1015 0

File: 541.460.000n
M.D.

THE MEMPHIS DEPOT
TENNESSEE

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 1015

1015 1

File:
M.D. 541.460.000.g

AR 1015

ANNUAL LONG-TERM MONITORING REPORT – 2007
MAIN INSTALLATION

Defense Depot Memphis, Tennessee

Defense Logistics Agency

Air Force Center for Engineering and the Environment
Contract No. FA8903-04-D-8722
Task Order No. 0019

Revision 1
February 2010

1015 2

ANNUAL LONG-TERM MONITORING REPORT - 2007
MAIN INSTALLATION

Defense Depot Memphis, Tennessee

Prepared for:

Air Force Center for Engineering and the Environment
Contract No. FA8903-04-D-8722
Task Order No. 0019

Prepared by:

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

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1-1
1.1 SITE LOCATION AND DESCRIPTION 1-1
1.2 GEOLOGY AND HYDROGEOLOGY 1-2
1.3 REMEDIAL ACTION OBJECTIVES 1-3
1.4 PREVIOUS GROUNDWATER MONITORING 1-3

2.0 LTM ACTIVITIES 2-1
2.1 WELL INSTALLATION 2-1
2.2 WELL ABANDONMENT 2-3
2.3 GROUNDWATER MONITORING 2-4
2.3.1 October 2006 2-5
2.3.2 January 2007 2-5
2.3.3 April 2007 2-5
2.3.4 July 2007 2-6
2.3.5 October 2007 2-6
2.4 WASTE DISPOSAL 2-7

3.0 SUMMARY OF MONITORING RESULTS 3-1
3.1 HYDROGEOLOGY 3-1
3.2 DATA QUALITY EVALUATION 3-1
3.3 ANALYTICAL RESULTS 3-2
3.3.1 October 2006 3-2
3.3.2 January 2007 3-3
3.3.3 April 2007 3-4
3.3.4 July 2007 3-4
3.3.5 October 2007 3-5

4.0 CONCLUSIONS AND RECOMMENDATIONS 4-1
4.1 WELL CLASSIFICATION REVIEW 4-1
4.1.1 Background Wells 4-2
4.1.2 Boundary Wells 4-2
4.1.3 Sentinel Wells 4-2
4.1.4 Performance Wells 4-3
4.2 RECOMMENDATIONS 4-5

5.0 REFERENCES 5-1

1015 04

LIST OF APPENDICES

Appendices

A Soil Boring Logs
B Well Installation Diagrams
C Complete Analytical Results
D Data Quality Evaluation
E Historical CVOC Results
F CVOC Time-Trend Plots

LIST OF TABLES

Tables

1 LTM Sample Schedule
2 Well Installation Summary
3 Well Development Summary
4 Well Abandonment Summary
5 Water Level Measurements
6 Well Stabilization Summary, October 2006
7 Well Stabilization Summary, January 2007
8 Well Stabilization Summary, April 2007
9 Well Stabilization Summary, July 2007
10 Well Stabilization Summary, October 2007
11 Soil Total Organic Carbon Analyses, August 2006
12 Analytical Results Summary, October 2006
13 Analytical Results Summary, January 2007
14 Analytical Results Summary, April 2007
15 Analytical Results Summary, July 2007
16 Analytical Results Summary, October 2007

LIST OF FIGURES

Figures

1 Site Location Map
2 Well Location Map
3 Top of Clay Elevation Map
4 Lithologic Cross-Section A-A', MW-55 to MW-81
5 Lithologic Cross-Section B-B', MW-66A to MW-103
6 Lithologic Cross-Section C-C', MW-107 to MW-50
7 Lithologic Cross-Section D-D', MW-213 to MW-217
8 Potentiometric Surface Map (October 2006)
9 Potentiometric Surface Map (January 2007)
10 Potentiometric Surface Map (April 2007)
11 Potentiometric Surface Map (July 2007)
12 Potentiometric Surface Map (October 2007)
13 PCE Isopleth Map, October 2006
14 TCE Isopleth Map, October 2006
15 PCE/TCE Analytical Results. January 2007
16 PCE Isopleth Map, April 2007
17 TCE Isopleth Map, April 2007
18 PCE/TCE Analytical Results. July 2007
19 PCE Isopleth Map, October 2007
20 TCE Isopleth Map, October 2007

1015 6

LIST OF ACRONYMS AND ABBREVIATIONS

AFCEE	Air Force Center for Engineering and the Environment
BCT	BRAC Cleanup Team
bgs	Below Ground Surface
BRAC	Base Realignment and Closure
cDCE	cis-1,2-Dichloroethene
CF	chloroform
CT	carbon tetrachloride
CVOC	Chlorinated Volatile Organic Compound
DDMT	Defense Depot Memphis, Tennessee
DQO	Data Quality Objective
DRI	Design-Related Investigation
EBT	Enhanced Bioremediation Treatment
IDW	Investigation-derived Waste
LTM	Long-term Monitoring
LTOA	Long-Term Operational Area
MACTEC	MACTEC Engineering and Consulting, Inc.
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
RAWP	Remedial Action Work Plan
RD	Remedial Design
RI	Remedial Investigation
RL	Reporting Limit
ROD	Record of Decision
TCA	1,1,1-Trichloroethane

LIST OF ACRONYMS AND ABBREVIATIONS

(Continued)

TCE	Trichloroethene
TCL	Target Compound List
THM	Trihalomethane
TOC	Total Organic Carbon
USEPA	U.S. Environmental Protection Agency
VC	Vinyl Chloride
VOC	Volatile Organic Compound

1015.018

1.0 INTRODUCTION

HDR|e^{2}M has prepared this 2007 Annual Long-term Monitoring (LTM) Report for the Main Installation (MI) at Defense Depot Memphis, Tennessee (DDMT) under Contract FA8903-04-D-8722, 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 from October 2006 through October 2007. 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 (BRAC). 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. 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 reduce concentrations of chemicals of concern to MCLs or lower; and
- to prevent horizontal and vertical offsite migration 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. 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. Land use controls 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 were not 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.

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 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 monitoring wells (MWs), 7 piezometers, and 1 pump test well were abandoned on the MI and Dunn Field in February 2005.

1015112

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. The recommendations were implemented by HDR|e^{2}M, as described in this report.

2.0 LTM ACTIVITIES

Following the DRI and quarterly groundwater sampling in 2004 and 2005, further MI LTM was postponed until the MI Remedial Action (RA) was initiated. MI LTM activities were restarted by HDR|e²M in August 2006 and 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. Field activities and laboratory analyses were performed in accordance with the *Remedial Action Sampling and Analysis Plan, Rev. 1* (RA SAP) (MACTEC, 2005b). The LTM wells and current sample frequency are listed on Table 1. The well locations are shown on Figure 2.

2.1 WELL INSTALLATION

New monitoring wells were installed in August 2006 and March-April 2007 to further delineate the plumes and to aid development of compliance well networks. Two-well clusters were installed at several locations to screen multiple aquifers or thick saturated zones. In each case, the B well was screened at the shallower depth. The new well locations are highlighted on Figure 2. Well installation data are provided on Table 2.

Nine monitoring wells were installed 3 through 23 August at six locations (MW-197 through MW-202) in accordance with the recommendations in the initial annual LTM report (MACTEC, 2006). Two-well clusters were installed at three of the locations (MW-197A/B, MW-199A/B and MW-202A/B). Twenty-three monitoring wells were abandoned on 24 August 2006 based on recommendations in the LTM Plan and after obtaining concurrence from the BRAC Cleanup Team (BCT).

Following review of hydrogeologic data from the new wells and analytical results for groundwater samples collected from new and existing wells in October 2006, additional monitoring wells were proposed at 13 locations. Following discussions at the February and April 2007 BCT meetings, 17 locations for additional monitoring wells were approved.

Twenty-seven monitoring wells were installed 5 March through 22 April 2007 at the selected locations (MW-203 through MW-219). Two-well clusters were installed at ten locations (MW-203A/B, MW-204A/B, MW-205A/B, MW-206A/B, MW-207A/B, MW-208A/B, MW-209A/B, MW-210A/B, MW-214A/B, and MW-215A/B) to screen multiple aquifers or thick saturated zones.

All of the wells were installed in borings drilled by Prosonic using rotasonic drilling methods with a 6-inch outer core and a 4-inch inner core barrels. Continuous soil cores were collected from ground surface to the termination depth of each boring. An HDR|e^{2}M field geologist was present during drilling to record field observations and log the soil core. The initial soil boring at each location was drilled several feet into the uppermost clay of the Jackson Formation/Upper Claiborne Group. Borings terminated in the clay were back-filled with bentonite to the top of the clay/base of the fluvial aquifer prior to well installation. Soil boring logs are provided in Appendix A.

During well installation in August 2006, a soil sample for total organic carbon (TOC) analysis was collected from the middle of the screened interval in each boring. The data was collected for use in fate and transport modeling, if necessary.

Monitoring wells were constructed of new, 2-inch inside diameter schedule 40 PVC with internal flush joined threaded joints and a 15-foot section of factory-slotted 0.010-inch well screen. Centralizers were attached to the well casing 1 foot from the bottom of the well and 1 foot above the top of the screen. A filter pack of clean sand was placed around the screen in a uniform density from the bottom of the well to at least 5 feet above the top of the well screen. A bentonite seal at least 5 feet thick was placed above the sand and the annular space was filled with a cement-bentonite grout mixture to approximately 6 inches below the ground surface. All of the new wells had flush-mount completions with an 8-inch ID manhole set within a 3-foot by 3-foot by 0.5-foot thick concrete pad. Well construction was performed by Prosonic under the supervision of an HDR|e^{2}M field geologist. Well completion diagrams are provided in Appendix B.

All new well locations were surveyed by Allen & Hoshall, Inc. of Memphis, Tennessee, a Tennessee Registered Land Surveyor. Horizontal and vertical coordinates are based on the North American Datum, 1927 used for all survey data at DDMT. Horizontal coordinates were provided in the Tennessee State Plane coordinate system. Surveyed coordinates and elevations are shown on Table 2.

The wells were developed at least 24 hours after well installation. Most wells were developed using a Grundfos Redi-Flo2 submersible pump; the wells were surged by raising and lowering the submersible pump in the water column. Three wells, MW-201, MW-202B, and MW-212 were developed using a bailer due to thin saturated zone and slow recharge. Well MW-213 was dry and was not developed.

Water quality measurements were made to evaluate well development in accordance with the RA SAP criteria: stabilized turbidity less than 10 nephelometric turbidity units (NTUs), pH within 0.1 standard

units, and temperature and specific conductance within 10 percent for three consecutive readings. Well MW-201 did not recover over 24 hours after being bailed dry and was not developed further. Wells MW-202B and MW-212 were bailed dry three times. The turbidity meter was not used during development of MW-202B and MW-212 because the purged groundwater was extremely turbid. The development criteria were met in the other wells, except for turbidity in MW-197A (11.5 NTU), MW-198 (45.4 NTU), MW-200 (403 NTU) and MW-202A (62.7 NTU).

Additional development was performed in wells MW-200, MW-202A and MW-202B prior to the January 2007 LTM event. Well MW-202B was pumped dry three times; additional development was discontinued in accordance with the RA SAP. Turbidity was out of range in MW-202B; field measurements in the other two wells met development criteria.

A well development summary, including volume purged and final stabilization parameters, is shown on Table 3. Following development, dedicated pumps were installed in the new wells to facilitate sampling, except for MW-201, MW-212 and MW-213, which did not have sufficient saturated thickness

2.2 WELL ABANDONMENT

Initial well abandonment was performed on 24 August 2006 based on recommendations in the LTM Plan and after obtaining concurrence from the BCT. Twenty-three monitoring wells were abandoned. Six additional wells were abandoned in 2007. Total well depth and reason for abandonment are listed on Table 4. The well locations are shown on Figure 2. Well abandonment was performed by Prosonic and was observed by an HDR|e^{2}M field technician.

The total depth of each well was measured to confirm that no obstructions were present that might interfere with placement of the tremie pipe and grout. One-half gallon of bleach was poured into each well in accordance with Memphis Shelby County Health Department regulations. The wells were filled with cement/bentonite grout (94 pounds of neat Type 1 Portland cement, up to 4 pounds of bentonite powder and up to 8 gallons of potable water) from the bottom up until undiluted grout was visible at the surface. The grout was tremied into the casing, keeping the side-discharge tremie pipe approximately 1 foot below the grout surface. The water displaced by the grout was contained and transported to the fractionation tank located near the decontamination pad and stored with other investigation-derived wastewater for testing and disposal. After allowing at least two days for grout settlement, the grout was topped off with concrete. Since all wells were in developed areas on the MI, the concrete well pads were left in place. The manhole covers were removed and the manholes were filled with concrete.

2.3 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 5.

LTM wells have been classified as boundary, background, performance or sentinel wells and assigned quarterly, semiannual, annual or biennial sampling frequencies. New wells are sampled during four consecutive quarterly events and then assigned a well classification and new sample interval. A biennial sample event was performed in October 2006 since it was the first LTM sample event since May 2005, and all LTM wells were sampled at that time. The current well classification, sample frequency, and sample events for each LTM well during this reporting period are shown on Table 1.

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. Pumps could not be used in these wells 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 a Horiba U-22XD. 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 NTUs 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 6 to 10.

Samples were sent to Kemron Environmental Services 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.

2.3.1 October 2006

Biennial groundwater sampling was conducted with samples collected from all LTM wells, 63 existing wells and 9 new wells. LTM sample events in 2005 included 71 monitoring wells, but 8 of these wells were selected for EBT performance monitoring in TTA-1 and TTA-2 and were deleted from LTM. Groundwater samples were collected 2 to 25 October 2006. Water levels were measured in all LTM wells on 19 September 2006.

Groundwater samples were collected from 68 wells using low-flow purging methods. The 3 piezometers and well MW-201 were sampled with bailers. The final stabilization measurements are shown on Table 6. The samples were collected according to the procedures described above with the following exceptions:

- Samples collected by bailer from PZ-03, PZ-06, PZ-07 and MW-201 exceeded the turbidity criteria. These wells were bailed dry, allowed to recharge and sampled within 24 hours.
- Samples were collected from wells (DR1-5, MW-92, DR2-4, MW-66A, MW104, MW102B, MW-36, MW-98, MW-202A, and MW-103) with elevated turbidity measurements (20.3 NTUs to out of range) after purging the wells for a minimum of two hours.
- A sample was collected from MW-197A with turbidity of 24 NTUs after purging for 1.25 hours.
- Well MW-62 was purged dry and sampled the following day.

2.3.2 January 2007

Quarterly groundwater sampling was conducted with samples collected from eight of the nine new wells. One well, MW-201, was installed in a perched zone and was not sampled; it was replaced in the second phase of well installation. Groundwater samples were collected 24 January 2007. Water levels were measured in all LTM wells on 22 January 2007.

Groundwater samples were collected from the eight wells using low-flow purging methods. The final stabilization measurements are shown on Table 7. Stabilization criteria were met in all eight wells.

2.3.3 April 2007

Semiannual groundwater sampling was conducted with samples collected from 26 of the 27 new Phase 2 MWs, 8 Phase 1 wells and 30 existing wells. One new well, MW-213, was dry and a sample could not be

1015 18

obtained. Groundwater samples were collected 13 to 27 April 2007. Water levels were measured in all LTM wells on 4 May 2007.

Groundwater samples were collected from 62 wells using low-flow purging methods. Two wells, MW-62 and MW-212, were sampled with bailers. The final stabilization measurements are shown on Table 8. The samples were collected according to the procedures described above with the following exceptions:

- Samples collected by bailer from MW-212 and MW-62 exceeded the turbidity criteria. MW-212 was bailed for three well volumes and then sampled. MW-62 was almost dry; a bailer was used to collect enough water for the sample.
- Samples were collected from wells (MW-104, MW-108, MW-215A, and MW-98) with elevated turbidity measurements (20.6 NTUs to 63.2 NTUs) after purging the wells for a minimum of two hours.

2.3.4 July 2007

Quarterly groundwater sampling was conducted with samples collected from 34 of the 35 recently installed wells. One well, MW-213, was dry. Groundwater samples were collected 9 to 12 July 2007. Water levels were measured in all LTM wells on 6 July 2007.

Groundwater samples were collected from 33 wells using low-flow purging methods. Well MW-212 was sampled with a bailer. The final stabilization measurements are shown on Table 9. The samples were collected according to the procedures described above with the following exceptions:

- Samples collected by bailer from MW-212 exceeded the turbidity criteria (195 NTUs). MW-212 was bailed for three well volumes and then sampled.
- Samples were collected from MW-217 with elevated turbidity measurement of 37.4 NTUs after purging the well for approximately two hours.

2.3.5 October 2007

Annual groundwater sampling was conducted with samples collected from 85 of 87 designated LTM wells. Well MW-213 was dry and a sample could not be collected. The tubing for the Waterra inertial pump disconnected in PZ-07 and could not be retrieved; a sample could not be collected. Groundwater samples were collected 1 to 5 October 2007. Water levels were measured in all LTM wells on 27 September 2007; due to miscommunication with field staff, only a limited number of LTM wells had water levels measured.

Groundwater samples were collected from 81 wells using low-flow purging methods. Two wells, MW-62 and MW-212, were sampled with bailers. The final stabilization measurements are shown on Table 10. The samples were collected according to the procedures described above with the following exceptions:

- Samples were collected from wells (MW-93, MW-99, MW-103 and MW-217) with elevated turbidity measurements (21.3 NTUs to 93.3 NTUs) after purging the wells for a minimum of two hours.
- Samples collected by bailer from MW-62 with elevated turbidity of 3,550 NTUs after the well was bailed dry and sampled the next day.
- Samples collected by bailer from MW-212 with elevated turbidity of 479 NTUs after the well had three well volumes bailed.
- Samples collected by inertial pump from PZ-03 and PZ-06 with turbidity out of range after each piezometer had three well volumes purged.

2.4 WASTE DISPOSAL

The waste generated during well installation in August 2006 and March-April 2007 and groundwater sampling in October 2006 and throughout 2007 was classified as either non-investigative waste or investigation-derived waste (IDW). Non-investigative waste, such as packaging materials, personal protective equipment, disposable sampling supplies, and other inert refuse, was collected, containerized, and transported to a designated collection bin for disposal at a municipal landfill. The IDW consisted of soil cuttings from the MW borings, waste water from equipment decontamination, and groundwater from well development and purging prior to sampling.

The soil cuttings generated during the two phases of well installation were spread in a fill area in the north-central area of the MI. Wastewater generated during decontamination of the drill rig and downhole equipment between borings and well construction materials was collected and stored in a 20,000 gallon fractionation tank. The well development water was also stored in the fractionation tank. Purge water and wastewater generated during sampling was stored in the fractionation tank when available, or in a 550-gallon polyethylene tank on the MI. Grab samples were collected when the storage tanks neared capacity; the samples were collected from the midpoint of the tank using a disposable Teflon® bailer and submitted to Kemron 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 NN3097. The analytical data was provided to the City of Memphis with requests for one-time discharges. Following approval of each request, the wastewater was discharged to the sewer system via a manhole on the MI.

1015120

3.0 SUMMARY OF MONITORING RESULTS

3.1 HYDROGEOLOGY

The top of the uppermost clay in the in the Jackson Formation/Upper Claiborne Group forms the base of the Fluvial aquifer effecting the saturated thickness and groundwater flow on the MI. One soil borings at each new monitoring well location was drilled into or through the upper clay, except for MW-201, which was inadvertently installed in a perched water table. MW-201 was abandoned and replaced by MW-217 in April 2007. The boring logs (Appendix A) were used to generate a top of clay contour map shown on Figure 3 and cross-sections on Figures 4 to 7.

Locations of lithologic cross-sections are shown on Figure 3. Figure 4 (A-A') is a north-south section which shows the upper clay above the intermediate sand on the west side of the 'window' and the absence of the upper clay in the area of MW-39. MW-209A was screened in a deeper sand unit within the Intermediate aquifer, at approximately the same elevation as in MW-81 at the southern end of the cross-section. Figure 5 (B-B') is a west-east section from TTA-1 to the northeast MI, which shows MW-197 at the deepest point on the uppermost clay. Figure 6 (C-C') is a northwest-southeast section from the central MI to TTA-2. Based on the borings for MW-214A and MW-215A, the deeper sand in the northwestern area of the cross-section is shown as the Intermediate sand. Figure 7 (D-D') is a west-east section from the west side of the MI to the east central portion of the MI, which includes several of the new wells. The cross-section shows the thin saturated thickness of the Fluvial aquifer from MW-213 to MW-141.

Water level measurements for the five LTM events are shown on Table 5. Groundwater contour maps for each quarter are shown on Figures 8 to 12. The groundwater elevation contour maps are similar. Groundwater flow near TTA-1 is to the east and northeast, with an approximate gradient of 0.004. The groundwater flow near TTA-2 is to the west-southwest, with an approximate gradient of 0.01. The gradient in the 'window' is approximately 0.03.

3.2 DATA QUALITY EVALUATION

VOC data collected during the five 2006-2007 LTM sampling events were reviewed based on guidelines in the RA SAP. The review process was completed by an independent data validation contractor, Diane Short and Associates, Inc and summarized by HDR|e²M. Based on the review and project data quality objectives (DQOs), the VOC data are acceptable and usable except for those results flagged as rejected.

Data flagged as rejected (R) are unusable. Data flagged as estimated (J) or having estimated reporting limits (RLs) (UJ) are acceptable and usable with an understanding of the data limitations.

No data in the five LTM events were rejected. VOC data were flagged as estimated J with the following primary causes:

- Acetone, 2-butanone, and 4-methyl-2-pentanone in several samples from the October 2007 event were qualified estimated J due to a low calibration response. These compounds are highly soluble in water.
- Methylene chloride was observed in several method blanks in October 2006, April 2007, and July 2007. The detections in associated samples were less than 10x the method blank (corrected for dilution), therefore the results were qualified as UB and are usable as nondetects
- Several samples were qualified J for acetone based upon LCS discrepancies in October 2006.
- TCE in one sample from both October 2006 and October 2007 were qualified J for low matrix spike/matrix spike duplicate recoveries.
- Any result reported below the RL but above the method detection limit was flagged "J" and considered an estimated result (unless overridden by other quality control flags).

Overall, the VOC data met project DQOs and were determined to be sufficient and valid for evaluation of RA at the MI. Detailed evaluations of data quality for the 2006-2007 LTM sampling events are provided in Appendix D.

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 chlorinated 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: 5 µg/L for PCE, TCE, and CT; 70 µg/L for cDCE, and 2 µg/L for VC. The MCL for total trihalomethanes (THM), which includes CF, is 80 µg/L.

3.3.1 October 2006

Soil samples were collected from the middle of the screened interval of each MW boring and analyzed for TOC. The analytical results are shown on Table 11; TOC was not detected in any of the samples above the RL, 1080 to 1210 milligrams per kilogram.

Groundwater samples were collected from 72 LTM wells for the biennial event in October 2006. Well MW-107 has two screened intervals, and groundwater samples were collected from both intervals. Table 12 lists the analytical results for all constituents detected above the RL in one or more samples. Fifteen VOCs were detected above RLs. The analytical results for the primary CVOCs are summarized below:

PCE was reported in 39 wells with a maximum concentration of 196 µg/L in MW-39A (161.6 feet). The MCL (5 µg/L) was exceeded in 30 wells.

TCE was reported in 42 wells with a maximum concentration of 118 µg/L in DR1-6A. The MCL (5 µg/L) was exceeded in 18 wells.

cDCE was reported in 14 wells with a maximum concentration of 180 µg/L in MW-86. The MCL (70 µg/L) was exceeded in two wells.

CT was reported in 14 wells with a maximum concentration of 82.7 µg/L in DR2-6. The MCL (5 µg/L) was exceeded in five wells.

CF was reported in 28 wells with a maximum concentration of 33.8 µg/L in MW-113. The MCL (80 µg/L for THM) was not exceeded.

Isoconcentration maps for PCE and TCE for the October 2006 LTM samples are shown on Figures 13 and 14, respectively.

3.3.2 January 2007

Groundwater samples were collected from 8 LTM wells for the quarterly event in January 2007. Table 13 lists the analytical results for all constituents detected above the RL in one or more samples. Three VOCs were detected above RLs. The analytical results for the primary CVOCs are summarized below:

PCE was reported in 4 wells with a maximum concentration of 166 µg/L in MW-197B. The MCL (5 µg/L) was exceeded in 4 wells.

TCE was reported in 7 wells with a maximum concentration of 115 µg/L in MW-199B. The MCL (5 µg/L) was exceeded in 4 wells.

CF was reported only in MW-202B with a concentration of 0.857 µg/L. The MCL (80 µg/L for THM) was not exceeded.

Analytical results for PCE and TCE in the January 2007 LTM samples are shown on Figure 15.

3.3.3 April 2007

Groundwater samples were collected from 64 LTM wells for the semiannual event in April 2007. Table 14 lists the analytical results for all constituents detected above the RL in one or more samples. Fourteen VOCs were detected above RLs. The analytical results for the primary CVOCs are summarized below:

PCE was reported in 51 wells with a maximum concentration of 176 µg/L in MW-39A (161.6 feet). The MCL (5 µg/L) was exceeded in 46 wells.

TCE was reported in 52 wells with a maximum concentration of 139 µg/L in DR1-6A. The MCL (5 µg/L) was exceeded in 34 wells.

cDCE was reported in 16 wells with a maximum concentration of 119 µg/L in MW-86. The MCL (70 µg/L) was exceeded in two wells.

VC was reported in MW-62 at 2.71 µg/L. The MCL (2 µg/L) was exceeded.

CT was reported in 12 wells with a maximum concentration of 92 µg/L in DR2-6. The MCL (5 µg/L) was exceeded in seven wells.

CF was reported in 25 wells with a maximum concentration of 35.9 µg/L in MW-113. The MCL (80 µg/L for THM) was not exceeded.

Isoconcentration maps for PCE and TCE for the April 2007 LTM samples are shown on Figures 16 and 17, respectively.

3.3.4 July 2007

Groundwater samples were collected from 34 LTM wells for the quarterly event in July 2007. Table 15 lists the analytical results for all constituents detected above the RL in one or more samples. Seven VOCs were detected above the RL. The analytical results for the primary CVOCs are summarized below:

PCE was reported in 25 wells with a maximum concentration of 193 µg/L in MW-205A. The MCL (5 µg/L) was exceeded in 23 wells.

TCE was reported in 30 wells with a maximum concentration of 136 µg/L in MW-199A. The MCL (5 µg/L) was exceeded in 20 wells.

cDCE was reported in five wells with a maximum concentration of 63.5 µg/L in MW-203B. The MCL (70 µg/L) was not exceeded.

CT was reported in six wells with a maximum concentration of 42.3 µg/L in MW-217. The MCL (5 µg/L) was exceeded in two wells.

CF was reported in 10 wells with a maximum concentration of 9.99 µg/L in MW-207A. The MCL (80 µg/L for total trihalomethanes) was not exceeded.

Analytical results for PCE and TCE in the July 2007 LTM samples are shown on Figure 18.

3.3.5 October 2007

Groundwater samples were collected from 85 LTM wells for the annual event in October 2007. Table 16 lists the analytical results for all constituents 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 57 wells with a maximum concentration of 191 µg/L in DR1-6. The MCL (5 µg/L) was exceeded in 48 wells.

TCE was reported in 66 wells with a maximum concentration of 184 µg/L in MW-62. The MCL (5 µg/L) was exceeded in 35 wells.

cDCE was reported in five wells with a maximum concentration of 143 µg/L in MW-100B. The MCL (70 µg/L) was exceeded in two wells.

VC was reported in one well, MW-100B, with a concentration of 1.02 µg/L. The MCL (2 µg/L) was not exceeded.

CT was reported in 17 wells with a maximum concentration of 96.9 µg/L in MW-113. The MCL (5 µg/L) was exceeded in seven wells.

CF was reported in 10 wells with a maximum concentration of 43.1 µg/L in DR2-6. The MCL (80 µg/L for total trihalomethanes) was not exceeded.

Isoconcentration maps for PCE and TCE for the October 2007 LTM samples are shown on Figures 19 and 20, respectively.

4.0 CONCLUSIONS AND RECOMMENDATIONS

PCE and TCE concentrations and isopleths for the most complete LTM events are shown on Figures 13 and 14 for the biennial sample event in October 2006, Figures 16 and 17 for the semiannual sample event in April 2007 and Figures 19 and 20 for the annual LTM event in October 2007. 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.

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

4.1 WELL CLASSIFICATION REVIEW

Current classifications for the 35 monitoring wells installed on the MI in August 2006 (MW-197 through MW-202) and March-April 2007 (MW-203 through MW-219) are listed on Table 1. Criteria for monitoring well classifications were established in the LTM Plan (Table 4-1). Twenty-five wells are classified as Performance wells based on their location within identified groundwater plumes. Nine wells are classified as Sentinel wells based on their location in the fluvial or intermediate aquifer within or adjacent to the window to the intermediate aquifer. One well (MW-219) is classified as a Boundary well based on its location along the MI boundary. Well MW-229 was installed in August 2007 as a replacement for MW-36 and was given the same classification (Sentinel).

Sample frequency for the eight wells installed in August 2006 was determined in accordance with the LTM Plan (Section 5.2). Based on the well locations and past analytical results, seven of the eight wells are proposed for semiannual sampling. CVOCs have not been detected above RLs in MW-199A and annual sampling is currently performed at that well. Sample frequency for the 27 wells installed in March-April 2007 will be determined following the fourth sampling event in 2008.

1015 26

Analytical results for the individual well classifications in the LTM events from October 2006 through October 2007 are summarized in the following sections.

4.1.1 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.

Primary CVOCs were not detected above RLs in five background wells (MW-16, MW-19, MW-55, MW-99, and MW-143). Wells MW-53 and MW-66A had low concentrations of one CVOC; PCE was reported at 2.26 µg/L and 1.79 µg/L, in the two wells respectively. No change in background well classification is proposed.

4.1.2 Boundary Wells

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

Primary CVOCs were not detected above RLs in five boundary wells (MW-22, MW-23, MW-24, MW-93, and MW-102B). Wells MW-50, located on the eastern MI boundary and upgradient of TTA-2, contained TCE at 1.5 µg/L and CF at 0.746 µg/L. Well MW-219 installed in April 2007 on the western MI boundary and immediately upgradient of TTA-1 North, contained several CVOCs in samples from April, July and October 2007; PCE was detected at the highest concentration, up to 33.9 µg/L. These results indicate the potential for off-site plume migration on the MI at MW-219.

4.1.3 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-36, 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. Well MW-36 was abandoned and replaced by MW-229 in August 2007.

Primary CVOCs were not detected above RLs in five sentinel wells (MW-36/MW-229, MW-107, MW-199A, MW-209A and MW-211). The remaining sentinel wells consistently had CVOCs detected above

the RLs and seven wells (MW-90, MW-108, MW-141, MW-202B, MW-207A, MW-207B and MW-210A) had PCE and/or TCE at concentrations above the MCL.

4.1.4 Performance Wells

There are 60 LTM performance wells, including three piezometers, 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 plume identifications are based on location rather than specific source area(s). 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-100B, MW-125, IW-06
TTA-1 South	PCE, TCE	DR1-1, DR1-1A, DR1-4, DR1-5, DR1-5A, DR1-6, DR1-6A
TTA-2	PCE, CT, CF	DR2-2, DR2-3, DR2-4, DR2-6, MW-26, MW-64, MW-86, MW-88, MW-92, MW-96, MW-113, MW-217, MW-218, PZ-07
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) with CVOC concentrations above MCLs in 2008 LTM samples. Further delineation of CVOC extent at these locations is not considered necessary.

4.1.4.1 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.

101528

Six LTM performance wells are associated with the TTA-1 North plume: MW-100B, MW-125, DR1-2, DR1-7, DR1-8, and IW-06. Two former LTM wells (MW-21 and MW-115) are sampled for EBT performance monitoring. The maximum concentration of PCE in 2007 LTM events were 101 µg/L (MW-100B).

4.1.4.2 TTA-1 South

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

Seven LTM performance wells are associated with the TTA-1 South plume: DR1-1, DR1-1A, DR1-4, DR1-5, DR1-5A, DR1-6 and DR1-6A. Two former LTM wells (MW-101 and DR1-3) are sampled for EBT performance monitoring. The maximum concentrations of PCE and TCE in 2007 LTM events were 191 µg/L (DR1-6) and 139 µg/L (DR1-6A), respectively.

4.1.4.3 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.

Fourteen LTM performance wells are associated with the TTA-2 plume: MW-26, MW-64, MW-86, MW-88, MW-92, MW-96, MW-113, MW-217, MW-218, DR2-2, DR2-3, DR2-4, DR2-6 and PZ-07. Four former LTM wells (MW-85, DR2-1, DR2-5 and IW-01) are sampled for EBT performance monitoring. The maximum PCE, CT and CF concentrations in 2007 LTM events were 193 µg/L (MW-92), 96.9 µg/L (MW-113) and 43.1 µg/L (DR2-6), respectively.

4.1.4.4 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 2007 LTM events was 196 µg/L in MW-39A.

4.1.4.5 Building 835

The Building 835 plume located in the western portion of the MI contains elevated concentrations of TCE. The plume is orientated along the southern edge of the 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 2007 LTM events was 184 µg/L in MW-62.

4.1.4.6 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 was 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 along the northern boundary of the MI: MW-103, MW-104, and PZ-06. The maximum TCE concentration in 2007 LTM events was 17.8 µg/L in MW-104.

4.2 RECOMMENDATIONS

No changes to the MI LTM program were recommended for 2008.

1015.30

5.0 REFERENCES

AFCEE, 1997. *Final Long-term Monitoring Optimization Guide, Version 1.1.* Air Force Center for Environmental Excellence, Brooks City-Base. October 1997.

CH2M HILL, 2001. *Memphis Depot Main Installation Record of Decision Rev. 2.* Prepared for the U.S. Army Engineering and Support Center, Huntsville, February, 2001.

CH2M HILL, 2004. *Memphis Depot Main Installation Final Remedial Design, Rev. 1.* Prepared for the U.S. Army Engineering and Support Center, Huntsville, July, 2004.

MACTEC Engineering and Consulting, Inc. (MACTEC), 2005a. *Remedial Action Work Plan, Main Installation, Defense Depot Memphis, Tennessee, Rev. 1.* Prepared for the Air Force Center for Environmental Excellence. July, 2005.

MACTEC, 2005b. *Remedial Action Sampling and Analysis Plan, Defense Depot Memphis, Tennessee, Rev. 1.* Prepared for the Air Force Center for Environmental Excellence. November, 2005.

MACTEC, 2006. *Main Installation Annual Long-Term Monitoring Report, Rev. 1.* Prepared for the Air Force Center for Environmental Excellence. February, 2006.

TABLES

TABLE 1
LTM SAMPLE SCHEDULE
ANNUAL LONG -TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Well Type	Plume	Sample Frequency[1]	Biennial Oct-2006	QTR Jan-2007	SA Apr-2007	QTR Jul-2007	Annual Oct-2007
MW16	Background		Biennially	X	-	-	-	-
MW19	Background		Biennially	X	-	-	-	-
MW22	Boundary		Biennially	X	-	-	-	-
MW23	Boundary		Biennially	X	-	-	-	-
MW24	Boundary		Biennially	X	-	-	-	-
MW25A	Performance	TTA-2	Semiannually	X	-	X	-	X
MW26	Performance	TTA-2	Semiannually	X	-	X	-	X
MW34	Sentinel		Annually	X	-	-	-	X
MW36[2]	Sentinel		Annually	X	-	-	-	-
MW38	Sentinel		Annually	X	-	-	-	X
MW39	Performance	West Central	Semiannually	X	-	X	-	X
MW39A	Performance	West Central	Semiannually	X	-	X	-	X
MW50	Boundary		Biennially	X	-	-	-	-
MW52	Performance	TTA-2	Semiannually	X	-	X	-	X
MW53	Background		Biennially	X	-	-	-	-
MW55	Background		Biennially	X	-	-	-	-
MW62	Performance	Building 835	Semiannually	X	-	X	-	X
MW63A	Sentinel		Annually	X	-	-	-	X
MW63B	Sentinel		Annually	X	-	-	-	X
MW64	Performance	TTA-2	Semiannually	X	-	X	-	X
MW66A	Background		Biennially	X	-	-	-	-
MW86	Performance	TTA-2	Semiannually	X	-	X	-	X
MW88	Performance	TTA-2	Semiannually	X	-	X	-	X
MW89	Sentinel		Annually	X	-	-	-	X
MW90	Sentinel		Semiannually	X	-	X	-	X
MW92	Performance	TTA-2	Semiannually	X	-	X	-	X
MW93	Boundary		Annually	X	-	-	-	X
MW94A	Performance	West Central	Semiannually	X	-	X	-	X
MW96	Performance	TTA-2	Semiannually	X	-	X	-	X
MW97	Performance	TTA-1 South	Semiannually	X	-	X	-	X
MW98	Performance	West Central	Semiannually	X	-	X	-	X
MW99	Background		Annually	X	-	-	-	X
MW100B	Performance	TTA-1 North	Semiannually	X	-	X	-	X
MW102B	Boundary		Annually	X	-	-	-	X
MW103	Performance	North Central	Annually	X	-	-	-	X
MW104	Performance	North Central	Semiannually	X	-	X	-	X
MW107T	Sentinel		Annually	X	-	-	-	-
MW107B	Sentinel		Annually	X	-	-	-	X
MW108	Sentinel		Semiannually	X	-	X	-	X
MW113	Performance	TTA-2	Semiannually	X	-	X	-	X
MW125	Performance	TTA-1 North	Semiannually	X	-	X	-	X
MW140	Sentinel		Annually	X	-	-	-	X
MW141	Sentinel		Semiannually	X	-	X	-	X
MW142	Performance	Building 835	Annually	X	-	-	-	X
MW143	Background		Biennially	X	-	-	-	-
MW-197A	Performance	West Central	Semiannually	X	X	X	X	X
MW-197B	Performance	West Central	Semiannually	X	X	X	X	X
MW-198	Performance	Building 835	Semiannually	X	X	X	X	X
MW-199A	Sentinel		Annually	X	X	X	X	X
MW-199B	Performance	Building 835	Semiannually	X	X	X	X	X
MW-200	Performance	West Central	Semiannually	X	X	X	X	X
MW-202A	Sentinel		Semiannually	X	X	X	X	X
MW-202B	Sentinel		Semiannually	X	X	X	X	X
MW-203A	Performance	West Central	TBD	-	-	X	X	X

TABLE 1
LTM SAMPLE SCHEDULE
ANNUAL LONG -TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Well Type	Plume	Sample Frequency[1]	Biennial Oct-2006	QTR Jan-2007	SA Apr-2007	QTR Jul-2007	Annual Oct-2007
MW-203B	Performance	West Central	TBD	-	-	X	X	X
MW-204A	Performance	West Central	TBD	-	-	X	X	X
MW-204B	Performance	West Central	TBD	-	-	X	X	X
MW-205A	Performance	West Central	TBD	-	-	X	X	X
MW-205B	Performance	West Central	TBD	-	-	X	X	X
MW-206A	Performance	West Central	TBD	-	-	X	X	X
MW-206B	Performance	West Central	TBD	-	-	X	X	X
MW-207A	Sentinel		TBD	-	-	X	X	X
MW-207B	Sentinel		TBD	-	-	X	X	X
MW-208A	Performance	West Central	TBD	-	-	X	X	X
MW-208B	Performance	West Central	TBD	-	-	X	X	X
MW-209A	Sentinel		TBD	-	-	X	X	X
MW-209B	Performance	West Central	TBD	-	-	X	X	X
MW-210A	Sentinel		TBD	-	-	X	X	X
MW-210B	Performance	West Central	TBD	-	-	X	X	X
MW-211	Sentinel		TBD	-	-	X	X	X
MW-212	Performance	Building 835	TBD	-	-	X	X	X
MW-213	Performance	West Central	TBD	-	-	X	X	NS
MW-214A	Performance	West Central	TBD	-	-	X	X	X
MW-214B	Performance	West Central	TBD	-	-	X	X	X
MW-215A	Performance	West Central	TBD	-	-	X	X	X
MW-215B	Performance	West Central	TBD	-	-	X	X	X
MW-216	Performance	TTA-1 South	TBD	-	-	X	X	X
MW-217	Performance	TTA-2	TBD	-	-	X	X	X
MW-218	Performance	TTA-2	TBD	-	-	X	X	X
MW-219	Boundary		TBD	-	-	X	X	X
MW-229[2]	Sentinel		TBD	-	-	-	-	X
DR1-1	Performance	TTA-1 South	Annually	X	-	-	-	X
DR1-1A	Performance	TTA-1 South	Semiannually	X	-	X	-	X
DR1-2	Performance	TTA-1 North	Annually	X	-	-	-	X
DR1-4	Performance	TTA-1 South	Semiannually	X	-	X	-	X
DR1-5	Performance	TTA-1 South	Semiannually	X	-	X	-	X
DR1-5A	Performance	TTA-1 South	Semiannually	X	-	X	-	X
DR1-6	Performance	TTA-1 South	Semiannually	X	-	X	-	X
DR1-6A	Performance	TTA-1 South	Semiannually	X	-	X	-	X
DR1-7	Performance	TTA-1 North	Annually	X	-	-	-	X
DR1-8	Performance	TTA-1 North	Annually	X	-	-	-	X
DR2-2	Performance	TTA-2	Semiannually	X	-	X	-	X
DR2-3	Performance	TTA-2	Semiannually	X	-	X	-	X
DR2-4	Performance	TTA-2	Annually	X	-	-	-	X
DR2-6	Performance	TTA-2	Semiannually	X	-	X	-	X
IW-06	Performance	TTA-1 North	Annually	X	-	-	-	X
PZ-03	Performance	West Central	Annually	X	-	-	-	X
PZ-06	Performance	North Central	Annually	X	-	-	-	X
PZ-07	Performance	TTA-2	Annually	X	-	-	-	NS

Notes:
1) Sample frequency established in Annual LongTerm Monitoring Report (MACTEC, 2006) and updated in July 2007 LTM Report (e^2M, 2008).
2) In August 2007, MW-36 was abandoned and MW-229 was installed as a replacement.
X: Sample collected
-: Sample not planned or collected
NS: Sample planned but not collected (In Oct-2007:PZ-06 was blocked and MW-213 was dry)
TBD: Sample frequency to be determined following initial year of quarterly monitoring

TABLE 2
WELL INSTALLATION SUMMARY
ANNUAL LONG - TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

							Groundwater		Well Screen			
Well ID	Date Completed	Northing	Easting	Top of Casing Elevation (ft msl)	Ground Elevation (ft. msl)	Total Boring Depth (ft. bgs)	Depth (ft. btoc)	Date Measured	Depth to Top (ft. btoc)	Length	Total Well Depth (ft. btoc)	Top of Clay
MW-197A	8/4/2006	276975.42	802042.30	291.26	291.54	186	92.96	8/14/2006	162.00	15	177.40	115.54
MW-197B	8/7/2006	276973.14	802036.92	291.03	291.43	111	92.82	8/14/2006	94.20	15	109.60	N/A
MW-198	8/23/2006	277775.67	802141.93	291.50	291.80	116	93.90	8/24/2006	89 60	15	105.10	186.80
MW-199A	8/8/2006	277756.40	802573.52	301.53	301.84	171	108.52	8/14/2006	144.00	15	159.40	142 84
MW-199B	8/8/2006	277751.74	802575.66	301.73	302.07	118	104.50	8/14/2006	102.40	15	117.80	N/A
MW-200	8/10/2006	277006.10	802859.39	300.18	300.51	126	102.53	8/16/2006	102.70	15	118.20	183.51
MW-201	8/22/2006	276660.71	805218.45	304.23	304.33	86	80.11	8/24/2006	67.00	15	82.50	223.33
MW-202A	8/22/2006	278685 74	802111.27	299.23	299.69	198	125 73	8/24/2006	175.00	15	190 40	109.69
MW-202B	8/22/2006	278692.79	802112.04	299.51	299.74	136	123 82	8/24/2006	118.50	15	133 90	N/A
MW-203A	3/28/2007	276841.61	801740.37	290.59	290.78	176	91.79	5/4/2007	142.94	15	158.12	167.00
MW-203B	4/17/2007	276821.58	801741.76	290.51	290.75	110	91.72	5/4/2007	92.83	15	108.18	N/A
MW-204A	4/7/2007	276724.66	802168.25	292.21	292.49	157	94.32	5/4/2007	133.26	15	148.57	143.49
MW-204B	4/9/2007	276707.82	802167.00	292.32	292 67	112	94.34	5/4/2007	94.49	15	109.78	N/A
MW-205A	4/10/2007	277157.28	802277.37	291.93	292.32	167	94.64	5/4/2007	140.97	15	156.27	158.00
MW-205B	4/11/2007	277173.13	802277.76	291.82	292.04	117	94.44	5/4/2007	97.08	15	112.37	N/A
MW-206A	3/25/2007	277219.28	802792.28	299.92	300.35	156	103.49	5/4/2007	127.34	15	142 51	158.00
MW-206B	3/26/2007	277200.85	802794.78	299.90	300.12	115	103.43	5/4/2007	96.72	15	111.90	N/A
MW-207A	3/15/2007	277652.65	803191.86	303.78	303.99	176	108.01	5/4/2007	149.65	15	164 97	167.00
MW-207B	3/17/2007	277665.39	803193.06	303.83	304.03	126	107.69	5/4/2007	108.25	15	123.47	N/A
MW-208A	3/24/2007	277382.04	802799.25	301.50	301.91	206	105.39	5/4/2007	183.45	15	198.77	198.00
MW-208B	3/24/2007	277396.90	802814.96	301.79	302.08	126	105.42	5/4/2007	106.66	15	121.97	N/A
MW-209A	4/3/2007	277574.28	802507.10	298.05	298.36	210	103.73	5/4/2007	189.28	15	204.57	93.36
MW-209B	4/4/2007	277581.50	802520.13	298.49	298.72	121	101.59	5/4/2007	102.32	15	117.64	N/A
MW-210A	4/19/2007	277238.49	801958.05	289.66	289.78	216	98.31	5/4/2007	177.06	15	192.34	150.78
MW-210B	4/20/2007	277228.18	801951.94	289.29	289.53	114	91.60	5/4/2007	97.30	15	112.25	N/A
MW-211	3/21/2007	278000.59	802973.69	303.74	304.09	186	109.01	5/4/2007	166.27	15	181.59	204.99
MW-212	4/5/2007	278028.36	802225.40	295.34	295.68	107	97.67	5/4/2007	85.65	15	100.97	195.68
MW-213	4/6/2007	278426.83	801668.99	293.83	294.12	106	92.12	5/4/2007	77.18	15	92.49	202.12
MW-214A	3/13/2007	277877.62	803906.94	303.61	303.96	147	102.65	5/4/2007	119.08	15	134.28	166.96
MW-214B	3/14/2007	277875 84	803922.20	303.70	303.96	119	102.50	5/4/2007	101.58	15	116.79	N/A
MW-215A	3/9/2007	277298.37	804164.31	304.50	304.86	170	108.25	5/4/2007	128.75	15	144.08	N/A
MW-215B	3/10/2007	277298 27	804177.33	304.53	304.98	124	108.34	5/4/2007	105.41	15	120.73	N/A
MW-216	4/16/2007	276024.68	801995.93	297.34	297.63	127	96.60	5/4/2007	99.93	15	115.24	178.63
MW-217	4/21/2007	276670.60	805213.69	304.18	304.51	126	108.00	5/4/2007	101.79	15	117.16	188.51
MW-218	3/7/2007	276936.70	805628.44	305.60	306.00	126	102.83	5/4/2007	98.92	15	114 31	192.00
MW-219	4/22/2007	276429.60	800460.96	294.90	295.07	126	92.19	5/4/2007	97.75	15	113.06	177.07
MW-229	8/1/2007	279293.98	802836.28	311.77	311.99	210	160.83	9/27/2007	188.43	20	208.65	93.00

Notes:
N/A: Not Applicable

1015 34

TABLE 3
WELL DEVELOPMENT SUMMARY
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

					Final Stabilization Parameters				
Well ID	Date Developed	Start Time	Finish Time	Volume Purged gallons	pH	Specific Conductivity mS/cm	Turbidity NTUs	Temperature °C	Total Depth ft (btoc)
MW-197A	8/14/2006	8:43	9:50	147	6.2	0.30	11.5	19.7	177.4
MW-197B	8/14/2006	9:51	11:00	162	6.0	0.32	9.8	20.2	109.7
MW-198	8/24/2006	10:42	11:44	100	5.5	0.21	45.4	25.0	105.5
MW-199A	8/14/2006	11:38	12:16	24	6.2	0.23	8.3	20.4	161.6
MW-199B	8/14/2006	12:22	13:32	6	6.1	0.15	9.2	22.1	120.1
MW-200	8/16/2006	13:23	15:10	35	6.0	0.34	403	24.5	118.7
MW-201	8/24/2006	15:00	15:59	1	6.2	0.35	OR	32.5	82.2
MW-202A	8/24/2006	13:09	13:57	100	5.5	0.31	62.7	25.4	192.1
MW-202B	8/24/2006	12:39	17:02	4	7.1	0.36	N/A	23.4	134.5
MW-200	12/14/2007	13:50	14:40	47	6.1	0.32	7.8	19.8	118.7
MW-202A	12/14/2007	9:54	11:35	137	5.8	0.23	10.0	19.3	192.1
MW-202B	12/14/2007	12:04	13:15	4	6.7	0.61	OR	20.6	134.5
MW-203A	4/4/2007	11:50	16:13	1118	5.8	0.82	0.0	19.0	158.2
MW-203B	4/24/2007	10:50	12:24	275	6.0	0.91	5.0	19.4	107.5
MW-204A	4/20/2007	14:40	8:04	825	6.3	0.79	6.2	18.8	147.9
MW-204B	4/20/2007	9:00	11:21	345	6.4	0.82	1.2	20.2	109.6
MW-205A	4/19/2007	7:40	11:20	831	6.3	0.65	0.0	19.1	156.2
MW-205B	4/19/2007	13:46	14:09	302	6.2	0.65	9.2	19.9	112.0
MW-206A	4/4/2007	16:12	8:23	303	6.0	0.88	0.0	18.9	142.4
MW-206B	4/4/2007	9:10	10:38	286	6.0	0.80	0.0	19.7	112.6
MW-207A	3/22/2007	8:40	14:42	390	6.1	0.90	2.4	NR	165.2
MW-207B	3/23/2007	15:26	9:44	250	5.9	0.76	2.4	NR	123.6
MW-208A	4/3/2007	12:07	14:02	499	5.9	0.89	0.0	19.4	197.0
MW-208B	4/3/2007	14:40	15:24	197	5.6	0.56	0.0	20.8	121.9
MW-209A	4/18/2007	9:03	12:20	595	6.1	0.44	9.9	19.8	204.7
MW-209B	4/18/2007	12:59	14:03	246	5.8	0.27	0.0	20.7	117.5
MW-210A	4/24/07-4/25/07	15:20	11:30	1170	6.2	0.79	1.2	19.3	192.3
MW-210B	4/24/2007	13:20	14:46	325	5.8	0.59	4.2	22.3	112.2
MW-211	4/3/2007	7:50	11:11	1096	5.7	0.76	0.0	20.1	181.5
MW-212[1]	4/18/2007	14:50	16:54	7	-	-	-	-	100.9
MW-213[2]	4/18/2007	15:15	15:40	0	-	-	-	-	92.1
MW-214A	3/22/2007	13:50	16:21	175	5.8	0.89	5.5	NR	134.2
MW-214B	3/21/2007	16:33	17:28	40	6.8	0.90	9.0	NR	116.9
MW-215A	3/21/2007	9:00	9:22	293	5.9	0.94	6.9	NR	144.0
MW-215B	3/21/2007	10:30	12:25	125	6.0	0.95	6.4	NR	120.6
MW-216	4/23/07-4/24/07	16:03	8:50	202	5.7	0.48	1.4	19.4	115.2
MW-217	4/23/2007	11:20	14:55	160	6.3	0.42	9.8	22.5	117.0
MW-218	3/20/2007	12:47	13:00	245	5.7	0.74	0.0	22.7	114.0
MW-219	4/25/2007	12:30	15:27	430	6.1	0.61	9.3	19.7	112.9

Notes:
1) MW-212 bailed dry 3 times, no measurements
2) MW-213 was dry
N/A: Not Applicable
OR: Out of Range

TABLE 4
WELL ABANDONMENT SUMMARY
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Northing	Easting	Date Installed	Aquifer	Total Depth (ft, btoc)	Date Abandoned	Rationale for Abandonment
MW-100	276590.49	800852.83	October 2001	Fluvial	128.5	8/24/2006	Wells damaged during installation, not usable
MW-102	275760.10	800716.10	November 2003	Fluvial	141.5	8/24/2006	
MW-105	276698.44	806316.91	May 2002	Fluvial	100.0	8/24/2006	Wells installed for EBT Treatbility Study; no longer needed.
MW-106	276708.07	806309.98	April 2002	Fluvial	107.5	8/24/2006	
MW-109	276707.71	806302.56	May 2002	Fluvial	103.0	8/24/2006	
MW-110	276707.51	806294.48	May 2002	Fluvial	102.0	8/24/2006	
MW-111	276690.51	806287.67	April 2002	Fluvial	99.0	8/24/2006	
MW-112	276690.57	806305.80	April 2002	Fluvial	100.0	8/24/2006	
MW-114	276695.47	806296.33	April 2002	Fluvial	102.0	8/24/2006	
MW-116	276593.32	800803.79	April 2002	Fluvial	108.5	8/24/2006	
MW-117	276582.76	800816.22	May 2002	Fluvial	109.0	8/24/2006	
MW-118	276587.70	800815.05	May 2002	Fluvial	100.0	8/24/2006	
MW-119	276599.18	800812.21	May 2002	Fluvial	100.0	8/24/2006	
MW-120	276589.30	800809.53	April 2002	Fluvial	105.0	8/24/2006	
MW-121	276594.20	800808.20	April 2002	Fluvial	102.0	8/24/2006	
MW-122	276604.07	800810.28	May 2002	Fluvial	108.5	8/24/2006	
MW-123	276586.10	800820.53	April 2002	Fluvial	105.0	8/24/2006	
MW-124	276603.07	800816.13	May 2002	Fluvial	105.0	8/24/2006	
IW-02	276714.75	806324.06	April 2002	Fluvial	106.0	8/24/2006	
IW-03	276706.78	806317.92	April 2002	Fluvial	105.0	8/24/2006	
IW-04	276705.54	806311.11	April 2002	Fluvial	106.0	8/24/2006	
IW-05	276585.57	800787.32	April 2002	Fluvial	114.0	8/24/2006	
IW-07	276593.69	800791.35	May 2002	Fluvial	110.5	8/24/2006	
IW85-03	276815.79	806167.69	July 2006	Fluvial	83.5	2/2/2007	Wells installed in perched zone.
PMW85-02	276763.90	806164.75	May 2006	Fluvial	86.0	2/2/2007	
PMW85-03	276752.66	806217.26	May 2007	Fluvial	78.7	2/2/2007	
MW-201	276660.71	805218.45	August 2006	Fluvial	82.1	6/16/2007	
MW-36	279531.02	802887.01	December 1989	Intermediate	209.0	8/2/2007	Wells on property transferred through FOST 4.
MW-84	279531.09	802878.65	May 2001	Fluvial	90.0	8/2/2007	

1015 36

TABLE 5
WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

				19-Sep-2006		22-Jan-2007		4-May-2007		6-Jul-2007		27-Sep-2007	
Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (LS-3) (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)
MW-16	Fluvial	299.86	242.26	57.75	242.11	57.96	241.90	58.04	241.82	58.27	241.59	--	--
MW-19	Fluvial	290.57	207.47	85.51	205.06	85.72	204.85	87.60	202.97	86.14	204.43	86.45	204.12
MW-21	Fluvial	295.00	202.90	--	--	91.67	203.33	--	--	--	--	92 01	202.99
MW-22	Fluvial	298.04	202.64	92.19	205.85	94.58	203.46	96.27	201.77	94.67	203.37	95.02	203.02
MW-23	Fluvial	298.99	197.79	96.61	202.38	96.82	202.17	96.79	202.20	96.76	202.23	97.30	201.69
MW-24	Fluvial	299.51	202.21	103 60	195.91	103.65	195 86	103.36	196.15	103.56	195.95	--	--
MW-25A	Fluvial	269.88	196.88	70.25	199.63	70.52	199.36	72.05	197.83	70.68	199.20	--	--
MW-26	Fluvial	303.69	206.09	98.20	205.49	98.73	204.96	100.50	203.19	98.44	205.25	99.05	204.64
MW-34	Intermediate	299.97	163.37	140.15	159.82	134.64	165.33	135.00	164.97	136.95	163.02	140 61	159.36
MW-36	Intermediate	310.24	117.94	159.73	150.51	148.51	161.73	151.31	158.93	155.49	154.75	--	--
MW-38	Intermediate	307.45	167.55	131.66	175.79	130.42	177.03	129.33	178.12	130.80	176.65	133.62	173.83
MW-39	Fluvial	296.28	200.78	101.29	194.99	101.45	194.83	101.21	195.07	101.41	194.87	--	--
MW-39A	Fluvial	298.45	150.53	101.69	196.76	101.67	196.78	101.49	196.96	101.75	196.70	--	--
MW-50	Fluvial	298.82	183 82	84.74	214.08	85.00	213.82	86.67	212.15	85.12	213.70	85.50	213.32
MW-52	Fluvial	279 26	185.26	78 04	201.22	78.48	200.78	80 06	199.20	78.62	200.64	--	--
MW-53	Fluvial	306.38	233.88	--	--	--	--	75 50	230.88	73.87	232.51	73.94	232.44
MW-55	Fluvial	292.08	228.08	70.49	221.59	70.78	221.30	72.57	219 51	71.23	220.85	--	--
MW-56	Fluvial	293.60	234.60	--	--	67.61	225.99	--	--	--	--	--	--
MW-58	Fluvial	290.51	233.51	--	--	63.78	226.73	--	--	--	--	--	--
MW-62	Fluvial	293 65	207.65	93.44	200.21	93.85	199.80	93.80	199.85	93.93	199.72	--	--
MW-63A	Intermediate	305.96	165.96	103.16	202.80	103.89	202.07	105.59	200.37	104.26	201.70	--	--
MW-63B	Intermediate	305.78	190 78	103.06	202.72	103.79	201.99	105.47	200.31	104.20	201.58	105.22	200.56
MW-64	Fluvial	304.21	202.21	106.11	198 10	106.29	197.92	106 06	198.15	106.42	197.79	107.01	197.20
MW-66A	Fluvial	284.22	209.60	77.38	206.84	77 62	206 60	79.45	204.77	77.85	206.37	--	--
MW-84	Intermediate	311.15	242.15	81.94	229.21	82.19	228.96	84.05	227.10	82.46	228.69	--	--
MW-85	Fluvial	304.13	208.23	--	--	98.00	206.13	--	--	--	--	98.44	205.69
MW-86	Fluvial	304.35	206.85	95.32	209.03	95.75	208.60	97.36	206.99	95.83	208.52	--	--
MW-88	Fluvial	305.15	223.15	79.25	225.90	79.37	225.78	81.42	223.73	79.70	225.45	79.84	225.31
MW-89	Intermediate	303.98	156.98	114.77	189.21	114.09	189.89	113 82	190.16	114.74	189.24	116.22	187.76
MW-90	Intermediate	304.19	189.19	114.92	189.27	114.45	189.74	114.23	189.96	115.04	189.15	116.32	187.87
MW-92	Fluvial	304.41	211.41	94.47	209.94	94.54	209.87	96.32	208.09	94.57	209.84	94.84	209.57
MW-93	Fluvial	294.08	202.08	99.15	194.93	99.27	194.81	98.54	195.54	99.38	194.70	100.22	193.86
MW-94A	Fluvial	303.00	193.38	106.76	196 24	106.78	196.22	106.46	196.54	107.00	196.00	--	--
MW-96	Fluvial	289.02	213.52	80.69	208.33	81.18	207.84	82.90	206.12	81.25	207.77	81.50	207.52
MW-97	Fluvial	297.44	199.94	96.85	200.59	97.01	200.43	96.93	200.51	96.94	200.50	97.58	199.86
MW-98	Fluvial	294.43	157.43	97.22	197.21	97.19	197.24	96.98	197.45	97.18	197.25	98.09	196.34
MW-99	Fluvial	285.33	193.83	85.29	200.04	85.31	200.02	87 07	198.26	85.56	199.77	--	--
MW-100B	Fluvial	291.06	183.56	88.73	202.33	88.64	202.42	90.67	200.39	89.12	201.94	--	--
MW-101	Fluvial	291.70	202.70	--	--	89.56	202.14	--	--	--	--	--	--
MW-102B	Fluvial	311.40	190.90	--	--	107.24	204.16	--	--	--	--	--	--
MW-103	Fluvial	301.35	231.35	69.21	232.14	69.33	232.02	63.01	238.34	69.50	231.85	69.59	231.76
MW-104	Fluvial	295.76	225.26	62.80	232.96	62.88	232.88	69.46	226.30	63.10	232.66	63.18	232.58
MW-107	Fluvial/Intermediate	304.92	176.92	107.87	197.05	108.35	196.57	108.19	196.73	108.82	196.10	110.10	194.82
MW-108	Fluvial/Intermediate	303.07	143.07	107.56	195.51	107.50	195.57	107.34	195.73	107.95	195.12	--	--

1015 37

TABLE 5
WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

1015 38

				19-Sep-2006		22-Jan-2007		4-May-2007		6-Jul-2007		27-Sep-2007	
Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (LS-3) (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)
MW-113	Fluvial	304.81	208.81	95.79	209.02	96.00	208.81	98.05	206.76	96.39	208.42	--	--
MW-115	Fluvial	291.92	202.17	--	--	89.39	202.53	--	--	--	--	89.85	201.82
MW-125	Fluvial	291.35	197.35	88.94	202.41	89.12	202.23	90.83	200.52	89.23	202.12	--	--
MW-140	Intermediate	298.12	73.52	148.73	149.39	137.10	161.02	138.32	159.80	143.69	154.43	146.82	151.30
MW-141	Intermediate	303.71	155.01	112.51	191 20	112 06	191.65	111.79	191.92	112.58	191.13	--	--
MW-142	Fluvial	291.18	206.18	91.71	199 47	91.85	199.33	91.81	199.37	91.89	199.29	--	--
MW-143	Fluvial	290.56	212 06	88.76	201.80	88.97	201.59	90.80	199.76	89 25	201.31	--	--
DR1-1	Fluvial	293.09	171.42	90.75	202.34	90.91	202.18	92.60	200.49	91.08	202.01	--	--
DR1-1A	Fluvial	293 13	203.79	90.70	202.43	90.82	202.31	92.51	200.62	90.96	202.17	--	--
DR1-2	Fluvial	290.08	192.28	88.81	201.27	88.94	201.14	90.62	199.46	89.11	200.97	--	--
DR1-3	Fluvial	290.93	181.26	--	--	90.80	200.13	--	--	--	--	91.49	199.44
DR1-4	Fluvial	292.78	186.50	90 91	201 87	91.05	201.73	92.76	200 02	91 21	201.57	91.60	201.18
DR1-5	Fluvial	294 50	169.28	91.91	202.59	92.08	202.42	93.79	200.71	92.20	202.30	--	--
DR1-5A	Fluvial	294.61	204.88	91.99	202.62	92.17	202.44	93.88	200.73	92.31	202.30	--	--
DR1-6	Fluvial	292.98	177.14	90.66	202.32	90 79	202.19	93.04	199.94	90.88	202.10	--	--
DR1-6A	Fluvial	293.14	202.32	90.74	202.40	90 89	202.25	92.60	200.54	91 04	202.10	--	--
DR1-7	Fluvial	289.15	180.86	89.25	199.90	89.31	199.84	90.99	198.16	89.55	199.60	90.04	199.11
DR1-8	Fluvial	290.02	197.37	87.97	202.05	88.13	201.89	89.85	200.17	88.30	201.72	88.68	201.34
DR2-1	Fluvial	304.90	231.00	--	--	87.09	217.81	--	--	--	--	88.03	216.87
DR2-2	Fluvial	304.37	225.37	81.21	223.16	81.00	223.37	83 38	220.99	81.69	222.68	--	--
DR2-3	Fluvial	303.44	210 44	96.01	207.43	96.48	206.96	98.28	205.16	96.60	206 84	--	--
DR2-4	Fluvial	303 47	215.47	93.36	210.11	93.74	209.73	95.47	208.00	93.81	209.66	--	--
DR2-5	Fluvial	305.44	220.44	--	--	95.74	209.70	--	--	--	--	96.08	209.36
DR2-6	Fluvial	304.70	210.10	99.99	204.71	100.54	204.16	102.31	202.39	100.70	204.00	101.00	203.70
PZ-03	Fluvial	298.51	189.61	101.99	196.52	101.92	196.59	101.67	196.84	102.15	196 36	--	--
PZ-06	Fluvial	302.74	213.34	71.21	231.53	71.80	230.94	72.14	230.60	72.41	230.33	--	--
PZ-07	Fluvial	304.72	203.42	97.80	206.92	98 40	206.32	101.29	203 43	98.13	206.59	--	--
IW-1	Fluvial	304.03	215.03	--	--	94.59	209 44	--	--	--	--	--	--
IW-6	Fluvial	291.94	192.94	89.24	202.70	89.48	202.46	91.35	200.59	89.77	202.17	--	--
MW-197A	Fluvial	291.26	129.30	93.35	197.91	93.37	197.89	93.24	198.02	93.39	197.87	--	--
MW-197B	Fluvial	291.03	196.88	93.25	197.78	93.26	197.77	93.14	197.89	93.30	197.73	94.08	196.95
MW-198	Fluvial	291.50	201.47	93.90	197.60	94.01	197.49	93.98	197.52	94.05	197.45	94.81	196.69
MW-199A	Fluvial	301.53	155.45	109.11	192.42	108.76	192 77	108.53	193 00	109.22	192.31	--	--
MW-199B	Fluvial	301.73	197.12	104.95	196.78	104.98	196.75	104.85	196.88	105.04	196.69	105.90	195.83
MW-200	Fluvial	300.18	196 98	103.77	196.41	103.85	196.33	103.65	196.53	104.08	196.10	--	--
MW-201	Fluvial	304.23	237.31	--	--	--	--	--	--	--	--	--	--
MW-202A	Intermediate	299.23	122.73	125.73	173.50	122.48	176.75	122.02	177.21	124.20	175.03	--	--
MW-202B	Intermediate	299.51	180.42	123.82	175.69	123.12	176.39	122 90	176.61	123.01	176.50	124.91	174.60
MW-203A	Fluvial	290.59	147.65	--	--	--	--	91.79	198.80	91.94	198.65	--	--
MW-203B	Fluvial	290.51	197 68	--	--	--	--	91.72	198.79	91.86	198.65	--	--
MW-204A	Fluvial	292.21	158.95	--	--	--	--	94.32	197.89	94.50	197.71	--	--
MW-204B	Fluvial	292.32	197.83	--	--	--	--	94.34	197.98	94.51	197.81	--	--
MW-205A	Fluvial	291.93	150.96	--	--	--	--	94.64	197.29	94.85	197.08	--	--

TABLE 5
WATER LEVEL MEASUREMENTS
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

				19-Sep-2006		22-Jan-2007		4-May-2007		6-Jul-2007		27-Sep-2007	
Well ID	Aquifer	Top of Casing Elevation (ft, msl)	Top of Screen Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (LS-3) (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)	Depth to Water (ft, btoc)	Groundwater Elevation (ft, msl)
MW-205B	Fluvial	291 82	194.82	--	--	--	--	94.44	197.38	94.62	197.20	--	--
MW-206A	Fluvial	299.92	172.58	--	--	--	--	103.49	196.43	104.00	195.92	--	--
MW-206B	Fluvial	299.90	203.18	--	--	--	--	103.43	196 47	103.93	195.97	--	--
MW-207A	Fluvial/Intermediate	303.78	154.13	--	--	--	--	108.01	195.77	108.55	195.23	--	--
MW-207B	Fluvial	303.83	195.58	--	--	--	--	107.69	196.14	108.18	195.65	--	--
MW-208A	Fluvial	301.50	118.05	--	--	--	--	105.39	196.11	105.93	195.57	--	--
MW-208B	Fluvial	301.79	195.13	--	--	--	--	105.42	196.37	105.90	195.89	--	--
MW-209A	Fluvial	298.05	109 07	--	--	--	--	103.73	194.32	104.25	193.80	--	--
MW-209B	Fluvial	298.49	196.17	--	--	--	--	101.59	196.90	101.83	196.66	--	--
MW-210A	Fluvial/Intermediate	289.66	112.60	--	--	--	--	98.31	191.35	99.39	190.27	--	--
MW-210B	Fluvial	289.29	192.33	--	--	--	--	91.60	197.69	91.80	197.49	--	--
MW-211	Intermediate	303.74	137.48	--	--	--	--	109.01	194.73	109.48	194.26	110.88	192.86
MW-212	Fluvial	295.34	209.69	--	--	--	--	97.67	197.67	97.73	197.61	--	--
MW-213	Fluvial	293.83	216.92	--	--	--	--	92.12	201.71	91.78	202.05	--	--
MW-214A	Fluvial	303.61	184.53	--	--	--	--	102.85	200.76	103.22	200.39	--	--
MW-214B	Fluvial	303.70	202.13	--	--	--	--	102.50	201.20	102.77	200.93	103 75	199.95
MW-215A	Fluvial	304.50	175.75	--	--	--	--	108.25	196.25	108.77	195.73	--	--
MW-215B	Fluvial	304.56	199 15	--	--	--	--	108.34	196.22	108.83	195.73	--	--
MW-216	Fluvial	297.34	197.41	--	--	--	--	96.60	200.74	96.69	200 65	--	--
MW-217	Fluvial	304.18	202.39	--	--	--	--	108.00	196.18	106.60	197.58	107.08	197.15
MW-218	Fluvial	305.60	206.69	--	--	--	--	102.83	202.77	102.80	202.80	--	--
MW-219	Fluvial	294.90	197.16	--	--	--	--	92.19	202.71	91.33	203.57	--	--
MW-229	Intermediate	311.77	123.34	--	--	--	--	--	--	--	--	160.61	151.16

Notes:
--: Not Measured

1015 39

TABLE 6
WELL STABILIZATION SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Sample Time	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
DR1-1	10/23/2006	DP	14:04	133.8	90.9	100	2.1	6.0	21.3	0.37	4.70	152	2.7
DR1-1A	10/2/2006	DP	14:45	101.3	90.6	160	3.8	6.1	24.3	0.30	6.21	362	0.0
DR1-2	10/24/2006	DP	14:49	109.1	89.0	183	4.2	6.0	20.4	0.36	4.90	156	7.9
DR1-4	10/25/2006	DP	9:48	117.6	91.0	160	3.6	6.2	17.6	0.49	7.40	-30	1.2
DR1-5	10/24/2006	DP	10:36	136.3	92.0	120	16.8	5 8	19.6	0.29	4.60	191	40.3
DR1-5A	10/23/2006	DP	14:57	102.3	92.1	180	6.3	5.7	19.7	0.15	7.10	197	6.7
DR1-6	10/24/2006	DP	12:47	126.6	90.8	262	7.2	6.0	20.4	0.35	5.60	167	12.9
DR1-6A	10/24/2006	DP	11:53	102.8	90.9	200	3.4	5.7	20.3	0.13	7.60	197	4.3
DR1-7	10/25/2006	DP	8:52	120.3	89 4	180	13.4	6.0	17.5	0.32	5.20	180	17.9
DR1-8	10/18/2006	DP	10:30	103.5	89 8	200	3.6	5.5	21.1	0.29	7.71	149	4.6
DR2-2	10/3/2006	DP	9:08	88.6	N/A	35	0.7	5.8	26.1	0.28	4.50	352	3.5
DR2-3	10/3/2006	DP	12:16	102.6	102.1	95	2.0	5.7	26.3	0.41	4.20	320	0.3
DR2-4	10/5/2006	DP	10:12	102.0	93.4	120	10.0	5.8	22.6	0.33	3.50	358	24.3
DR2-6	10/17/2006	DP	12:45	109.2	102.4	200	3.3	5.5	20.7	0.21	1.99	195	1.5
IW-6	10/18/2006	DP	9:15	105.6	92.4	100	16.5	7.8	20.8	1.61	3.15	-12	16.9
MW-16	10/16/2006	PP	13:16	64.0	57.5	208	9.4	5.9	19.1	0.50	9.20	-49	18.0
MW-19	10/17/2006	PP	13:15	87.0	84.4	170	13 6	6.0	19.6	0.14	6.50	173	13.9
MW-22	10/18/2006	PP	11:41	101.0	94.4	140	8.0	6.1	20.2	0.49	5.20	131	15.9
MW-23	10/18/2006	PP	13:59	107.0	96.7	160	7.8	6.1	20.4	0.42	4.90	105	11.5
MW-24	10/18/2006	PP	16:19	108.0	103.7	160	11 0	5.7	19.9	0.24	5.70	171	19.5
MW-25A	10/2/2006	DP	12:50	79.0	70.3	168	4 5	5.8	19.9	0.37	7.00	366	0.0
MW-26	10/2/2006	DP	8:39	104.1	98.3	240	2 4	5.2	21.0	0.31	6.49	139	2.3
MW-34	10/16/2006	DP	13:46	148.9	139.3	160	8.0	5.6	18.2	0.19	6.40	149	1.0
MW-36	10/16/2006	DP	12:00	202.7	156.5	230	30.0	6.6	17.9	0.31	7.90	-26	1000.0
MW-38	10/17/2006	DP	11:10	147.0	131.8	238	7.4	5.6	19.1	0.22	7.20	166	2.0
MW-39	10/17/2006	DP	9:15	110.1	101.3	247	5.6	5.7	19.3	0.32	8.50	149	2.0
MW-39A	10/17/2006	DP	8:25	161.6	101.4	185	10.4	5.6	19.0	0.33	6.50	150	1.0
MW-50	10/18/2006	PP	14:45	121.0	84 8	110	11.5	5.8	23.3	0.78	3.65	123	16.8
MW-52	10/2/2006	DP	10:10	97.4	78.5	200	12.4	6.0	19.8	1.01	10.01	214	0.0
MW-53	10/17/2006	PP	8:38	78.0	73.2	140	10.3	5.8	19 6	0.47	1.70	83	9.9
MW-55	10/16/2006	PP	10:30	72.0	70.4	140	9.1	5.7	19.4	0.17	7.10	192	13.9
MW-62	10/4/2006	DP	14:30	96.5	93.4	24	1.4	6.6	26.7	0.13	6.50	158	OR
MW-63A	10/23/2006	DP	10:54	136.1	103.8	140	3.6	5.8	20 3	0.41	2.80	172	4.9
MW-63B	10/23/2006	DP	11:40	120.8	103.7	160	5.1	5.7	19.9	0.54	1.50	175	2.8
MW-64	10/23/2006	DP	9:42	110.4	106.6	200	6.9	5.8	18 2	0.27	4.50	176	6.0
MW-66A	10/18/2006	PP	12:08	85.6	77.5	120	13.0	5.9	21.7	0.27	5.38	208	20.3
MW-84	10/17/2006	PP	10:33	86.0	82.0	140	9.5	5.5	18 5	0.15	5.20	190	5.2
MW-86	10/25/2006	DP	12:08	108.1	95.2	478	13.4	6.1	20.8	0.64	1.70	-84	3.0
MW-88	10/3/2006	DP	10:10	87.0	79.3	50	1.8	5.9	24.2	0.31	3.00	363	7.2
MW-89	10/24/2006	DP	9:48	164.3	115.0	326	9.8	5.6	17.9	0.23	7.20	160	2.0
MW-90	10/24/2006	DP	10:35	130.6	115.3	533	16.0	5.5	18.2	0.59	5.70	146	2.0
MW-92	10/5/2006	DP	10:15	102.1	94.5	180	10.0	4.5	24.9	0.23	4.70	198	29.4
MW-93	10/17/2006	PP	9:15	103.0	99.3	102	7.5	5.7	19.7	0.19	5.61	142	18.1
MW-94A	10/24/2006	DP	13:02	117.5	107.0	475	13.8	5.7	19.3	0.34	5.00	115	1.0
MW-96	10/2/2006	DP	11:50	89.2	80.8	154	7.1	5.9	20.7	0.27	7.79	348	0.0
MW-97	10/25/2006	DP	12:30	109.2	97.0	300	28.5	5.7	18.2	0.16	4.50	183	19.5

1015 40

TABLE 6
WELL STABILIZATION SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Sample Time	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-98	10/25/2006	DP	9:44	142.6	97.4	232	28.4	5.6	18.0	0.29	5.50	146	94.0
MW-99	10/18/2006	PP	10:06	102.0	85.3	160	15.9	5.7	21.2	0.26	5.50	168	18.7
MW-100B	10/23/2006	DP	12:57	118.5	89.0	200	6.2	5.9	19.5	0.42	5.80	-67	5.4
MW-102B	10/19/2006	PP	14:20	131.0	107.0	263	33.7	6.5	18.1	0.50	10.87	163	346 0
MW-103	10/3/2006	DP	9:50	80.0	69.2	136	30.8	6.5	20.9	0.89	1.81	137	23 6
MW-104	10/3/2006	DP	12:50	77.2	62.8	160	13.5	5.8	23.6	0.70	1.90	136	103 0
MW-107B	10/17/2006	PP	12 31	153.0	107.8	416	15.0	5.4	18.7	0.18	7.10	177	6.0
MW-107T	10/17/2006	PP	13:26	136.0	108.1	455	16.8	5.5	19.3	0.18	6.50	189	4.0
MW-108	10/24/2006	DP	12:12	167.9	108.0	138	9.8	5.5	18.8	0.54	3.00	137	16.0
MW-113	10/23/2006	DP	8:27	103.2	96.1	160	3.8	5.6	20.4	0.20	2.50	169	13.2
MW-125	10/2/2006	DP	13:52	102.3	88.9	200	3.5	5.9	22.9	0.25	8 15	268	0.0
MW-140	10/23/2006	DP	9:00	238.5	144.3	233	7.0	5.5	17.0	0.25	10 30	95	1.0
MW-141	10/23/2006	DP	10:04	161.0	113.0	446	13.4	5.4	18.0	0.49	2 30	120	3 0
MW-142	10/2/2006	DP	12:55	96.9	91.8	140	2.1	4.6	23.1	0.19	8.13	149	1.6
MW-143	10/19/2006	PP	8:37	94.0	88.8	145	5.3	5.7	18.2	0.21	5.40	314	12.9
MW-197A	10/24/2006	DP	15:05	170.4	93.6	210	16.4	5.9	18.8	0.34	3.00	68	24 0
MW-197B	10/2/2006	DP	11:10	102.6	93.4	180	12.1	5.7	21.2	0.30	5 21	91	19.2
MW-198	10/2/2006	DP	11:58	100.5	94.1	200	3.2	5.6	22.7	0.18	6 24	101	3 1
MW-199A	10/23/2006	DP	11:39	154.6	109 5	205	14.2	5.9	18 6	0.23	4.00	22	10.0
MW-199B	10/23/2006	DP	12:32	113.3	105.3	205	7.4	5.5	18 5	0.11	7.50	110	3.0
MW-200	10/24/2006	DP	10:38	112.0	104 0	366	11.0	5.9	17.5	0.35	2.70	-6	2.0
MW-201	10/18/2006	BA	10:45	–	81 8	Bailed Dry	1.7	8.5	19.6	0.33	5.62	-2	OR
MW-202A	10/23/2006	DP	15:03	185.0	125.2	250	30.0	5.5	18.6	0.24	2.80	107	85.0
MW-202B	10/24/2006	DP	8:49	129.9	124.1	133	8.8	6.5	15.5	0.57	3.60	-89	6.0
PZ-03	10/5/2006	BA	N/A	–	102.1	Bailed Dry	1.1	4.6	23.5	0.20	11.00	215	OR
PZ-06	10/4/2006	BA	13:11	–	71.5	Bailed Dry	6.3	6.2	20.8	0.38	6 40	248	OR
PZ-07	10/5/2006	BA	7:30	–	97.5	Bailed Dry	3.4	6.3	26.6	0.25	2.00	-35	268.0

Notes
–: No Data
BA Bailer
DP: Dedicated bladder pump
N/A: Not Applicable
OR: Out of Range
PP: Portable bladder pump

TABLE 7
WELL STABILIZATION SUMMARY, JANUARY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Sample Time	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-197A	1/24/2007	DP	12:29	170.4	93.55	360	25.3	6.0	17.5	0.40	5.25	147	6.6
MW-197B	1/24/2007	DP	8:37	102.6	93.43	120	4.5	6.1	14.7	99.9*	0.00	148	0.0
MW-198	1/24/2007	DP	11:29	100.5	94.10	150	6.3	5.9	18.1	0.9*	5.22	365	0.0
MW-199A	1/24/2007	DP	11:04	154.6	109 50	200	8.3	5.9	17.2	0.24	4.72	55	13.6
MW-199B	1/24/2007	DP	12:31	113.3	105 30	180	4.8	5.8	16.9	0.9*	4.85	320	0.0
MW-200	1/24/2007	DP	9:28	112.0	104.00	180	5.7	6.1	16.5	99.9*	0.00	145	0.0
MW-202A	1/24/2007	DP	8:11	185.0	125.20	200	6.0	5.8	17.0	0.28	2.27	131	5.3
MW-202B	1/24/2007	DP	9:59	129.9	124.08	300	13.9	6.3	17.2	0.61	0.31	-71	15.8

Notes:
*: Conductivity probe inoperable
DP: Dedicated bladder pump

1015 42

TABLE 8
WELL STABILIZATION SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Sample Time	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	4/13/2007	DP	13:22	101.3	92.7	150	1.3	6.0	18.5	0.55	7.06	156	4.2
DR1-4	4/13/2007	DP	16:15	117.6	92.8	475	6.2	6.7	17.4	0.93	0.82	-121	1.8
DR1-5	4/16/2007	DP	10:00	136.3	92.3	180	6.0	5.2	18.9	0.28	5.68	266	12.4
DR1-5A	4/13/2007	DP	13.58	102 3	94.0	400	3.1	5.8	18.3	0.28	8.16	167	4.6
DR1-6	4/13/2007	DP	15:18	126.6	92.7	250	3.1	6.0	17.4	0.72	5.25	161	17.6
DR1-6A	4/13/2007	DP	14:36	102.8	92.8	460	3.2	5.8	18.5	0.25	8.11	167	4.9
DR2-2	4/13/2007	DP	16:35	88.6	81.7	120	3.9	5.9	17.8	0.20	5.18	263	10.5
DR2-3	4/15/2007	DP	10:29	102.6	98.4	210	1.6	5.7	16.2	0.67	6.24	230	4.1
DR2-6	4/15/2007	DP	11:23	109.2	102.5	200	3.1	5.7	18.5	0.40	1.49	240	2.5
MW-100B	4/13/2007	DP	8.19	118.5	90.9	560	6.3	6.2	18.1	0.77	2.07	-95	5.7
MW-104	4/13/2007	DP	11:40	77.2	65.0	250	17.3	5.6	17.9	1.00	2.09	170	63.2
MW-108	4/16/2007	DP	11:35	167.9	107.6	360	52.2	5.7	18.1	1.00	2.22	244	20.6
MW-113	4/16/2007	DP	7:56	103.2	98.2	540	5.6	5.7	20.3	0.40	3.19	176	2.7
MW-125	4/13/2007	DP	9:09	102.3	91.1	200	2.7	5.9	17.8	0.47	3.10	124	0.1
MW-141	4/17/2007	DP	8:43	161.0	111.9	240	12.8	5.7	18.0	1.00	1.13	211	4.0
MW-197A	4/13/2007	DP	14:39	170.4	93.5	280	38.5	6.0	17.2	0.60	4.90	250	19.9
MW-197B	4/13/2007	DP	15:05	102.6	93.4	280	7.2	6.0	17.3	5.87	4.83	192	2.5
MW-198	4/15/2007	DP	12:17	100.5	95.8	260	4.2	5.8	18.6	0.29	8.38	269	17.5
MW-199A	4/13/2007	DP	15:57	154.6	108.8	280	8.5	5.8	17.1	0.38	4.58	106	17.7
MW-199B	4/13/2007	DP	16:30	113.3	104.9	400	9.7	5.7	17.6	0.20	7.42	243	0.0
MW-200	4/15/2007	DP	13:30	112.0	105.5	240	8.4	6.0	18.0	0.63	5.09	186	13.8
MW-202A	4/16/2007	DP	15:45	185.0	121.9	310	13.6	5.6	19.3	5.07	2.86	200	18.1
MW-202B	4/16/2007	DP	16:57	129.9	121.6	400	11.3	6.2	20.0	1.00	0.41	-47	18.6
MW-203A	4/17/2007	DP	9:45	150.5	91.9	280	5 8	6.6	18.5	1.00	0.06	-111	3.6
MW-203B	4/26/2007	DP	9:44	100.3	91.8	240	10.9	6.4	17.9	1.00	1.89	49	14.5
MW-204A	4/23/2007	DP	15 15	139.0	96.1	400	7.6	5.8	19.8	0.90	4.67	63	7.4
MW-204B	4/23/2007	DP	16:10	100.5	96.1	200	8.1	6.1	21.3	0.90	2.12	22	12.3
MW-205A	4/23/2007	DP	14:36	147.0	96.5	240	10 0	6.2	20.7	0.88	0.38	-53	10.1
MW-205B	4/23/2007	DP	12:33	103.1	96.3	240	10 5	6.0	20.7	0.76	5.78	42	17.0
MW-206A	4/15/2007	DP	15:35	134.8	105.4	140	3 3	6.2	17.9	0.67	1.17	-20	16.7
MW-206B	4/15/2007	DP	16:18	107.9	105.4	130	1.4	6.0	17.5	0.58	2.48	52	10.4
MW-207A	4/16/2007	DP	8:30	157.2	108.3	280	12.0	6.3	18.6	1.00	0.00	-102	8.7
MW-207B	4/16/2007	DP	9:20	115.6	108.0	280	9.8	5.9	19.0	0.54	2.03	13	3.3
MW-208A	4/16/2007	DP	13:42	191.0	105.6	240	4 4	5.9	19.8	0.69	3.59	41	0.1
MW-208B	4/16/2007	DP	14:35	114.2	105.9	240	6.3	5.6	19.3	0.41	4.85	82	0.0
MW-209A	4/23/2007	DP	9:30	195.3	103.8	200	6.8	6.0	20.2	0.44	6.80	93	6.4
MW-209B	4/23/2007	DP	11:35	108.3	103.5	260	11.8	5.7	21.1	0.29	3.43	88	19.1
MW-210A	4/27/2007	DP	10:50	184.5	98.3	240	7.6	6.3	18.9	0.63	7.89	74	13.4
MW-210B	4/27/2007	DP	12:45	104.5	91.8	120	11.6	6.2	19.7	0.55	5.18	51	17.7
MW-211	4/16/2007	DP	12:45	174.0	109.3	280	16.7	6.0	19.6	0.65	1.47	23	12.0
MW-212	4/27/2007	BA	11:20	–	97.7	N/A	6.0	6.2	19.0	0.90	5.34	10	268.0
MW-213	4/27/2007	N/A	DRY	–	–	–	–	–	–	–	–	–	–
MW-214A	4/16/2007	DP	15:47	126.6	103.1	120	5.8	5.8	21.9	3.79	4.60	200	9.3
MW-214B	4/17/2007	DP	8:27	109.6	102.7	160	9.9	5.6	19.0	0.85	6.55	148	9.1
MW-215A	4/16/2007	DP	15:04	136.3	110.3	150	6.9	5.8	22.0	0.61	4.71	149	37.2
MW-215B	4/16/2007	DP	16:33	114.4	110.3	160	3.8	5.9	21.1	0.64	5.41	93	12.4

1015 43

TABLE 8
WELL STABILIZATION SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Sample Time	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-216	4/27/2007	DP	10:11	107.4	96.9	120	4.6	6.1	18.2	0.90	5.36	36	6.7
MW-217	4/27/2007	DP	8:47	111.0	106.4	60	1.2	6.0	19.2	0.48	7.28	109	6.0
MW-218	4/17/2007	DP	9:57	108.2	104.5	180	5.2	6.1	21.8	0.49	5.97	64	16.8
MW-219	4/27/2007	DP	12:26	105.2	91.5	120	3.2	6.0	19.6	0.90	3.87	13	18.4
MW-25A	4/13/2007	DP	12:40	79.0	70.5	240	16.7	5.9	16.3	0.37	5.09	272	1.6
MW-26	4/16/2007	DP	12:28	104.1	100.6	320	3.0	5.6	20.8	0.65	5.47	171	3.2
MW-39	4/13/2007	DP	8:35	110.1	101.5	280	6.3	6.0	17.5	0.61	5.75	230	2.1
MW-39A	4/13/2007	DP	9:15	161.6	101.8	280	4.9	6.0	17.7	0.62	5.98	264	0 0
MW-52	4/16/2007	DP	9:03	97.4	78.5	200	5.9	5.7	17.6	1.00	3.92	210	8.4
MW-62	4/17/2007	BA	13:10	–	95.8	Bailed Dry	–	–	–	–	–	–	–
MW-64	4/17/2007	DP	10:44	110.4	107.8	267	2.8	6.1	21.8	0.56	5.63	155	10.0
MW-86	4/16/2007	DP	8:28	108.1	97.5	720	4.1	6.2	20.4	0.96	0.52	-97	4.7
MW-88	4/13/2007	DP	15:30	87.0	80.5	100	4.6	6.0	17.5	0.28	3.61	234	6.3
MW-90	4/16/2007	DP	10:40	130.6	115.0	250	7.5	5.4	18.4	0.60	4.44	268	2.4
MW-92	4/16/2007	DP	11:36	102.1	96.4	140	15.7	6.4	21.4	0.66	0.67	-61	18.7
MW-94A	4/16/2007	DP	14:30	117.5	106.8	260	20.0	6.0	19.6	2.61	6.55	278	1.8
MW-96	4/16/2007	DP	8:23	89.2	81.4	240	9.1	5.9	18.3	0.29	5.55	257	11.6
MW-97	4/16/2007	DP	12:10	109.2	97.3	240	31 8	6.1	18.6	0.19	5.52	184	17.1
MW-98	4/13/2007	DP	11:35	142.6	97.5	320	45.4	5.8	18.3	0.54	3.99	268	39.9

Notes
–: No Data
BA: Bailer
DP: Dedicated bladder pump
N/A: Not Applicable

1015 44

TABLE 9
WELL STABILIZATION SUMMARY, JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Sample Time	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-197A	7/9/2007	DP	9:40	170.4	93.6	400	22.0	5.9	18.7	0.44	4.76	191	16.4
MW-197B	7/9/2007	DP	11:00	102.6	93.5	260	13.1	5.9	19.8	0.42	2.90	188	4.8
MW-198	7/10/2007	DP	12:56	100.5	94.1	240	5.5	5.8	21.1	0.13	6 80	135	4.6
MW-199A	7/12/2007	DP	14:15	154 6	109.4	340	12.1	5.7	20.0	0.31	4.52	60	11.6
MW-199B	7/11/2007	DP	10:45	113 3	105 2	400	27.5	5.9	19.9	0.18	6.96	151	13.8
MW-200	7/10/2007	DP	8:50	112.0	103.9	600	8.0	5.8	19.0	0.29	5.14	144	9.3
MW-202A	7/11/2007	DP	14:30	185.0	124.3	260	18.3	5.8	19.9	0.40	2.40	167	13.2
MW-202B	7/11/2007	DP	10:53	129.9	**	240	5.7	6.1	22.0	0.47	0.68	10	16.4
MW-203A	7/9/2007	DP	12:10	150.5	92.5	280	9.3	6.1	19.4	0.48	0.00	-119	8.5
MW-203B	7/9/2007	DP	13:56	100.3	92.2	280	8.6	6.2	20.1	0.68	0.00	6	17.5
MW-204A	7/10/2007	DP	12:15	139.0	94.8	380	21.2	6.1	19.4	0.59	5.12	158	17.6
MW-204B	7/11/2007	DP	12:55	100.5	94.9	100	2.3	6.0	23.5	0.32	5.53	114	3.6
MW-205A	7/10/2007	DP	10:08	147.0	95.1	380	23 4	6.1	19.1	0.50	2.34	27	6.2
MW-205B	7/10/2007	DP	8:40	103.1	94.9	300	13 6	6 0	20 5	0.46	3.99	159	4.8
MW-206A	7/11/2007	DP	12:27	134.8	103.9	380	24 9	6 0	19.6	0.46	4.46	47	12.4
MW-206B	7/11/2007	DP	13:20	107.9	103.8	360	14.3	6.0	19.8	0.44	3.90	135	18.1
MW-207A	7/10/2007	DP	14:00	157.2	108.4	380	12.4	6.0	20.3	1.89	0.00	-96	5.3
MW-207B	7/11/2007	DP	9:10	115.6	**	200	4.1	5.7	21.7	0.21	5.27	109	1.5
MW-208A	7/10/2007	DP	15:45	191.0	**	300	8.2	6.0	20.2	0.49	4.94	108	13.4
MW-208B	7/11/2007	DP	10:04	114.7	**	200	3.3	5.5	20.6	0.19	6 60	135	3.8
MW-209A	7/11/2007	DP	15:55	195.3	**	360	9.2	5.9	20.0	0.33	6 71	128	9.0
MW-209B	7/11/2007	DP	11:40	108.3	**	120	2.2	5.7	23.4	0.10	6 57	157	9.2
MW-210A	7/9/2007	DP	15:50	184.5	99.7	380	18.5	6.0	21.3	0.40	5 41	147	10 0
MW-210B	7/9/2007	DP	16:45	104.5	92 0	280	9.6	5.9	21.4	0.31	3.72	100	10.3
MW-211	7/10/2004	DP	13:55	174.0	109.6	380	16.1	5.9	19.8	0.44	2.61	71	9.1
MW-212	7/9/2007	BA	12:05	100.9	97.8	N/A	6.0	6.2	20.5	0.14	6.27	28	195.0
MW-213	7/9/2007	N/A	DRY	–	–	–	–	–	–	–	–	–	–
MW-214A	7/10/2007	DP	15:55	126.6	**	120	6.2	5.7	22.8	0.26	4.02	105	17.5
MW-214B	7/11/2007	DP	8:25	109.6	**	180	7.6	5.3	21.7	0.29	3.14	151	1.9
MW-215A	7/10/2007	DP	13:57	136.3	**	120	2.9	5.8	23 5	0.26	4.28	106	3.1
MW-215B	7/9/2007	DP	16:25	114.4	108.7	200	3.4	5.7	23.5	0.32	4.75	98	17.1
MW-216	7/10/2007	DP	11:45	107.4	96.8	120	11.1	6.0	21.0	0.35	5.79	117	19.9
MW-217	7/9/2007	DP	15:25	111.0	106 4	60	4.5	5.6	25.1	0.20	4.35	118	37.4
MW-218	7/9/2007	DP	8:50	108.2	102.7	200	7.2	5.5	23.2	0.24	3.36	136	2.1
MW-219	7/10/2007	DP	8:05	105.2	91.2	200	5.0	5.5	19.2	0.25	4.25	135	3.1

Notes:
*: Conductivity probe inoperable
**: waterlevel meter inoperable
--: No Data
BA: Bailer
DP: Dedicated bladder pump
N/A: Not Applicable

1015 45

TABLE 10
WELL STABILIZATION SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Sample Time	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	10/3/2007	DP	10:46	79.0	71.3	140	3.2	5.8	19.0	0.38	4.76	175.4	-4.0
MW-26	10/1/2007	DP	16.05	104.1	99.1	80	7.9	5.8	22.7	0.31	5.10	165.6	-3.2
MW-34	10/1/2007	DP	8:28	148.9	141.8	340	8.9	5.6	18.7	0.24	5.82	256.0	1.7
MW-38	10/1/2007	DP	10:57	147.0	133.6	220	3.4	5.9	20 7	0.92	5.73	222.0	1.8
MW-39	10/1/2007	DP	9:43	110.1	102.4	340	3.7	6.0	20 7	1.00	6.41	231.0	3.7
MW-39A	10/2/2007	DP	14:40	161.6	102.6	340	15.2	6.0	19 9	0.90	7.46	172.0	17.2
MW-52	10/3/2007	DP	10:00	97.4	79.2	140	4.5	5.9	19.8	1.05	3.80	152.4	-3.8
MW-62	10/3/2007	BA	14:22	N/A	94.1	N/A	1.6	6.5	20.1	0.12	6.71	118.7	3550.0
MW-63A	10/2/2007	DP	16:27	136.1	105.1	100	5.7	5.7	23.1	0.50	2.51	167.7	-4.3
MW-63B	10/2/2007	DP	15:25	120.8	105.1	120	4.7	5.7	24.6	0.61	2.45	185.5	-4.2
MW-64	10/3/2007	DP	8:35	110.4	107.0	120	7.2	5.8	20.7	0.27	3.80	178.6	-4.1
MW-86	10/4/2007	DP	11:53	108.1	96.3	180	3.4	5.9	24.5	0.90	0.34	-29.0	6.4
MW-88	10/4/2007	DP	13:35	87.0	79.9	120	3.0	5.7	26.2	0.90	4.73	142.0	4.6
MW-89	10/1/2007	DP	15:00	164.3	116.4	400	7.9	5.7	19.8	1.00	5.92	207.0	1.9
MW-90	10/1/2007	DP	14:22	130.6	116.6	320	9 6	5.6	19.7	1.03	4.87	210.0	5.8
MW-92	10/4/2007	DP	11:15	102.1	94.9	120	3.1	6.3	24.9	0.90	1.64	-69.0	13.0
MW-93	10/4/2007	PP	15:00	103.0	100.3	120	18.0	6.0	20.8	0.19	6.34	117.6	30.1
MW-94A	10/4/2007	DP	15:50	117.5	107.6	140	3.5	6.0	21.8	0.33	6.33	131.9	2.8
MW-96	10/4/2007	DP	10:15	89.2	81.6	260	7.1	5.8	20.0	1.00	5.00	197.0	5.3
MW-97	10/2/2007	DP	13:00	109.2	97.6	280	12.1	5.7	19.6	0.54	6.56	156.0	19.9
MW-98	10/3/2007	DP	8:49	142.6	98.0	240	21.6	5.8	19.5	0.90	4.61	251.0	17.4
MW-99	10/3/2007	PP	12:10	102.0	86.0	240	23 1	5.9	20.8	0.90	8.23	215.0	93.3
MW-100B	10/2/2007	DP	10:50	118.5	89.9	280	10.0	6.0	19.9	2.34	3.40	-30.0	11.9
MW-102B	10/3/2007	PP	9:40	131.0	107.6	260	19.2	6.2	20.7	1.00	5.11	177.0	76.0
MW-103	10/4/2007	DP	8:25	80.0	69.5	200	20.2	5.6	21.0	0.84	0.59	177.4	73.5
MW-104	10/4/2007	DP	10:55	77.2	63.2	100	16.6	5.6	22.8	0.70	0.89	143.9	32.2
MW-107	10/2/2007	PP	13:19	–	110.0	400	20.0	5.9	20.0	0.90	7.96	184.0	14.2
MW-108	10/1/2007	DP	11:53	167.9	109.9	320	6.0	5.6	20 0	1.00	3.50	231.0	18.9
MW-113	10/4/2007	DP	12:27	103.2	97.1	200	3.4	5.6	24.1	1.00	3.87	77.0	202.0
MW-125	10/2/2007	DP	9:20	102.3	89.6	220	6.4	5.9	21.2	1.63	1.37	26.0	8.7
MW-140	10/2/2007	DP	11:42	238.5	148.0	100	10.5	5.8	20 3	0.90	5.03	125.0	0.5
MW-141	10/2/2007	DP	10:08	161.0	114.1	300	6.9	5.8	19 3	0.90	1.18	220.0	0.8
MW-142	10/3/2007	DP	14:20	96.9	32.4	240	4.3	5.7	22.0	0.68	8.09	223.0	4.5
MW-197A	10/3/2007	DP	9:27	170.4	94.2	340	11.6	6.0	18.2	1.00	5.44	232.0	4.3
MW-197B	10/3/2007	DP	10:08	102.6	94.1	160	4.9	6.0	19.2	0.90	4.88	232.0	9.4
MW-198	10/2/2007	DP	16:05	100.5	94.7	260	4.9	5.8	22.4	0.39	8.38	187.0	14.2
MW-199A	10/2/2007	DP	9:26	154.6	110.6	220	6.8	5.8	19.8	1.00	4.88	113.0	14.7
MW-199B	10/2/2007	DP	8:36	113.3	106.0	320	6.0	5.8	19.8	0.22	7.62	259.0	3.0
MW-200	10/3/2007	DP	16:10	112.0	104.7	280	6.8	6.0	19.3	1.00	4.73	221.0	9.0
MW-202A	10/1/2007	DP	15:38	185.0	126.8	260	5.6	5.7	20.1	1.00	3.68	201.0	4.5
MW-202B	10/2/2007	DP	7:38	129.9	125.0	260	5.2	5.9	23.2	0.95	0.79	-19.0	69.0
MW-203A	10/3/2007	DP	11:11	150.5	92.6	280	13.2	6.0	18 6	1.00	1.48	-16.0	9.9
MW-203B	10/3/2007	DP	12:01	100.3	92.6	100	4.0	6.4	20.7	1.00	1.55	4.0	19.8
MW-204A	10/2/2007	DP	15:22	139.0	95.2	120	3.2	6.1	23.5	1.00	5.12	165.0	6.7
MW-204B	10/2/2007	DP	14:18	100.5	95.2	100	3.1	6.1	23.9	1.00	6.25	159.0	7.6
MW-205A	10/3/2007	DP	15:04	147.0	95.6	160	6.0	6.0	19.6	1.00	5.67	124.0	1.0
MW-205B	10/3/2007	DP	8:20	103.1	95.5	100	3.1	6.0	21.8	1.00	5.84	247.0	2.1
MW-206A	10/3/2007	DP	15:10	134.8	104.7	100	3.3	6.0	21.5	0.90	4.40	217.0	9.4
MW-206B	10/3/2007	DP	15:40	107.9	104.6	200	3.1	5.9	21.2	1.00	5.44	222.0	4.7

TABLE 10
WELL STABILIZATION SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Date	Sample Method	Sample Time	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-207A	10/3/2007	DP	13:40	157.2	109.5	280	14.4	5.9	20.1	1.03	0.18	-89 0	-1.1
MW-207B	10/3/2007	DP	14:16	115 6	109.0	240	5.7	5.8	20.5	1.00	7.08	141.0	-2.1
MW-208A	10/4/2007	DP	9:39	191.0	106.7	340	12.4	5.9	19.4	1.00	5.63	152.0	13.4
MW-208B	10/4/2007	DP	10:14	114.2	106.7	300	5.0	5.8	20.0	1.00	6.56	210.0	0.2
MW-209A	10/4/2007	DP	14:12	195.3	105.4	200	4.0	5.8	21.9	0.90	8.85	185.0	6.4
MW-209B	10/5/2007	DP	8:42	108.3	102.8	80	3.2	5.4	23.7	0.10	6.28	199.8	3.2
MW-210A	10/5/2007	DP	15:05	184.5	100.9	200	9.2	6.0	20 1	0.90	15 72	173.0	3.1
MW-210B	10/5/2007	DP	9:58	104.5	92.7	80	4.0	5.6	22.4	0.22	5.60	170.6	0.6
MW-211	10/2/2007	DP	15:26	174.0	110.8	280	6.0	5.9	21.2	0.90	2.63	165.0	14.7
MW-212	10/3/2007	BA	14:19	N/A	78.5	–	18.7	6.0	20.8	0.13	6.66	129.2	479.0
MW-213	10/2/2007	N/A	10:07	DRY	–	–	–	–	–	–	–	–	–
MW-214A	10/3/2007	DP	13:07	126.6	104.0	80	3.4	5.7	24.7	0.29	4.09	175.2	13.6
MW-214B	10/3/2007	DP	12:09	109.6	103.6	100	3.3	5.8	23.5	0.30	3.45	170.4	-17.5
MW-215A	10/4/2007	DP	8:20	136.3	109.7	120	3.0	5.7	23.5	1 00	5.29	179.0	3.9
MW-215B	10/4/2007	DP	8:50	114.4	109 8	200	3.0	5.7	22.8	1 00	6 33	197.0	14.3
MW-216	10/2/2007	DP	12:05	107.4	97 2	100	5 9	6 1	23.6	0.90	6.64	97.0	13.7
MW-217	10/2/2007	DP	13:47	111.0	107.2	140	14.1	5.7	21.8	0.19	3.80	117.8	21.3
MW-218	10/2/2007	DP	10:16	108.2	103.3	80	4.6	5.8	24.0	0.23	3.09	110.0	-0.9
MW-219	10/3/2007	DP	13:12	105.2	91.6	220	4.5	5.8	19.7	0.90	4.12	214 0	5 7
MW-229	10/5/2007	DP	9:23	200.0	160.7	180	20.0	6.8	20.2	1.00	1 85	-116.0	18.6
DR1-1	10/1/2007	DP	14:40	133.8	91.4	180	4.7	6 0	25.9	1.00	4 64	180.0	5.5
DR1-1A	10/1/2007	DP	15:20	101.3	91.3	200	4.1	6.0	21.9	0.90	6.93	190.0	3.4
DR1-2	10/1/2007	DP	11:50	109.1	89.6	280	4.6	6.0	20.7	0.90	4.39	159.0	8.8
DR1-4	10/1/2007	DP	9.10	117.6	91.8	260	6.4	6.3	19.4	0.90	0.88	-79.0	5.2
DR1-5	10/1/2007	DP	12:35	136.3	92.6	280	4.2	5.8	21.8	0.90	4.87	163.0	3 6
DR1-5A	10/1/2007	DP	13:10	102.3	92.7	280	6.8	5.6	21.6	0.33	7.46	178 0	0.0
DR1-6	10/1/2007	DP	10:00	126.6	91.4	260	7.6	5.9	20.7	0.90	4.18	107.0	12.4
DR1-6A	10/1/2007	DP	10:45	102.8	91.5	280	9.2	5.7	21.1	0.35	6.53	163.0	5.6
DR1-7	10/1/2007	DP	8:37	120.3	90.1	280	10.4	5.9	19.3	0.50	4.96	176.0	12.0
DR1-8	10/1/2007	DP	15:55	103.5	88.7	240	4.1	5.9	21.0	1.00	6.63	203.0	3.6
DR2-2	10/1/2007	DP	9:30	88.6	81.7	40	7.7	5.8	22.2	0.20	4.57	208.9	10.4
DR2-3	10/1/2007	DP	10:45	102 6	97.2	120	4.8	5.7	22.9	0.38	4.78	223.9	-1.9
DR2-4	10/1/2007	DP	10:45	102 0	94.2	100	5.7	5.8	22.3	0.35	4.50	202.3	-2.6
DR2-6	10/1/2007	DP	14:40	109.2	101.1	100	14.0	5.7	22.1	0.20	1.34	149.7	-4.0
PZ-03	10/5/2007	W	9:40	N/A	103.0	–	5.3	6 3	22.2	0 57	9.43	163.0	OR
PZ-06	10/5/2007	W	12:15	N/A	72.5	–	11.2	6.1	26.4	0.90	9.45	142.0	OR
PZ-07	10/4/2007	W	N/A	N/A	98.5	–	–	–	–	–	–	–	–
IW-06	10/2/2007	DP	8:35	105.6	95.4	180	10.0	4.8	20.3	9.99	2.10	15.0	19.2

Notes:
–: No Data
BA: Bailer
DP: Dedicated bladder pump
N/A: Not Applicable
OR: Out of Range
PP: Portable bladder pump
W: Weetarra

TABLE 11
SOIL TOTAL ORGANIC CARBON ANALYSES, AUGUST 2006
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	Sample Data	Depth feet	Total Organic Carbon mg/kg
MW197-A	8/4/2006	168	<1180
MW197-B	8/4/2006	101	<1100
MW-198	8/23/2006	96	<1160
MW199-A	8/7/2006	151	<1180
MW199-B	8/8/2006	109	<1120
MW-200	8/10/2006	109	<1080
MW-201	8/22/2006	73	<1210
MW-202A	8/18/2006	180	<1200
MW-202B	8/21/2006	125	<1130

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	DR1-1	DR1-1A	DR1-2	DR1-4	DR1-5	DR1-5A	DR1-6	DR1-6A	DR1-7
	Field Sample ID	Contaminant	DR1-1-LB-1	DR1-1A-LB-1	DR1-2-LB-1	DR1-4-LB-1	DR1-5-LB-1	DR1-5A-LB-1	DR1-6-LB-1	DR1-6A-LB-1	DR1-7-LB-1
	Lab Sample ID	Levels	L0610711-01	L0610051-01	L0610708-01	L0610762-01	L0610708-02	L0610711-02	L0610708-03	L0610708-04	L0610762-02
	Date Collected		10/23/2006	10/2/2006	10/24/2006	10/25/2006	10/24/2006	10/23/2006	10/24/2006	10/24/2006	10/25/2006
Primary VOCs	units										
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	80	<0.3	**0.324**	0.163 J	<0.3	0.129 J	**0.306**	<0.3	0.18 J	<0.3
cis-1,2-Dichloroethene	ug/L	70	**1.02**	0.634 J	0.602 J	<1	<1	**3.46**	**1.59**	**4.81**	0.374 J
Tetrachloroethene	ug/L	5	**2.46**	**1.18**	**1.82**	**12.4**	**57**	**50.9**	**184**	**28.4**	**5.68**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	0.255 J	**6.28**	<1	**1.33**	<1	**98.1**	**1.85**	**118**	0.76 J
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0.5	0.425 J	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	0.223 J	<1	0.335 J	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	ug/L	–	<10	<10	<10	4.72 J	<10	<10	<10	<10	<10
Chloromethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1	<1
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	**23.8**	<5	<5	<5

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 49

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	DR1-8 DR1-8-LB-1 L0610601-01 10/18/2006	DR2-2 DR2-2-LB-1 L0610100-01 10/3/2006	DR2-3 DR2-3-LB-1 L0610100-02 10/3/2006	DR2-4 DR2-4-LB-1 L0610186-01 10/5/2006	DR2-6 DR2-6-LB-1 L0610509-01 10/17/2006	MW-16 MW-16-LB-1 L0610474-01 10/16/2006	MW-19 MW-19-LB-1 L0610509-06 10/17/2006	MW-22 MW-22-LB-1 L0610602-01 10/18/2006
Primary VOCs	**units**									
Carbon tetrachloride	ug/L	5	<1	**4.19**	**4.2**	**4.06**	**82.7**	<1	<1	<1
Chloroform	ug/L	80	<0.3	**1.05**	**0.939**	**1.06**	**27.3**	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	ug/L	70	<1	**1.9**	0.601 J	<1	**9.97**	<1	<1	0.527 J
Tetrachloroethene	ug/L	5	<1	**23.2**	**22.8**	**7.15**	**77.2**	<1	<1	0.79 J
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	**3.13**	**2.47**	**1.61**	**15.5**	<1	<1	0.531 J
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	<0.5	<0.5	<0.5	<0.5	0.226 J	<0.5	<0.5	<0.5
1,1-Dichloroethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	**50.4**	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0 5	<0 5	**1.08**	<0.5	<0 5	<0 5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	0.475 J	<1	<1	<1
1,3-Dichloropropane	ug/L	--	<0 4	<0 4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
MEK (2-Butanone)	ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	--	<5	<5	<5	<5	<5	<5	<5	<5

Notes
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	MW-23	MW-24	MW-25A	MW-26	MW-34	MW-36	MW-38	MW-39
	Field Sample ID	Contaminant	MW-23-LB-1	MW-24-LB-1	MW-25A-LB-1	MW-26-LB-1	MW-34-LB-1	MW-36-LB-1	MW-38-LB-1	MW-39-LB-1
	Lab Sample ID	Levels	L0610602-02	L0610602-03	L0610051-06	L0610052-06	L0610474-04	L0610474-05	L0610509-07	L0610509-08
	Date Collected		10/18/2006	10/18/2006	10/2/2006	10/2/2006	10/16/2006	10/16/2006	10/17/2006	10/17/2006
Primary VOCs	units									
Carbon tetrachloride	ug/L	5	<1	<1	**2.66**	**5.24**	0 381 J	<1	**1.24**	<1
Chloroform	ug/L	80	<0.3	<0.3	**0.608**	**0.935**	**0.531**	<0 3	**0.513**	<0.3
cis-1,2-Dichloroethene	ug/L	70	<1	<1	<1	0 45 J	<1	<1	<1	0.622 J
Tetrachloroethene	ug/L	5	<1	<1	**8.61**	**25.5**	0.336 J	<1	<1	**149**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	<1	0.352 J	**1.77**	**1.06**	<1	**4.63**	**8.94**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5	<0 5	<0.5
1,1-Dichloroethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0 5	<0.5	<0 5	<0 5	<0 5	<0 5	<0.5	<0 5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	--	<0.4	<0.4	<0 4	<0 4	<0.4	<0.4	<0 4	<0 4
Acetone	ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
MEK (2-Butanone)	ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	--	<5	<5	<5	<5	<5	<5	<5	<5

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-39A MW-39A-LB-1 L0610509-09 10/17/2006	MW-50 MW-50-LB-1 L0610603-01 10/18/2006	MW-52 MW-52-LB-1 L0610051-07 10/2/2006	MW-53 MW-53-LB-1 L0610509-10 10/17/2006	MW-55 MW-55-LB-1 L0610474-06 10/16/2006	MW-62 MW-62-LB-1 L0610119-01 10/4/2006	MW-63A MW-63A-LB-1 L0610711-05 10/23/2006	MW-63B MW-63B-LB-1 L0610711-06 10/23/2006
Primary VOCs	units									
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	0 279 J	<1	<1
Chloroform	ug/L	80	0.251 J	**0.746**	**0.899**	<0.3	<0.3	0.25 J	<0 3	**0.604**
cis-1,2-Dichloroethene	ug/L	70	0.418 J	0.483 J	0 639 J	<1	<1	0.26 J	<1	<1
Tetrachloroethene	ug/L	5	**196**	0.263 J	**10.2**	**2.26**	<1	<1	**1.24**	**3.71**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**4.68**	**1.5**	**1.04**	<1	<1	**77.7 J**	0.765 J	**1.12**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5
1,1-Dichloroethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0 5	<0 5	<0 5	<0 5	<0 5	<0 5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	--	<0 4	<0 4	<0.4	<0.4	<0.4	<0 4	<0 4	<0 4
Acetone	ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
MEK (2-Butanone)	ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	--	<5	2.94 J	<5	2 29 J	<5	<5	1 19 J	0.796 J

Notes
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	MW-64	MW-66A	MW-84	MW-86	MW-88	MW-89	MW-90	MW-92
	Field Sample ID	Contaminant	MW-64-LB-1	MW-66A-LB-1	MW-84-LB-1	MW-86-LB-1	MW-88-LB-1	MW-89-LB-1	MW-90-LB-1	MW-92-LB-1
	Lab Sample ID	Levels	L0610711-07	L0610603-02	L0610509-11	L0610761-02	L0610100-05	L0610709-06	L0610709-07	L0610187-01
	Date Collected		10/23/2006	10/18/2006	10/17/2006	10/25/2006	10/3/2006	10/24/2006	10/24/2006	10/5/2006
Primary VOCs	units									
Carbon tetrachlonde	ug/L	5	**2.9**	<1	**4**	<1	**8.59**	0 7 J	0 466 J	**27.2**
Chloroform	ug/L	80	**1.01**	<0 3	**0.494**	<0.3	**1.78**	**0.348**	**3.11**	**8.02**
cis-1,2-Dichloroethene	ug/L	70	0.397 J	<1	<1	**180**	**1.3**	0.404 J	0.294 J	**10.8**
Tetrachloroethene	ug/L	5	**18.2**	**1.79**	0.868 J	0 388 J	**26.4**	0.363 J	**26.7**	**193**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**28.9**	<1	<1	<1	**3.5**	**2.13**	**2.53**	**6.14**
Vinyl chloride	ug/L	2	<1	<1	<1	0.976 J	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	**1.06**	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	<1	<1	<1	<1	0.51 J	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	**5.6**	**1.09**	**2.52**	**1.09**	<0.5	<0.5	<0.5	<0 5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	**1.81**	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0 4	<0.4	<0.4	**1.64**	<0 4	<0 4	<0.4	<0 4
Acetone	ug/L	–	<10	<10	<10	<10	<10	<10	<10	8 73 J
Chloromethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
MEK (2-Butanone)	ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	--	<5	<5	<5	<5	<5	<5	<5	<5

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-93 MW-93-LB-1 L0610603-03 10/18/2006	MW-94A MW-94A-LB-1 L0610709-08 10/24/2006	MW-96 MW-96-LB-1 L0610051-08 10/2/2006	MW-97 MW-97-LB-1 L0610762-03 10/25/2006	MW-98 MW-98-LB-1 L0610761-03 10/25/2006	MW-99 MW-99-LB-1 L0610602-04 10/18/2006	MW-100B MW-100B-LB-1 L0610711-03 10/23/2006	MW-102B MW-102B-LB-1 L0610627-01 10/19/2006
Primary VOCs	**units**									
Carbon tetrachloride	ug/L	5	<1	<1	**4.5**	<1	<1	<1	<1	<1
Chloroform	ug/L	80	<0.3	0.139 J	**0.975**	0.228 J	0.133 J	0 22 J	<0 3	<0.3
cis-1,2-Dichloroethene	ug/L	70	<1	0.624 J	0.883 J	<1	0 252 J	<1	**112**	<1
Tetrachloroethene	ug/L	5	<1	**52.2**	**2.84**	<1	**33.1**	<1	**101**	<1
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	0.39 J	<1
Trichloroethene	ug/L	5	<1	**5.58**	<1	**14.7**	**2.37**	<1	**43.1**	<1
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	0 716 J	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0 5	<0.5	0 433 J	<0 5	<0.5	<0.5	<0 5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0 4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
MEK (2-Butanone)	ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	--	<5	<5	<5	<5	<5	<5	**30.9**	<5

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID Field Sample ID Lab Sample ID Date Collected **Primary VOCs** units	Maximum Contaminant Levels	MW-103 MW-103-LB-1 L0610102-01 10/3/2006	MW-104 MW-104-LB-1 L0610102-02 10/3/2006	MW-107T MW-107T-LB-1 L0610509-05 10/17/2006	MW-107B MW-107B-LB-1 L0610509-02 10/17/2006	MW-108 MW-108-LB-1 L0610709-01 10/24/2006	MW-113 MW-113-LB-1 L0610711-04 10/23/2006	MW-125 MW-125-LB-1 L0610051-05 10/2/2006	MW-140 MW-140-LB-1 L0610710-01 10/23/2006
Carbon tetrachloride ug/L	5	<1	<1	<1	<1	<1	**75.6**	<1	0.313 J
Chloroform ug/L	80	**12.2**	**15.9**	<0.3	<0.3	**11.7**	**33.8**	0.168 J	0.162 J
cis-1,2-Dichloroethene ug/L	70	0.322 J	0.446 J	<1	<1	0.75 J	**54.9**	**16.3**	<1
Tetrachloroethene ug/L	5	<1	<1	0.564 J	0.377 J	**5.41**	**182**	**35.6**	0.424 J
trans-1,2-Dichloroethene ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene ug/L	5	**5.04**	**17.6**	0.999 J	0.585 J	**32**	**25.9**	**13.3**	**1.49**
Vinyl chloride ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1-Dichloroethene ug/L	7	**1.7**	**1.68**	<1	<1	0.618 J	<1	<1	<1
1,1,2,2-Tetrachloroethane ug/L	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane ug/L	–	**2.45**	0.917 J	<1	<1	0.37 J	<1	<1	<1
1,2,3-Trichloropropane ug/L	–	<1	<1	<1	<1	<1	**14.5**	<1	<1
1,2-Dichloroethane ug/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.744**	0.465 J	<0.5
1,2-Dichloropropane ug/L	5	<1	<1	<1	<1	<1	0.682 J	<1	<1
1,3-Dichloropropane ug/L	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone ug/L	--	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
MEK (2-Butanone) ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE) ug/L	–	<5	<5	<5	<5	<5	<5	**18.5**	<5

Notes:
VOC samples analyzed using method 8260B
ug/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· Estimated, possibly biased high or false positive based on blank data

1015 55

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-141 MW-141-LB-1 L0610710-02 10/23/2006	MW-143 MW-143-LB-1 L0610625-01 10/19/2006	MW-142 MW-142-LB-1 L0610052-03 10/2/2006	MW-197A MW-197A-LB-1 L0610709-02 10/24/2006	MW-197B MW-197B-LB-1 L0610052-04 10/2/2006	MW-198 MW-198-LB-1 L0610052-05 10/2/2006	MW-199A MW-199A-LB-1 L0610710-03 10/23/2006	MW-199B MW-199B-LB-1 L0610710-04 10/23/2006
Primary VOCs	units									
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	0.719 J
Chloroform	ug/L	80	**2.37**	<0.3	<0.3	0.237 J	<0.3	<0.3	0.126 J	0.197 J
cis-1,2-Dichloroethene	ug/L	70	<1	<1	<1	0.447 J	0.625 J	<1	<1	<1
Tetrachloroethene	ug/L	5	**27.6**	<1	<1	**130**	**179**	<1	<1	0.632 J
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**3.56**	0.7 J	0.371 J	**2.04**	**8.51**	**3.28**	<1	**99.2 J**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10
Chloromethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	--	<5	4.26 J	1.15 J	<5	<5	<5	1.17 J	<5

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 56

TABLE 12
ANALYTICAL RESULTS SUMMARY, OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-200 MW-200-LB-1 L0610761-01 10/25/2006	MW-201 MW-201-LB-1 L0610601-05 10/18/2006	MW-202A MW-202A-LB-1 L0610710-07 10/23/2006	MW-202B MW-202B-LB-1 L0610709-03 10/24/2006	PZ-03 PZ-03-LB-1 L0610187-02 10/5/2006	PZ-06 PZ-06-LB-1 L0610121-01 10/4/2006	PZ-07 PZ-07-LB-1 L0610186-02 10/5/2006	IW-6 IW-6-LB-1 L0610601-02 10/18/2006
Primary VOCs	**units**									
Carbon tetrachloride	ug/L	5	<1	0 338 J	0.365 J	<1	<1	<1	<1	<1
Chloroform	ug/L	80	<0.3	**1.15**	0.232 J	**0.778**	0 198 J	<0.3	<0 3	<0 3
cis-1,2-Dichloroethene	ug/L	70	0.466 J	<1	<1	<1	<1	<1	<1	0.835 J
Tetrachloroethene	ug/L	5	**72**	<1	0.257 J	**5.51**	**3.89**	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**5.47**	<1	**1.85**	0.811 J	0.917 J	<1	<1	0.581 J
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0 5	<0.5	<0 5	<0 5	<0 5	<0.5	<0.5	<0.5
1,1-Dichloroethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0 4	<0 4	<0.4	<0.4	<0 4	<0.4	<0 4	<0.4
Acetone	ug/L	–	<10	**11.7 J**	<10	<10	<10	3 14 J	3.98 J	**233 J**
Chloromethane	ug/L	–	<1	0 528 J	<1	<1	<1	<1	<1	**1.63 J**
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	**93.5 J**
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	<5	<5	**28**

Notes
VOC samples analyzed using method 8260B
ug/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 Estimated, possibly biased high or false positive based on blank data

1015 57

TABLE 13
ANALYTICAL RESULTS SUMMARY, JANUARY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID Field Sample ID Lab Sample ID Date Collected Primary VOCs	units	Maximum Contaminant Levels	MW-197A MW-197A-RW-2 L0701585-01 1/24/2007	MW-197A DUP MW-197A DUP L0701585-04 1/24/2007	MW-197B MW-197B-RW-2 L0701586-03 1/24/2007	MW-198 MW-198-RW-2 L0701586-02 1/24/2007	MW-199A MW-199A-RW-2 L0701585-05 1/24/2007	MW-199B MW-199B-RW-2 L0701586-01 1/24/2007	MW-200 MW-200-RW-2 L0701586-06 1/24/2007	MW-202A MW-202A-RW-2 L0701585-02 1/24/2007	MW-202B MW-202B-RW-2 L0701585-03 1/24/2007
Carbon tetrachloride	ug/L	5	<1	<1	<1	0.915 J	<1	0.949 J	<1	0.749 J	<1
Chloroform	ug/L	80	0.226 J	<0.3	0.227 J	0.2 J	<0.3	0.179 J	<0.3	0.198 J	**0.857**
cis-1,2-Dichloroethene	ug/L	70	0.345 J	<1	0.484 J	<1	<1	<1	0.303 J	<1	<1
Tetrachloroethene	ug/L	5	**125**	**127**	**166**	<1	<1	0.497 J	**81.9**	0.326 J	**8.42**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**2.04**	**1.97**	**8.76**	**25.8**	<1	**115**	**5.94**	**1.59**	**1.27**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1

Additional VOCs
None Detected above RL

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 58

TABLE 14
ANALYTICAL RESULTS SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID Field Sample ID Lab Sample ID Date Collected **Primary VOCs**	Maximum Contaminant Levels units	DR1-1A DR1-1A-LS-3 L0704355-11 4/13/2007	DR1-4 DR1-4-LS-3 L0704355-12 4/13/2007	DR1-5 DR1-5-LS-3 L0704380-14 4/16/2007	DR1-5A DR1-5A-LS-3 L0704355-13 4/13/2007	DR1-6 DR1-6-LS-3 L0704355-14 4/13/2007	DR1-6A DR1-6A-LS-3 L0704355-15 4/13/2007	DR2-2 DR2-2-LS-3 L0704355-19 4/13/2007	DR2-3 DR2-3-LS-3 L0704381-03 4/15/2007
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	**6.78**	**4.29**
Chloroform	ug/L	80	**0.313**	<0.3	<0.3	0.274 J	<0.3	0.236 J	**1.76**	**0.913**
cis-1,2-Dichloroethene	ug/L	70	0.416 J	**8.09**	<1	**3.19**	**1.91**	**5.98**	**3.47**	0.673 J
Tetrachloroethene	ug/L	5	0.959 J	<1	**69.2**	**49.6**	**173**	**34.4**	**49.2**	**23.9**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**4.57**	<1	<1	**84**	**1.83**	**139**	**3.49**	**2.28**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	0.366 J	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	0.212 J	<1	0.48 J	<1	<1
1,3-Dichloropropane	ug/L	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Methyl t-butyl ether (MTBE)	ug/L	--	<5	<5	<5	**33.3**	<5	<5	<5	<5
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	0.421 J	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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 Estimated, possibly biased high or false positive based on blank data

1015 59

TABLE 14
ANALYTICAL RESULTS SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	DR2-6 DR2-6-LS-3 L0704381-04 4/15/2007	MW-25A MW-25A-LS-3 L0704355-17 4/13/2007	MW-26 MW-26-LS-3 L0704380-01 4/16/2007	MW-39 MW-39-LS-3 L0704355-01 4/13/2007	MW-39A MW-39A-LS-3 L0704355-02 4/13/2007	MW-52 MW-52-LS-3 L0704380-09 4/16/2007	MW-62 MW-62-LS-3 L0704412-07 4/17/2007	MW-64 MW-64-LS-3 L0704412-02 4/17/2007
Primary VOCs	**units**									
Carbon tetrachloride	ug/L	5	**92**	**2.54**	**5.23**	<1	<1	<1	0.703 J	**3.26**
Chloroform	ug/L	80	**33.1**	**0.507**	**1.05**	0.155 J	0.215 J	**0.828**	**0.311**	**0.818**
cis-1,2-Dichloroethene	ug/L	70	**14.1**	<1	0.313 J	0.462 J	0.4 J	0.938 J	**1.16**	0.345 J
Tetrachloroethene	ug/L	5	**90.8**	**10.3**	**20.1**	**106**	**176**	**10.8**	0.362 J	**18.1**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**16.4**	0.525 J	**1.56**	**8.17**	**4.04**	**1.4**	**102**	**30.6**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	**2.71**	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	0.179 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.88**
1,2,3-Trichloropropane	ug/L	--	**63.8**	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	**1.05**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.495 J
1,2-Dichloropropane	ug/L	5	0.559 J	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Methyl t-butyl ether (MTBE)	ug/L	--	<5	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 14
ANALYTICAL RESULTS SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-86 MW-86-LS-3 L0704380-02 4/16/2007	MW-88 MW-88-LS-3 L0704355-18 4/13/2007	MW-90 MW-90-LS-3 L0704380-10 4/16/2007	MW-92 MW-92-LS-3 L0704380-03 4/16/2007	MW-94A MW-94A-LS-3 L0704380-11 4/16/2007	MW-96 MW-96-LS-3 L0704380-12 4/16/2007	MW-97 MW-97-LS-3 L0704380-13 4/16/2007	MW-98 MW-98-LS-3 L0704355-03 4/13/2007
Primary VOCs	units									
Carbon tetrachloride	ug/L	5	<1	**3.88**	0.401 J	**7.67**	<1	**3.47**	<1	<1
Chloroform	ug/L	80	0.212 J	**0.671**	**3.18**	**13.2**	0.196 J	**0.901**	0.292 J	0.147 J
cis-1,2-Dichloroethene	ug/L	70	**119**	0.588 J	0.313 J	**7.32**	0.532 J	0.814 J	<1	<1
Tetrachloroethene	ug/L	5	**2.11**	**18.5**	**26.7**	**159**	**48**	**4.35**	<1	**35.2**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	0.989 J	**2.94**	**2.4**	**5.01**	**6.08**	0.419 J	**18.8**	**2.63**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	0.526 J	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	ug/L	–	**1.8**	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	**0.695**	<0.5	<0.5	<0.5	<0.5	0.261 J	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	**1.24**	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	**0.986**	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	5	<1	<1	<1	**1.52**	<1	<1	0.469 J	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 61

TABLE 14
ANALYTICAL RESULTS SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	MW-100B	MW-104	MW-108	MW-113	MW-125	MW-141	MW-197A	MW-197B
	Field Sample ID	Contaminant	MW-100B-LS-3	MW-104-LS-3	MW-108-LS-3	MW-113-LS-3	MW-125-LS-3	MW-141-LS-3	MW-197A-LS-3	MW-197B-LS-3
	Lab Sample ID	Levels	L0704355-08	L0704355-09	L0704381-07	L0704380-04	L0704355-10	L0704412-04	L0704355-04	L0704355-05
	Date Collected		4/13/2007	4/13/2007	4/16/2007	4/16/2007	4/13/2007	4/17/2007	4/13/2007	4/13/2007
Primary VOCs	units									
Carbon tetrachloride	ug/L	5	<1	<1	<1	**89.1**	<1	<1	<1	<1
Chloroform	ug/L	80	<0.3	**13.7**	**10.8**	**35.9**	<0 3	**2.46**	0.212 J	0.208 J
cis-1,2-Dichloroethene	ug/L	70	**94.4**	0 589 J	0.634 J	**46.3**	**10.3**	<1	0.432 J	0.792 J
Tetrachloroethene	ug/L	5	**98.9**	<1	**6.03**	**163**	**33.1**	**21.3**	**114**	**138**
trans-1,2-Dichloroethene	ug/L	100	0 432 J	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**39.4**	**17**	**33.5**	**24.1**	**9.27**	**3.02**	**2.28**	**9.11**
Vinyl chloride	ug/L	2	0.595 J	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	**1.83**	0.553 J	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0 5	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	**13.7**	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0 5	<0 5	<0.5	**0.701**	0 399 J	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	0.62 J	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0 4	<0.4	<0.4	<0 4	<0.4	<0 4	<0 4	<0.4
Methyl t-butyl ether (MTBE)	ug/L	–	**32.7**	<5	<5	<5	**14**	<5	<5	<5
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 14
ANALYTICAL RESULTS SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-198 MW-198-LS-3 L0704381-01 4/15/2007	MW-199A MW-199A-LS-3 L0704355-06 4/13/2007	MW-199B MW-199B-LS-3 L0704355-07 4/13/2007	MW-200 MW-200-LS-3 L0704381-02 4/15/2007	MW-202A MW-202A-LS-3 L0704381-08 4/16/2007	MW-202B MW-202B-LS-3 L0704381-09 4/16/2007	MW-203A MW-203A-LS-3 L0704412-05 4/17/2007	MW-203B MW-203B-LS-3 L0704714-01 4/27/2007
Primary VOCs	units									
Carbon tetrachloride	ug/L	5	0.32 J	<1	0 555 J	<1	0 382 J	<1	<1	<1
Chloroform	ug/L	80	0.146 J	<0.3	0.232 J	0.146 J	0.213 J	**0.752**	<0.3	<0.3
cis-1,2-Dichloroethene	ug/L	70	<1	<1	<1	0.532 J	<1	<1	<1	**50.1**
Tetrachloroethene	ug/L	5	<1	<1	0.715 J	**70.2**	0.316 J	**8.6**	**62.6**	**38.4**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**20.2**	<1	**115**	**7.49**	**1.88**	**1.46**	**1.27**	**8.97**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0 5	<0 5	<0 5	<0 5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.5	0.291 J	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0 4	<0 4	<0 4	<0.4	<0.4	<0.4
Methyl t-butyl ether (MTBE)	ug/L	–	<5	1.28 J	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1

Notes·
VOC samples analyzed using method 8260B
ug/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 Estimated, possibly biased high or false positive based on blank data

1015 63

TABLE 14
ANALYTICAL RESULTS SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-204A MW-204A-LS-3 L0704560-01 4/23/2007	MW-204B MW-204B-LS-3 L0704560-02 4/23/2007	MW-205A MW-205A-LS-3 L0704560-03 4/23/2007	MW-205B MW-205B-LS-3 L0704560-04 4/23/2007	MW-206A MW-206A-LS-3 L0704381-05 4/15/2007	MW-206B MW-206B-LS-3 L0704381-06 4/15/2007	MW-207A MW-207A-LS-3 L0704381-12 4/16/2007	MW-207B MW-207B-LS-3 L0704381-13 4/16/2007
Primary VOCs	units									
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	**1.36**
Chloroform	ug/L	80	<0.3	<0.3	0.238 J	0.206 J	0.155 J	0.139 J	**5.86**	**3.09**
cis-1,2-Dichloroethene	ug/L	70	0.763 J	0.906 J	0.337 J	0.546 J	0.607 J	0.582 J	0.468 J	<1
Tetrachloroethene	ug/L	5	**38.8**	**26.3**	**102**	**129**	**76.6**	**57.2**	**7.92**	**35.7**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**1.19**	**2.37**	**3.69**	**7.2**	**9.81**	**8.94**	**21.4**	**12.1**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**1.16**
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	<5	<5	<5
Methylene chloride	ug/L	5	0.433 B	<1	<1	<1	<1	<1	**2.18 B**	0.289 B

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

10154

TABLE 14
ANALYTICAL RESULTS SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID Field Sample ID Lab Sample ID Date Collected **Primary VOCs**	units	Maximum Contaminant Levels	MW-208A MW-208A-LS-3 L0704381-14 4/16/2007	MW-208B MW-208B-LS-3 L0704381-17 4/16/2007	MW-209A MW-209A-LS-3 L0704560-05 4/23/2007	MW-209B MW-209B-LS-3 L0704560-06 4/23/2007	MW-210A MW-210A-LS-3 L0704714-02 4/27/2007	MW-210B MW-210B-LS-3 L0704714-03 4/27/2007	MW-211 MW-211-LS-3 L0704381-18 4/16/2007	MW-212 MW-212-LS-3 L0704714-04 4/27/2007
Carbon tetrachloride	ug/L	5	<1	<1	<1	0.327 J	<1	<1	<1	0 257 J
Chloroform	ug/L	80	0 216 J	<0 3	<0 3	0 251 J	0 201 J	0.15 J	0.139 J	0.289 J
cis-1,2-Dichloroethene	ug/L	70	0 554 J	**1.12**	<1	<1	0 828 J	0 646 J	<1	<1
Tetrachloroethene	ug/L	5	**174 J**	**3.42**	0 326 J	<1	**38.2**	**32.4**	<1	<1
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**8.12**	**18.4**	0.576 J	**6.4**	**5.85**	**7.29**	0 536 J	**34.4**
Vinyl chlonde	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	0.307 J	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0 5	<0 5	<0 5	<0.5	<0.5	<0.5	<0.5	<0 5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0 4	<0 4
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	1.43 J	<5	<5	<5	<5	<5
Methylene chloride	ug/L	5	0.308 B	<1	<1	0.319 B	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 65

TABLE 14
ANALYTICAL RESULTS SUMMARY, APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID Field Sample ID Lab Sample ID Date Collected **Primary VOCs**	Maximum Contaminant Levels units	MW-214A MW-214A-LS-3 L0704380-15 4/16/2007	MW-214B MW-214B-LS-3 L0704412-01 4/17/2007	MW-215A MW-215A-LS-3 L0704380-05 4/16/2007	MW-215B MW-215B-LS-3 L0704380-06 4/16/2007	MW-216 MW-216-LS-3 L0704714-05 4/27/2007	MW-217 MW-217-LS-3 L0704714-06 4/27/2007	MW-218 MW-218-LS-3 L0704412-03 4/17/2007	MW-219 MW-219-LS-3 L0704714-08 4/27/2007
Carbon tetrachloride	ug/L	5	0.601 J	0 645 J	0.679 J	0.956 J	<1	**34.8**	**15.1**	<1
Chloroform	ug/L	80	**2.63**	**2.06**	**1.66**	**0.68**	<0 3	**5.05**	**3.15**	<0 3
cis-1,2-Dichloroethene	ug/L	70	<1	<1	<1	<1	<1	**1.34**	0.459 J	0.643 J
Tetrachloroethene	ug/L	5	**8.83**	**6.4**	**5.81**	**4.36**	<1	**18.4**	**17.7**	**16.3**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**5.59**	**4.24**	**7.82**	**1.52**	<1	**29.5**	**44.2**	**1.72**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	0.626 J	<1
1,1,2,2-Tetrachloroethane	ug/L	–	0 297 J	0.326 J	0.203 J	<0 5	<0.5	**0.64**	**1.67**	<0 5
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	0 666 J	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0 5	<0.5	<0.5	0 287 J	**0.671**	**1.49**
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	0.336 J	<1
1,3-Dichloropropane	ug/L	–	<0 4	<0.4	<0.4	<0 4	<0 4	<0 4	<0.4	<0 4
Methyl t-butyl ether (MTBE)	ug/L	–	2.76 J	1 97 J	1.85 J	<5	<5	<5	<5	<5
Methylene chloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 15
ANALYTICAL RESULTS SUMMARY, JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID Field Sample ID Lab Sample ID Date Collected **Primary VOCs**	units	Maximum Contaminant Levels	MW-49 MW-49-LQ-4 L0707151-01 7/9/2007	MW-197A MW-197A-LQ-4 L0707157-001 7/9/2007	MW-197B MW-197B-LQ-4 L0707157-002 7/9/2007	MW-198 MW-198-LQ-4 L0707205-09 7/10/2007	MW-199A-LQ4 MW-199A-LQ4 L0707271-01 7/12/2007	MW-199B MW-199B-LQ-4 L0707239-001 7/11/2007	MW-200 MW-200-LQ-4 L0707205-10 7/10/2007	MW-202A MW-202A-LQ-4 L0707239-002 7/11/2007	MW-202B MW-202B-LQ-4 L0707239-005 7/11/2007
Carbon tetrachloride	ug/L	5	<1	<1	<1	0 267 J	<1	**1.05**	<1	0.904 J	<1
Chloroform	ug/L	80	<0.3	0.208 J	<0 3	<0 3	0 132 J	0.279 J	<0 3	0 249 J	**1.05**
cis-1,2-Dichloroethene	ug/L	70	<1	0.419 J	**5.29**	<1	<1	<1	0.543 J	0.251 J	<1
Tetrachloroethene	ug/L	5	0 285 J	**103**	**134**	<1	0 361 J	0 517 J	**62.9**	0 371 J	**8.16**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	**2.31**	**10.2**	**15.1**	<1	**136**	**7.49**	**2.22**	**2.2**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1,2,2-Tetrachloroethane	ug/L	--	<0 5	<0 5	<0 5	<0.5	<0.5	<0 5	<0.5	<0.5	<0.5
1,2-Dichloroethane	ug/L	5	<0 5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	<0.5

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 67

TABLE 15
ANALYTICAL RESULTS SUMMARY, JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	MW-203A	MW-203B	MW-204A	MW-204B	MW-205A	MW-205B	MW-206A	MW-206B	MW-207A
	Field Sample ID	Contaminant	MW-203A-LQ-4	MW-203B-LQ-4	MW-204A-LQ-4	MW-204B-LQ-4	MW-205A-LQ-4	MW-205B-LQ-4	MW-206A-LQ-4	MW-206B-LQ-4	MW-207A-LQ-4
	Lab Sample ID	Levels	L0707157-003	L0707157-006	L0707205-01	L0707239-006	L0707205-02	L0707205-03	L0707239-003	L0707239-004	L0707205-04
	Date Collected		7/9/2007	7/9/2007	7/10/2007	7/11/2007	7/10/2007	7/10/2007	7/11/2007	7/11/2007	7/10/2007
Primary VOCs	units										
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	80	<0.3	<0.3	<0.3	0.125 J	0.222 J	<0 3	<0.3	0 14 J	**9.99**
cis-1,2-Dichloroethene	ug/L	70	<1	**63.5**	0.785 J	0.916 J	0 465 J	0 616 J	0.765 J	0 722 J	0 387 J
Tetrachloroethene	ug/L	5	**69.1 J**	**21.1**	**36.2**	**17.2**	**180**	**149**	**99.2**	**77.5**	**8.32**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**1.46**	**7.68**	**1.17**	**4.88**	**5.84**	**9.22**	**10.1**	**11**	**18.6**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1,2,2-Tetrachloroethane	ug/L	--	<0 5	<0.5	<0.5	**1.38**	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	ug/L	5	<0.5	<0 5	<0.5	<0 5	<0 5	<0.5	<0.5	<0.5	<0.5

Notes:
VOC samples analyzed using method 8260B
ug/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· Estimated, possibly biased high or false positive based on blank data

1015 68

TABLE 15
ANALYTICAL RESULTS SUMMARY, JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-207B MW-207B-LQ-4 L0707239-007 7/11/2007	MW-208A MW-208A-LQ-4 L0707205-05 7/10/2007	MW-208B MW-208B-LQ-4 L0707239-008 7/11/2007	MW-209A MW-209A-LQ-4 L0707205-06 7/10/2007	MW-209B MW-209B-LQ-4 L0707239-009 7/11/2007	MW-210A MW-210A-LQ-4 L0707157-007 7/9/2007	MW-210B MW-210B-LQ-4 L0707157-008 7/9/2007	MW-211 MW-211-LQ-4 L0707205-07 7/10/2007	MW-212 MW-212-LQ-4 L0707157-011 7/9/2007
Primary VOCs	**units**										
Carbon tetrachloride	ug/L	5	**1.91**	<1	<1	<1	0.962 J	<1	<1	<1	0.479 J
Chloroform	ug/L	80	**2.54**	0.228 J	0.131 J	0.165 J	**0.56**	0.199 J	<0.3	<0.3	0.135 J
cis-1,2-Dichloroethene	ug/L	70	<1	0.541 J	**1.3**	<1	<1	0.813 J	0.57 J	<1	<1
Tetrachloroethene	ug/L	5	**32.5**	**193**	**2.8**	<1	<1	**36.1**	**24.4**	<1	<1
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**17.6**	**8.26**	**15.7**	0.487 J	**7.2**	**6.05**	**8.42**	0.576 J	**47.9**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	**0.542**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	ug/L	5	**2.02**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 69

TABLE 15
ANALYTICAL RESULTS SUMMARY, JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID Field Sample ID Lab Sample ID Date Collected **Primary VOCs**	units	Maximum Contaminant Levels	MW-214A MW-214A-LQ-4 L0707205-11 7/10/2007	MW-214B MW-214B-LQ-4 L0707239-010 7/11/2007	MW-215A MW-215A-LQ-4 L0707205-12 7/10/2007	MW-215B MW-215B-LQ-4 L0707157-012 7/9/2007	MW-216 MW-216-LQ-4 L0707205-13 7/10/2007	MW-217 MW-217-LQ-4 L0707157-013 7/9/2007	MW-218 MW-218-LQ-4 L0707157-016 7/9/2007	MW-219 MW-219-LQ-4 L0707205-14 7/10/2007
Carbon tetrachloride	ug/L	5	0.476 J	**1.05**	0 538 J	**1.01**	<1	**42.3 J**	**13.3**	<1
Chloroform	ug/L	80	**2.32**	**1.85**	**1.67**	**0.71**	0.169 J	**5.33**	**2.79**	<0 3
cis-1,2-Dichloroethene	ug/L	70	<1	<1	<1	<1	<1	**1.45**	0 468 J	**1.06**
Tetrachloroethene	ug/L	5	**6.81**	**6**	**5.58**	**4.39**	<1	**25.4 J**	**16.7**	**27.6**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**4.49**	**3.83**	**8.12**	**1.53**	<1	**40.6 J**	**47.6**	**2.79**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1,2,2-Tetrachloroethane	ug/L	–	0 321 J	0.321 J	0.242 J	<0.5	<0.5	**0.612 J**	**1.72**	<0.5
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5	**0.565**	**1.31**

Notes.
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 70

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Primary VOCs	Well ID Field Sample ID Lab Sample ID Date Collected units	Maximum Contaminant Levels	DR1-1 DR1-1-LA-5 L0710045-01 10/1/2007	DR1-1A DR1-1A-LA-5 L0710045-02 10/1/2007	DR1-2 DR1-2-LA-5 L0710045-03 10/1/2007	DR1-4 DR1-4-LA-5 L0710045-04 10/1/2007	DR1-5 DR1-5-LA-5 L0710045-05 10/1/2007	DR1-5A DR1-5A-LA-5 L0710045-06 10/1/2007	DR1-6 DR1-6-LA-5 L0710045-07 10/1/2007	DR1-6A DR1-6A-LA-5 L0710045-10 10/1/2007	DR1-7 DR1-7-LA-5 L0710045-11 10/1/2007
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	80	<0.3	**0.307**	<0.3	<0.3	0 148 J	0.252 J	<0 3	0.183 J	<0.3
cis-1,2-Dichloroethene	ug/L	70	0.969 J	0.312 J	0.48 J	**5.29**	<1	**3.16**	**1.42**	**4.24**	0.344 J
Tetrachloroethene	ug/L	5	**2.49**	0.813 J	**1.52**	<1	**69.9**	**46.8**	**191 J**	**30.2**	**5.15**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	**3.61**	<1	<1	<1	**78.6**	**1.58**	**107**	0.812 J
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0 5	<0 5	<0 5	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0 5	<0.5	<0 5	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0 4	<0 4	<0.4	<0.4	<0.4	<0 4	<0.4	<0.4
Acetone	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	**28.4**	<5	<5	<5
Toluene	ug/L	1000	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
ug/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. Estimated, possibly biased high or false positive based on blank data

1015 71

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	DR1-8	DR2-2	DR2-3	DR2-4	DR2-6	MW-25A	MW-26	MW-34	MW-38
	Field Sample ID	Contaminant	DR1-8-LA-5	DR2-2-LA-5	DR2-3-LA-5	DR2-4-LA-5	DR2-6-LA-5	MW-25A-LA-5	MW-26-LA-5	MW-34-LA-5	MW-38-LA-5
	Lab Sample ID	Levels	L0710045-12	L0710045-15	L0710045-16	L0710045-17	L0710045-18	L0710147-21	L0710045-14	L0710045-20	L0710045-21
	Date Collected		10/1/2007	10/1/2007	10/1/2007	10/1/2007	10/1/2007	10/3/2007	10/1/2007	10/1/2007	10/1/2007
Primary VOCs	units										
Carbon tetrachlonde	ug/L	5	<1	**10.8**	**4.12**	**3.96**	**82.8**	**2.38**	**6.52**	**1.05**	**1.37**
Chloroform	ug/L	80	<0.3	**2.86**	**0.76**	**0.973**	**43.1**	**0.531**	**1.29**	**0.434**	**0.646**
cis-1,2-Dichloroethene	ug/L	70	<1	**5.7**	0 549 J	<1	**31.6**	<1	0.41 J	<1	<1
Tetrachloroethene	ug/L	5	<1	**76.7**	**20.6**	**9.28**	**115**	**9.24**	**29**	0.753 J	0.446 J
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	0.341 J	**4.04**	**2.15**	**1.54**	**19.7**	0 433 J	**1.75**	**1.38**	**4.37**
Vinyl chlonde	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	--	<0 5	<0.5	<0.5	<0 5	<0.5	<0.5	<0.5	<0 5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	**78**	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0 5	<0 5	<0.5	<0.5	**1.27**	<0.5	<0.5	<0 5	<0 5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	0 666 J	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0 4	<0.4	<0 4
Acetone	ug/L	–	<10	<10	<10	<10	<10	3 16 J	<10	<10	<10
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	ug/L	1000	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-39 MW-39-LA-5 L0710045-22 10/1/2007	MW-39A MW-39A-LA-5 L0710076-06 10/2/2007	MW-52 MW-52-LA-5 L0710147-22 10/3/2007	MW-62 MW-62-LA-5 L0710147-23 10/3/2007	MW-63A MW-63A-LA-5 L0710076-01 10/2/2007	MW-63B MW-63B-LA-5 L0710076-02 10/2/2007	MW-64 MW-64-LA-5 L0710147-26 10/3/2007	MW-86 MW-86-LA-5 L0710180-05 10/4/2007	MW-88 MW-88-LA-5 L0710180-06 10/4/2007
Primary VOCs	**units**										
Carbon tetrachloride	ug/L	5	<1	<1	<1	0 744 J	<1	<1	**2.82**	<1	**4.83**
Chloroform	ug/L	80	0.225 J	0.215 J	**0.75**	**0.476**	<0.3	**1.44**	**0.891**	**0.341**	**0.827**
cis-1,2-Dichloroethene	ug/L	70	0.435 J	0.362 J	0.993 J	0.33 J	<1	<1	0.363 J	**117**	0 751 J
Tetrachloroethene	ug/L	5	**111**	**162**	**9.62**	0.8 J	**1.23**	**2.95**	**17.1**	**5.14**	**21.3**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**8.81**	**4.4**	**1.17**	**184**	**1.09**	**2.1**	**30.2**	**1.79**	**3.42**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5	**1.11**	<0.5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	<1	<1	<1	0 433 J	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	**1.83**	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	**3.19**	**0.766**	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	**1.58**	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0 4	<0 4	<0 4	<0.4	<0 4	**1.27**	<0.4
Acetone	ug/L	–	<10	<10	4.13 J	3.42 J	<10	<10	2.86 J	<10	<10
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	0 532 J	<5	<5	<5	<5
Toluene	ug/L	1000	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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 Estimated, possibly biased high or false positive based on blank data

1015.73

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-89 MW-89-LA-5 L0710045-23 10/1/2007	MW-90 MW-90-LA-5 L0710045-24 10/1/2007	MW-92 MW-92-LA-5 L0710180-07 10/4/2007	MW-93 MW-93-LA-5 L0710180-01 10/4/2007	MW-94A MW-94A-LA-5 L0710180-02 10/4/2007	MW-96 MW-96-LA-5 L0710180-08 10/4/2007	MW-97 MW-97-LA-5 L0710076-15 10/2/2007	MW-98 MW-98-LA-5 L0710147-01 10/3/2007	MW-99 MW-99-LA-5 L0710147-11 10/3/2007
Primary VOCs	**units**										
Carbon tetrachloride	ug/L	5	0.56 J	0.462 J	**6.45**	<1	<1	**3.4**	<1	<1	<1
Chloroform	ug/L	80	0.224 J	**3.64**	**11**	<0.3	0.129 J	**0.739**	0.255 J	<0.3	0.2 J
cis-1,2-Dichloroethene	ug/L	70	0.279 J	0.36 J	**67.5**	<1	0.61 J	0.836 J	<1	<1	<1
Tetrachloroethene	ug/L	5	0.644 J	**50.7**	**55**	<1	**43.5**	**4.33**	<1	**36.9**	<1
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**1.55**	**3.69**	**3.12**	<1	**7.44**	<1	**25.7**	**2.69**	<1
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1-Dichloroethene	ug/L	7	<1	0.579 J	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0.5	0.238 J	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	ug/L	--	<1	0.762 J	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	ug/L	–	<10	<10	4.19 J	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	ug/L	–	<10	<10	7.65 J	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	ug/L	1000	<1	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Primary VOCs	Well ID Field Sample ID Lab Sample ID Date Collected units	Maximum Contaminant Levels	MW-100B MW-100B-LA-5 L0710076-16 10/2/2007	MW-102B MW-102B-LA-5 L0710147-12 10/3/2007	MW-103 MW-103-LA-5 L0710180-03 10/4/2007	MW-104 MW-104-LA-5 L0710180-04 10/4/2007	MW-107B MW-107B-LA-5 L0710076-07 10/2/2007	MW-108 MW-108-LA-5 L0710045-25 10/1/2007	MW-113 MW-113-LA-5 L0710180-09 10/4/2007	MW-125 MW-125-LA-5 L0710076-17 10/2/2007	MW-140 MW-140-LA-5 L0710076-08 10/2/2007
Carbon tetrachloride	ug/L	5	<1	<1	<1	<1	0.415 J	0.461 J	**96.9**	<1	<1
Chloroform	ug/L	80	<0 3	<0.3	**11.7**	**12.8**	<0.3	**12.1**	**36.4**	<0.3	0.16 J
cis-1,2-Dichloroethene	ug/L	70	**143**	<1	0.35 J	0.554 J	<1	0 71 J	**50.2**	**26.3**	<1
Tetrachloroethene	ug/L	5	**29.6**	0.308 J	<1	<1	0 476 J	**5.03**	**151**	**48.3**	0 59 J
trans-1,2-Dichloroethene	ug/L	100	0.605 J	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**12.6**	<1	**6.63**	**17.8**	0 95 J	**38.4 J**	**26**	**16**	**1.19**
Vinyl chloride	ug/L	2	**1.02**	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs											
1,1-Dichloroethene	ug/L	7	<1	<1	**1.94**	**1.98**	<1	0 657 J	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	<0 5	<0 5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	**2.3**	0.894 J	<1	0.351 J	<1	<1	<1
1,2,3-Trichloropropane	ug/L	--	<1	<1	<1	<1	<1	<1	**13.5**	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0.5	<0 5	<0 5	**0.661**	0.342 J	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	0 552 J	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0.4	<0.4	<0 4	<0 4	<0 4	<0 4	<0 4
Acetone	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	–	**36.1**	<5	<5	<5	<5	<5	<5	**19.2**	<5
Toluene	ug/L	1000	0 515 J	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015 75

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	MW-141	MW-142	MW-197A	MW-197B	MW-198	MW-199A	MW-199B	MW-200
	Field Sample ID	Contaminant	MW-141-LA-5	MW-142-LA-5	MW-197A-LA-5	MW-197B-LA-5	MW-198-LA-5	MW-199A-LA-5	MW-199B-LA-5	MW-200-LA-5
	Lab Sample ID	Levels	L0710076-09	L0710147-13	L0710147-02	L0710147-03	L0710076-18	L0710076-10	L0710076-11	L0710147-14
	Date Collected		10/2/2007	10/3/2007	10/3/2007	10/3/2007	10/2/2007	10/2/2007	10/2/2007	10/3/2007
Primary VOCs	units									
Carbon tetrachlonde	ug/L	5	<1	<1	<1	<1	0 438 J	<1	0.376 J	<1
Chloroform	ug/L	80	**2.09**	<0 3	0 179 J	0.166 J	<0.3	<0.3	0.146 J	<0.3
cis-1,2-Dichloroethene	ug/L	70	<1	<1	0 445 J	**10.7**	<1	<1	<1	0 419 J
Tetrachloroethene	ug/L	5	**18**	<1	**87.3**	**105 J**	<1	<1	0.393 J	**73.9**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**2.52**	0.709 J	**2.42**	**10.3**	**6.53**	<1	**78.6**	**6.88**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	<0.5
1,1-Dichloroethane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.5	<0 5	<0 5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0 4	<0.4	<0.4	<0 4	<0.4	<0 4
Acetone	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	–	<5	3 26 J	<5	<5	<5	1.55 J	<5	<5
Toluene	ug/L	1000	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID Field Sample ID Lab Sample ID Date Collected **Primary VOCs**	Maximum Contaminant Levels units	MW-202A MW-202A-LA-5 L0710045-28 10/1/2007	MW-202B MW-202B-LA-5 L0710076-12 10/2/2007	MW-203A MW-203A-LA-5 L0710147-04 10/3/2007	MW-203B MW-203B-LA-5 L0710147-05 10/3/2007	MW-204A MW-204A-LA-5 L0710076-20 10/2/2007	MW-204B MW-204B-LA-5 L0710076-21 10/2/2007	MW-205A MW-205A-LA-5 L0710147-06 10/3/2007	MW-205B MW-205B-LA-5 L0710180-13 10/4/2007
Carbon tetrachloride	ug/L 5	0.552 J	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L 80	0 238 J	**0.907**	0.128 J	<0.3	<0.3	<0 3	0.185 J	0.15 J
cis-1,2-Dichloroethene	ug/L 70	<1	<1	0.294 J	**55**	0.846 J	**1.05**	0.538 J	**4.41**
Tetrachloroethene	ug/L 5	0 672 J	**3.82**	**86.8**	**13.9**	**37**	**19**	**145**	**100**
trans-1,2-Dichloroethene	ug/L 100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L 5	**1.66**	**1.36**	**1.69**	**7.92**	**1.06**	**4.7**	**6.25**	**8.74**
Vinyl chloride	ug/L 2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs									
1,1-Dichloroethene	ug/L 7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L –	<0 5	<0.5	<0.5	<0.5	<0.5	**1.36**	<0.5	<0 5
1,1-Dichloroethane	ug/L –	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L –	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L 5	<0.5	<0 5	<0.5	<0 5	<0.5	<0 5	<0.5	<0 5
1,2-Dichloropropane	ug/L 5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L –	<0.4	<0.4	<0.4	<0.4	<0.4	<0 4	<0.4	<0.4
Acetone	ug/L –	<10	<10	3.77 J	<10	<10	<10	<10	<10
MEK (2-Butanone)	ug/L –	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L –	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	ug/L 1000	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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: Estimated, possibly biased high or false positive based on blank data

1015.77

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-206A MW-206A-LA-5 L0710147-15 10/3/2007	MW-206B MW-206B-LA-5 L0710147-16 10/3/2007	MW-207A MW-207A-LA-5 L0710147-07 10/3/2007	MW-207B MW-207B-LA-5 L0710147-08 10/3/2007	MW-208A MW-208A-LA-5 L0710180-14 10/4/2007	MW-208B MW-208B-LA-5 L0710180-15 10/4/2007	MW-209A MW-209A-LA-5 L0710180-18 10/4/2007	MW-209B MW-209B-LA-5 L0711117-03 10/5/2007
Primary VOCs	**units**									
Carbon tetrachloride	ug/L	5	<1	<1	<1	**1.37**	<1	<1	<1	**1.86**
Chloroform	ug/L	80	0.166 J	0 148 J	**8.28**	**1.9**	0 214 J	<0.3	<0.3	0 215 J
cis-1,2-Dichloroethene	ug/L	70	0.762 J	0 698 J	0 479 J	<1	0 557 J	**1.08**	0.727 J	<1
Tetrachloroethene	ug/L	5	**76.4**	**64.9**	**10.3**	**23.7**	**163**	**3.02**	**28.8**	<1
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	**12.4**	**11**	**21.6**	**62**	**8.44**	**15**	**5.63**	**14.8**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0 5	<0 5	<0.5	<0 5	<0.5	0.344 J	<0.5	<0 5
1,1-Dichloroethane	ug/L	–	<1	<1	0.27 J	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0 5	<0.5	<0.5	**0.888**	<0 5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0 4	<0.4	<0 4	<0.4	<0.4	<0.4	<0 4	<0.4
Acetone	ug/L	–	2.79 J	<10	<10	<10	<10	<10	<10	<10
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	ug/L	1000	<1	<1	<1	<1	<1	<1	<1	<1

Notes
VOC samples analyzed using method 8260B
ug/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. Estimated, possibly biased high or false positive based on blank data

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	Maximum	MW-210A	MW-210B	MW-211	MW-212	MW-214A	MW-214B	MW-215A	MW-215B
	Field Sample ID	Contaminant	MW-210A-LA-5	MW-210B-LA-5	MW-211-LA-5	MW-212-LA-5	MW-214A-LA-5	MW-214B-LA-5	MW-215A-LA-5	MW-215B-LA-5
	Lab Sample ID	Levels	L0710180-19	L0711117-04	L0710076-13	L0710147-27	L0710147-28	L0710147-29	L0710180-10	L0710180-11
	Date Collected		10/4/2007	10/5/2007	10/2/2007	10/3/2007	10/3/2007	10/3/2007	10/4/2007	10/4/2007
Primary VOCs	units									
Carbon tetrachloride	ug/L	5	<1	<1	<1	0 568 J	0.725 J	0.76 J	0 671 J	0.894 J
Chloroform	ug/L	80	0.136 J	0 143 J	<0.3	0.13 J	**2.26**	**1.47**	**1.76**	**0.651**
cis-1,2-Dichloroethene	ug/L	70	<1	0 433 J	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5	<1	**21**	<1	0.516 J	**6.99**	**4.89**	**6.95**	**4.49**
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	0.404 J	**10.7**	0 436 J	**41.7**	**4.11**	**3.06**	**7.79**	**1.47**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0.5	<0.5	<0.5	<0 5	0.316 J	0.394 J	<0.5	<0.5
1,1-Dichloroethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	<0.5	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5
1,2-Dichloropropane	ug/L	5	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	–	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Acetone	ug/L	–	<10	<10	<10	<10	4.96 J	4.24 J	<10	<10
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	--	1.89 J	<5	<5	<5	1.94 J	1.28 J	1 99 J	<5
Toluene	ug/L	1000	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
VOC samples analyzed using method 8260B
ug/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 Estimated, possibly biased high or false positive based on blank data

TABLE 16
ANALYTICAL RESULTS SUMMARY, OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID Field Sample ID Lab Sample ID Date Collected	Maximum Contaminant Levels	MW-216 MW-216-LA-5 L0710076-22 10/2/2007	MW-217 MW-217-LA-5 L0710076-03 10/2/2007	MW-218 MW-218-LA-5 L0710076-04 10/2/2007	MW-219 MW-219-LA-5 L0710147-17 10/3/2007	PZ-03 PZ-03-LA-5 L0711117-01 10/5/2007	PZ-06 PZ-06-LA-5 L0711117-02 10/5/2007	MW-229 MW-229-LA5 L0710208-01 10/5/2007	IW-06 IW-06-LA-5 L0710076-19 10/2/2007
Primary VOCs	**units**									
Carbon tetrachloride	ug/L	5	<1	**53.4**	**17.6**	<1	<1	<1	<1	<1
Chloroform	ug/L	80	0 183 J	**5.18**	**2.45**	<0 3	0.139 J	<0.3	<0 3	<0.3
cis-1,2-Dichloroethene	ug/L	70	<1	**1.89**	0.508 J	**1.01**	<1	<1	<1	**2.16**
Tetrachloroethene	ug/L	5	<1	**31.3**	**18.5**	**33.9**	0.523 J	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	100	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5	<1	**39.4**	**42.8**	**3.37**	0 321 J	<1	<1	**1.38**
Vinyl chloride	ug/L	2	<1	<1	<1	<1	<1	<1	<1	<1
Additional VOCs										
1,1-Dichloroethene	ug/L	7	<1	<1	0.651 J	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	–	<0 5	**0.547**	**1.56**	<0.5	<0 5	<0.5	<0.5	<0 5
1,1-Dichloroethane	ug/L	--	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	–	<1	0.731 J	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	5	<0.5	0.342 J	**0.542**	**1.02**	<0 5	<0.5	<0.5	<0 5
1,2-Dichloropropane	ug/L	5	<1	<1	0.355 J	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	--	<0.4	<0.4	<0.4	<0.4	<0.4	<0 4	<0.4	<0.4
Acetone	ug/L	--	<10	<10	<10	<10	4.56 J	<10	3.26 J	**1550 B**
MEK (2-Butanone)	ug/L	–	<10	<10	<10	<10	<10	<10	<10	**1380**
Methyl t-butyl ether (MTBE)	ug/L	–	<5	<5	<5	<5	<5	<5	<5	**27.8**
Toluene	ug/L	1000	<1	<1	<1	<1	<1	0.864 J	**2.37**	<1

Notes:
VOC samples analyzed using method 8260B
ug/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 Estimated, possibly biased high or false positive based on blank data

FIGURES

1015 82

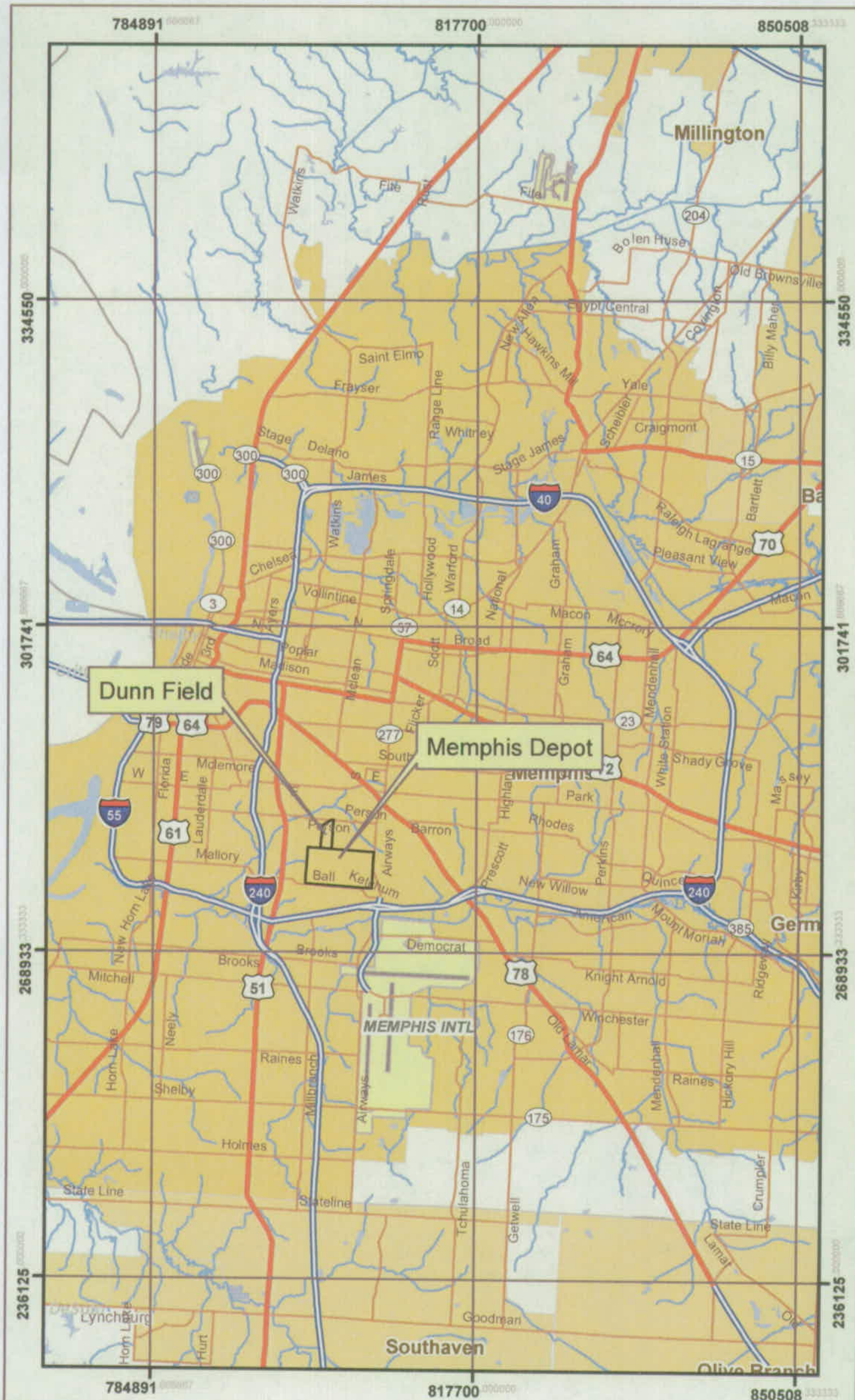


Figure 1

SITE LOCATION MAP

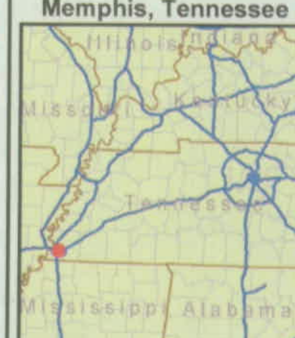
ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION DEFENSE DEPOT MEMPHIS, TENNESSEE

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 0.6 1.2 1.8 2.4 3 Miles

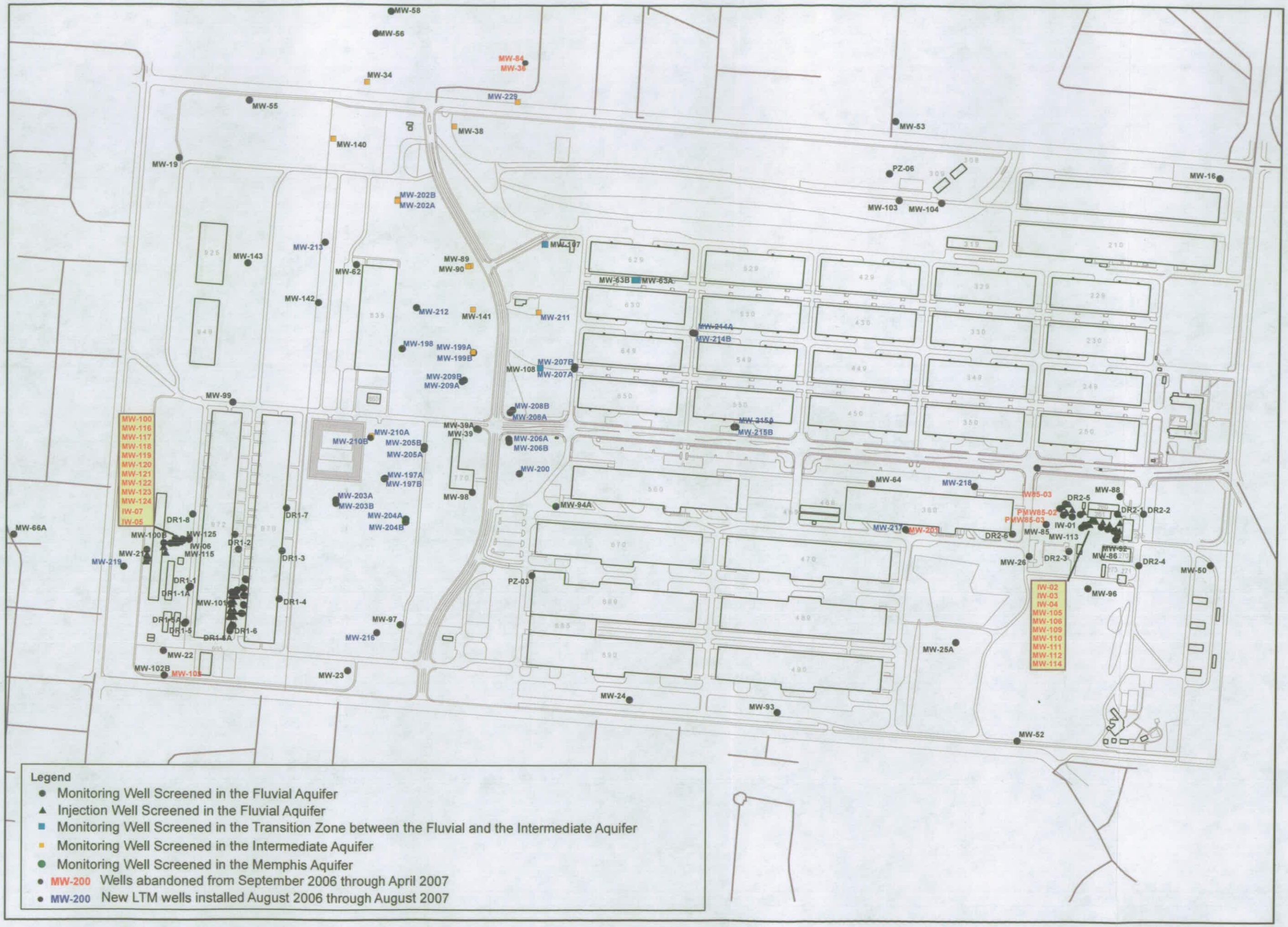
Installation Location
Memphis, Tennessee



Date: August 2009
Edition: Rev 0

HDR | eM

1015 83



N
W E
S

Figure 2

WELL LOCATION MAP

ANNUAL LONG-TERM
MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000
Feet

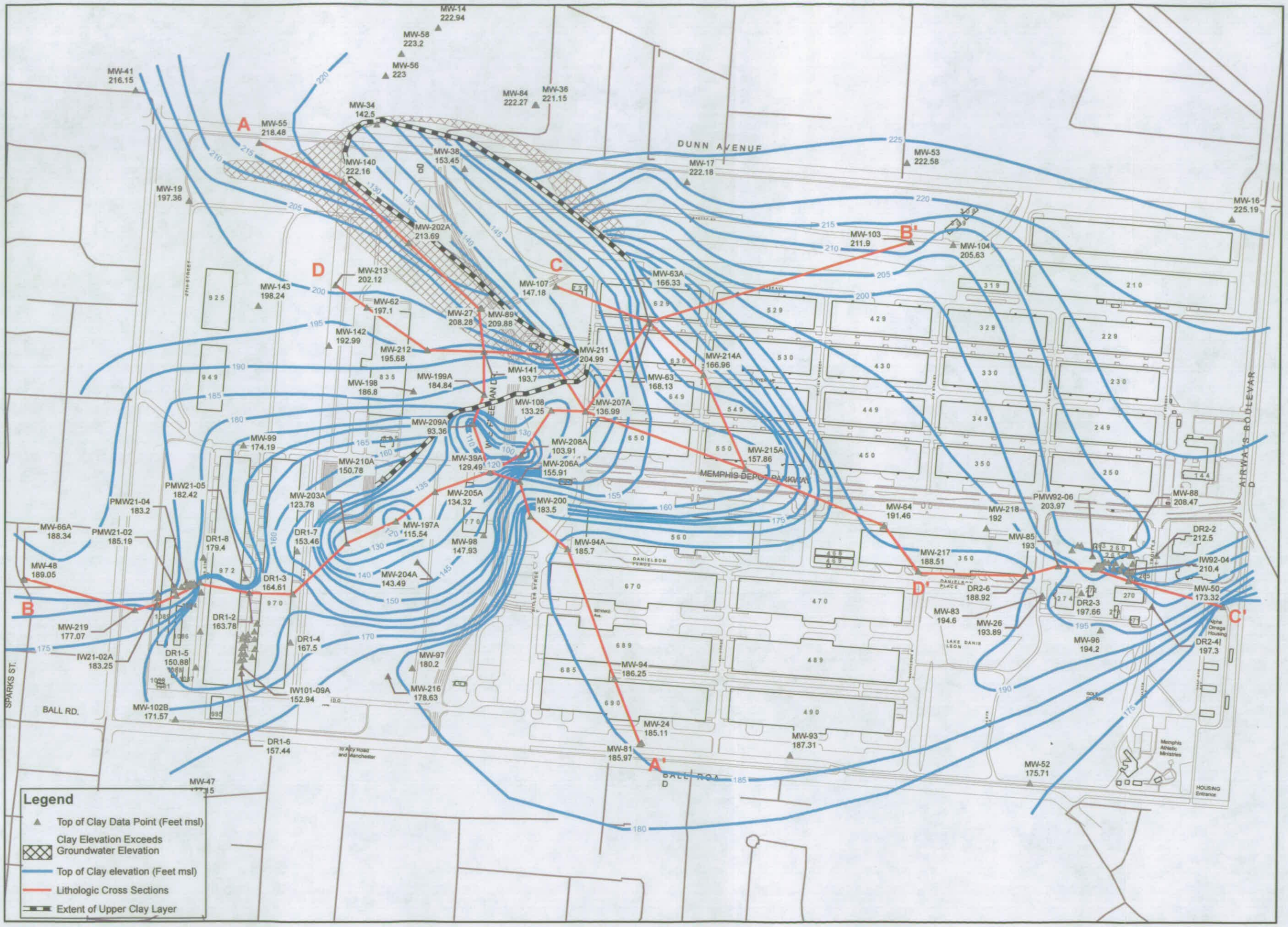
Installation Location
Memphis, Tennessee



Date: August 2009
Edition: Rev 0

HDR | eM

1015 84



N
W E
S

Figure 3

TOP OF CLAY ELEVATION MAP

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800
Feet

Installation Location
Memphis, Tennessee



Date: August 2009
Edition: Rev 0

HDR | eM

1015 85

A NORTH

A' SOUTH

DD'

BB'

MW-55 MW-140 MW-202A/MW-202B MW-89/MW-90 MW-141 MW-199A MW-199B MW-209A MW-209B MW-39 MW-39A MW-206A MW-206B MW-200 MW-94A MW-94 MW-81/MW-24

Silty Clay to Clayey Silt

Sandy Clay to Clayey Sand

Sand with Gravel

Grey Clay

Clay

Sand

Silty Sandy Clay

B.T.

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

20 0 200

N W E S

Figure 4

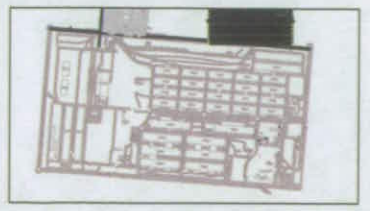
LITHOLOGIC CROSS-SECTION A-A', MW-55 to MW-81

ANNUAL LONG-TERM MONITORING REPORT – 2007

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

HDR eM

1015 86

B

WEST

AA'

CC'

B'

EAST

MW-66A
MW-219
IW21-02A
IW21-04A
MW-100
DR1-2
DR1-3
MW-203A
MW-203B
MW-197A
MW-197B
MW-205A
MW-205B
MW-39
MW-39A
MW-208A
MW-208B
MW-108
MW-207A
MW-207B
MW-63A/MW-63B
MW-103

Silty Clay to Clayey Silt

Sandy Clay to Clayey Sand

Sand with Gravel

Clay

Grey Clay

Sand

ELEVATION (FEET, MSL)

300
280
260
240
220
200
180
160
140
120
100

20
0
200

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
Well Screen Interval

Figure 5

LITHOLOGIC CROSS-SECTION B-B', MW-66A to MW-103

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION DEFENSE DEPOT MEMPHIS, TENNESSEE

Installation Location
Memphis, Tennessee

Date: August 2009
Edition: Rev 0

HDR | eM

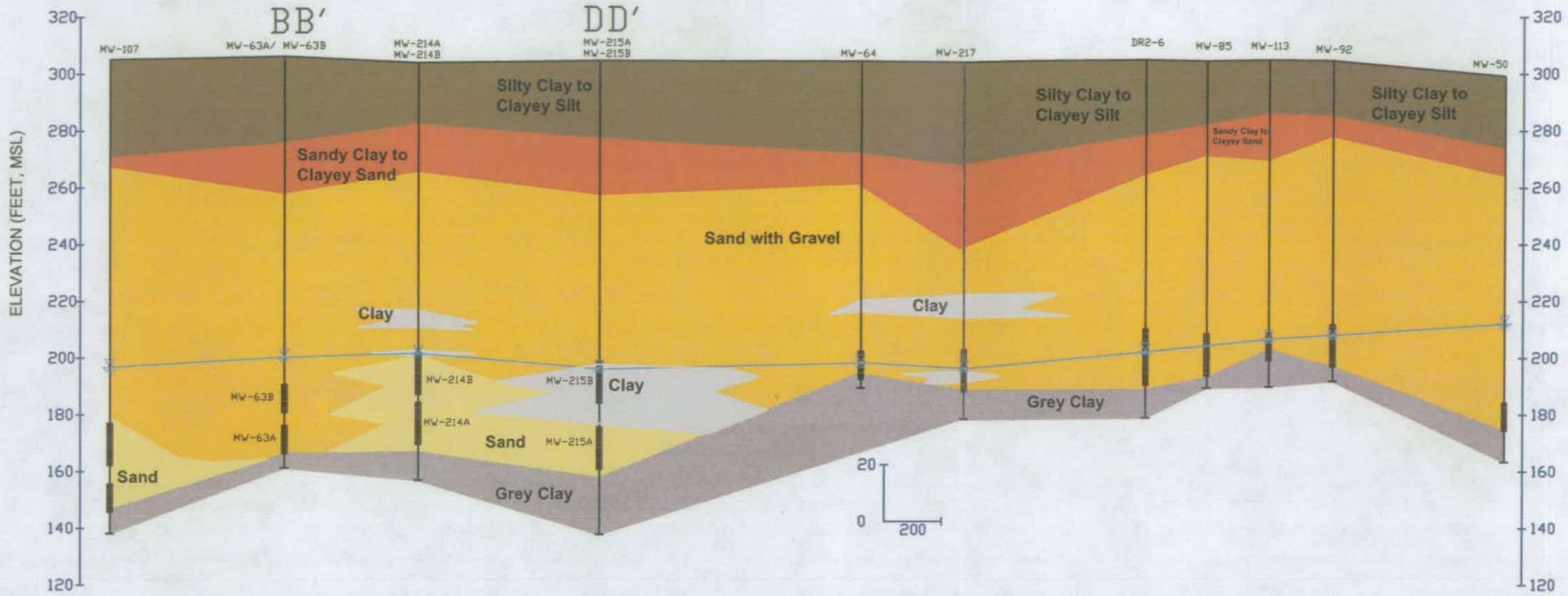
1015 87

C

NORTHWEST

C'

SOUTHEAST



Note:
MW-215A and MW-215 B are approximately 15 feet apart. The cross-section lithology is based on MW-215A. The well screen in MW-215B is set within a gravelly sand, although a sandy clay was observed at that elevation in MW-215A.

N

W E

S

Figure 6

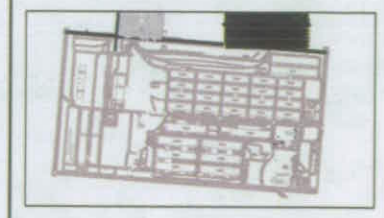
LITHOLOGIC CROSS-SECTION C-C', MW-107 to MW-50

ANNUAL LONG-TERM MONITORING REPORT – 2007

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 5/4/2007
- Well Screen Interval

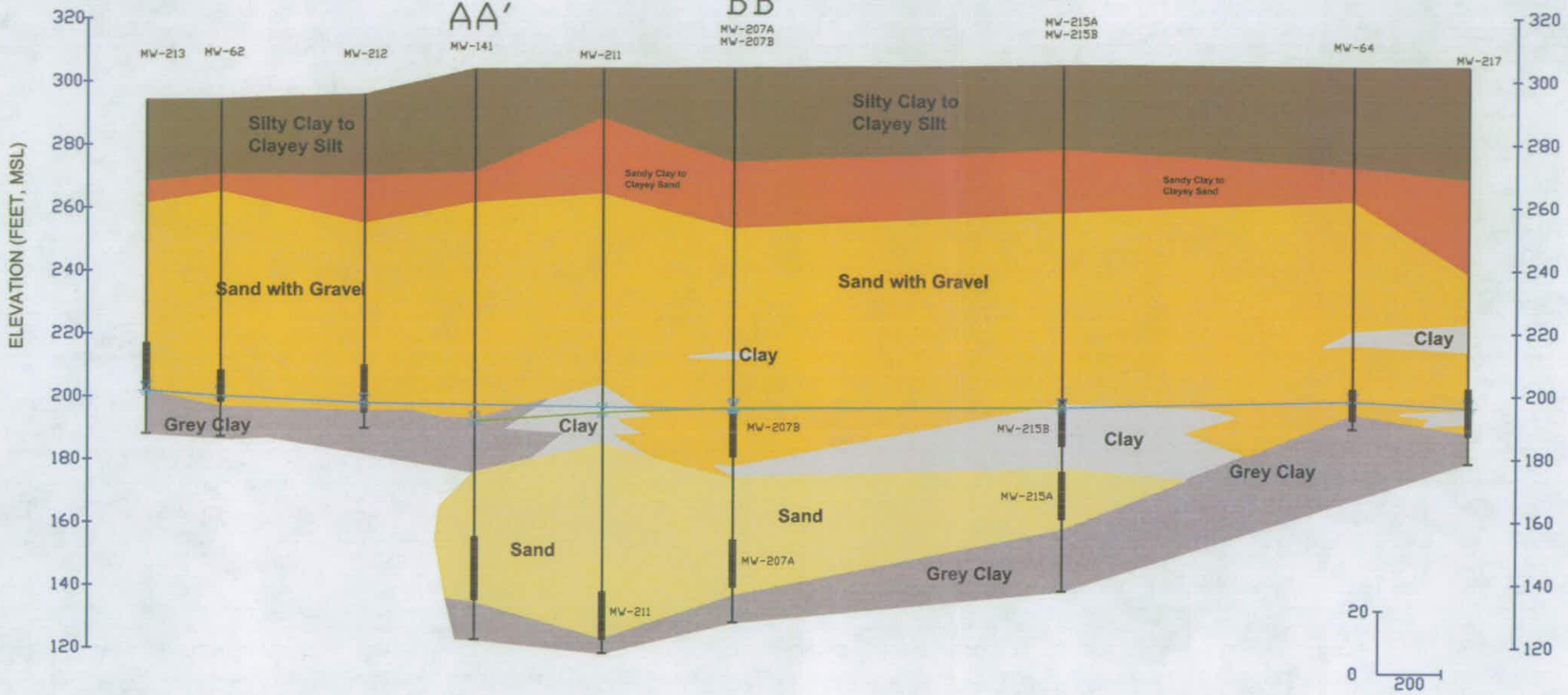
Installation Location
Memphis, Tennessee



Date: August 2009
Edition: Rev 0

HDR | eM

1015 88



Note:
MW-215A and MW-215 B are approximately 15 feet apart. The cross-section lithology is based on MW-215A. The well screen in MW-215B is set within a gravelly sand, although a sandy clay was observed at that elevation in MW-215A.

N
W E
S

Figure 7

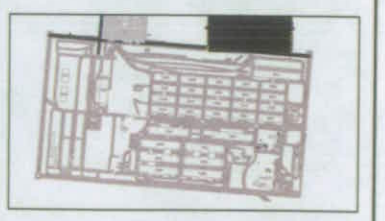
LITHOLOGIC CROSS-SECTION D-D', MW-213 to MW-217

ANNUAL LONG-TERM MONITORING REPORT – 2007

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 5/4/2007
- Groundwater Elevation Intermediate Aquifer 5/4/2007
- Well Screen Interval

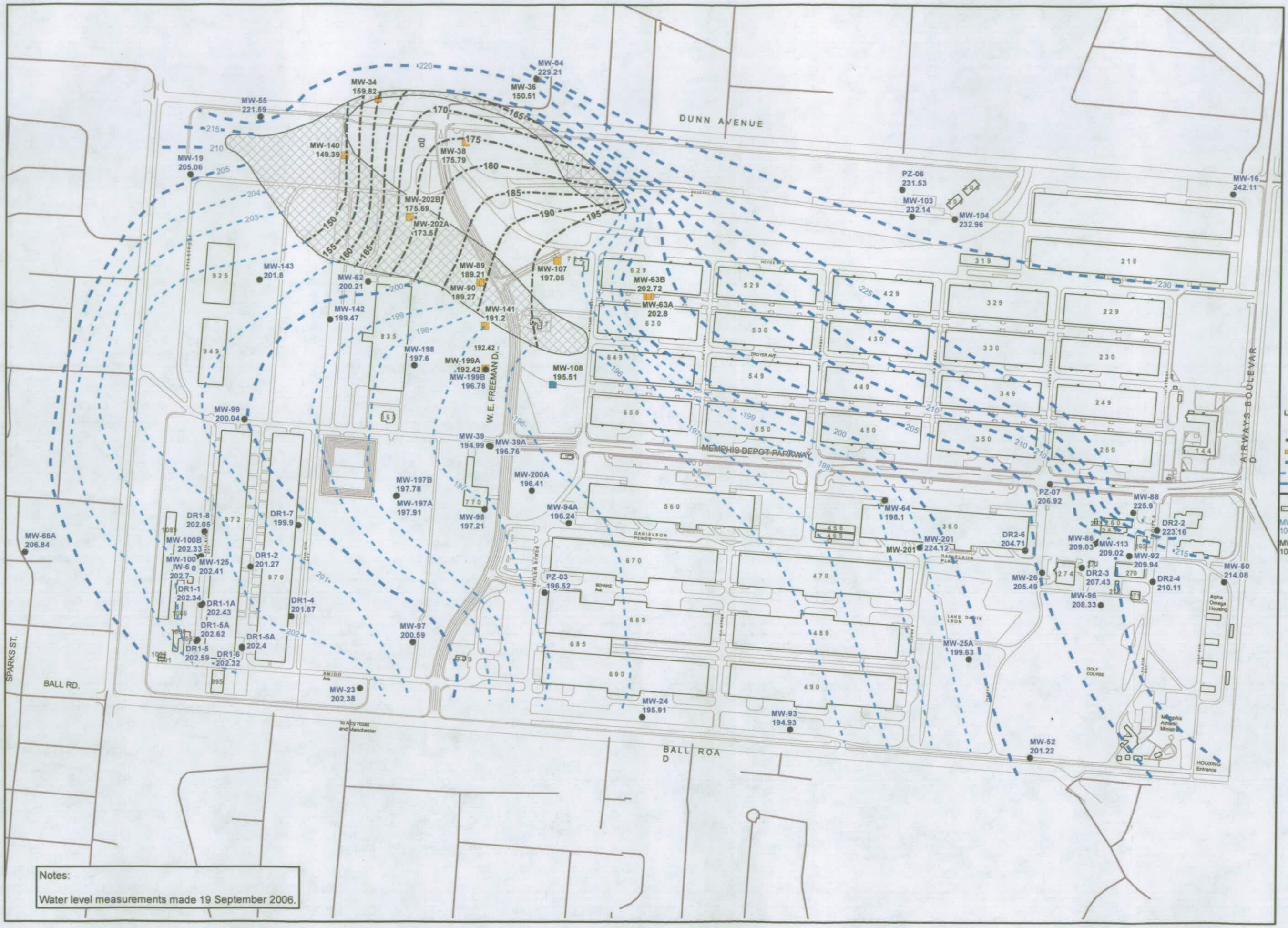
Installation Location
Memphis, Tennessee



Date: August 2009
Edition: Rev 0

HDR eM

1015 89



N
W E
S

Figure 8

POTENTIOMETRIC SURFACE MAP (OCTOBER 2006)

ANNUAL LONG-TERM MONITORING REPORT – 2007

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
- ClayArea *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

0 200 400 600 800
Feet

Installation Location
Memphis, Tennessee



Date: February 2010
Edition: Rev 0

HDR | eM

G:\3202\016LTM2007 Annual Report

1015 90

N
W E
S

Figure 9

POTENTIOMETRIC SURFACE MAP (JANUARY 2007)

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

DUNN AVENUE
W. E. FREEMAN DR.
MEMPHIS DEPOT PARKWAY
AIRWAYS BOULEVARD
SPARKS ST.
BALL RD.
BALL ROAD
DANIELSON PLACE
GOLF COURSE
HOUSING Entrance
Memphis Athletic Ministries
Alpha Omega Housing

Notes:

Water level measurements made 1/22/2007.

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
- ClayArea *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

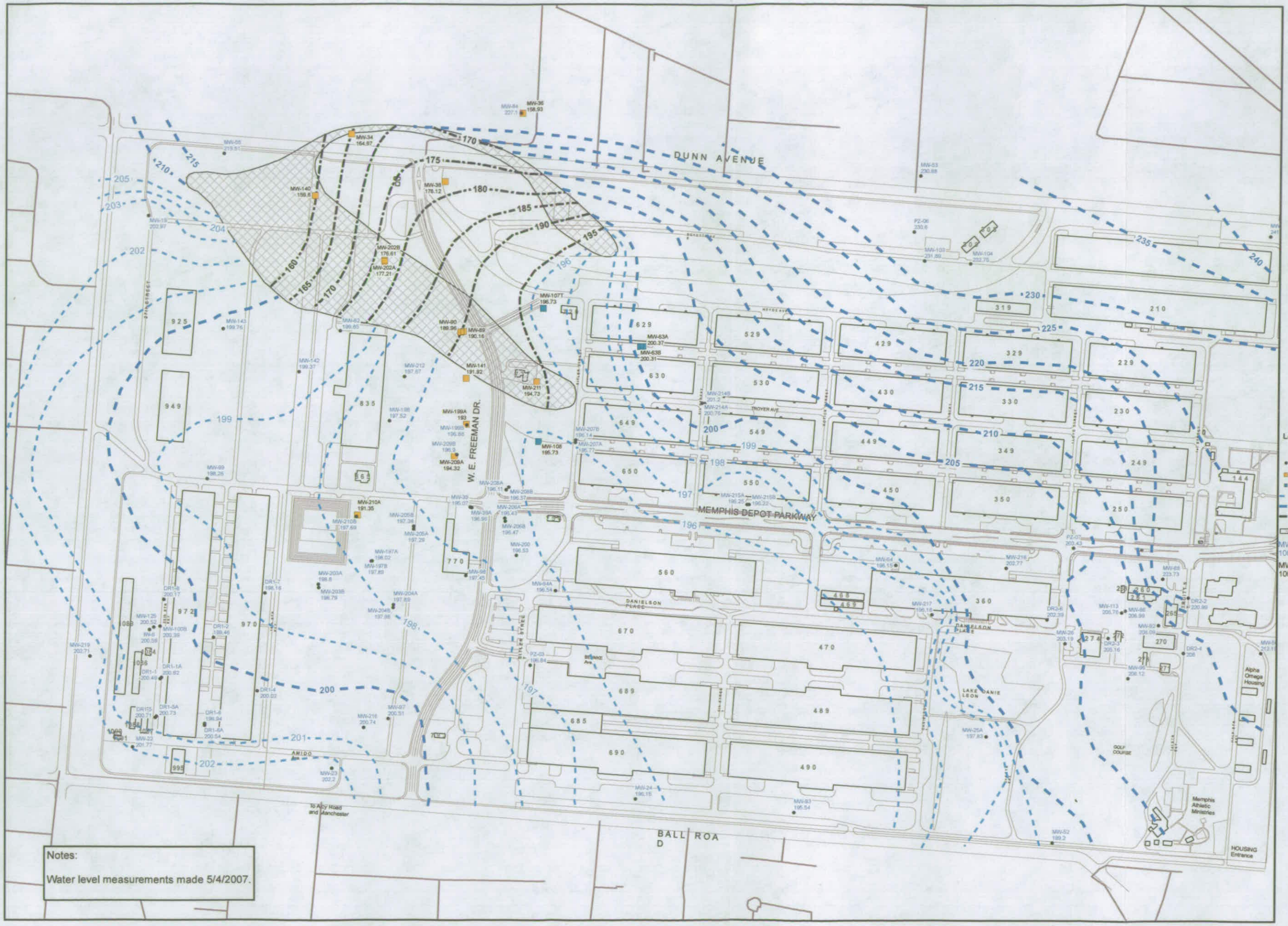
Installation Location
Memphis, Tennessee

Date: February 2010
Edition: Rev 0

HDR | eM

G:\32021016\LTM\2007 Annual Report

1015 91



Notes:

Water level measurements made 5/4/2007.

G:\3202\016LTM\2007 Annual Report

N
W E
S

Figure 10

POTENTIOMETRIC SURFACE MAP (APRIL 2007)

ANNUAL LONG-TERM MONITORING REPORT – 2007

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 Area *Clay Elevation Exceeds Groundwater Elevation*

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

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

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000
Feet

Installation Location
Memphis, Tennessee



Date: February 2010
Edition: Rev 0

HDR | eM

1015 92

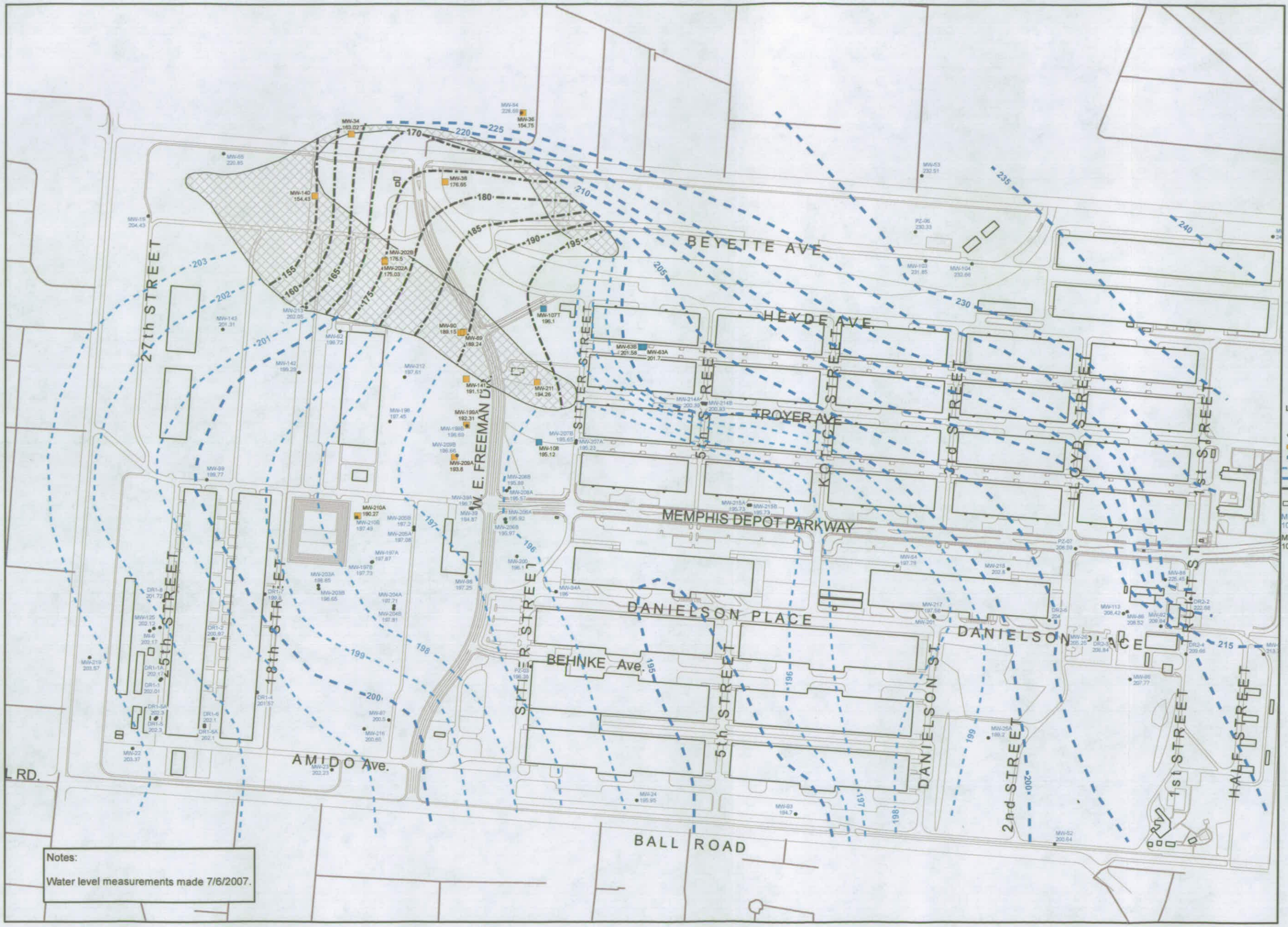
N
W E
S

Figure 11

POTENTIOMETRIC SURFACE MAP (JULY 2007)

ANNUAL LONG-TERM MONITORING REPORT – 2007

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
- ClayArea *Clay Elevation Exceeds Groundwater Elevation*

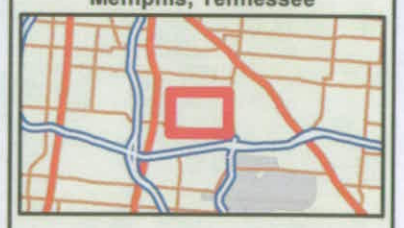
MW-03 100.12 Blue: value used for Fluvial Aquifer groundwater contours

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

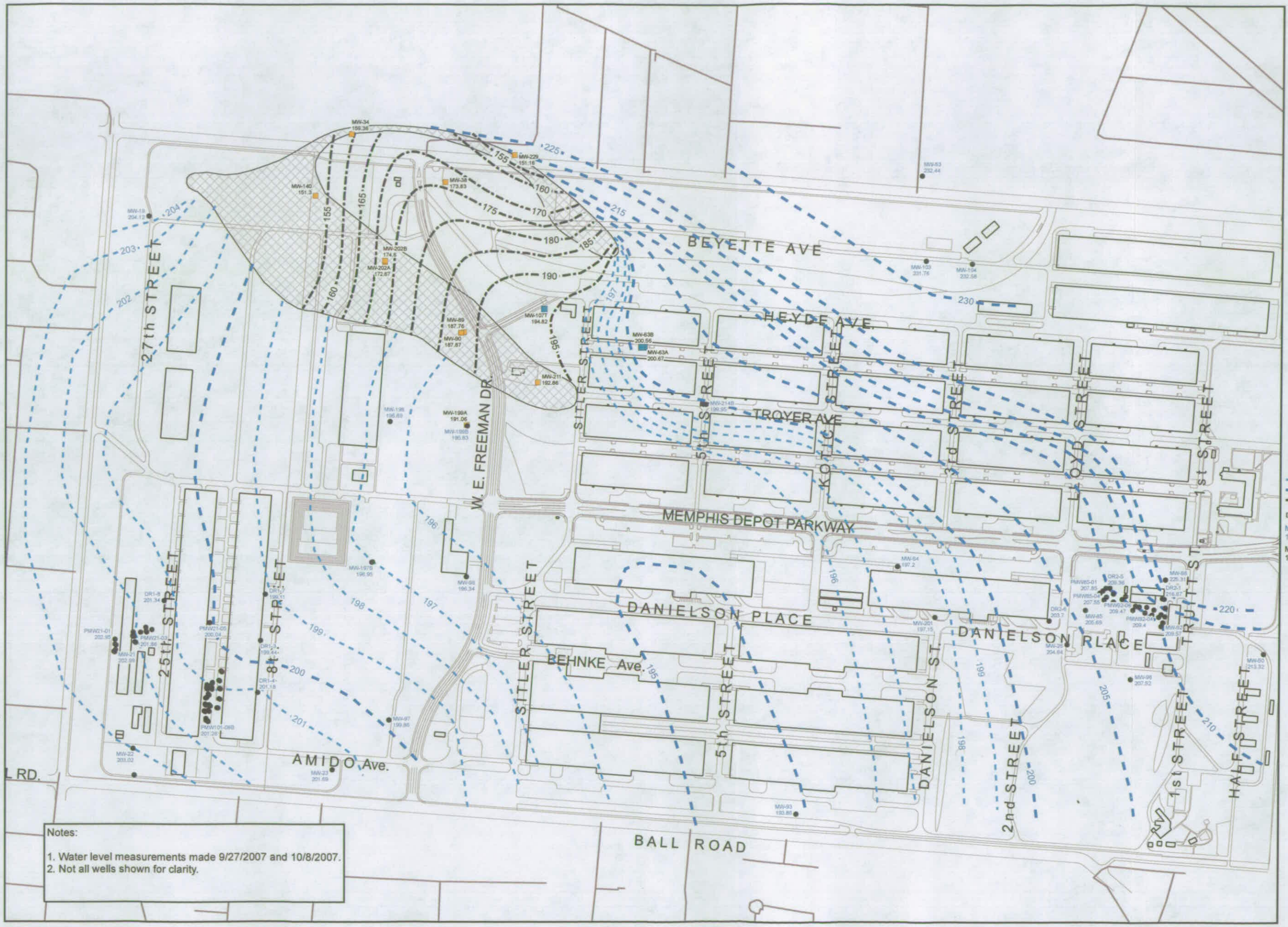


Date: February 2010
Edition: Rev 0

HDR | eM

G:\3202\016LTM\2007 Annual Report

1015 93



Notes:

1. Water level measurements made 9/27/2007 and 10/8/2007.
2. Not all wells shown for clarity.

G:\32021016LTM\2007 Annual Report

N
W E
S

Figure 12

POTENTIOMETRIC SURFACE MAP (OCTOBER 2007)

ANNUAL LONG-TERM MONITORING REPORT – 2007

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
- ClayArea *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: February 2010
Edition: Rev 0

HDR | eM

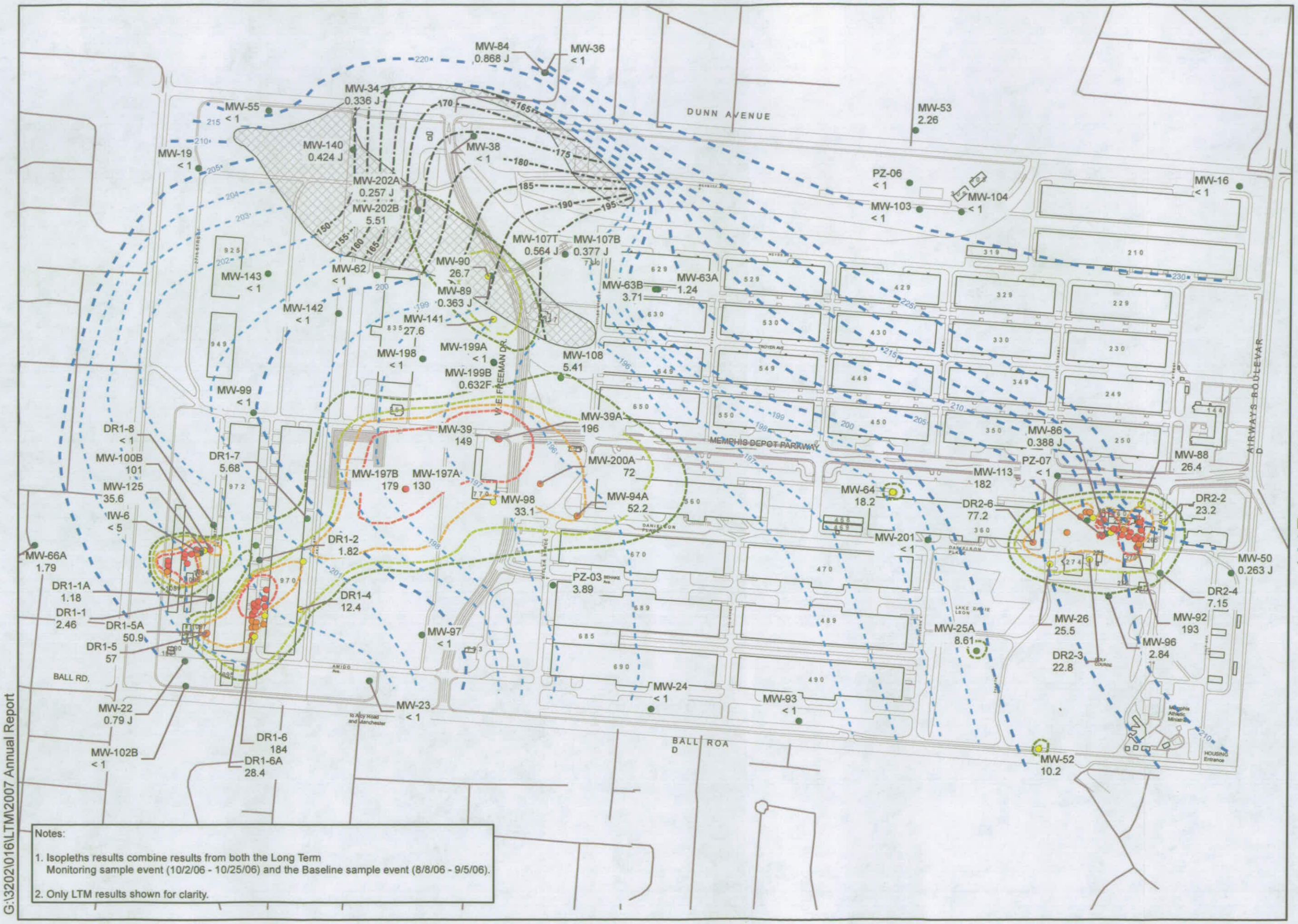
1015 94

Figure 13

PCE ISOPLETH MAP, OCTOBER 2006

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE



Notes:

1. Isopleths results combine results from both the Long Term Monitoring sample event (10/2/06 - 10/25/06) and the Baseline sample event (8/8/06 - 9/5/06).

2. Only LTM results shown for clarity.

Legend

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

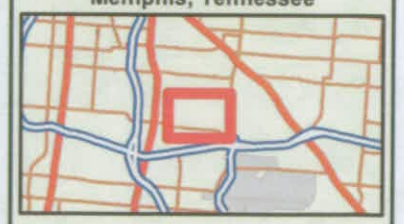
PCE Ranges
ug/L
- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 300

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

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000
Feet

Installation Location
Memphis, Tennessee

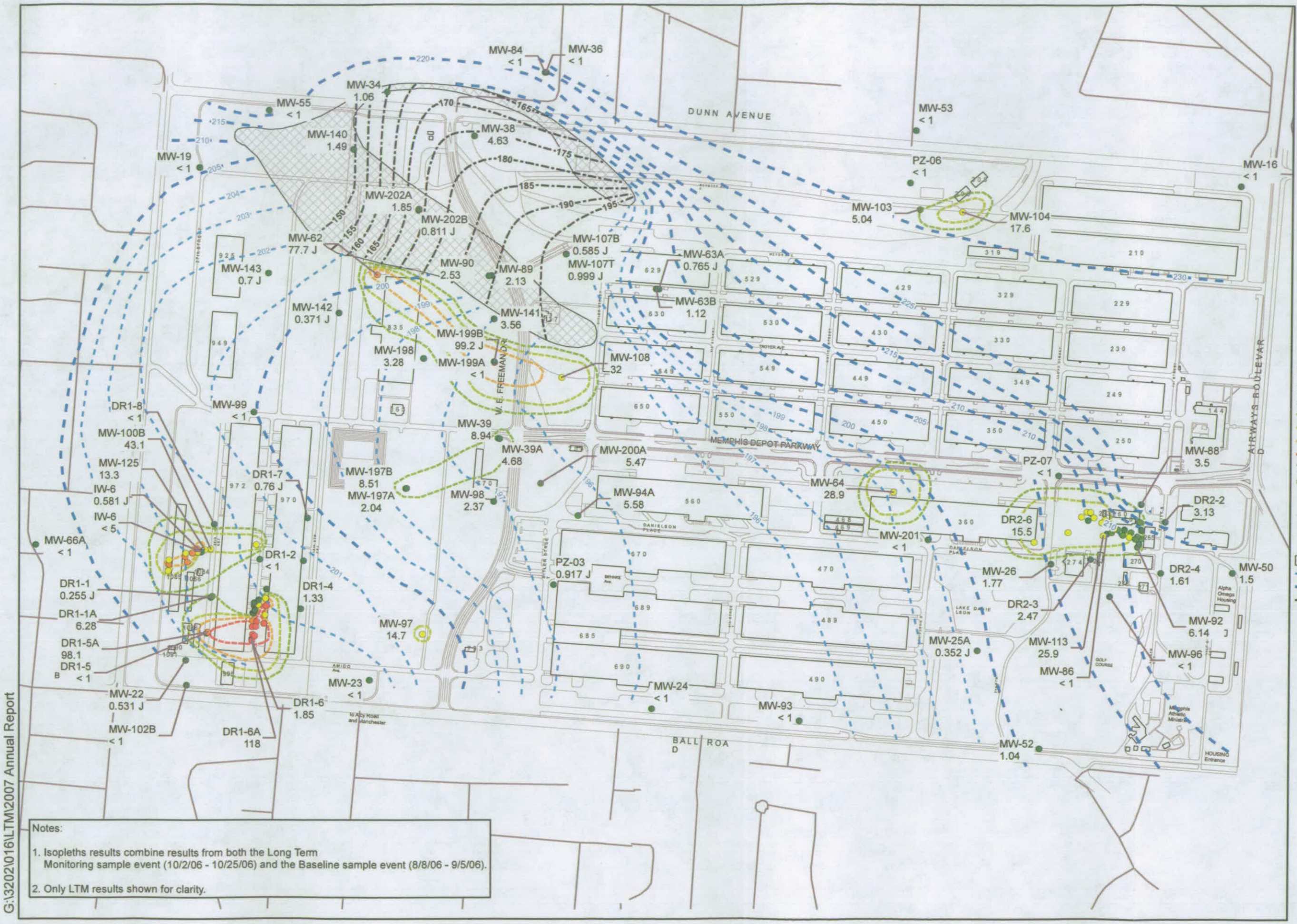


Date: February 2010
Edition: Rev 0

HDR | eM

G:\3202\016\LTM\2007 Annual Report

1015 95



Notes:

1. Isopleths results combine results from both the Long Term Monitoring sample event (10/2/06 - 10/25/06) and the Baseline sample event (8/8/06 - 9/5/06).
2. Only LTM results shown for clarity.

G:\3202\016\LTM\2007 Annual Report

N

W E

S

Figure 14

TCE ISOPLETH MAP, OCTOBER 2006

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Legend

TCE ISOPLETH
ug/L
- 5
- 10
- 50
- 100

TCE RANGES
ug/L
- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 400

Clay Elevation Exceeds Groundwater Elevation

Potentiometric surface of the Fluvial Aquifer 1-ft. contour

Potentiometric surface of the Fluvial Aquifer 5-ft. contour

Potentiometric surface of the Intermediate Aquifer 5-ft. contour

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000

Feet

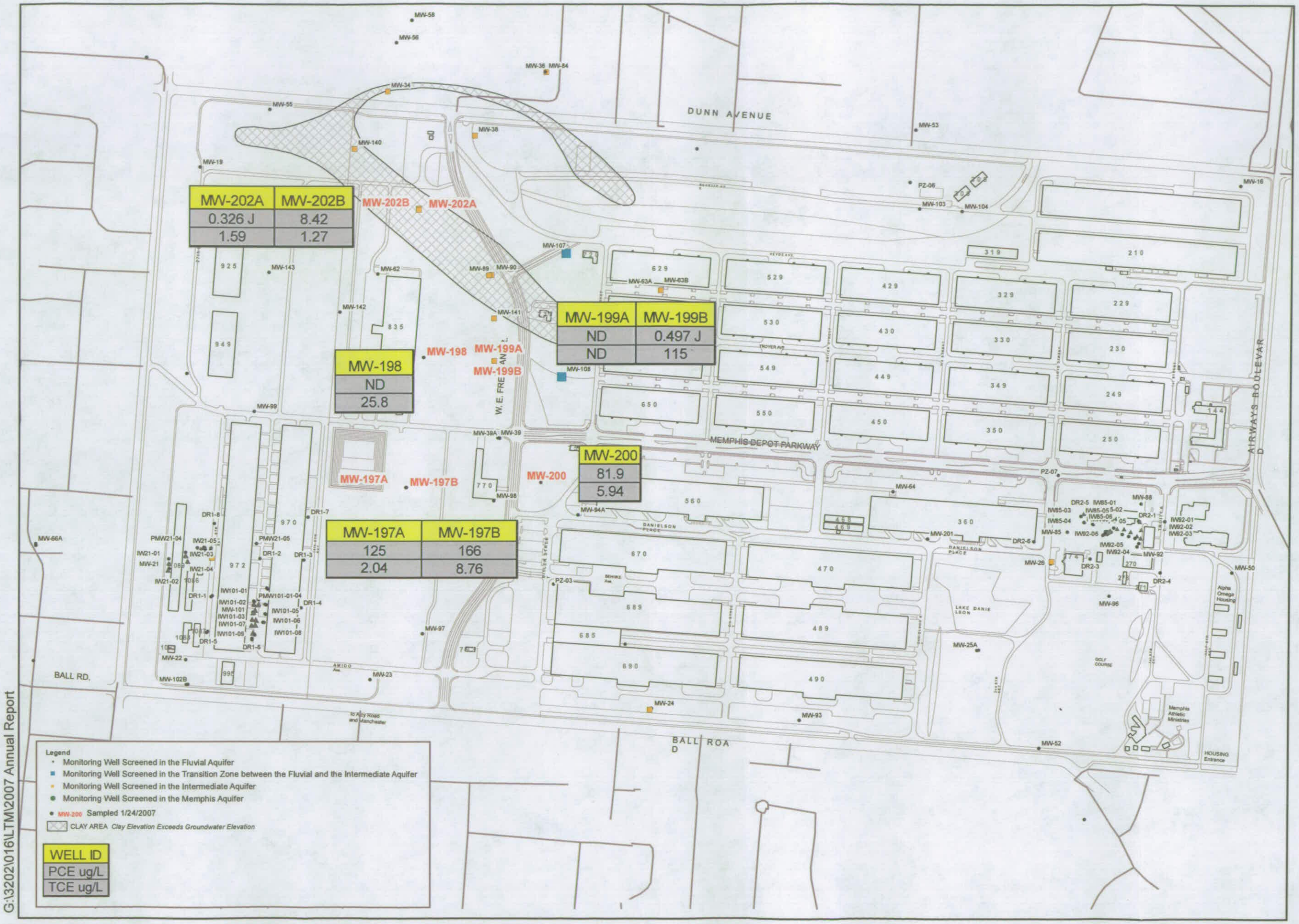
Installation Location
Memphis, Tennessee



Date: February 2010
Edition: Rev 0

HDR | eM

1015 96



G:\3202\016\LTM2007 Annual Report

N
W E
S

Figure 15

PCE / TCE ANALYTICAL RESULTS JANUARY 2007

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 250 500 1,000
Feet

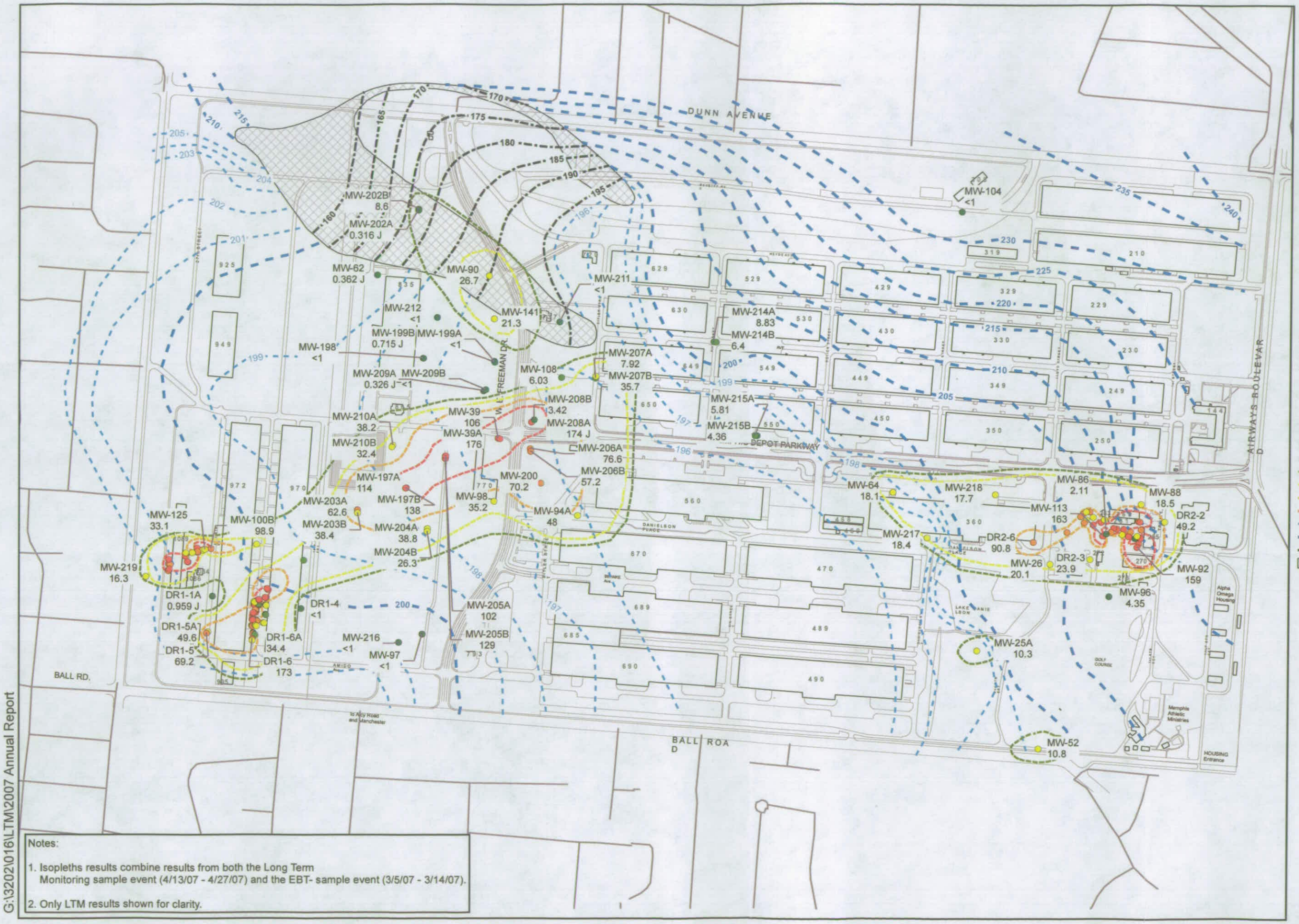
Installation Location
Memphis, Tennessee



Date: August 2009
Edition: Rev 0

HDR | eM

1015 97



Notes:

1. Isopleths results combine results from both the Long Term Monitoring sample event (4/13/07 - 4/27/07) and the EBT- sample event (3/5/07 - 3/14/07).

2. Only LTM results shown for clarity.

G:\3202\016\LTM\2007 Annual Report

N
W E
S

Figure 16

PCE ISOPLETH MAP, APRIL 2007

ANNUAL LONG-TERM MONITORING REPORT – 2007

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
- 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

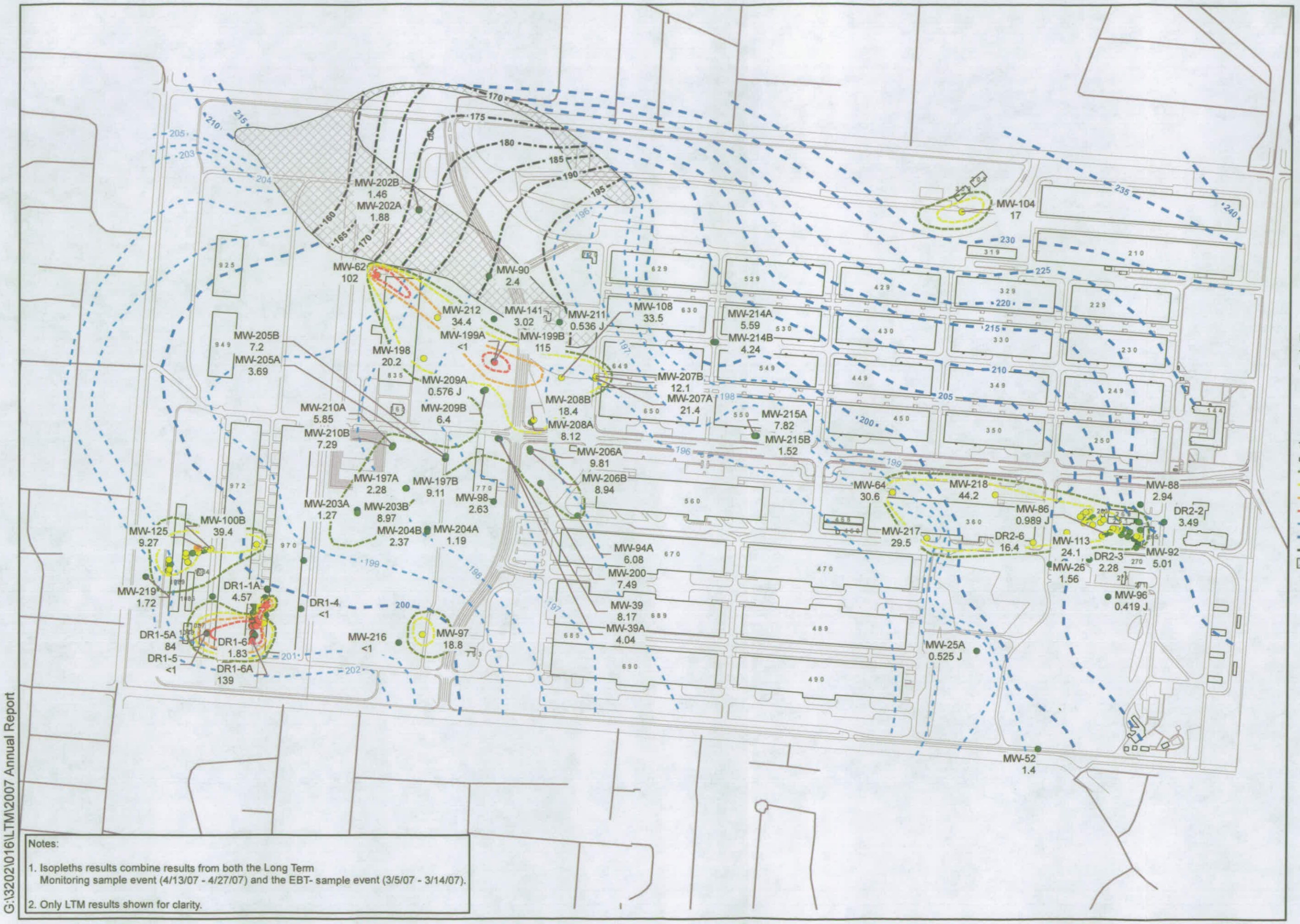
Installation Location
Memphis, Tennessee



Date: February 2010
Edition: Rev 0

HDR | eM

1015 98



Notes:

1. Isopleths results combine results from both the Long Term Monitoring sample event (4/13/07 - 4/27/07) and the EBT- sample event (3/5/07 - 3/14/07).
2. Only LTM results shown for clarity.

G:\3202\016\LTM\2007 Annual Report

N
W E
S

Figure 17

TCE ISOPLETH MAP, APRIL 2007

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Legend

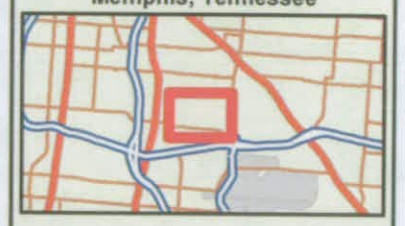
TCE Ranges ug/L
- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 300

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

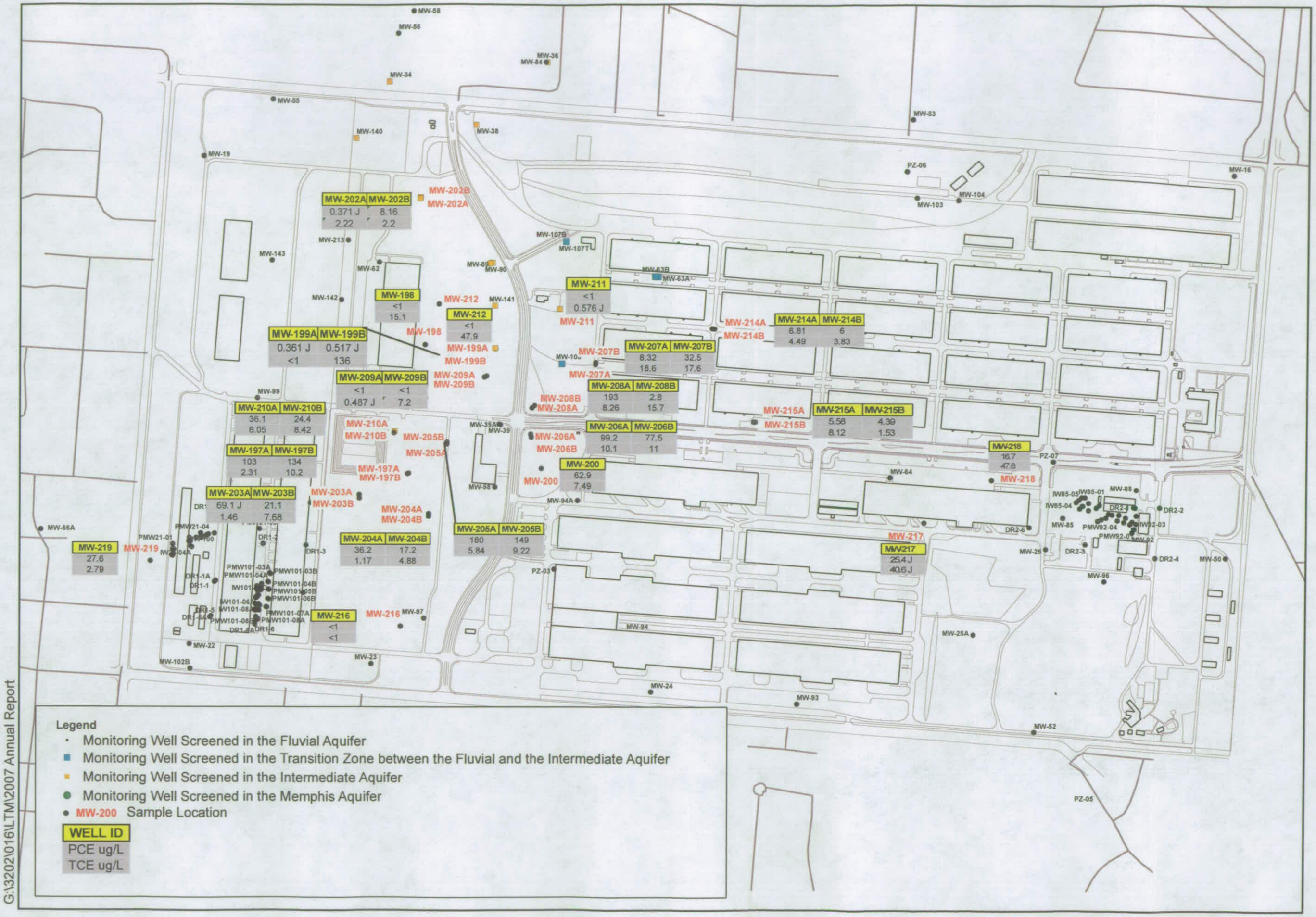
Installation Location
Memphis, Tennessee



Date: February 2010
Edition: Rev 0

HDR | eM

1015 99



G:\3202\016\LTM\2007 Annual Report

N
W E
S

Figure 18

PCE/TCE ANALYTICAL RESULTS, JULY 2007

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE

Projection: NAD 1927 StatePlane Tennessee
Units: Feet

0 200 400 800
Feet

Installation Location
Memphis, Tennessee



Date: August 2009
Edition: Rev 0

HDR | eM

1015100



Notes:

1. Isopleths results combine results from both the Long Term Monitoring sample event (10/1/07 - 10/18/07) and the EBT- sample event (9/10/07 - 9/20/07).
2. Only LTM results shown for clarity.

G:\3202\016\LTM\2007 Annual Report

N
W E
S

Figure 19

PCE ISOPLETH MAP, OCTOBER 2007

ANNUAL LONG-TERM MONITORING REPORT – 2007

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
- 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: February 2010
Edition: Rev 0

HDR | eM

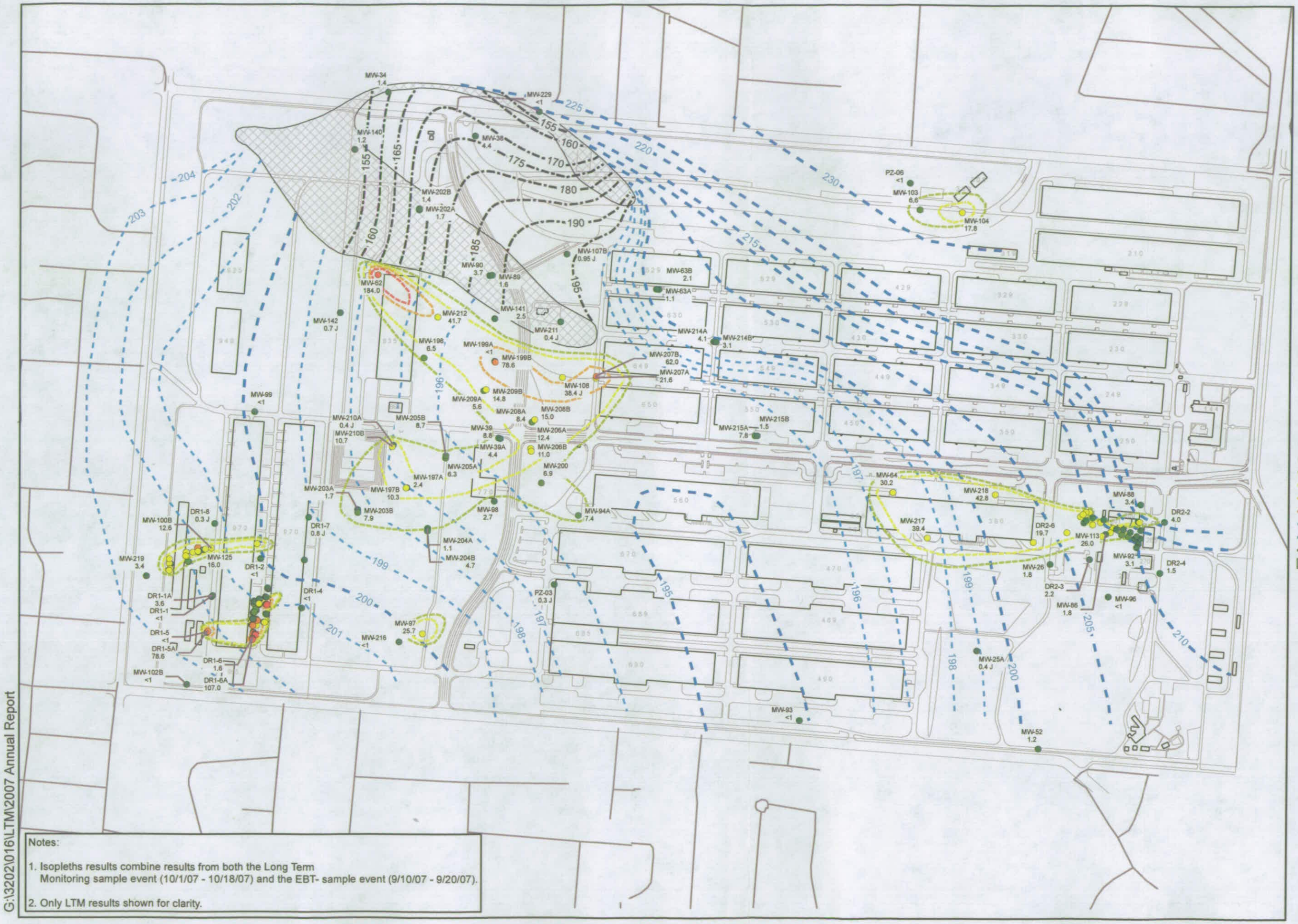
1015101

Figure 20

TCE ISOPLETH MAP, OCTOBER 2007

ANNUAL LONG-TERM MONITORING REPORT – 2007

MAIN INSTALLATION
DEFENSE DEPOT
MEMPHIS, TENNESSEE



Notes:

1. Isopleths results combine results from both the Long Term Monitoring sample event (10/1/07 - 10/18/07) and the EBT- sample event (9/10/07 - 9/20/07).
2. Only LTM results shown for clarity.

Legend

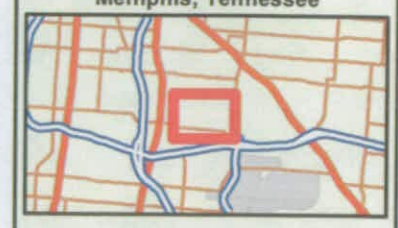
TCE Ranges
ug/L
- 0 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 300

TCE Isopleth
ug/L
- 5
- 10
- 50
- 100
- 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: February 2010
Edition: Rev 0

HDR | eM

G:\3202\016\LTM\2007 Annual Report

APPENDIX A

SOIL BORING LOGS

1015103

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197A
TOTAL DEPTH: 186 ft.

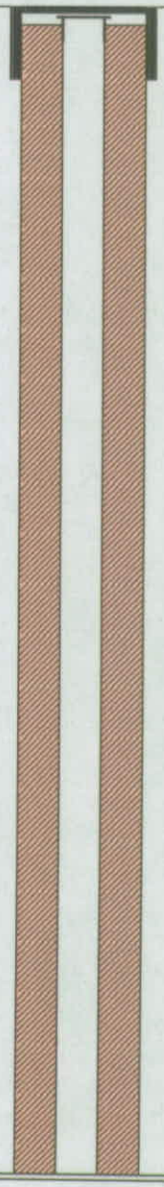
PROJECT INFORMATION

PROJECT: DDMT - Main Installation Remedial Action
PROJECT NO.: 3202-016
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: E. Van Schaik
BOREHOLE STARTED: 8/3/2006 8:00:00 AM
BOREHOLE FINISHED: 8/4/2006 8:00:00 AM

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 291.54 (ft, msl)
WATER DEPTH/ DATE: 92.96 ft.toc - 8/14/06
BOREHOLE USE: Monitoring Well

NOTES: Measured well depth was 177.4 feet beet below top of casing (177.7 bgs) on 12/12/06. Field notes state well set at 176 feet bgs.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
10		**CL** Clay - reddish brown (5YR 4/4) low plasticity, crumbly, dry		Grouted Annulus
20		**CL** Clay - reddish brown (5YR 4/4) low to medium plasticity, very fine grained sand, dry		
30		**CL** Clay - yellowish red (5YR 5/6) low plasticity with gray and brown mottling, dry		

Created By: WTR
Checked By: EVS

1015104

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197A
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - yellowish red (5YR 5/6) low plasticity, fine to medium gravel, sub rounded, dry		
		SC Clayey sand - reddish yellow (7.5YR 6/8) very fine grained, trace of fine gravel, dry		
40		**SW** Clayey gravelly sand - strong brown (7.5YR 5/6) very fine to fine grained, fine to medium gravel, sub angular to sub rounded, dry		
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine to medium gravel A/A, dry		
50		**SP** Sand - reddish yellow (7.5YR 6/8) fine grained, dry		
		SW Gravelly sand - reddish yellow (7.5YR 7/6) fine grained, fine to medium gravel, sub angular, dry		
		SW Sand - reddish yellow (7.5YR 7/6) medium grained sand, dry		
60		**SP** Sand - reddish yellow (7.5YR 7/8) medium grained sand, dry		

Created By: WTR
Checked By: EVS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197A

TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Sand - strong brown (7.5YR 7/8) fine to medium gravel, dry		
70		**SW** Gravelly sand - strong brown (10YR 5/8) medium grained, fine to medium gravel, sub angular to sub rounded, dry		
		SP Sand - yellow (10YR 7/8) very fine to fine grained, dry		
		SP Sand - reddish yellow (7.5YR 7/8) very fine grained, dry		
80		**SP** Sand - reddish yellow (7.5YR 6/8) A/A, dry		
		SP Sand - pink (7.5YR 8/4) very fine grained, dry		
		SP Sand - brownish yellow (10YR 6/6) very fine grained, dry		
90				

Created By: WTR

Checked By: EVS

1015106

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197A
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			92.96	
		SW Gravelly sand - yellow (10YR 7/6) fine grained, fine to medium gravel, A/A, dry		
		SW Gravelly sand - yellow (7.5YR 6/6) medium grained , moist		
100		**SW** Gravelly sand - brownish yellow (10YR 6/6) medium grained, fine to medium gravel, moist		
		SP Sand - yellow (10YR 7/6) fine to medium grained, moist		
		SP Gravelly sand - yellow (10YR 7/6) very fine grained, moist		
110		**SW** Gravelly sand - yellow (10YR 7/6) fine to medium grained with fine to medium gravel, sub angular to sub rounded, moist		
120				

Created By: WTR
Checked By: EVS

1015107

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197A

TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravelly sand - yellow (10YR 7/6) medium grained, fine to coarse gravel (up to cobble size), moist		
		SW Gravelly sand - yellow (10YR 7/6) fine to medium grained, fine to medium gravel, moist		
130		**SW** Gravelly sand - yellow (10YR 7/6) very fine to fine grained, fine gravel, moist		
		SW Gravelly sand - yellow (10YR 7/6) very fine to fine grained, fine to medium gravel, A/A, moist		
140		**SW** Gravelly sand - yellow (10YR 7/6) very fine to fine grained, fine gravel, sub angular to sub rounded, moist		
		SP Sand - yellow (10YR 7/6) very fine grained, moist		
150		**SP** Gravel - yellow (10YR 7/6) fine grained to very fine grained sand, moist		

Created By: WTR

Checked By: EVS

1015108

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197A
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		GW Gravel - yellow (10YR 7/6) fine grained to very fine grained sand, moist		Bentonite Plug
		SW Gravelly sand - yellow (10YR 7/6) medium grained, fine gravel 153 - 156-ft., moist		
		SW Gravelly sand - yellow (10YR 7/6) very fine grained, fine to medium gravel, sub angular to sub rounded, moist		
160		**SP** Gravel - very pale brown (10YR 7/4) very fine grained, moist		Sand Pack
		SP Sand - very pale brown (10YR 7/4) very fine grained, moist		Screened Interval
		GW Sand - yellow (10YR 7/6) fine to medium grained, very fine to fine grained sand, moist		
170		**SW** Gravelly sand - yellow (10YR 7/6) fine grained, fine gravel, A/A, moist		
		SC Gravelly sand - gray (10YR 6/8) moist		
		CL Clay - brownish yellow (10YR 6/8) medium plasticity, trace of very fine sand, dry		Bentonite Backfill
180				

Created By: WTR
Checked By: EVS

1015109

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197A
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - gray (10YR 5/1) very fine grained sand, medium plasticity, dry		
		CL Clay - reddish brown (10YR 5/1) low plasticity (stiff),		
		End of Log		
190				
200				
210				

Created By: WTR
Checked By: EVS

1015110

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197B
TOTAL DEPTH: 111 ft.

PROJECT INFORMATION

PROJECT: DDMT - Main Installation, New Plume Wells
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: E. Van Schaik
BOREHOLE STARTED: 8/4/2006 1:10:00 PM
BOREHOLE FINISHED: 8/4/2006 3:00:00 PM

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 291.43 (ft, msl)
WATER DEPTH/ DATE: 92.82 ft.toc - 8/14/06
BOREHOLE USE: Monitoring Well

NOTES:

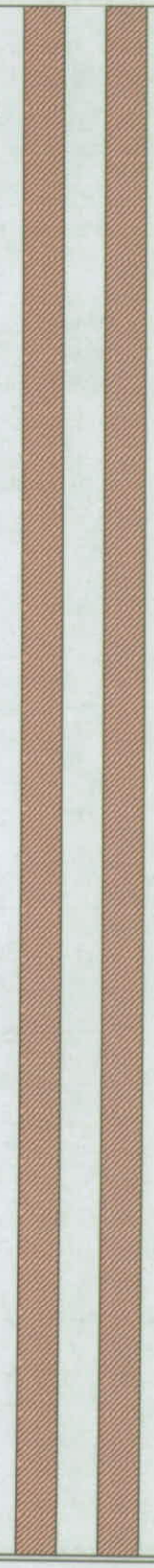
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
10		**CL** Clay - reddish brown (5YR 4/4) low plasticity, dry		Grouted Annulus
20		**CL** Clay - reddish brown (5YR 4/4) medium plasticity, dry		
30		**CL** Gravelly Clay - yellowish red (5YR 5/6) low to medium plasticity, fine gravel, sub angular to sub rounded, dry		

Created By: WTR
Checked By: EVS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197B
TOTAL DEPTH: 111 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SC Clayey sand - reddish yellow (7.5YR 6/8) very fine grained, dry		
		SW Gravelly sand - strong brown (7.5YR 5/8) fine to medium grained, fine to medium sub angular to sub rounded gravel increasing with depth, dry		
40				
		SP Sand - reddish yellow (7.5YR 6/8) fine to medium grained, dry		
50		**SW** Gravelly sand - reddish yellow (7.5YR 6/8) fine to medium grained, fine to medium gravel, A/A, dry		
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine to medium grained, fine to medium gravel, A/A, dry		
60				



Created By: WTR
Checked By: EVS

1015112

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197B
TOTAL DEPTH: 111 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravelly sand - yellow (7.5YR 6/8) very fine to fine grained, lower most 1-ft. very silty, dry		
		SP Sand - yellow (10YR 7/8) very fine to fine grained, lower most 1-ft. very silty, dry		
		SW Gravelly sand - yellowish red (5YR 5/8) fine to medium grained, fine gravel, dry		
70		**SW** Gravelly sand - brownish yellow (10YR 6/8) fine to medium grained, fine to coarse gravel, sub angular to sub rounded, dry		
		SP Sand - brownish yellow (10YR 6/8) very fine to fine grained, dry		
		SP Sand - yellow (10YR 7/6) very fine grained, dry		
		SP Sand - yellow (10YR 7/8) very fine grained, dry		
80		**SP** Sand - yellow (10YR 7/8) very fine grained, dry		
		SP Sand - very pale brown (10YR 8/3) very fine grained, dry		Bentonite Plug
		SP Sand - yellowish brown (10YR 5/8) very fine grained, dry		Sand Pack
90				

Created By: WTR
Checked By: EVS

1015113

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-197B
TOTAL DEPTH: 111 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravelly sand - yellow (10YR 7/6) fine grained, dry	92.82	Screened Interval
		SW Gravelly sand - yellow (10YR 7/8) fine to medium grained, fine to coarse gravel, A/A, dry		
		SW Gravelly sand - yellow (10YR 7/6) fine to medium grained, fine to medium sub angular to sub rounded gravel, dry		
100				
		SW Gravelly sand - yellow (10YR 7/6) fine to medium grained, fine to coarse gravel, A/A, moist		
110		**GW** Gravel - yellow (10YR 7/6) fine to medium gravel, sub angular to sub rounded, fine grained sand, moist		
		End of Log		
120				

Created By: WTR
Checked By: EVS

1015114

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-198
TOTAL DEPTH: 116 ft.

PROJECT INFORMATION

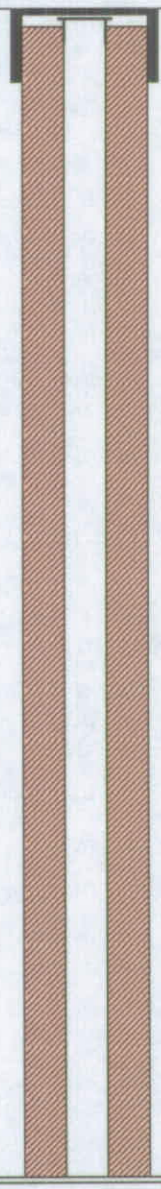
PROJECT: DDMT - Main Installation, New Plume Wells
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: D. Whitesides
BOREHOLE STARTED: 8/23/2006
BOREHOLE FINISHED: 8/23/2006 11:30:00 AM

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 291.8 (ft, msl)
WATER DEPTH/ DATE: 93.9 ft.toc - 8/24/06
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt		
		No Recovery		
10		**CL** Clay - dark gray (7.2YR 4/1) massive, plastic		Grouted Annulus
		CL Clay - brown (7.5YR 4/4) massive, plastic,		
20		**CL** Clay - brown (7.5YR 4/4) soft moist		
		CL Clay - brown (7.5YR 4/4) stiffer than above		
30		**CL** Clay - brown (7.5YR 4/4) less than 10% sand		



Created By: WTR
Checked By: DW

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-198
TOTAL DEPTH: 116 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - red (2.5YR 4/8) fine grained, clayey		
		SP Sand - yellowish red (5YR 5/6) fine grained		
		GW Gravel - reddish yellow (5YR 6/6) sandy, moist		
		SP Sand - reddish yellow (7.5YR 6/8) gravelly, cobbles up to 3-in., moist		
40		**SP** Sand - reddish yellow (7.5YR 7/8) fine to very fine grain,		
		SP Sand - reddish yellow (7.5YR 7/8) fine grained, moist		
50		**SW** Sand - reddish yellow (7.5YR 6/8) gravelly up to 50%, dry		
		SP Sand - white (7.5YR 8/1) fine grain, dry		
		SP Sand - strong brown (7.5YR 5/6) gravelly, dry		
60				

Created By: WTR
Checked By: DW

1015116

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-198
TOTAL DEPTH: 116 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - white (7.5YR 8/1) gravelly,		
		SP Sand - yellowish red (5YR 4/6) gravelly, clayey, moist		
		SW Sand - yellowish red (5YR 4/6) gravelly, medium to fine, wet		
		SW Sand - yellowish red (5YR 7/6) gravelly, medium to fine, moist		
70		**SW** Sand - strong brown (7.5YR 5/6) gravelly, medium to fine, moist		
		SP Sand - pinkish white (7.5YR 8/2) fine to very fine grain, moist		
		SC Sand - light gray (7.5YR 7/1) fine grain, clayey, dry		
80		**SP** Sand - (7.5YR 8/1) fine to very fine grain, dry		Bentonite Plug
		SP Sand - pinkish white (7.5YR 8/2) fine to very fine grain, dry		
		SP Sand - gray (5YR 6/1) very fine		
		SP Sand – pink (7.5YR7/3) find to very fine, moist		
90				

Created By: WTR
Checked By: DW

1015117

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-198
TOTAL DEPTH: 116 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand – white (7.5YR8/1) gravelly, fine to very fine	93.9	
		SP Sand – white (7.5YR8/1) fine to very fine		
		SC Sand – reddish yellow (7.5YR7/8) clayey, fine grain, wet		Sand Pack
		SC Sand – strong brown (7.5YR5/6) clayey, fine grain, wet		Screened Interval
100		**SW** Sand – reddish yellow (7.5YR6/6) gravelly, coarse to fine grain, wet		
		CL Clay – strong brown (7.5YR5/8) sandy		
		CL Clay – strong brown (7.5YR5/8) massive, very plastic		Bentonite Backfill
110		**CL** Clay – very dark gray (7.5YR3/1) massive, dense, plastic		
		End of Log		
120				

Created By: WTR
Checked By: DW

1015118

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A
TOTAL DEPTH: 171 ft.

PROJECT INFORMATION

PROJECT: DDMT - Main Installation, New Plume Wells
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: E. Van Schaik
BOREHOLE STARTED: 8/7/2006 10:45:00 AM
BOREHOLE FINISHED: 8/7/2006 4:55:00 PM

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 301.84 (ft, msl)
WATER DEPTH/ DATE: 108.52 ft.toc - 8/14/06
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt and gravel		
		CL Clay - brown (7.5YR 4/4) low to medium plasticity, dry		
10				Grouted Annulus
		CL Clay - brown (7.5YR 4/4) medium plasticity, dry		
20		**CL** Clay - red (2.5YR 5/6) medium plasticity, dry		
		CL Sandy clay - yellowish red (5YR 5/8) very fine grained sand, medium plasticity, dry		
30				

Created By: WTR
Checked By: EVS

1015119

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A
TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SC Clayey sand - reddish yellow (5YR 6/6) very fine grained, dry		
		SC Clayey sand - yellowish red (5YR 5/8) fine grained, dry		
40				
		CL Gravelly Clay - yellowish red (5YR 5/6) fine gravel sub angular to sub rounded, dry		
		SW Gravelly sand - strong brown (7YR 4/6) fine gravel, fine grained, dry		
50		**SP** Sand - reddish yellow (5YR 6/8) fine to medium grained, dry		
		SP Sand - yellowish red (5YR 4/6) fine grained, dry		
60				

Created By: WTR
Checked By: EVS

1015120

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A
TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravelly sand - reddish yellow (5YR 6/8) fine to medium gravel, dry		
		SW Gravelly sand - yellow (10YR 7/6) medium grained, fine to medium gravel, sub angular to sub rounded, dry		
70		**SW** Gravelly sand - brownish yellow (10YR 6/8) medium grained, fine to medium gravel, sub angular to sub rounded, dry		
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine to medium grained, fine gravel, dry		
80		**SW** Gravelly sand - strong brown (7.5YR 5/8) fine to medium gravel, very silty, dry		
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine grained, fine to medium gravel, dry		
90		**SW** Gravelly sand - strong brown (7.5YR 5/8) fine grained, fine gravel, sub angular to sub rounded, dry		

1015121

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A
TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - reddish yellow (5YR 7/6) 4-5-in. pink clay (5YR 7/6) at 95-ft.		
		CL Clay - light gray (7.5YR 7/1) highly plastic, moist		
100		**SP** Gravelly sand - reddish yellow (7.5YR 6/8) fine grained, moist		
		SW Gravelly sand - yellow gravelly (10YR 7/6) very fine to fine grained sand, fine gravel, sub angular to sub rounded, moist		
		SW Gravelly sand - yellowish brown (10YR 5/8) medium grained, fine gravel, A/A, moist	108.52	
110		**SW** Gravelly sand - strong brown (7.5YR 5/8) medium grained, fine to coarse gravel, A/A, moist		
		SW Gravelly sand - brownish yellow (10YR 6/8) fine to medium grained, fine to coarse gravel, A/A, moist		
120				

Created By: WTR
Checked By: EVS

1015122

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A
TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - gray (10 YR 5/1) very fine grained sand, moist		
		CL Sandy clay - gray (10 YR 5/1) very fine grained sand, moist		
		CL Sandy clay - gray (10 YR 5/1) low plasticity, moist		
130		**CL** Clay - dark grey (10YR 4/1) A/A, moist		
		SC Clayey sand - light brownish gray (10YR 6/2) very fine grained, moist		
		CL Clay - light brownish gray (10YR 6/2) moist		Bentonite Plug
		SP Sand - pale brown (10YR 6/3) very fine grained, moist		
140				
		SP Sand - pale brown (10YR 7/3) very fine grained, moist		
150				Sand Pack

Created By: WTR
Checked By: EVS

1015123

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199A
TOTAL DEPTH: 171 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Sand Pack
		SP Sand - light gray (10 YR 7/1) very fine grained, moist		Screened Interval
		SP Sand - gray (10 YR 5/1) fine grained, moist		
160		**CL** Clay - gray (10 YR 5/1) sandy, very fine grained, low plasticity, moist		
		CL Clay - gray (10 YR 5/1) low plasticity (stiff), moist		Bentonite Backfill
170				
		End of Log		
180				

Created By: WTR
Checked By: EVS

1015124

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199B
TOTAL DEPTH: 118 ft.

PROJECT INFORMATION

PROJECT: DDMT - Main Installation, New Plume Wells
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: E. Van Schaik
BOREHOLE STARTED: 8/8/2006 12:00:00 PM
BOREHOLE FINISHED: 8/8/2006 3:20:00 PM

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 302.07 (ft, msl)
WATER DEPTH/ DATE: 104.5 ft.toc - 8/14/06
BOREHOLE USE: Monitoring Well

NOTES: Measured well depth was 117.8 feet beet below top of casing (118.1 bgs) on 12/12/06. Field notes state well set at 117 feet bgs.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
10		**CL** Clay - red (2.5YR 4/6) medium plasticity, dry		Grouted Annulus
20		**CL** Clay - red (2.5YR 4/6) medium plasticity, dry		
		CL Clay - strong brown (7.5YR 4/6) medium plasticity, silty, dry		
30		**CL** Silty Clay - strong brown (7.5YR 6/6) silty, dry		

Created By: WTR
Checked By: EVS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199B
TOTAL DEPTH: 118 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - reddish yellow (5YR 6/8) fine grained, dry		
		SC Clayey sand - red (10YR 5/8) very fine grained, dry		
40				
		SC Clayey sand - red (2.5YR 5/8) very fine grained, fine gravel, sub angular to sub rounded, dry		
		SC Clayey sand - brown (7.5YR 4/4) very fine grained, fine to medium gravel, A/A, dry		
50		**SW** Gravelly sand - reddish yellow (5YR 6/8) fine grained, fine to coarse gravel, dry		
		SP Sand - reddish yellow (5YR 6/8) fine grained, dry		
		SC Silty sand - strong brown (7.5YR 5/8) very fine grained sand, dry		
60				

1015126

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199B
TOTAL DEPTH: 118 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine grained, fine to coarse gravel, sub angular, dry		
		SW Gravelly sand - yellow (10YR 7/6) fine grained, dry		
		SW Gravelly sand - strong brown (7.5YR 5/6) fine grained, fine gravel, dry		
70		**SW** Gravelly sand - reddish yellow (7.5YR 6/8) fine grained, fine to coarse gravel, sub angular to sub rounded, dry		
		SW Gravelly sand - strong brown (7.5YR 5/8) very fine grained, fine to coarse gravel, dry		
80		**SW** Gravelly sand - strong brown (7.5YR 4/6) very fine grained, fine to coarse gravel, A/A, dry		
		SW Gravelly sand - reddish yellow (7.5YR 7/8) very fine grained, fine to coarse gravel, silty, dry		
		SW Gravelly sand - brownish yellow (10YR 6/8) very fine grained, fine to coarse gravel, silty, dry		
90				

Created By: WTR
Checked By: EVS

1015127

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-199B
TOTAL DEPTH: 118 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clayey sand - pinkish gray (5YR 7/2) medium plasticity, dry		
		SP Sand - reddish yellow (7.5YR 6/8) fine grained, dry		Bentonite Plug
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine to medium gravel, A/A , dry		Sand Pack
		CL Clay - pinkish gray (5YR 7/2) medium plasticity, moist		
100		**SC** Clayey sand - light brown (7.5YR 6/3) moist		
		SW Gravelly sand - yellow (10YR 7/6) fine grained, fine to medium gravel, A/A, moist	104.5	
		SW Gravelly sand - brownish yellow (10YR 6/8) fine grained, fine to medium gravel, sub rounded to sub angular, moist		
110				Screened Interval
		SW Gravelly sand - brownish yellow (10YR 6/8) medium grained, fine to medium gravel, A/A, moist		
		SW Gravelly sand - dark yellowish brown (10YR 4/6) fine to medium grained, fine to coarse gravel, sub angular to sub rounded, moist		
120		End of Log		

Created By: WTR
Checked By: EVS

1015128

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-200
TOTAL DEPTH: 126 ft.

PROJECT INFORMATION

PROJECT: DDMT - Main Installation, New Plume Wells
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: E. Van Schaik
BOREHOLE STARTED: 8/9/2006 10:00:00 AM
BOREHOLE FINISHED: 8/9/2006 12:00:00 PM

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 300.51 (ft, msl)
WATER DEPTH/ DATE: 102.53 ft.toc - 8/16/06
BOREHOLE USE: Monitoring Well

NOTES: Measured well depth was 118.2 feet beet below top of casing (118.5 bgs) on 12/12/06. Field notes state well set at 117 feet bgs.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
10		**CL** Clay - red (2.5YR 4/6) medium plasticity, dry		Grouted Annulus
20		**CL** Clay - red (2.5YR 5/8) low to medium plasticity, dry		
30		**SC** Clayey sand - yellowish red (5YR 5/8) very fine grained, dry		



Created By: WTR
Checked By: EVS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-200
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SC Clayey sand - reddish yellow (7.5YR 6/8) very fine grained, dry		
		SC Clayey sand - strong brown (7.5YR 5/8) very fine grained, dry		
40		**SP** Sand - reddish yellow (7.5YR 6/8) very fine to fine grained, dry		
		SW Gravelly sand - yellow (10YR 7/6) fine grained, fine to medium gravel, sub angular to sub rounded, dry		
		SP Sand - strong brown (7.5YR 5/8) fine grained, dry		
50		**SW** Gravelly sand - reddish yellow (7.5YR 7/6) fine grained, fine gravel, A/A, dry		
		SP Sand - reddish yellow (7.5YR 7/8) fine grained, dry		
		SW Gravelly sand - brownish yellow (10YR 6/8) fine grained, dry		
60				

Created By: WTR
Checked By: EVS

1015130

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-200
TOTAL DEPTH: 126 ft.

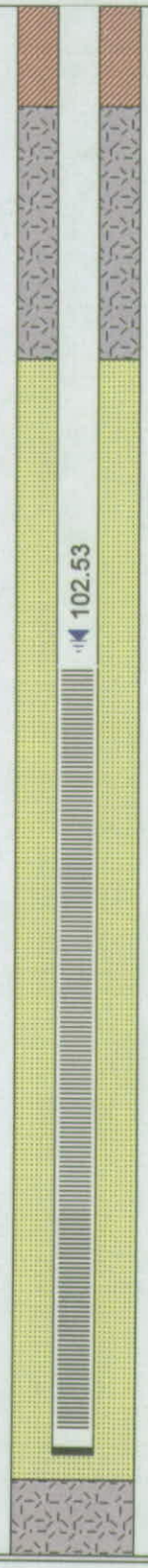
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravelly sand - reddish yellow (7.5YR 6/8) fine grained, fine to medium gravel, sub angular to sub rounded, dry		
		SP Sand - yellow (10YR 7/6) fine grained, dry		
		SW Gravelly sand - strong brown (7.5YR 4/6) very fine grained, silty, fine gravel, A/A, dry		
70		**SW** Gravelly sand - brownish yellow (10YR 6/8) fine grained, fine to coarse gravel, A/A, dry		
		SP Sand - reddish yellow (7.5YR 6/8) fine grained, dry		
80		**SP** Sand - yellow (10YR 7/6) fine grained, dry		
		SP Sand - very pale brown (10YR 8/4) fine grained, dry		
		SW Gravelly sand - yellow (10YR 7/6) fine to medium gravel, sub angular to sub rounded, very silty, dry		
90				

Created By: WTR
Checked By: EVS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-200
TOTAL DEPTH: 126 ft.

Depth	Soil Description
	SW Gravelly sand - brownish yellow (10YR 6/8) fine grained, fine to coarse gravel, dry
	SW Gravelly sand - yellowish brown (10YR 5/8) very fine to fine grained, very silty, fine to coarse gravel, dry
	SW Gravelly sand - yellow (10YR 7/6) fine grained, fine to coarse gravel, A/A, dry
100	**SW** Gravelly sand - strong brown (7.5YR 5/6) very fine to fine grained, very silty, fine to coarse gravel, dry
	SP Sand - very pale brown (10YR 7/3) very fine to fine grained, dry
	SW Gravelly sand - yellowish brown (10YR 5/8) fine to medium grained, fine to coarse gravel, moist
110	**SW** Gravelly sand - brownish yellow (10YR 6/8) fine to coarse gravel, A/A, moist
	SW Gravelly sand - yellow (10YR 7/6) medium grained, fine gravel, A/A, moist
	SW Gravelly sand - yellowish brown (10YR 5/8) fine grained, fine to coarse gravel, sub angular to sub rounded, moist
120	**CL** Clay - brownish yellow (10YR 6/8) low plasticity (stiff), moist



Well Description: Bentonite Plug; Sand Pack; Screened Interval

Created By: WTR
Checked By: EVS

1015132

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-200
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - gray (10YR 5/1)		
130		End of Log		
140				
150				

Created By: WTR
Checked By: EVS

1015133

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-201
TOTAL DEPTH: 86 ft.

PROJECT INFORMATION

PROJECT: DDMT - Main Installation, New Plume Wells
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: D. Whitesides
BOREHOLE STARTED: 8/22/2006 11:00:00 AM
BOREHOLE FINISHED: 8/22/2006 1:30:00 PM

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 304.33 (ft, msl)
WATER DEPTH/ DATE: 80.11 ft.toc - 8/24/06
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		No Recovery		
10		**CL** Clay – reddish brown (5YR4/3) massive, stiff, moist		Grouted Annulus
		CL Clay - dark gray (5YR 4/1) massive, plastic, moist		
20		**CL** Clay - dark reddish brown (2.5YR 2.5/4) stiff, massive, moist		
		CL Clay - gray (5YR 5/1) plastic		
		CL Clay - gray (5YR 5/1) plastic		
30				

Created By: WTR
Checked By: DW

1015134

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-201
TOTAL DEPTH: 86 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - strong brown (7.5YR 4/6) plastic, moist		
40		**SW** Sand – red (10R4/6), medium to fine grain, moist		
		SP Sand - reddish yellow (5YR 7/8) fine to very fine, moist		
50		**SP** Sand - reddish yellow (5YR 7/8) fine grained, minor gravel, cobbles to 1-in., moist		
60		**SP** Sand - reddish yellow (5YR 7/8) fine grained, minor gravel, cobbles to 1-in., moist		Bentonite Plug

Created By: WTR
Checked By: DW

1015135

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-201
TOTAL DEPTH: 86 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
70		**SP** Sand - reddish yellow (5YR 7/8) fine grained, minor gravel, cobbles to 2-in., up to 50% gravel, moist		Sand Pack Screened Interval
		SP Sand - reddish yellow (5YR 7/8) fine grained, minor gravel, cobbles to 2-in., up to 50% gravel, wet	80.11	
80		**SP** Sand - brownish yellow (10YR 6/8) fine grain, wet		
		CL Clay - gray (10YR 6/1) massive, very plastic,		Bentonite Backfill
		End of Log		
90				

Created By: WTR
Checked By: DW

1015136

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202A
TOTAL DEPTH: 198 ft.

PROJECT INFORMATION

PROJECT: DDMT - Main Installation, New Plume Wells
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: D. Whitesides
BOREHOLE STARTED: 8/16/2006 8:40:00 AM
BOREHOLE FINISHED: 8/22/2006

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 299.69 (ft, msl)
WATER DEPTH/ DATE: 125.73 ft.toc - 8/24/06
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel		
		No Recovery		
10		CL Clay - light gray (10YR 7/1) high plasticity, mottled brown gray, moist		Grouted Annulus
20		CL Clay - light gray (10YR 7/1) high plasticity, mottled brown gray, moist		
30		CL Clay - light gray (2.5YR 7/1) high plasticity, sandy,		

Created By: WTR
Checked By: DW

1015137

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202A
TOTAL DEPTH: 198 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sand - red (7.5YR 5/6) silty, fine grained, moist		
		SM Sand - red (7.5YR 5/6) silty, fine grained, moist		
		SM Sand - red (7.5YR 5/6) silty, fine grained, moist		
40		**SP** Sand - light yellowish brown (10YR 6/4) medium to fine, round, quartz, dry		
		SP Sand - very pale brown (10YR 8/3) medium, sub rounded to rounded, quartz, minor gravel, dry		
		SP Sand - yellowish brown (7.5YR 6/6) medium, sub rounded to rounded, quartz, minor gravel, dry		
50		**SP** Sand - light gray (2.5YR 7/1) silty, medium to fine, dry		
		SM Sand - light gray (2.5YR 7/1) silty, medium to fine, dry		
60				

Created By: WTR
Checked By: DW

1015138

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202A
TOTAL DEPTH: 198 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - strong brown to reddish yellow (7.5YR 4/6) to (7.5YR 7/8) gravelly up to 25%, fine coarse grained, cobbles up to 4-in., moist		
70		**SW** Sand - strong brown to reddish yellow (7.5YR 4/6) to (7.5YR 7/8) gravelly up to 25%, fine coarse grained, cobbles up to 4-in., moist		
		SW Sand - dark yellowish brown (10YR 4/4) silty, gravelly, fine to coarse, moist		
80		**SP** Sand - olive brown (2.5YR 4/3) silty, gravelly, fine to coarse, moist		
		No Recovery		
		CL Clay - strong brown (7.5YR 4/6) massive, dry		
90				

Created By: WTR
Checked By: DW

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202A
TOTAL DEPTH: 198 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - dark grey (2.5Y 4/1) massive, very plastic dry		
100		**CL** Clay - dark grey (2.5Y 4/1) massive, very plastic dry		
		CL Sand - white (gley1 8/) to yellowish red (5YR5/8) fine grained, moist		
110		**SP** Sand - white (gley1 8/) to yellowish red (5YR5/8) fine grained, moist		
		SP Sand - white (gley1 8/) to yellowish red (5YR5/8) fine grained, moist		
120				

Created By: WTR
Checked By: DW

1015140

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202A
TOTAL DEPTH: 198 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			125.73	
		SP Sand - white (5YR 8/1) fine grained, wet		
130				
		SP Sand - white (5YR 8/1) fine grained, wet		
140				
		SP Sand - white (5YR 8/1) fine grained, wet		
150				

Created By: WTR
Checked By: DW

1015141

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202A
TOTAL DEPTH: 198 ft.

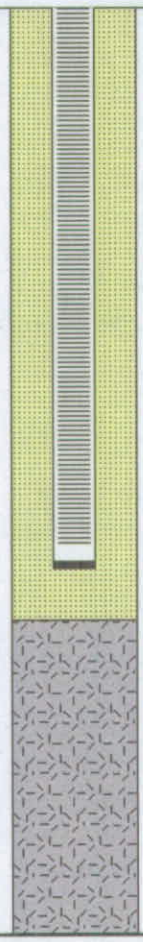
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - white (5YR 8/1) fine grained, wet		
160				
		SP Sand - white (5YR 8/1) fine grained, wet		Bentonite Plug
170				
		SP Sand - reddish brown (2.5YR 4/3) fine grained, wet		
		SM Sand - black (5YR 2.5/1) silty, coarse to fine grained,		
180				

Created By: WTR
Checked By: DW

1015142

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202A
TOTAL DEPTH: 198 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - reddish brown (2.5YR 4/3) fine grained,		Screened Interval
		SP Sand - white (2.5YR 8/1)		Sand Pack
		SP Sand - reddish yellow (7.5YR 6/8) fine grained, clay stringers, wet		
190		**CL** Clay - light gray (7.5YR 7/1) massive, plastic with sand stringers, fine grained sand		
		CL Clay - gray (7.5YR 6/1) massive, very plastic, wet		Bentonite Backfill
		End of Log		
200				
210				

Created By: WTR
Checked By: DW

1015143

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202B
TOTAL DEPTH: 136 ft.

PROJECT INFORMATION

PROJECT: DDMT - Main Installation, New Plume Wells
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: D. Whitesides
BOREHOLE STARTED: 8/21/2006 11:15:00 AM
BOREHOLE FINISHED: 8/22/2006

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: A. Marshall
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 299.74 (ft, msl)
WATER DEPTH/ DATE: 123.82 ft.toc - 8/24/06
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel		
		CL Clay - dark yellowish brown (10YR 4/6) massive, plastic, moist		
		CL Clay - gray (10YR 6/1) massive, plastic		
		CL Clay - dark yellowish brown (10YR 4/4) massive, very plastic, moist		
10				Grouted Annulus
		CL Clay - dark yellowish brown (10YR 4/4) massive, very plastic, moist		
20		**CL** Clay – gray (10YR6/2) massive, very plastic, mottled, occasional dark reddish brown oxidation zones		
30				

Created By: WTR
Checked By: DW

1015144

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202B
TOTAL DEPTH: 136 ft.

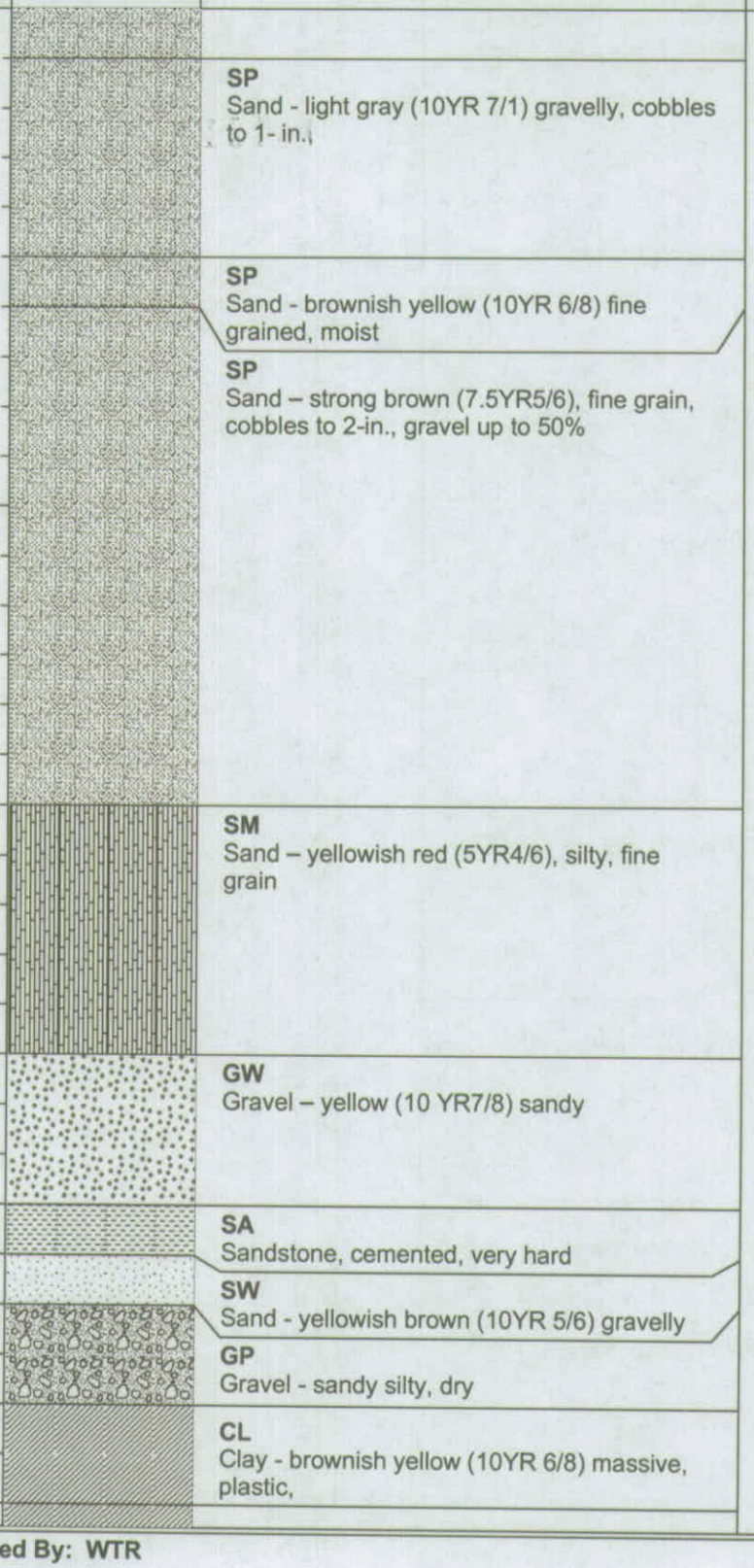
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - yellowish brown (10YR 5/8) sandy		
		SC Sand - dark reddish brown (2.5YR 3/4) clayey, fine grain, moist		
		SP Sand - yellowish brown (2.5YR 7/8) fine grain, moist		
40		**SP** Sand - white (2.5YR 8/1) fine grain, moist		
		SP Sand - yellowish brown (10YR 5/8) fine grain, cobbles to 1-in., moist		
		SP Sand - red (2.5YR 4/6) fine grain, moist		
		SP Sand – white (2.5YR8/1) fine grain		
50		**SP** Sand – white (2.5YR8/1) gravelly, fine grain		
		SP Sand – yellow (105YR7/8) gravelly, fine grain		
60		**SP** Sand – white (2.5YR8/1) fine grain		

Created By: WTR
Checked By: DW

1015145

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202B
TOTAL DEPTH: 136 ft.



Created By: WTR

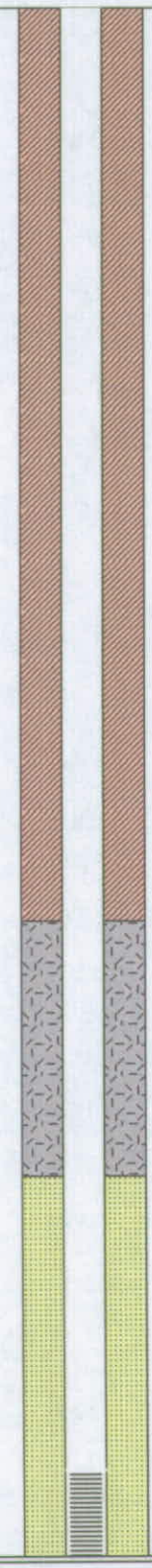
Checked By: DW

1015146

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202B
TOTAL DEPTH: 136 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - light gray (10YR 7/1) massive, hard, plastic,		
		CL Clay - dark gray (10YR 4/1) massive, hard,		
		CL Clay - dark gray (10YR 4/1) massive, hard, dry		
100		**SP** Sand - light gray (10YR 7/1) very fine grained, moist		
		SC Sand - light gray (10YR 7/1) clayey, very fine grained, moist		
110		**CL** Clay - light gray (10YR 7/1) very plastic, sandy		Bentonite Plug
		SP Sand - white (10YR 8/1) fine to very fine grained,		
		SP Sand - white (10YR 8/1) fine grained, wet		
120				Sand Pack



Created By: WTR
Checked By: DW

1015147

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-202B
TOTAL DEPTH: 136 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			123.82	Sand Pack
				Screened Interval
130		**SP** Sand - white (10YR 8/1) fine grained, wet		
		End of Log		
140				
150				

Created By: WTR
Checked By: DW

1015148

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203A
TOTAL DEPTH: 176 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/26/2007 09:15
BOREHOLE FINISHED: 3/26/2007 16:30

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: J. Asua
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 290.78 (ft, msl)
WATER DEPTH/ DATE: 91.79-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

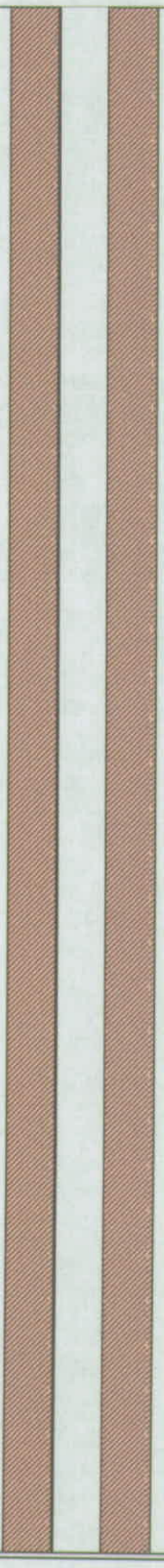
NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Grass and roots.		Grouted Annulus
10		**CL** Silty clay - brown 7.5YR (5/4), high plasticity, moist.		
		CL Sandy clay with gray modeling - dark red 10R (3/6), fine grained sand, low plasticity, moist.		
20		**SW** Clayey sand with gravel - reddish yellow 7.5YR (6/8), fine to medium grained sand, sub-rounded gravel, well graded, moist.		
		SW Clayey sand with some gravel - reddish yellow 5YR (6/8), fine to medium grained sand, sub-rounded gravel, well graded, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
40		**CL** Sandy clay - yellow 5YR (6/8), fine grained sand, medium plasticity, wet.		
50		**SP** Clayey sand - yellowish red 5YR (5/6), fine grained sand, poorly graded, moist.		
		SM Silt with trace of gravel - pink 7.5YR (8/4), possible silt stone, sub-rounded gravel, dry.		
60		**SW** Gravely sand - brownish yellow 10YR (6/8), fine to medium grained sand, sub-rounded to sub-angular gravel, well graded, moist.		

Created By: WTR
Checked By: KMS

1015150

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
70		**SP** Silty sand - yellow 10YR (7/8), fine grained sand, poorly graded, moist.		
		SP Silty sand - light reddish gray 2.5YR (7/1), fine grained sand, poorly graded, moist.		
		SW Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
80		**SP** Silty sand - very pale brown 10YR (8/3), fine grained sand, poorly graded, wet.		
		SW Gravely sand - pinkish gray 5YR (7/2), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
90				

Created By: WTR
Checked By: KMS

1015151

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203A
TOTAL DEPTH: 176 ft.

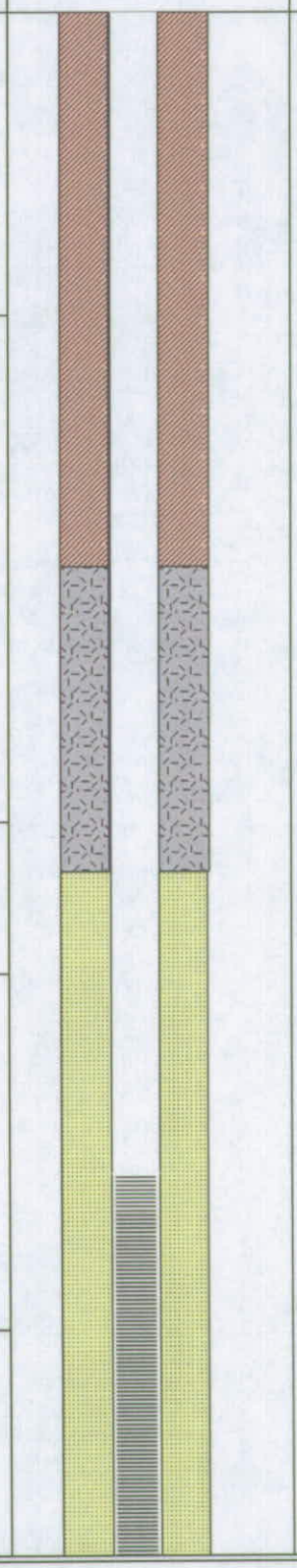
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			91.79- ft	
		MH Silt - light greenish gray (8/1), possible silt stone, dry.		
		SP Silty sand with some gravel - reddish yellow 7.5YR (8/6), fine grained sand, sub-rounded gravel, poorly graded, wet.		
		SP Silty sand with some gravel, reddish yellow 7.5YR (8/6), fine grained sand, sub-rounded gravel, poorly graded, wet.		
100		**SW** Gravely sand with trace of cobbles - dark red 2.5YR (3/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, conglomerate cobbles, well graded, wet.		
		SW Gravely sand - strong brown 7.5YR (4/6), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
110				
		SW Gravely sand with trace of cobbles - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
120				

Created By: WTR
Checked By: KMS

1015152

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
130		**SP** Silty sand with some clay - pinkish white 10R (8/2), fine grained sand, poorly graded, wet.		Bentonite Plug
		SW Gravely sand - yellowish red 5YR (5/8), fine to medium grained sand, sub-rounded gravel, well graded, wet.		Sand Pack
140		**SP** Silty sand with some clay - yellow 2.5Y (8/6), fine grained sand, poorly graded, wet.		
		SP Silty sand - pale yellow 2.5Y (8/4), fine grained sand, poorly graded, wet.		
150				Screened Interva

Created By: WTR
Checked By: KMS

1015153

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Screened Interval
		CL Clay with some silt - dark gray 5Y (4/1), medium plasticity, moist.		
160		**SP** Silty sand - pale yellow 2.5Y (8/3), fine grained sand, poorly graded, wet.		
		SP Silty sand - pale yellow 2.5Y (8/3), fine grained sand, poorly graded, wet.		
		CL Silty clay - dark gray 2.5Y (4/1), medium plasticity, moist.		
170				
		End of Log		
180				

Created By: WTR
Checked By: KMS

1015154

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203B
TOTAL DEPTH: 110 ft.

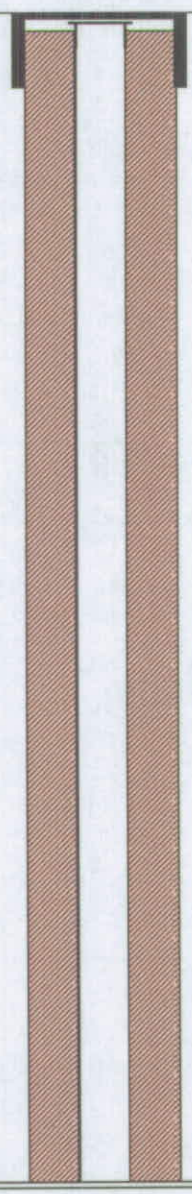
PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/16/2007 14:25
BOREHOLE FINISHED: 4/17/2007 08:50

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 290.75 (ft, msl)
WATER DEPTH/ DATE: 91.72-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
10		**CL** Silty clay - dark yellowish brown 10YR (3/6), medium plasticity, moist.		Grouted Annulus
20		**CH** Silty clay - dark yellowish brown 10YR (3/4), trace sand, medium plasticity, fine to medium grained sand, moist.		
30		**CL** Clayey sand - red 2.5YR (4/8), with gravel, gray mottling, fine to medium grained sand, sub-rounded to sub-angular gravel, well graded, moist.		

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203B
TOTAL DEPTH: 110 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Silty sand - yellowish red 5YR (5/8), with gravel, fine grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
		SP Silty sand - reddish yellow 7.5YR 6/8), fine grained sand, with trace medium to coarse grained sand, poorly graded, moist.		
40				
		SM Sandy Silt - yellow 10YR (8/6), coarse grained sand, possible silt stone, dry.		
		SM Sandy Silt - yellow 10YR (8/6), coarse grained sand, possible silt stone, dry.		
50				
		SP Silty sand - reddish yellow 7.5YR (6/8), with some gravel, fine grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
		SP Silty sand - reddish yellow 7.5YR (6/8), with trace gravel, fine grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
60				

Created By: WTR
Checked By: KMS

1015156

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203B
TOTAL DEPTH: 110 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Silty sand - very pale brown 10YR (8/4), fine grained sand, poorly graded, dry.		
		SW Gravely sand - reddish yellow 5YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SW Gravely sand - dark reddish brown 5YR (3/4), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded wet.		
70		**SP** Silty sand - white 5YR (8/1), fine grained sand, poorly graded, possible silt stone, dry.		
		MH Silt - light gray 5Y (7/1), with some sand, possible silt stone, dry.		
80				Bentonite Plug
		SP Silty sand - very dark gray 5YR (3/1), fine grained sand, poorly graded, possible sand stone, dry.		
90				

1015157

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-203B
TOTAL DEPTH: 110 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - yellowish red 5YR (5/8), fine grained sand, trace coarse grained sand, poorly graded, moist.	91.72- ft.	
		SP Silty sand - very pale brown 10 YR (8/4), fine grained sand, trace gravel, sub-rounded gravel, poorly graded, wet.		Sand Pack
		SW Gravely sand - strong brown 7.5YR (5/8), trace cobbles, fine to coarse grained sand, sub-rounded gravel and cobbles, well graded, wet.		Screened Interval
100		**SW** Sand - pink 7.5YR (7/4), with some gravel, fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SW Gravely sand - strong brown 7.5YR (4/6), fine to coarse grained sand, sub-rounded gravel, well graded solid conglomerate rock, moist.		
		SP Sand - yellowish red 5YR (4/6), trace gravel, fine to coarse grained sand, sub-rounded gravel, poorly graded, wet.		
		SW Gravely sand - yellowish red 5YR (4/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
110		End of Log		
120				

Created By: WTR
Checked By: KMS

1015158

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204A
TOTAL DEPTH: 157 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/6/2007 08:30
BOREHOLE FINISHED: 4/6/2007 15:30

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 292.49 (ft, msl)
WATER DEPTH/ DATE: 94.32-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel		
		CL Clay - dark yellowish brown 10YR (4/4), medium plasticity, moist.		
		CL Silty clay - dark gray 10YR (4/1), low plasticity, moist.		
10		**CL** Silty clay - dark yellowish brown 10YR (4/6), low plasticity, moist.		Grouted Annulus
		CL Silty clay - 10YR (5/8), medium plasticity, moist.		
20				
		CL Sandy Clay - yellowish red 5YR (5/6), with gray mottling, fine grained sand, low plasticity, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204A
TOTAL DEPTH: 157 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clayey sand - yellowish red 5YR (5/8), fine grained sand, poorly graded, moist.		
40		**SP** Silty sand - reddish yellow 7.5YR (6/8), with some gravel, fine to coarse grained sand, sub-rounded gravel, poorly graded, moist.		
50		**MH** Silty sand - pink 7.5YR (7/3), few gravel, fine grained sand, sub-rounded gravel, dry.		
60		**SW** Gravely sand - reddish yellow 7.5YR (6/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204A
TOTAL DEPTH: 157 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
70		**SW** Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
		SP Silty sand - reddish yellow 5YR (6/8), fine grained sand, poorly graded, moist.		
		CH Clay - pale red 10R (6/4), high plasticity, moist.		
80		**SP** Silty sand - pink 10R (8/4), fine grained sand, poorly graded, dry.		
		SP Silty sand - pinkish white 7.5YR (8/2), with some gravel, fine to coarse grained sand, sub-rounded gravel, poorly graded, moist.		
90				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204A
TOTAL DEPTH: 157 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			94.32- ft.	
		SW Gravely sand - reddish yellow 7.5YR (6/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
100				
		SW Gravely sand - reddish yellow 7.5YR (6/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
110		**SW** Silty sand with gravel - very pale brown 10YR (7/3), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SW Gravely sand - strong brown 7.5YR (5/6), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
120				

Created By: WTR
Checked By: KMS

1015162

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204A
TOTAL DEPTH: 157 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
130		**SW** Gravely sand - reddish brown 5YR (5/4), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SP Silty sand - pinkish gray 5YR (7/2), fine grained sand, poorly graded, wet.		Screened Interval
		SP Silty sand - light gray 10YR (7/1), fine grained sand, poorly graded,trace of clay, wet.		Sand Pack
140		**SW** Gravely sand - very pale brown 10YR (7/4), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SP Silty sand - light gray 10YR (7/1), fine grained sand, poorly graded, wet.		
		SW Gravely sand - reddish brown 5YR (5/4), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
150				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204A
TOTAL DEPTH: 157 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - dark gray 10YR (4/1), medium plasticity, hard, moist.		
160		End of Log		
170				
180				

Created By: WTR
Checked By: KMS

1015164

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204B
TOTAL DEPTH: 112 ft.

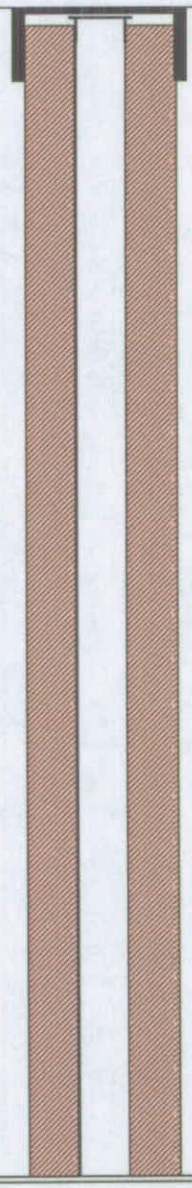
PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/7/2007 09:00
BOREHOLE FINISHED: 4/9/2007 08:00

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 292.67 (ft, msl)
WATER DEPTH/ DATE: 94.34-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES: Total depth 112-ft. because of sand collapse.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel		Grouted Annulus
		CL Clay - light gray 7.5YR (7/1), low plasticity, moist.		
10		**CL** Silty clay - light brown 7.5YR (6/4), low plasticity, moist.		
20		**CH** Silty clay - strong brown 7.5YR (5/6), medium plasticity, moist.		
30		**CL** Sandy Clay - light reddish brown 5YR (6/4), with gray mottling, fine grained sand, medium plasticity, moist.		

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204B

TOTAL DEPTH: 112 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Clayey sand - yellowish red 5YR (5/8), with few gravel, fine grained sand, sub-rounded gravel, poorly graded, moist.		
		SW Gravely sand - red 2.5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
40				
		SP Sand - reddish yellow 7.5YR (6/8), fine grained sand, poorly graded, moist.		
		SW Gravely sand - reddish yellow 5YR (6/8), with silt and trace cobbles, fine to medium grained sand, sub-rounded sub-angular gravel, sub-rounded cobbles, well graded, dry.		
50				
		SW Gravely sand - yellowish red 5YR (5/6), with silt, fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
60				

Created By: WTR

Checked By: KMS

1015166

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204B
TOTAL DEPTH: 112 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
70		**SW** Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
		SP Silty sand - yellow 10YR (7/8), fine grained sand, poorly graded, moist.		
80		**CH** Clay - weak red 10R (4/4), high plasticity, moist.		
		SP Silty sand - pink 7.5YR (8/4), fine grained sand, poorly graded, moist.		
		SP Silty sand - very pale brown 10YR (8/3), fine grained sand, poorly graded, dry.		Bentonite Plug
90				

Created By: WTR
Checked By: KMS

1015167

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-204B
TOTAL DEPTH: 112 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			94.34- ft.	Sand Pack
		SP Silty sand - pinkish gray 7.5YR (7/2), fine grained sand, poorly graded, moist.		Screened Interval
100		**SW** Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded wet.		
		SW Gravely sand - reddish yellow 7.5YR (6/6), with a trace of cobbles, fine to coarse grained sand, sub-rounded gravel, sub-rounded cobbles, well graded, wet.		
110		**SW** Silty sand - reddish yellow 7.5YR (8/6), with a trace of gravel, sand is fine to coarse grained, sub-rounded gravel, well graded, wet.		Collapse
		End of Log		
120				

Created By: WTR
Checked By: KMS

1015168

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205A
TOTAL DEPTH: 166.5 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/9/2007 13:00
BOREHOLE FINISHED: 4/10/2007 09:40

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 292.32 (ft, msl)
WATER DEPTH/ DATE: 94.64-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel and crushed stone		
		CL Silty clay - dark yellowish brown 10YR (4/4), low plasticity, moist.		
10				Grouted Annulus
		CH Silty clay - dark yellowish brown 10YR (4/4), medium plasticity, moist.		
20				
		CL Silty clay - brownish yellow 10YR (6/6), with gray mottling, medium plasticity, moist.		
		CL Sandy clay - red 2.5YR (4/6), with some gravel medium plasticity, fine grained sand, sub-rounded gravel, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205A

TOTAL DEPTH: 166.5 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Clayey sand - reddish yellow 5YR (6/8), with some gravel, fine grained sand, sub-rounded gravel, poorly graded, moist.		
		SP Sand - yellowish red 5YR (5/8), fine to coarse grained sand, poorly graded, moist.		
40		**SW** Silty sand - reddish yellow 7.5YR (8/6), with few gravel, fine to coarse grained sand, sub-rounded gravel, well graded, dry.		
		SP Sand - yellowish red 5YR (5/8), fine to coarse grained sand, poorly graded, moist.		
50		**SW** Gravely sand - reddish yellow 5YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
60		**SW** Gravely sand - yellow 10YR (7/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		

Created By: WTR

Checked By: KMS

1015170

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205A
TOTAL DEPTH: 166.5 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
70		**SW** Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SP Silty sand - very pale brown 10YR (8/2), fine grained sand, poorly graded, moist.		
80		**SW** Gravely sand - brownish yellow 10YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SP Silty sand - very pale brown 10YR (8/3), fine grained sand, poorly graded, dry.		
		SM Sandy Silt - light gray 5YR (7/1), fine to medium grained sand, possible siltstone, poorly graded, dry.		
90				

Created By: WTR
Checked By: KMS

1015171

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205A
TOTAL DEPTH: 166.5 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellow 10YR (7/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.	94.64- ft.	
100		**SW** Gravely sand - yellowish brown 10YR (5/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
110		**SW** Gravely sand - dark grayish brown 10YR (4/2), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SW Gravely sand - red 2.5YR (5/8), trace cobbles, fine to coarse grained sand, sub-rounded gravel, sub-rounded cobbles, well graded, wet.		
		SW Gravely sand - reddish yellow 7.5YR (6/6), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
120				

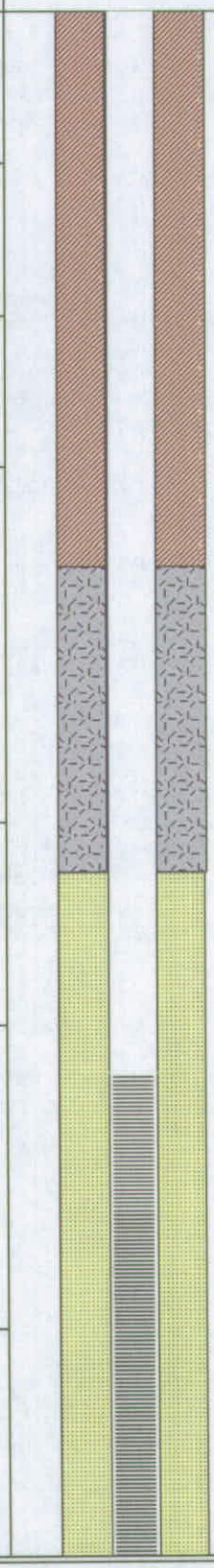
Created By: WTR
Checked By: KMS

1015172

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205A
TOTAL DEPTH: 166.5 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Silty sand - reddish yellow 7.5YR (7/8), few gravel, fine to medium grained sand, sub-rounded gravel, well graded, wet.		
		SW Gravely sand - reddish yellow 7.5YR (6/6), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SW Silty sand - reddish yellow 7.5YR (6/8), with few gravel, fine to medium grained sand, sub-rounded gravel, well graded, wet.		
130		**GW** Sandy gravel - pale yellow 2.5YR (8/2), trace clay, coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		Bentonite Plug
		SW Gravely sand - olive yellow 2.5Y (6/8), medium to coarse grained sand, sub-rounded gravel, well graded, moist.		
140		**SP** Silty sand - pinkish gray 7.5YR (7/2), fine grained sand, poorly graded, wet.		Sand Pack
		SP Silty sand - pinkish gray 7.5YR (7/2), fine grained sand, poorly graded, wet.		Screened Interva
150				

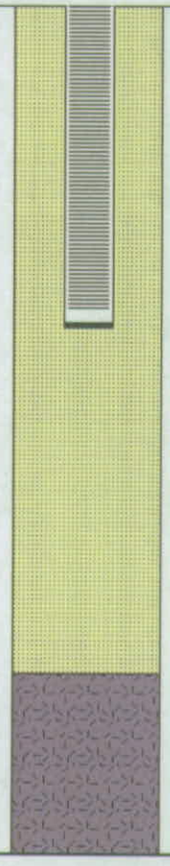


Created By: WTR
Checked By: KMS

1015173

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205A
TOTAL DEPTH: 166.5 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		SP Silty sand - yellowish red 5YR (5/8), fine grained sand, poorly graded, wet.		
160		**CH** Clay - dark gray 2.5Y (4/1), medium plasticity hard, moist.		
		End of Log		
170				
180				

Created By: WTR
Checked By: KMS

1015174

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205B
TOTAL DEPTH: 116.5 ft.

PROJECT INFORMATION

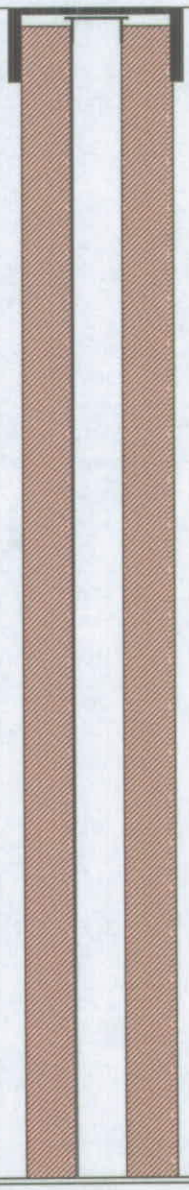
PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/10/2007 15:20
BOREHOLE FINISHED: 4/11/2007 09:50

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 292.04 (ft, msl)
WATER DEPTH/ DATE: 94.44-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel and crushed stone		
		CL Silty clay - strong brown 7.5YR (4/6), low plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - dark yellowish brown 10YR (4/4), medium plasticity, moist.		
20				
		CL Sandy clay - red 2.5YR (4/6), trace gravel, fine grained sand, low plasticity, sub-rounded to sub-angular gravel, moist.		
30				



Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205B
TOTAL DEPTH: 116.5 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Clayey sand - yellowish red 5YR (5/6), with gravel, fine grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SW Clayey sand - yellowish red 5YR (5/6), with gravel, fine grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
40		**SP** Silty sand - reddish yellow 5YR (6/8), fine grained sand, poorly graded, moist.		
		ML Silt - pinkish white 5YR (8/2), possible silt stone, dry.		
		ML Silt - brownish yellow 10YR (6/6), little sand, coarse grained sand, possible silt stone, dry.		
50				
		ML Silt - brownish yellow 10YR (6/6), little sand, coarse grained sand, possible silt stone, dry.		
60				

Created By: WTR
Checked By: KMS

1015176

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205B
TOTAL DEPTH: 116.5 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - reddish yellow 7.5YR (7/8), fine to medium grained sand, with silt, sub-rounded to sub-angular gravel, well graded, moist.		
		SW Gravely sand - reddish yellow 5YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SW Gravely sand - reddish yellow 5YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
70		**ML** Silt - very pale brown 10YR (8/3), poorly graded, moist.		
		SW Sand - yellowish brown 10YR (5/6), fine to coarse grained sand, poorly graded, moist.		
		SW Gravely sand - reddish yellow 7.5YR (6/6), with little clay, fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
80		**SP** Silty sand - very pale brown 10YR (8/3), fine to coarse grained sand, poorly graded, moist.		
		SW Silty sand - yellow 10YR (7/6), with gravel, fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		Bentonite Plug
90				

Created By: WTR
Checked By: KMS

1015177

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-205B
TOTAL DEPTH: 116.5 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			94.44- ft.	Sand Pack
100		**SW** Gravely sand - very pale brown 10YR (8/2), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		Screened Interval
		SW Gravely sand - gray yellowish brown 10YR (4/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
110		**SW** Gravely sand - reddish yellow 5YR (5/8), with cobbles, fine to coarse grained sand, sub-rounded to sub-angular gravel, conglomerate, sub-rounded cobbles, wet.		
120		End of Log		

Created By: WTR
Checked By: KMS

1015178

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206A
TOTAL DEPTH: 156 ft.

PROJECT INFORMATION

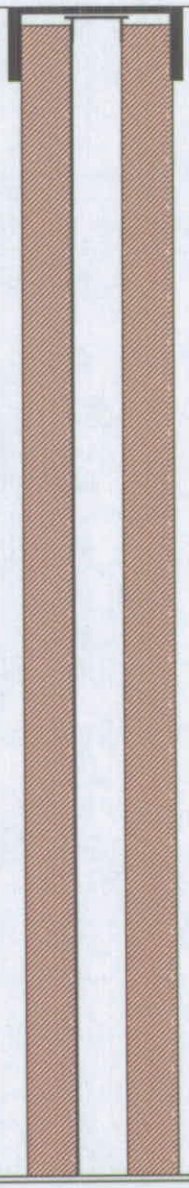
PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/24/2007 11:25
BOREHOLE FINISHED: 3/24/2007 16:45

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 300.35 (ft, msl)
WATER DEPTH/ DATE: 103.49-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel, crushed stone.		
		CL Silty clay - dark yellowish brown 10YR (4/6), medium plasticity, moist.		
10		**CL** Silty clay - dark gray 5Y (4/1), medium plasticity, moist.		Grouted Annulus
20		**CL** Clay - dark yellowish brown 10YR (4/6), high plasticity, moist.		
30		**CL** Silty clay - strong brown 7.5YR (5/8), low plasticity, moist.		



Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206A
TOTAL DEPTH: 156 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - red 2.7YR (4/6), low plasticity, fine grained sand, moist.		
		CL Sandy clay - dark red 2.5YR (3/6), low plasticity, fine grained sand, moist.		
40		**SP** Sand - yellowish red 5YR (4/6), trace gravel, fine grained sand, poorly graded, moist.		
		SP Sand - yellowish red 5YR (5/8), trace gravel, fine grained sand, poorly graded, moist.		
50		**SP** Silty sand - reddish yellow 7.5YR (7/8), fine grained sand, poorly graded, dry.		
		SP Sand - yellow 5YR (6/8), with trace gravel, fine grained sand, sub-rounded gravel, poorly graded, dry.		
60				

Created By: WTR
Checked By: KMS

1015180

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206A
TOTAL DEPTH: 156 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - reddish yellow 7.5YR (7/8), fine to coarse grained sand, sub-rounded gravel, well graded, dry.		
		SW Silty sand - pink 7.5YR (8/4), with some gravel, fine to coarse grained sand, sub-rounded gravel, well graded, dry.		
70		**SW** Gravely sand - reddish yellow 5YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
		SW Gravely sand - brownish yellow 10YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, moist.		
80				
		SW Gravely sand - brownish yellow 10YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
90				

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206A
TOTAL DEPTH: 156 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Silty sand - reddish yellow 7.5YR (7/8), fine grained sand, poorly graded moist.		
		MH Gravely silt - light gray 7.5YR (7/1), possible silt stone, sub-rounded gravel, dry.		
100		**SP** Silty sand - reddish yellow 7.5YR (8/6), fine grained sand, poorly graded, moist.		
		SW Gravely sand - yellowish brown 10YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.	103.49- ft.	
		SW Gravely sand - brownish yellow 10YR (6/8), fine to coarse grained sand, sub-rounded to sub angular gravel, well graded, wet.		
110				
		SW Gravely sand - yellow 10YR (7/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		Bentonite Plug
120				

Created By: WTR
Checked By: KMS

1015182

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206A
TOTAL DEPTH: 156 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellowish red 5YR (4/6), fine to coarse grained sand, sub-angular to sub-rounded gravel, well graded, wet.		Sand Pack
130				
				Screened Interval
		SP Silty sand - yellow 10YR (7/8), with little gravel, fine grained sand, sub-rounded gravel, poorly graded, wet.		
140				
		CH Clay - gray 5YR (5/1), high plasticity, moist.		
		CH Clay - gray 5YR (5/1), high plasticity, moist.		
150				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206A
TOTAL DEPTH: 156 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
160		End of Log		
170				
180				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206B
TOTAL DEPTH: 115 ft.

PROJECT INFORMATION

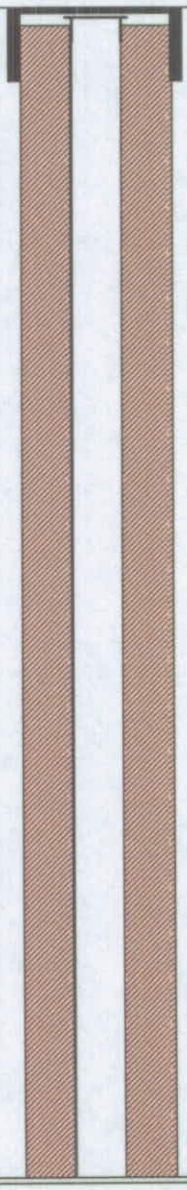
PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/25/2007 12:00
BOREHOLE FINISHED: 3/25/2007 15:30

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 300.12 (ft, msl)
WATER DEPTH/ DATE: 103.43-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Rocks and Gravel		
		CL Silty clay - dark yellowish brown 10YR (4/4), medium plasticity, moist.		
10		**CL** Silty clay - gray 10YR (5/1), medium plasticity, moist.		Grouted Annulus
		CH Silty clay - dark yellowish brown 10YR (4/6), high plasticity, moist.		
20				
		CH Silty clay - dark yellowish brown 10YR (4/6), high plasticity, moist.		
30				



Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206B
TOTAL DEPTH: 115 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - red 2.5 YR (4/6), low plasticity, fine grained sand, moist.		
		CL Sandy clay - red 2.5YR (4/6), low plasticity, fine grained sand, moist.		
40		**SP** Clayey sand - red 2.5YR (5/8), fine grained sand, poorly graded, moist.		
		SP Clayey sand - reddish yellow 5YR (6/8), fine grained sand, poorly graded, moist.		
50		**SP** Silty sand - yellowish red 5YR (5/8), fine grained sand, poorly graded, moist.		
		SP Gravely sand - light red 2.5YR (6/8), fine grained sand, sub-rounded gravel, poorly graded, moist.		
60		**SP** Silty sand - reddish yellow 5YR (6/6), with gravel, fine grained sand, sub-rounded gravel, poorly graded, moist.		

Created By: WTR
Checked By: KMS

1015186

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206B
TOTAL DEPTH: 115 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
		SP Silty sand - reddish yellow 5YR (6/8), fine grained sand, poorly graded, moist.		
		SP Silty sand - pale yellow 2.5YR (8/4), with gravel, fine grained sand, sub-rounded gravel, poorly graded, dry.		Sand Pack
70		**SW** Gravely sand - yellow 10YR (8/8), fine to coarse grained sand, sub-rounded gravel, well graded, dry.		Screened Interva
		SW Gravely sand - yellow 10YR (7/8), fine to coarse grained sand, sub-rounded gravel, well graded, dry.		
80		**SP** Silty sand - pink 10R (8/3), fine grained sand, poorly graded, dry.		
		SW Gravely sand - yellowish brown 10YR (5/6), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
90				

Created By: WTR
Checked By: KMS

1015187

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-206B
TOTAL DEPTH: 115 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Silty sand - very pale brown 10YR (8/2), with some gravel, fine to medium grained sand, sub-rounded gravel, poorly graded, dry.		
		SP Silty sand - pink 2.5YR (8/4), fine grained sand, poorly graded, dry.		
		SP Silty sand - light red 2.5YR (7/8), fine grained sand, poorly graded, wet.		
100				
		CL Clayey sand - reddish yellow 7.5YR (7/8), fine grained sand, poorly graded, wet.		
		SW Gravely sand - pale brown 10YR (6/3), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
110				
		End of Log		
120				

103.43- ft.

Created By: WTR
Checked By: KMS

1015188

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207A
TOTAL DEPTH: 176 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/14/2007 10:45
BOREHOLE FINISHED: 3/15/2007 10:35

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 303.99 (ft, msl)
WATER DEPTH/ DATE: 108.01-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt Asphalt and gravel.		
		CL Clay - gray 7.5YR (5/1), high plasticity, moist.		
		CL Silty clay - strong brown 7.5YR (4/6), medium plasticity, with trace sand, moist.		
10				Grouted Annulus
		CL Silty clay - strong brown 7.5 YR (4/6), medium plasticity, with trace sand, moist.		
20				
		CL Silty clay - strong brown 7.5 YR (4/6), medium plasticity, with sand, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - red 10R (4/6), fine grained sand with gray mottling, medium plasticity, moist.		
		CL Sandy clay - red 2.5YR (5/8), fine grained sand with gray mottling, low plasticity, moist.		
40				
		SC Clayey sand - red 2.5YR (5/8), fine to medium grained sand, poorly graded, moist.		
50				
		SW Gravely sand - reddish yellow 5YR (7/8), fine to coarse grained sand, well graded, dry.		
		SP Sand - reddish yellow 7.5YR (7/8), fine to medium grained sand, poorly graded, moist.		
60				

Created By: WTR
Checked By: KMS

1015190

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellow 2Y (7/8), fine to coarse grained sand with silt, sub-rounded gravel, dry.		
		SP Sand - reddish yellow 7.5YR (7/8), fine to medium grained sand, poorly graded, moist.		
70		**SW** Sand - reddish yellow 7.5YR (6/8), medium to coarse grained sand, little gravel, sub-rounded gravel, well graded, dry.		
		SW Gravely sand - strong brown 7.5YR (5/8), medium to coarse grained sand, sub-rounded gravel, well graded, wet.		
80		**SW** Sand - reddish yellow 7.5YR (7/8), with some gravel, fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SC Clayey sand - pale red 2.5YR (7/2), with some silt, fine grained sand, poorly graded, wet.		
90				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Silty clay - red 2.5YR (5/6), medium plasticity, gray mottling, moist.		
		SM Sand - reddish yellow 7.5YR (7/8), fine grained sand, poorly graded, wet.		
		SW Sand with some gravel - pink 7.5YR (8/4), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
100				
		MH Sandy silt - yellow 2.5Y (7/6), fine to medium grained sand, well graded, dry.	108.01- ft.	
		SW Gravely sand - yellowish red 5YR (4/6), fine to coarse grained sand, sub-rounded gravel, some cobbles, well graded, wet.		
110				
		SW Gravely sand - yellow 10YR (8/8), fine to coarse grained sand, sub-rounded gravel, trace clay, well graded, wet.		
120				

Created By: WTR
Checked By: KMS

1015192

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Silty clay - gray 10YR (6/1), medium plasticity, moist.		
130		**SM** Sand - light gray 10YR (7/1), fine to medium grained sand, with clay, poorly graded, wet.		
		SM Sand - pinkish gray 7.5YR (7/2), fine grained sand, poorly graded, wet.		
140				Bentonite Plug
		SM Sand - pinkish gray 7.5YR (7/2), fine grained sand, poorly graded, wet.		
150				

Created By: WTR
Checked By: KMS

1015193

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207A
TOTAL DEPTH: 176 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Sand Pack
		SM Sand - reddish yellow 7.5YR (6/8), fine grained sand, with some silt, poorly graded, wet.		
160				Screened Interval
		SM Sand - reddish yellow 7.5YR (6/8), fine grained sand, with some silt, poorly graded, wet.		
		CL Clay - dark gray 10YR (4/1), hard low plasticity, moist.		
170				
		End of Log		
180				

Created By: WTR
Checked By: KMS

1015194

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207B
TOTAL DEPTH: 126 ft.

PROJECT INFORMATION

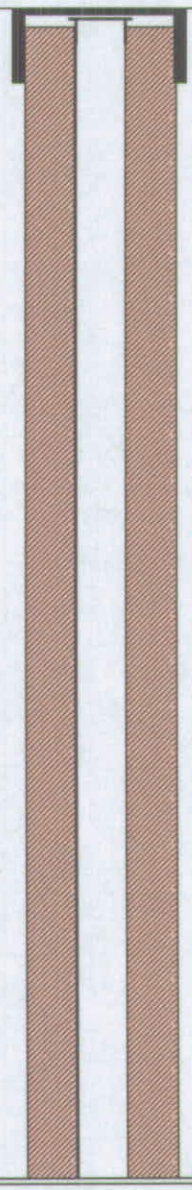
PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/16/2007 07:15
BOREHOLE FINISHED: missing

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 304.03 (ft, msl)
WATER DEPTH/ DATE: 107.69-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt Asphalt and crushed stone.		
		CL Silty clay - brown 7.5YR (5/3), low plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - yellowish brown 10YR (5/6), trace sand, medium plasticity, moist.		
20				
		CL Silty clay - yellowish red 5YR (5/6), with sand and gray mottling, medium plasticity, fine to medium grained sand, moist.		
30				



Created By: WTR
Checked By: KMS

1015195

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207B
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
40		**CL** Sandy clay - red 10R (4/8), with some silt, gray mottling, low plasticity, fine grained sand, moist.		
50		**SP** Clayey sand - light red 2.5YR (6/8), fine to coarse grained sand, with some silt, poorly graded, moist.		
		SP Silty sand - yellow 10YR (8/8), fine to coarse grained sand, poorly graded, dry.		
60		**SP** Sand - yellowish red 5YR (5/8), with some gravel, fine grained sand, sub-rounded gravel, poorly graded, moist.		

Created By: WTR
Checked By: KMS

1015196

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207B
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellow 10YR (7/8), fine to medium grained sand, sub-angular to sub-rounded gravel, well graded, moist.		
70		**SW** Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
80		**SP** Sand - yellow 10YR (8/6), with some gravel, fine to coarse grained sand, sub-rounded gravel, poorly graded, moist.		
90		**SP** Clayey sand - reddish yellow 5YR (6/8), with some silt, fine grained sand, poorly graded, moist.		

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207B
TOTAL DEPTH: 126 ft.

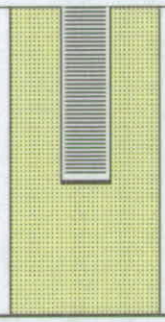
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
		SM Silty sand - pinkish white 7.5YR (8/2), fine grained sand, poorly graded, dry.		
100		**SW** Sand - yellow 10YR (8/6), with some gravel, fine to medium grained sand, subrounded gravel, well graded, moist.		
		SW Gravely sand - strong brown 7.5YR (5/6), fine to coarse grained sand, sub-rounded to rounded gravel, well graded, wet.	107.69- ft.	Sand Pack
110				Screened Interval
		SP Silty sand - pale yellow 2.5Y (8/3), fine grained sand, poorly graded, wet.		
120				

Created By: WTR
Checked By: KMS

1015198

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-207B
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
130		End of Log		
140				
150				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208A
TOTAL DEPTH: 206 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/22/2007 08:40
BOREHOLE FINISHED: 3/22/2007 16:30

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 301.91 (ft, msl)
WATER DEPTH/ DATE: 105.39-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Grass and topsoil		
		CL Sandy clay - reddish brown 5YR (5/3), medium plasticity, medium to coarse grained sand, moist.		
10				Grouted Annulus
		CL Silty clay - yellowish red 5YR (4/6), medium plasticity, moist.		
		CL Silty clay - dark reddish brown 5YR (3/4), with gray mottling, low plasticity, moist.		
20				
		CL Silty clay - dark reddish brown 5YR (3/4), with gray mottling, medium plasticity, moist.		
30				

Created By: WTR
Checked By: KMS

1015200

FIELD BOREHOLE LOG

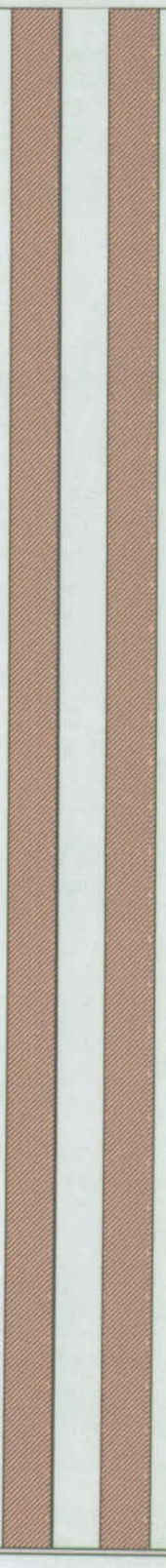
BOREHOLE NO.: MW-208A
TOTAL DEPTH: 206 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - weak red 10R (4/4), medium plasticity, fine grained sand, moist.		
		CL Sandy clay - weak red 10R (4/4), low plasticity, fine grained sand, gray mottling, moist.		
40		**SP** Clayey sand - red 2.5YR (4/8), fine grained sand, poorly graded, moist.		
		SP Clayey sand - yellowish red, 5YR (5/8), fine grained sand, poorly graded, wet.		
50		**SP** Sand - yellow 10YR (8/8), fine to medium grained sand, poorly graded, moist.		
		SW Gravely sand - yellow 10YR (7/8), fine to coarse grained sand, with some silt, sub-rounded to sub-angular gravel, well graded, dry.		
60				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208A
TOTAL DEPTH: 206 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
70		**SW** Gravely sand - brownish yellow 10YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
		SW Silty sand - yellow 10YR (7/8), with some gravel, fine grained sand, sub-rounded gravel, well graded, dry.		
80		**SW** Gravely sand - yellow 10YR (8/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SW Gravely sand - yellowish red 5YR (5/8), medium to coarse grained sand, sub-rounded gravel, well graded, wet.		
90				

Created By: WTR
Checked By: KMS

1015202

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208A
TOTAL DEPTH: 206 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		MH Sandy silt - pale yellow 2.5Y (8/3), fine grained sand, dry.		
		CH Silty clay - light reddish brown 5YR (6/3), high plasticity, moist.		
		SP Clayey sand - reddish yellow 7.5YR (6/6), fine grained sand, poorly graded, moist.		
		SP Silty sand - reddish yellow 5YR (6/8), fine grained sand, poorly graded, moist.		
100				
		SW Gravely sand - reddish yellow 7.5YR (6/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.	105.39-ft.	
110				
		SW Gravely sand - reddish yellow 7.5YR (6/6), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		CL Clay - red 5R (5/6), medium plasticity, moist.		
120				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208A
TOTAL DEPTH: 206 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
130		**SW** Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SW Silty sand - light red 2.5YR (6/6), with some gravel, fine to medium grained sand, sub-rounded gravel, well graded, wet.		
140		**SW** Gravely sand - reddish yellow 7.5YR (6/6), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SW Silty sand with gravel - very pale brown 10YR (8/4), fine to medium grained sand, sub-rounded gravel, well graded, wet.		
150				

Created By: WTR
Checked By: KMS

1015204

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208A
TOTAL DEPTH: 206 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
160		**SW** Gravely sand - yellow 10YR (7/6), trace cobbles, fine to coarse grained sand, sub-rounded to sub-angular gravel, sub-angular cobbles, well graded, wet.		
170		**SP** Silty sand - pale red 2.5YR (7/2), trace gravel, fine grained sand, sub-rounded gravel, poorly graded, wet.		Bentonite Plug
180		**SW** Gravely sand - brownish yellow 10YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		

Created By: WTR
Checked By: KMS

1015205

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208A
TOTAL DEPTH: 206 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Sand Pack
		SP Silty sand - pinkish white 7.5YR (8/2), trace gravel, fine grained sand, sub-angular to sub-rounded gravel, poorly graded, wet.		Screened Interval
190				
		SP Silty sand - pinkish white 7.5YR (8/2), trace gravel, fine grained sand, sub-rounded gravel, poorly graded, wet.		
		CH Clay - light gray 10R (7/1), high plasticity, moist.		
200				
		End of Log		
210				

Created By: WTR
Checked By: KMS

1015206

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208B
TOTAL DEPTH: 126 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/23/2007 13:05
BOREHOLE FINISHED: 3/23/2007 17:00

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 302.08 (ft, msl)
WATER DEPTH/ DATE: 105.42-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Grass and topsoil.		
		CL Silty clay - dark yellowish brown 10YR (4/4), low plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - gray 2.5Y (5/1), medium plasticity, moist.		
20		**CL** Silty clay - dark yellowish brown 10YR (4/4), low plasticity, moist.		
		CL Silty clay - yellowish brown 10YR (5/4), medium plasticity, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208B
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - reddish yellow 7.5YR (6/6), low plasticity, moist.		
40		**CL** Sandy clay - yellowish red 5YR (4/6), low plasticity, fine grained sand, with gray mottling, moist.		
		SP Clayey sand - yellowish red 5YR (5/8), fine grained sand, poorly graded, moist.		
50		**SW** Silty sand - reddish yellow 7.5YR (8/6), with some gravel, fine to coarse grained sand, sub-rounded gravel, well graded, dry.		
60		**SW** Gravely sand - reddish yellow, 7.5YR (7/8), with silt, fine to medium grained sand, sub-rounded to sub-angular gravel, well graded, dry.		

Created By: WTR
Checked By: KMS

1015208

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208B
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		MH Silt - pale yellow 2.5Y (8/2), with some fine grained sand, dry.		
70		**SW** Gravely sand - yellowish red 5YR (5/8), fine to medium grained sand, sub-rounded gravel, well graded, moist.		
		SW Silty sand - reddish yellow 7.5YR (7/8), with gravel, fine grained sand, sub-rounded gravel, well gravel, dry.		
80		**SW** Gravely sand - yellowish red 5YR (5/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
90		**SW** Gravely sand - strong brown 7.5YR (5/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208B
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
100		**SP** Clayey sand - reddish yellow 5YR (7/8), fine grained sand, poorly graded, moist.		
		SP Silty sand - yellow 10YR (8/6), with trace gravel, fine grained sand, sub-rounded gravel, poorly graded, wet.	105.42- ft.	
		SP Silty sand - very pale brown 10YR (7/4), fine grained sand, poorly graded, wet.		Sand Pack
110		**SW** Gravely sand - reddish yellow 7.5YR (6/6), fine to medium grained sand, sub-rounded gravel, well graded, wet.		Screened Interval
120		**SW** Gravely sand - reddish yellow 7.5YR (6/6), fine to medium grained sand, sub-rounded gravel, well graded, wet.		

Created By: WTR
Checked By: KMS

1015210

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-208B
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - red 10R (4/8), medium plasticity, moist.		
		SW Gravely sand - yellow 10YR (8/8), fine to medium grained sand, sub-rounded gravel, well graded, wet.		
		End of Log		
130				
140				
150				

Created By: WTR
Checked By: KMS

1015211

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209A
TOTAL DEPTH: 210 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/2/2007 08:15
BOREHOLE FINISHED: 4/2/2007 16:40

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 298.36 (ft, msl)
WATER DEPTH/ DATE: 103.73-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

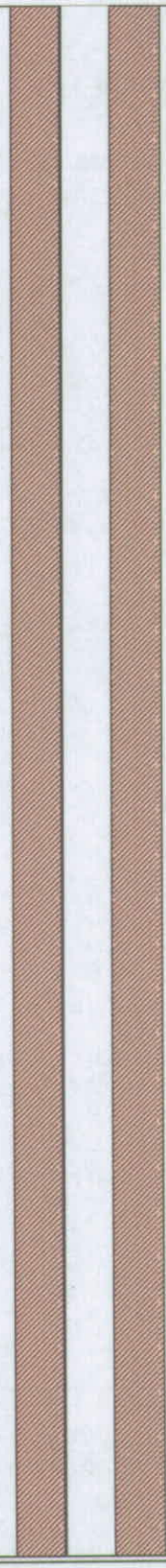
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel and crushed stone.		
		CL Silty clay - brown 7.5YR (4/4), medium plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - brown 7.5YR (4/4), medium plasticity, moist.		
20		**CL** Silty clay - very pale brown 10R (7/4), with gray mottling, low plasticity, moist.		
		CL Sandy clay - red 10R (4/6), with gray mottling, fine grained sand, low plasticity, moist.		
30				

Created By: WTR
Checked By: KMS

1015212

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209A
TOTAL DEPTH: 210 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		SP Clayey sand - red 5YR (4/6), fine grained sand, poorly graded, moist.		
40		**SW** Gravely sand - strong brown 7.5YR (5/8), fine to medium grained sand, sub-rounded gravel, trace clay, well graded, moist.		
		SP Clayey sand - red 2.5YR (5/8), fine grained sand, poorly graded, moist.		
50		**SW** Gravely sand - yellow 10YR (7/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SM Sandy Silt - light gray 10YR (7/1), fine grained sand, possible siltstone, dry.		
60				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209A
TOTAL DEPTH: 210 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SM Silty sand - reddish yellow 7.5YR (7/8), fine grained sand, poorly graded, dry.		
		SW Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, dry.		
		SW Gravely sand - strong brown 7.5YR (5/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
70				
		MH Silt - light gray 7.5YR (7/1), dry.		
		SW Gravely sand - yellow 10YR (7/6), with some silt, fine to medium grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
80				
		CL Sandy clay - pale red 10R (6/4), fine grained sand, medium plasticity, moist.		
		SW Gravely sand - yellowish brown 10YR (5/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
90				

Created By: WTR
Checked By: KMS

1015214

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209A
TOTAL DEPTH: 210 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Silty sand - light red 2.5YR (6/6), with some clay, fine grained sand, poorly graded, moist.		
		SP Silty sand - reddish yellow 7.5YR (7/8), fine grained sand, poorly graded, moist.		
100				
		SP Silty sand - yellow 10YR (7/8), with little gravel, fine to medium grained sand, sub-rounded gravel, poorly graded, wet.		
110				
		SP Silty sand - yellow 10YR (7/8), with little gravel, fine to medium grained sand, sub-rounded gravel, poorly graded, wet.		
120				



Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209A
TOTAL DEPTH: 210 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellowish brown 10YR (5/6), fine to coarse grained sand, rounded to sub-rounded gravel, well graded, wet.		
130		**SW** Gravely sand - pinkish gray 7.5YR (7/2), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SW Gravely sand - yellowish red 5YR (5/8), with trace cobbles, fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
140		**SW** Gravely sand - yellowish red 5YR (5/8), with trace cobbles, fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		ML Clayey Silt - light gray 10YR (7/1), wet.		
150		**SW** Gravely sand - yellowish brown 10YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		

Created By: WTR
Checked By: KMS

1015216

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209A
TOTAL DEPTH: 210 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - pinkish gray 7.5YR (7/2), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
160		**SP** Silty sand - light gray 7.5YR (7/1), trace clay, fine grained sand, poorly graded, wet.		
170		**SP** Silty sand - light gray 7.5YR (7/1), trace clay, fine grained sand, poorly graded, wet.		
180		**CH** Silty clay - pale yellow 2.5Y (7/3), high plasticity, moist.		Bentonite Plug

Created By: WTR
Checked By: KMS

1015217

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209A
TOTAL DEPTH: 210 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
				Sand Pack
190		**SP** Silty sand - very pale brown 10YR (7/4), fine grained sand, poorly graded, wet.		Screened Interval
200		**SW** Gravely sand - very pale brown 10YR (7/4), fine to coarse grained sand, sub-rounded to sub-angular gravel, wet.		
210		**CL** Clay - gray 10YR (6/1), low plasticity, moist.		

Created By: WTR
Checked By: KMS

1015218

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209B
TOTAL DEPTH: 121 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/3/2007 13:30
BOREHOLE FINISHED: 4/4/2007 10:45

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 298.72 (ft, msl)
WATER DEPTH/ DATE: 101.59-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel and rocks.		
		CL Silty clay - brown 7.5 YR (4/4), low plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - brown 7.5 YR (4/4), medium plasticity, moist.		
20		**CL** Silty clay - brown 7.5 YR (4/4), low plasticity, moist.		
		CL Silty clay - brown 7.5 YR (4/4), medium plasticity, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209B

TOTAL DEPTH: 121 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - red 2.5 YR (4/6), low plasticity, fine grained sand, moist.		
		CL Sandy clay - red 2.5 YR (4/8), low plasticity, fine grained sand, moist.		
40		**SP** Sand - reddish yellow 7.5 YR (7/8), with few gravel, fine to medium grained sand, sub-rounded gravel, poorly graded, dry.		
		SW Gravely sand - yellowish red 5YR (5/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
50		**SP** Silty sand - reddish yellow 5YR (7/6), few gravel, fine grained sand, sub-rounded gravel, poorly graded, dry.		
		SW Gravely sand - yellowish red 5YR (5/8), fine to course grained sand, sub-rounded gravel, well graded, moist.		
60				

Created By: WTR

Checked By: KMS

1015220

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209B
TOTAL DEPTH: 121 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		ML Gravely Silt - light gray 5YR (7/1), possible silt stone, sub-rounded gravel, dry.		
		SW Gravely sand - red 5YR (5/8), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
70		**SW** Gravely sand - yellowish red 5YR (5/8), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SW Gravely sand - yellowish red 5YR (5/8), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
80		**MH** Gravely silt - light gray 10YR (7/2), possible silt stone, sub-rounded gravel, dry.		
		SW Gravely sand - yellow 10YR (8/6), with silt, fine to course grained sand, sub-rounded gravel, well graded, dry.		
		CH Clay - light red 10R (7/8), high plasticity, moist.		
90		**SP** Silty sand - very pale brown 10YR (8/) fine grained sand, poorly graded, moist.		

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209B
TOTAL DEPTH: 121 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
100		**SP** Silty sand - brownish yellow 10YR (6/8), fine grained sand, poorly graded, wet.	101.59- ft.	Sand Pack
110		**SP** Silty sand - reddish yellow 7.5YR (7/8) fine grained sand, poorly graded, wet.		Screened Interval
		SW Gravely sand - yellow 10YR (7/6), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
120		Open hole to 121 ft.		

Created By: WTR
Checked By: KMS

1015222

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-209B
TOTAL DEPTH: 121 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		End of Log		
130				
140				
150				

Created By: WTR
Checked By: KMS

1015223

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210A
TOTAL DEPTH: 216 ft.

PROJECT INFORMATION

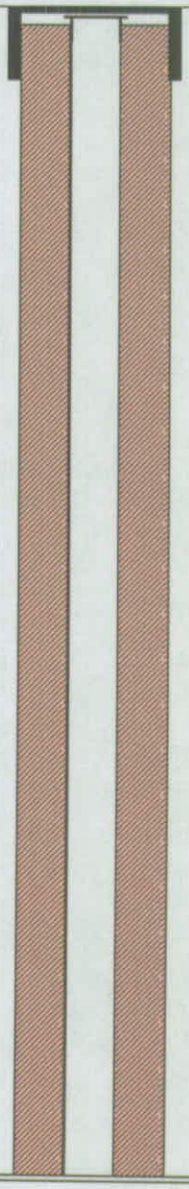
PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/17/2007 14:00
BOREHOLE FINISHED: 4/18/2007 15:25

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 289.78 (ft, msl)
WATER DEPTH/ DATE: 98.31-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Grass and roots		
		CL Silty clay - dark yellowish brown 10YR (3/6), low plasticity, moist.		
10		**CL** Silty clay - dark yellowish brown 10YR (5/4), low plasticity, moist.		Grouted Annulus
20		**CH** Silty clay - dark yellowish brown 10YR (5/4), medium plasticity, moist.		
30		**CL** Sandy clay - yellowish red 5YR (4/6), gray mottling, low plasticity, fine grained sand, moist.		



Created By: WTR
Checked By: KMS

1015224

FIELD BOREHOLE LOG

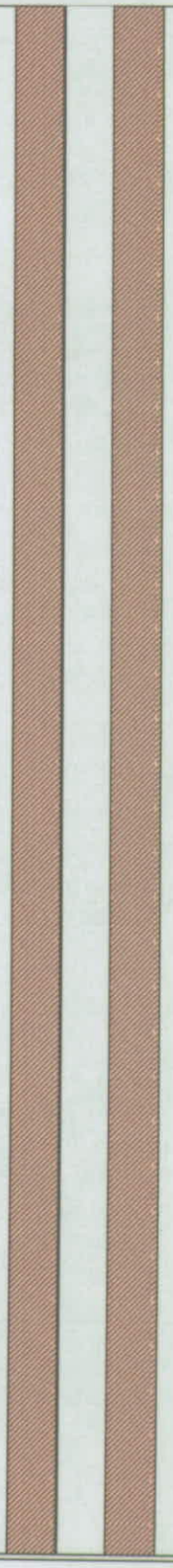
BOREHOLE NO.: MW-210A
TOTAL DEPTH: 216 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Clayey sand - yellowish red 5YR (5/8), fine grained sand, poorly graded, moist.		
40		**SW** Silty sand - brown 10YR (4/3) fine to course grained sand, well graded, wet.		
50		**SP** Silty sand - yellow 10YR (7/8), fine grained sand with trace course grained sand, poorly graded, moist.		
		SP Sand - strong brown 7.5YR (5/8), trace gravel, fine to course grained sand, sub-rounded gravel, poorly graded, moist.		
60		**SW** Gravely sand - yellowish red 5YR (5/8), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, moist.		

1015225

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210A
TOTAL DEPTH: 216 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
70		**SW** Gravely sand - brownish yellow 10YR (6/6), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
		SP Silty sand - yellow 10YR (7/8), fine grained sand, poorly graded, moist.		
		SP Clayey sand - reddish brown 5YR (5/4), fine grained sand, poorly graded, moist.		
80		**SP** Silty sand - yellow 2.5Y (7/6), fine grained sand, poorly graded, moist.		
		SP Silty sand - pale yellow 2.5Y (8/4), with some gravel, fine grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
90		**SW** Gravely sand - brownish yellow 10YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		

Created By: WTR
Checked By: KMS

1015226

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210A
TOTAL DEPTH: 216 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			98.31- ft.	
		SP Sand - yellowish red 5YR (5/6), fine to medium grained sand, poorly graded, wet.		
100		**SW** Gravely sand - pale brown 10YR (6/3), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
		SW Gravely sand - pale brown 10YR (6/3), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
110		**SW** Sand - yellowish red 5YR (4/6), with some gravel, fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
		SW Gravely sand - yellowish red 5YR (5/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
120				

Created By: WTR

Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210A

TOTAL DEPTH: 216 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Silty sand - strong brown 7.5YR (5/8), fine grained sand, poorly graded, wet.		
		GW Sandy gravel, light brown 7.5YR (6/4), sub-rounded to sub-angular gravel, coarse grained sand, well graded, wet.		
		SW Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, trace cobbles, sub-rounded cobbles, well graded, wet.		
130				
		SW Silty sand with gravel - light gray 2.5Y (7/2), trace cobbles, fine to medium grained sand, sub-rounded to sub-angular gravel, sub-rounded to sub-angular cobbles, well graded, wet.		
140		**CL** Silty clay - light gray 2.5Y (7/1), low plasticity, brown mottling, moist.		
		CH Clay - light brownish gray 2.5Y (6/2), high plasticity, moist.		
		CL Silty clay - dark gray 2.5Y (4/1), medium plasticity, moist.		
150				

Created By: WTR

Checked By: KMS

1015228

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210A
TOTAL DEPTH: 216 ft.

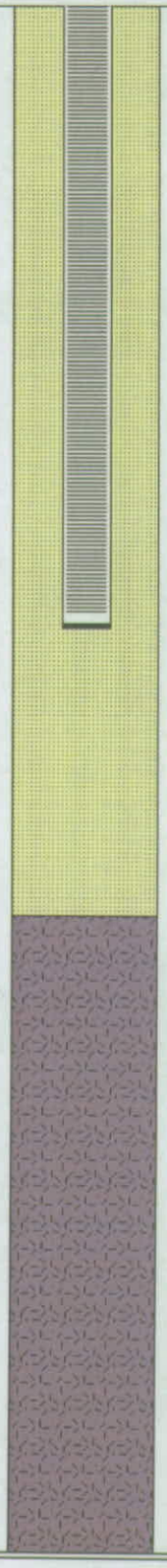
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CH Silty clay - light gray 2.5Y (7/1), with brown mottling, medium plasticity, moist.		
		CH Clay - light gray 2.5Y (7/1), high plasticity, moist.		
160		**MH** Sandy silt - pale yellow 2.5Y (7/3), fine grained sand, poorly graded, moist.		
		SP Silty sand - pale yellow 2.5Y (7/3), fine grained sand, poorly graded, moist.		Bentonite Plug
170		**SW** Gravely sand - light brown 7.5YR (6/4), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		Sand Pack
		SW Gravely sand - strong brown 7.5YR (5/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		Screened Interva
180				

Created By: WTR
Checked By: KMS

1015229

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210A
TOTAL DEPTH: 216 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		SP Silty sand - light gray 7.5YR (7/1), with some clay, fine grained sand, poorly graded, moist.		
190				
		CH Silty clay - light gray 7.5YR (7/1), high plasticity, moist.		
		SW Gravely sand - light brownish yellow 2.5Y (6/3), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
200		**CL** Silty clay - pale yellow 2.5Y (7/3), medium plasticity, moist.		
		ML Clayey silt - very pale brown 10YR (7/3), moist.		
		CL Silty clay - light gray 2.5Y (7/2), medium plasticity, moist.		
210				

Created By: WTR
Checked By: KMS

1015230

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210A
TOTAL DEPTH: 216 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Silty sand - yellow 2.5Y (8/6), fine grained sand, poorly graded, moist.		
220		End of Log		
230				
240				

Created By: WTR
Checked By: KMS

1015231

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210B
TOTAL DEPTH: 114 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/19/2007 12:45
BOREHOLE FINISHED: 4/19/2007 16:30

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 289.53 (ft, msl)
WATER DEPTH/ DATE: 91.6-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Grass and roots.		
10		**CL** Silty clay - yellowish brown 10YR (4/4), low plasticity, moist.		Grouted Annulus
20		**CL** Silty clay - brown 10YR (5/3), low plasticity, moist.		
30		**CL** Sandy clay - yellowish red 5YR (4/6), low plasticity, gray mottling, some gravel, fine grained sand, sub-angular gravel, moist.		

Created By: WTR
Checked By: KMS

1015232

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210B
TOTAL DEPTH: 114 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Clayey sand - yellowish red 5YR (5/8), fine to course grained sand, well graded, moist.		
40		**SP** Silty sand - reddish yellow 5YR (6/8), fine grained sand, trace course grained sand, poorly graded, moist.		
50		**SP** Silty sand - yellowish red 5YR (5/8), fine grained sand, trace course grained sand, poorly graded, moist.		
		MH Silt - very pale brown 10YR (8/2), trace sand, medium grained sand, possible silt stone, dry.		
60		**SW** Gravely sand - yellowish red 5YR (5/8), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, moist.		

1015233

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210B
TOTAL DEPTH: 114 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellowish red 5YR (5/8), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
70		**SP** Silty sand - reddish yellow 5YR (6/8), fine grained sand, poorly graded, moist.		
		CH Clay - weak red 10R (5/4), medium plasticity, moist.		
		SP Silty sand - yellow 10YR (8/8), fine grained sand, poorly graded, moist.		
		SP Silty sand - yellow 10YR (8/6), fine to course grained sand, poorly graded, moist.		
80				
		SW Gravely sand - very pale brown 10YR (8/3), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, wet.		Bentonite Plug
90				

Created By: WTR
Checked By: KMS

1015234

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-210B
TOTAL DEPTH: 114 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			91.6- ft	
		SW Gravely sand - reddish yellow 7.5YR (7/8), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, wet.		Sand Pack
100				Screened Interval
		SW Silty sand - light brown 7.5YR (6/4), some gravel, fine grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
110		**SW** Gravely sand - yellowish red 5YR (5/8), fine to course grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
		End of Log		
120				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-211
TOTAL DEPTH: 186 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/19/2007 07:30
BOREHOLE FINISHED: 3/21/2007 10:45

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 304.09 (ft, msl)
WATER DEPTH/ DATE: 109.01-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Soil and roots		
		CL Silty clay - dark yellowish brown 10YR (3/4), medium plasticity, moist.		
10				Grouted Annulus
		CL Sandy clay - brownish yellow 10YR (6/6), with silt, low plasticity, fine grained sand, moist.		
20				
		CL Sandy clay - yellowish red 5YR (5/6), with silt, low plasticity, fine grained sand, moist.		
30				

Created By: WTR
Checked By: KMS

1015236

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-211
TOTAL DEPTH: 186 ft.

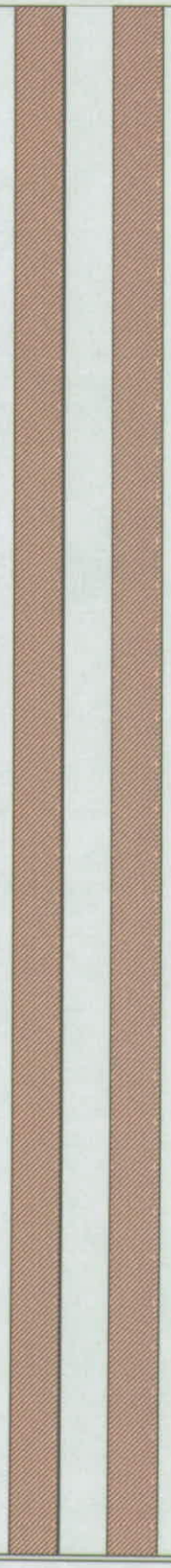
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy clay - red 10R (4/8), with some silt, gray mottling, low plasticity, fine grained sand, moist.		
		SP Clayey sand - reddish yellow 5YR (7/8), fine grained sand, poorly graded, moist.		
		SP Clayey sand - yellow 5YR (7/8), fine grained sand, poorly graded, moist.		
40		**SW** Sand with some gravel - yellow 10YR (7/8), fine to coarse grained sand, sub-rounded gravel, well graded, dry.		
		SW Silty sand - yellow 10YR (8/8), some gravel, fine to medium grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
50				
		SW Gravely sand with some silt - reddish yellow 7.5YR (6/8), fine to medium grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
60				

Created By: WTR
Checked By: KMS

1015237

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-211
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		MH Sandy silt - pale yellow 5Y (8/2), with some gravel, fine grained sand, sub-rounded gravel, poorly graded, dry.		
70		**SW** Gravely sand - light red 2.5YR (6/8), with some silt, fine to coarse grained sand, sub-rounded gravel, well graded, dry.		
80		**SP** Sand - yellowish red 5YR (4/6), with little gravel, medium to coarse grained sand, sub-rounded gravel, poorly graded, dry.		
		No Recovery No sample core barrel broke down hole.		
90				

Created By: WTR
Checked By: KMS

1015238

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-211
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
100		**CL** Silty clay - gray, 10YR (6/1), medium plasticity, moist.		
		CL Silty clay - gray 10YR (6/1), medium plasticity, moist.	109.01- ft.	
110		**CL** Clay - light gray 2.5YR (7/1), high plasticity, moist.		
		CL Clay - light gray 2.5YR (7/1), high plasticity, moist.		
120				

Created By: WTR
Checked By: KMS

1015239

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-211
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - white 7.5YR (8/1), fine grained, poorly graded, wet.		
130		**SM** Sand - very pale brown 10YR (8/4), with some silt, fine grained sand, poorly graded, wet.		
140		**SM** Sand - pale yellow 2.5Y (8/2), with some silt, fine grained sand, poorly graded, wet.		
150		**SM** Sand - pale yellow 2.5Y (8/2), with some silt, fine grained sand, poorly graded, wet.		

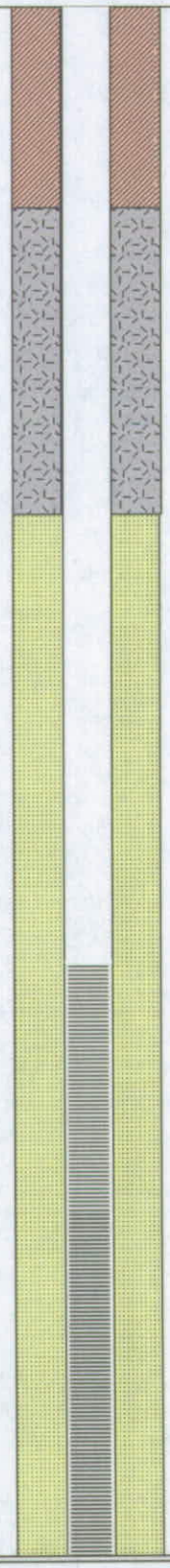
Created By: WTR
Checked By: KMS

1015240

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-211
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
160		**SM** Sand - pink 7.5YR (8/4), with some silt, fine grained sand, poorly graded, wet.		
		SM Sand - very pale brown 10YR (8/4), with some silt, fine grained sand, poorly graded, wet.		Sand Pack
170				Screened Interva
		SM Sand - very pale brown 10YR (8/4), with some silt, fine grained sand, poorly graded, wet.		
180				

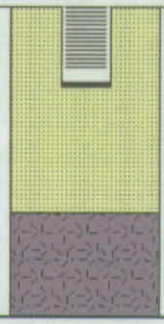


Created By: WTR
Checked By: KMS

1015241

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-211
TOTAL DEPTH: 186 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - gray 2.5Y (5/1), medium plasticity, moist.		
190 200 210		End of Log		

Created By: WTR
Checked By: KMS

1015242

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-212
TOTAL DEPTH: 107 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/4/2007 14:00
BOREHOLE FINISHED: 4/5/2007 09:00

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 295.68 (ft, msl)
WATER DEPTH/ DATE: 97.67-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel		
		CL Silty clay - brown 7.5YR (4/4), low plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - brown 7.5YR (4/4), low plasticity, moist.		
20				
		CL Sandy clay with gray mottling, reddish yellow 7.5YR (6/8), fine grained sand, low plasticity, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-212
TOTAL DEPTH: 107 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Clayey sand - yellowish red 5YR (5/8), fine grained sand, poorly graded, moist.		
		SP Clayey sand - yellowish red 5YR (5/8), fine grained sand poorly graded, moist.		
40		**SW** Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
		SW Gravely sand - yellow 10YR (7/6), fine to coarse grained sand, sub-rounded gravel, trace of sub-rounded cobbles, well graded, dry.		
50				
		SW Gravely sand - brownish yellow 10YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
60				

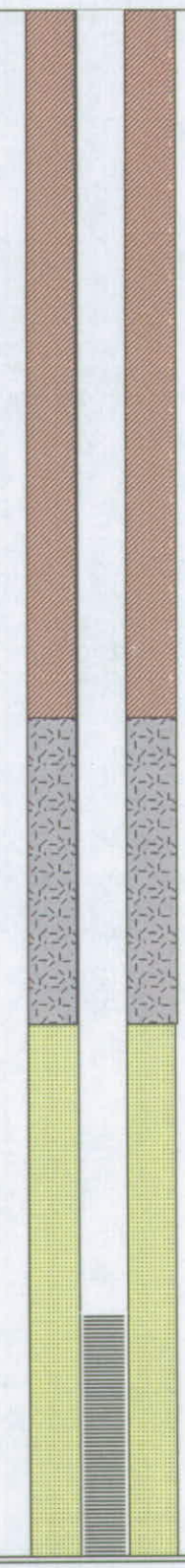
Created By: WTR
Checked By: KMS

1015244

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-212
TOTAL DEPTH: 107 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SM Sandy silt - light gray 5Y (7/1), fine to coarse grained sand, possible silt stone, dry.		
70		**SW** Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
				Bentonite Plug
		SW Gravely sand - yellowish brown 10YR (5/6), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		
80				
		SP Silty sand - pink 7.5YR (7/3), fine grained sand, poorly graded, wet.		
		SP Silty sand - reddish yellow 7.5YR (7/8), fine grained sand, poorly graded, wet.		Sand Pack
90				Screened Interva



Created By: WTR
Checked By: KMS

1015245

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-212
TOTAL DEPTH: 107 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Screened Interval
		SP Silty sand - strong brown 7.5YR (5/6), fine grained sand, poorly graded, wet.	97.67- ft.	
100		**CL** Clay - gray 10YR (5/1), low plasticity, moist.		
		End of Log		
110				
120				

Created By: WTR
Checked By: KMS

1015246

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-213
TOTAL DEPTH: 106 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/5/2007 13:00
BOREHOLE FINISHED: 4/5/2007 16:35

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 294.12 (ft, msl)
WATER DEPTH/ DATE: 92.12-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel		
		CL Clay - dark yellowish brown 10YR (4/4), medium plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - strong brown 7.5YR (5/6), low plasticity, moist.		
20				
		CL Sandy clay - yellowish red 5YR (4/6), with gray mottling, fine grained sand, trace sub-rounded gravel, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-213
TOTAL DEPTH: 106 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellowish red 5YR (5/8), with some clay, fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
		SW Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
40				
		SW Gravely sand - brown 7.5YR (5/4), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
50				
		SW Gravely sand - yellowish red 5YR (5/8), trace cobbles, fine to coarse grained sand, sub-rounded to sub-angular gravel, sub-rounded cobbles, well graded, wet.		
60				

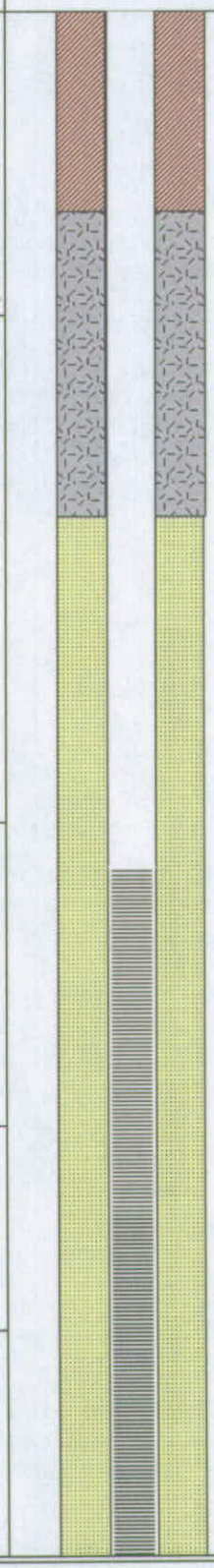
Created By: WTR
Checked By: KMS

1015248

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-213
TOTAL DEPTH: 106 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
70		**SW** Gravely sand - reddish yellow 5YR (6/8), with trace cobbles, fine to coarse grained sand, sub-rounded to sub-angular gravel, sub-rounded cobbles, well graded, wet.		
80		**SW** Gravely sand - yellowish red 5YR (5/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.		Sand Pack
		SP Silty sand - reddish yellow 7.5YR (6/8), fine grained sand, poorly graded, wet.		Screened Interva
90		**SP** Silty sand - very pale brown 10YR (8/4), fine grained sand, poorly graded, wet.		



Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-213
TOTAL DEPTH: 106 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, wet.	92.12- ft.	
		CL Clay - dark gray 10YR (4/1), medium plasticity, moist.		
100		**CL** Clay - dark gray 10YR (4/1), medium plasticity, moist.		
		End of Log		
110				
120				

Created By: WTR
Checked By: KMS

GAS 1015250

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214A
TOTAL DEPTH: 147 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/12/2007 08:00
BOREHOLE FINISHED: 3/2/2007 15:15

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 303.96 (ft, msl)
WATER DEPTH/ DATE: 102.85-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt Asphalt and gravel		
		CL Silty clay - brown 7.5YR 95/4), medium plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - brown 7.5YR (5/4), with trace sand, fine grained, medium plasticity, moist.		
20		**CL** Sandy clay - red 2.5YR (4/8), fine grained, medium plasticity, grey mottling, moist.		
		CL Sandy clay - red 2.5YR (4/8), fine grained, low plasticity, grey mottling, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214A
TOTAL DEPTH: 147 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SC Clayey sand - light red 2.5YR (6/6), fine to medium grained, poorly graded, moist.		
		SC Clayey sand - light red 2.5YR (6/6), fine to medium grained, poorly graded, moist.		
40		**SP** Sand - yellow 10YR (8/8), with trace clay, fine to medium grained, poorly graded, moist.		
50		**SM** Silty sand - reddish yellow 7.5YR (7/8), with gravel, fine to course grained sand, sub-angular to sub-rounded gravel, well graded, dry.		
60		**SW** Gravely sand - reddish yellow 7.5YR (7/6), fine to course grained sand, sub-angular to sub-rounded gravel, well graded, dry.		

1015252

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214A
TOTAL DEPTH: 147 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SM Silty sand - yellow 10YR (8/6), with trace gravel, fine to medium grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
		SM Silty sand - yellow 10YR (8/6) with trace gravel, fine to medium grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
70		**SW** Gravelly sand - yellowish red 5YR (5/6) medium to course grained sand, sub-angular to sub-rounded gravel, well graded, dry.		
		SW Gravelly sand - yellowish red 5YR (5/6) medium to course grained sand, sub-angular to sub-rounded gravel, well graded, wet.		
80		**SW** Gravelly sand - reddish yellow 5YR (7/6) with some cobbles, fine to medium grained sand, sub-angular to sub-rounded gravel, well graded, wet.		
		CL Sandy clay - pink 5YR (7/4) fine to medium grained sand, low plasticity, wet.		
90				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214A
TOTAL DEPTH: 147 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Silty sand - reddish yellow 5YR (6/8) with some clay, fine grained sand, poorly graded, wet.		
100		**SP** Sand - reddish yellow 7.5YR (7/6) with little clay, find to medium grained, poorly graded, wet.		
		CL Clay - weak red 10R (4/4) medium plasticity, moist.	102.85- ft.	
		SP Sand - reddish yellow 7.5YR (8/6) with little clay, fine to medium grained, poorly graded, wet.		
110		**SP** Sand - pink 7.5YR (8/4) with little clay, fine to medium grained, poorly graded, wet.		Bentonite Plug Sand Pack
120		**SP** Sand - pink 7.5YR (8/4) with little clay, fine to medium grained, poorly graded, wet.		Screened Interval

Created By: WTR
Checked By: KMS

1015254

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214A
TOTAL DEPTH: 147 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Screened Interval
130		**SP** Sand - pink 7.5YR (8/4) with trace clay, fine to medium grained, poorly graded, wet.		
140		**CL** Clay - grey 10YR (5/1) hard plasticity, moist.		
150		End of Log		

Created By: WTR
Checked By: KMS

1015255

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214B
TOTAL DEPTH: 119 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/13/2007 09:55
BOREHOLE FINISHED: 3/13/2007 15:00

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 303.96 (ft, msl)
WATER DEPTH/ DATE: 102.5-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt Asphalt and gravel.		
		CL Silty clay - dark brown 7.5 YR (3/4) medium plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - dark brown 7.5 YR (3/4) medium plasticity, moist.		
20		**CL** Sandy clay - red 10YR (4/8) low plasticity, brown mottling, moist.		
		CL Sandy clay - red 10YR (4/8), low plasticity, grey mottling, moist.		
30				

Created By: WTR
Checked By: KMS

1015256

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214B
TOTAL DEPTH: 119 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SC Clayey sand - red 2.5 YR (5/8) fine to medium grained, poorly graded, moist.		
		SC Clayey sand - light red 2.5YR (6/8) fine grained, poorly graded, moist.		
40		**SM** Silty sand - reddish yellow 7.5YR (8/6) fine to coarse grained, well graded, dry.		
		SW Gravelly sand - reddish yellow 5YR (6/8) fine to coarse grained, sub-angular to sub-rounded gravel, well graded, dry.		
50		**SW** Silty sand - yellow 10YR (8/6) with gravel, fine to coarse grained sand, sub-angular to sub-rounded gravel, well graded, dry.		
		SW Silty sand - yellow 10YR (8/6) with gravel, fine to coarse grained, sub-rounded gravel, well graded, dry.		
60				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214B
TOTAL DEPTH: 119 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravelly sand - reddish yellow 7.5YR (6/8), fine to coarse grained, sub-angular to sub-rounded gravel, well graded, moist.		
70		**SW** Gravelly sand - reddish yellow (7.5YR 7/6) fine to coarse grained, sub-angular to sub-rounded gravel, well graded, moist.		
		SW Gravelly sand - yellowish red 5YR (5/8) medium to coarse grained, sub-rounded gravel, well graded, moist.		
		SW Gravelly sand - yellowish red 5YR (5/8) medium to coarse grained, sub-rounded gravel, well graded, moist.		
80		**SW** Gravelly sand - reddish yellow 7.5YR (7/8) fine to coarse grained, sub-angular to sub-rounded gravel, well graded, wet.		
		SW Gravelly sand - reddish yellow 7.5YR (7/8) fine to coarse grained, sub-angular to sub-rounded gravel, well graded, wet.		
90				

Created By: WTR
Checked By: KMS

1015258

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-214B
TOTAL DEPTH: 119 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SC Clayey sand - very pale brown 10YR (7/4) with silt, fine grained, poorly graded, wet.		Bentonite Plug
100		**SC** Clayey sand - very pale brown 10YR (7/4) with silt, fine grained, poorly graded, wet.	102.5- ft.	Sand Pack
		CL Clay - weak red 10R (4/4) medium plasticity, moist.		Screened Interval
		SC Clayey sand - pale red 10R (6/2) with silt, fine grained, poorly graded, wet.		
110		**SM** Silty sand - brownish yellow (10YR 6/6) with some clay, fine grained, poorly graded, wet.		
120		End of Log		

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215A
TOTAL DEPTH: 170 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/7/2007 14:30
BOREHOLE FINISHED: 3/8/2007 14:45

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 304.86 (ft, msl)
WATER DEPTH/ DATE: 108.25-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt Asphalt and gravel		
10		**CL** Silty clay - brown 7.5YR (4/3) medium plasticity, moist.		Grouted Annulus
20		**CL** Clay - brown 7.5YR (4/3) with some sand, fine to medium grained, medium plasticity, moist.		
		SC Clayey sand - red 2.5YR (4/8) fine to medium grained, grey mottling, moist.		
30		**CL** Sandy clay - red 10R (4/6) fine grained, low plasticity, grey mottling, moist.		

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215A
TOTAL DEPTH: 170 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SC Clayey sand - reddish yellow 5YR (5/8) fine to medium grained, moist.		
		SC Clayey sand - reddish yellow 5YR (5/8) fine to medium grained, grey mottling, moist.		
40				
		No Recovery		
50				
		SW Sand - light olive brown 2.5Y (5/4) with some gravel, fine to medium grained sand, sub-rounded gravel, well graded, dry.		
60				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215A
TOTAL DEPTH: 170 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
70		**SW** Sand - yellowish brown 10YR (5/8) with some gravel, fine to medium grained sand, sub-rounded gravel, well graded, dry.		
		ML Silt or sandstone - white 5Y (8/1), rock with little gravel, dry.		
		SW Sand - yellowish brown 10YR (5/8) with some gravel, fine to course grained sand, sub-rounded gravel, well graded, moist.		
80		**SW** Sand - yellowish brown 10YR (5/8) with some gravel, medium to course grained sand, sub-rounded gravel, well graded, moist.		
		SC Clayey sand - pale red 10R (7/4) fine grained, poorly graded, moist.		
90		**SC** Clayey sand - pale red 10R (7/4) fine grained, moist.		

Created By: WTR
Checked By: KMS

1015262

FIELD BOREHOLE LOG

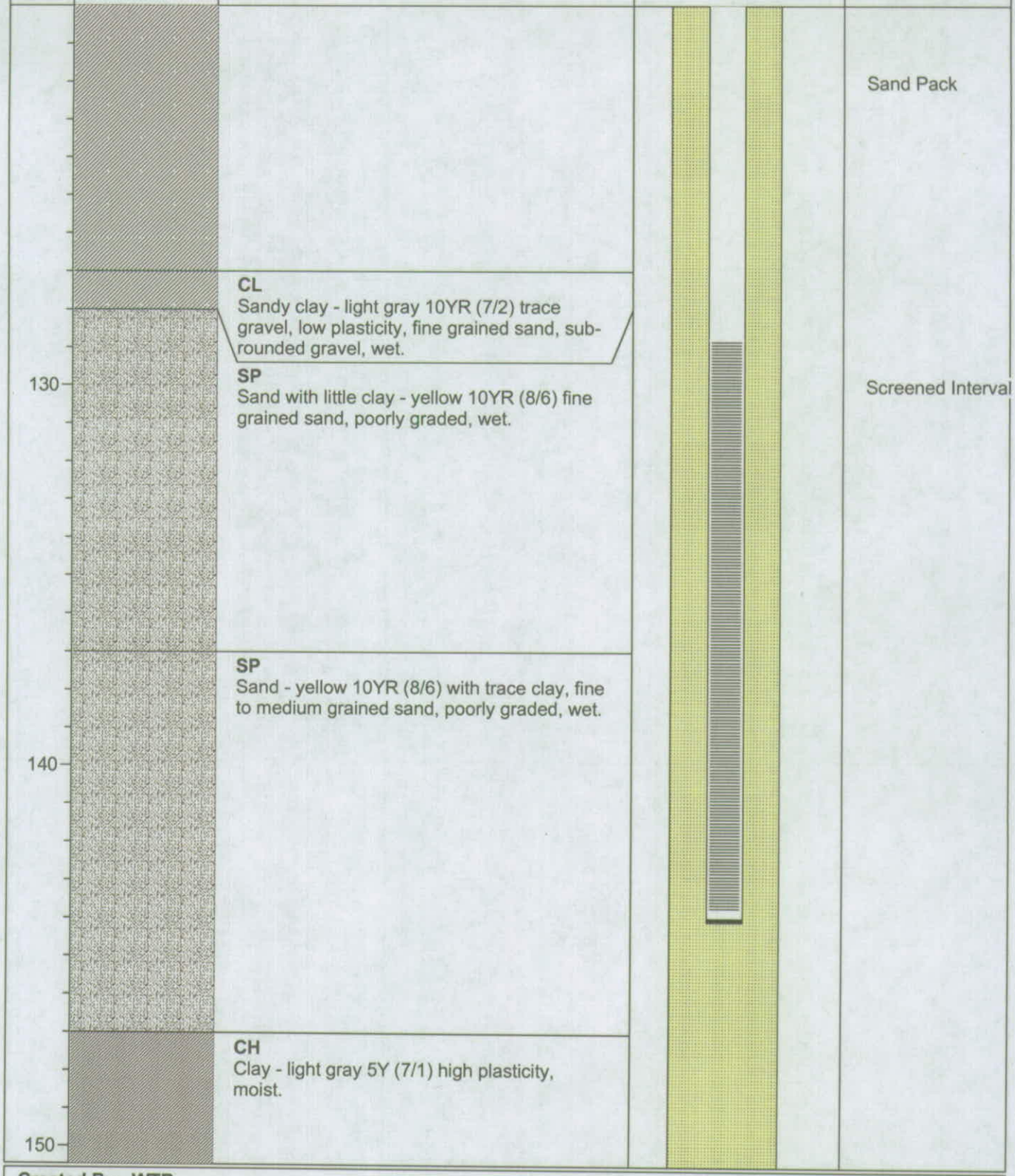
BOREHOLE NO.: MW-215A
TOTAL DEPTH: 170 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - reddish yellow 7.5YR (6/6) with little clay, fine grained, poorly graded, moist.		
		GM Silt with gravel - white 5Y (8/1), possible silt stone, dry.		
100		**SW** Gravely sand - reddish yellow 7.5 YR (6/8) medium to coarse grained sand, sub-angular to sub-rounded gravel, well graded, moist.		
		CL Sandy clay - yellow 10YR (7/6) trace gravel, low plasticity, fine grained sand, rounded gravel, red and gray mottling, wet.	108.25- ft.	
110				Bentonite Plug
		CL Sandy clay - light gray 10YR (7/2) trace gravel, low plasticity, fine grained sand, sub-rounded gravel, wet.		
120				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215A
TOTAL DEPTH: 170 ft.



Created By: WTR
Checked By: KMS

1015264

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215A
TOTAL DEPTH: 170 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
160		**CL** Silty clay - light gray 5Y (5/1) medium plasticity, moist.		
170		End of Log		
180				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215B
TOTAL DEPTH: 127 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/9/2007 13:40
BOREHOLE FINISHED: 3/10/2007 14:50

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 304.98 (ft, msl)
WATER DEPTH/ DATE: 108.34-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES: Filled in to 123.5-ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt Asphalt and gravel		
		CL Silty clay - brown 7.5 YR (5/4) medium plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - strong brown 7.5YR (5/8) hard plasticity, trace medium grained sand, moist.		
		CL Silty clay - strong brown 7.5YR (5/8) with trace sand, hard plasticity, medium grained sand, moist.		
20				
		CL Sandy clay - red 10YR (4/6) medium plasticity, fine grained sand, gray mottling, moist.		
		SC Clayey sand - reddish yellow 5 YR (6/8) fine to medium grained sand, low plasticity, poorly graded, gray mottling, moist.		
30				

Created By: WTR
Checked By: KMS

1015266

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215B
TOTAL DEPTH: 127 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SC Clayey sand - reddish yellow 5YR (6/8) fine to medium grained sand, low plasticity, poorly graded, moist.		
40		**SP** Sand - very pale brown 10YR (8/4) fine to medium grained, poorly graded, dry.		
		SP Sand - pale yellow 2.5Y (8/4) fine grained, poorly graded, moist.		
		SP Sand - light gray 2Y (7/1) fine grained, poorly sorted, dry.		
50		**SW** Sand - brownish yellow 10YR (5/8) with some gravel and little clay, fine to medium grained sand, sub-rounded gravel, well graded, moist.		
		SP Sand - yellowish red 5YR (5/8) fine grained, poorly graded, dry.		
60				

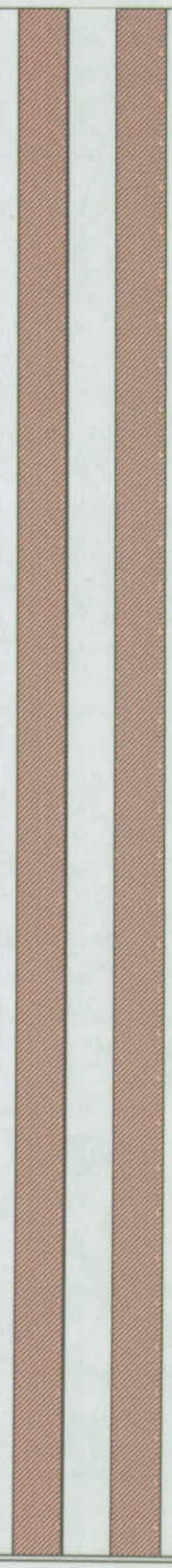
Created By: WTR
Checked By: KMS

1015267

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215B

TOTAL DEPTH: 127 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - strong brown 7.5YR (5/8) fine to coarse grained sand, sub-angular to sub-rounded gravel, trace clay, well graded, moist.		
		SM Silty sand with gravel - yellow 2.5YR (8/6) fine to medium grained sand, sub-angular to sub-rounded gravel, well graded, moist.		
		SW Sand - yellow 10YR (7/6) with little gravel, fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
70		**ML** Silt with sand - light gray 2.5YR (7/1) fine to medium grained ,well graded, dry.		
		SW Sand with some gravel - yellow 10YR (7/6) fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
80		**SW** Gravely sand - yellow 10YR (7/8) medium to coarse grained sand, sub-angular to sub-rounded gravel, well graded, moist.		
		SC Clayey sand - pinkish gray 5YR (7/2) fine grained sand poorly graded, gray mottling, moist.		
		SC Clayey sand - pinkish gray 5Y (7/2) fine grained sand, poorly graded, gray mottling, wet.		
90				

Created By: WTR

Checked By: KMS

1015268

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215B
TOTAL DEPTH: 127 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - yellow 10YR (8/8) fine grained, poorly graded, wet.		Bentonite Plug
		SP Sand - grayish brown 10YR (5/2) fine grained, poorly graded, wet.		
100		**SM** Silty sand - brown 10YR (8/3) fine grained, poorly graded, dry.		
		SP Sand - yellowish brown 10YR (5/6), fine to coarse grained, poorly graded, wet.	108.34- ft.	Sand Pack
		SM Silty sand - pale yellow 2.5Y (8/2), fine to medium grained, poorly graded, dry.		
110		**SW** Gravely sand - yellow 2.5Y (8/6), fine to coarse grained sand, sub-angular to sub-rounded gravel, little clay, well graded, wet.		Screened Interval
		SW Gravely sand - olive brown 2.5Y (5/6), fine to coarse grained sand, sub-angular to sub-rounded gravel, well graded, wet.		
120				

Created By: WTR
Checked By: KMS

1015269

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-215B
TOTAL DEPTH: 127 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Gravely sand - yellow 10YR (8/6), fine to coarse grained sand, sub-angular to sub-rounded, some clay, well graded, wet.		
130		End of Log		
140				
150				

Created By: WTR
Checked By: KMS

1015270

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-216
TOTAL DEPTH: 127 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/11/2007 15:00
BOREHOLE FINISHED: 4/16/2007 08:50

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 297.63 (ft, msl)
WATER DEPTH/ DATE: 96.6-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Gravel and crushed stone		
		CH Silty clay - dark yellowish brown 10YR (4/4), medium plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - yellowish brown 10YR (5/4), medium plasticity moist.		
20				
		CL Sandy clay - red 2.5YR (4/6), with gray mottling, medium plasticity, fine grained sand, moist.		
		CL Sandy clay - red 2.5YR (4/6), with gray mottling, medium plasticity, fine grained sand, moist.		
30				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-216
TOTAL DEPTH: 127 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Clayey sand - dark red 10R(3/6), fine grained sand, poorly graded, moist.		
		SW Gravely sand - light red 2.5YR (6/8), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
		SW Gravely sand - red 2.5YR (4/6), fine to coarse grained sand, sub-rounded gravel, well graded, moist.		
40		**SP** Sand - red 5YR (5/8), fine grained sand poorly graded, moist.		
		SP Silty sand - very pale brown 10YR (8/3), fine grained sand poorly graded, moist.		
50		**SW** Gravely sand - yellow 10YR (8/8), with some silt, fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, dry.		
		SP Silty sand - reddish yellow 7.5YR (7/8), with few gravel, fine grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
60				

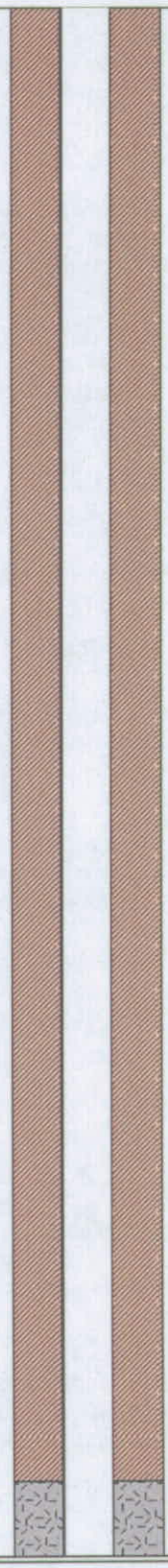
Created By: WTR

Checked By: KMS

1015272

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-216
TOTAL DEPTH: 127 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
70		**SP** Silty sand - reddish yellow 7.5YR (7/8), with few gravel, fine grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
		SP Silty sand - very pale brown 10YR (8/3), fine grained sand, poorly graded, moist.		
		CH Clay - pale red 10R (6/4), high plasticity, moist.		
80		**SP** Silty sand - very pale brown 10YR (8/2), fine grained sand, poorly graded, moist.		
		SW Silty sand - very pale brown 10YR (7/4), fine to coarse grained sand, well graded, moist.		
90				

Created By: WTR
Checked By: KMS

1015273

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-216
TOTAL DEPTH: 127 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				Bentonite Plug
		SP Silty sand - yellow 10YR (8/6), fine grained sand, trace coarse grained sand, poorly graded, wet.	96.6- ft.	Sand Pack
100		**CH** Clay - pale red 10R (7/4), medium plasticity, moist.		Screened Interval
		SP Silty sand - yellow 10YR (8/6), fine grained sand, trace coarse grained sand, poorly graded, wet.		
		SW Gravely sand - yellow 10YR (7/6), with few cobbles, fine to coarse grained sand, sub-rounded to sub-angular gravel and cobbles, well graded, wet.		
110		**CH** Silty clay - light gray 10YR (7/1), medium plasticity, moist.		
		CL Sandy clay - reddish yellow 7.5YR (6/8), fine to medium grained sand, low plasticity, moist.		
		SW Clayey sand - light yellowish brown 10YR (6/4), fine grained sand, poorly graded, wet.		
		CH Clay - reddish yellow 7.5YR (7/8), medium plasticity hard, moist.		
		CL Clay - reddish yellow 5YR (7/8), medium plasticity hard, moist.		
120				

Created By: WTR
Checked By: KMS

1015274

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-216
TOTAL DEPTH: 127 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - gray 5Y (5/1), medium plasticity, hard, moist.		
130 140 150		End of Log		

Created By: WTR
Checked By: KMS

1015275

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-217
TOTAL DEPTH: 126 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/20/2007 11:30
BOREHOLE FINISHED: 4/20/2007 16:50

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 304.51 (ft, msl)
WATER DEPTH/ DATE: 108-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Grass and roots.		
		CL Silty clay - brown 7.5YR (4/4), low plasticity, moist.		
10				Grouted Annulus
		CL Silty clay - dark gray 7.5YR (4/1), low plasticity, moist.		
		CL Silty clay - dark gray 7.5YR (4/1), low plasticity, moist.		
20				
		CL Silty clay - brown 7.5YR (4/4), low plasticity, moist.		
		CL Silty clay - brown 7.5YR (4/4), low plasticity, moist.		
30				

Created By: WTR
Checked By: KMS

1015276

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-217
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		CL Silty clay - yellowish red 5YR (4/6), low plasticity, moist.		
		CL Sandy clay - dark red 5R (3/6), gray mottling, low plasticity, fine grained sand, moist.		
40		**SW** Clayey sand - yellowish red 5YR (4/6), few gravel, fine grained sand with few coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SP Clayey sand - yellowish red 5YR (5/8), few gravel, fine grained sand with trace coarse grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
50				
		SP Clayey sand - yellowish red 5YR (5/8), few gravel, fine grained sand with trace coarse grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
60				

Created By: WTR
Checked By: KMS

1015277

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-217
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		MH Silt - light red 10R (6/6), some sand, possible silt stone, coarse grained sand, dry.		
70		**SP** Sand - yellowish red 5YR (5/8), trace gravel, fine grained sand with trace coarse grained sand, sub-rounded to sub-angular gravel, poorly graded, moist.		
		SW Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		SW Gravely sand - reddish yellow 7.5YR (7/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
80		**SP** Silty sand - reddish yellow 7.5YR (6/8), fine grained sand, poorly graded, wet.		
		CH Clay - light gray 2.5Y (7/2), brown mottling, medium plasticity, moist.		
		CH Clay - light gray 2.5Y (7/2), medium plasticity, moist.		
		CL Silty clay - yellowish brown 10YR (5/8), medium plasticity, moist.		
90				

Created By: WTR
Checked By: KMS

1015278

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-217
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Silty sand - brownish yellow 10YR (6/8), fine grained sand, poorly graded, dry.		Bentonite Plug
		SP Silty sand - very pale brown 10YR(8/4), possible silt stone, fine grained sand, poorly graded, dry.		
		SP Silty sand - yellow 10YR (7/8), fine grained sand, poorly graded, moist.		
		SP Silty sand - reddish yellow 10YR (6/8), fine grained sand, poorly graded, moist.		
100				
		MH Silt - gray 7.5YR (5/1), few sand, fine grained sand, dry.		Sand Pack
		SP Silty sand - reddish yellow 7.5YR (6/8), fine grained sand, poorly graded, moist.		
		SW Gravely sand - strong brown 7.5YR (4/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.	108- ft.	Screened Interval
110		**CH** Clay - light gray 10YR (7/1), brown mottling, medium plasticity, moist.		
		SW Gravely sand - strong brown 7.5YR (4/6), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
		CL Clay - dark gray 2.5Y (4/1), medium plasticity, hard, moist.		
120				

Created By: WTR
Checked By: KMS

1015279

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-217

TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		ML Clayey silt - gray 2.5Y (5/1), moist.		
		CL Clay - dark gray 2.5Y (4/1), medium plasticity, hard, moist.		
		End of Log		
130				
140				
150				

Created By: WTR

Checked By: KMS

1015280

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-218
TOTAL DEPTH: 126 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 3/5/2007 09:23
BOREHOLE FINISHED: 3/6/2007 16:45

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 306 (ft, msl)
WATER DEPTH/ DATE: 102.83-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

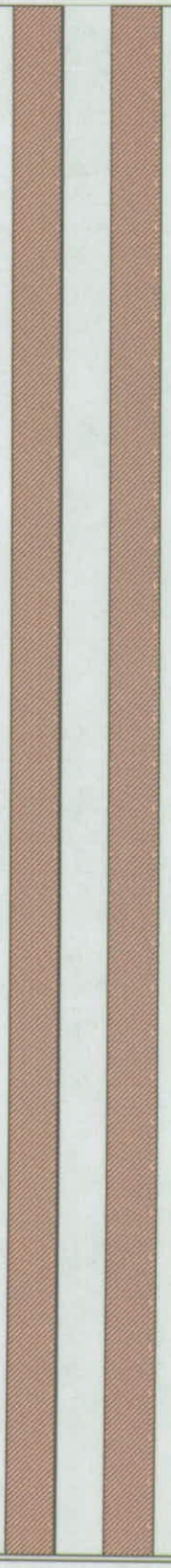
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Asphalt Asphalt and gravel		
		CL Clay - yellowish red 5YR (4/6) with trace gravel, hard plasticity, dry.		
		CL Silty clay - strong brown 7.5YR (4/6) medium plasticity, moist.		
		CL Clay - strong brown 7.5YR (4/6) high plasticity, moist.		
10				Grouted Annulus
		CL Clay - strong brown 10YR (6/6) with trace sand, high plasticity, moist.		
20				
		CL Silty clay - light brown 10YR (7/6) medium plasticity, gray mottling, moist.		
30				

Created By: WTR
Checked By: KMS

1015281

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-218
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		CL Clayey sand - brown 10YR (5/8) fine grained sand, low plasticity, moist.		
		CL Clayey sand - yellowish brown 10YR (5/6) medium plasticity, grey and red mottling, moist.		
40				
		SC Sand - reddish yellow 7.5YR (6/6) with some clay, fine to medium grained sand, poorly graded, dry.		
		SW Sand and gravel - reddish yellow 7.5YR (6/8) with trace cobbles, fine to medium grained sand, sub-rounded gravel, well graded, dry.		
50				
		SC Sand - yellowish red 5YR (5/6) with some clay, fine to medium grained, poorly graded, dry.		
		MH Silt - grey 10Y (8/1), poorly graded, dry.		
		SC Sand - yellowish red 5YR (5/6) with some clay, fine to medium grained, poorly graded, dry.		
60				

Created By: WTR
Checked By: KMS

1015282

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-218
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Sand - yellowish red 5YR (4/6) with gravel and trace cobbles, fine to medium grained, sub-rounded gravel, well graded, dry.		
		SW Sand - reddish yellow 7.5YR (8/6) with gravel and trace cobbles, fine to medium grained, subrounded gravel, well graded, dry.		
70		**SW** Sand - reddish yellow 7.5YR (7/6) with gravel, fine to coarse grained sand, subangular to subrounded gravel, well graded, dry.		
		SW Sand - yellowish red 5YR (5/6) with gravel and trace cobbles, coarse grained, subangular to subrounded gravel, well graded, dry.		
80		**SW** Sand - reddish yellow 5YR (7/6) with gravel, fine to coarse grained, sub-angular to sub-rounded gravel, well graded, dry.		
		SW Sand - reddish yellow 7.5YR (6/6) with gravel, fine to medium grained, sub-rounded gravel, well graded, wet.		
		SW Sand - pinkish white 7.5YR (8/2) with gravel, medium to coarse grained sand, sub-angular to sub-rounded gravel, well graded, moist.		
90				Bentonite Plug

Created By: WTR
Checked By: KMS

1015283

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-218
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Sand - yellow 2.5Y (8/6) with trace gravel, fine to medium grained, sub-rounded gravel, poorly sorted, moist.		Bentonite Plug
		CL Sandy clay - yellow 10YR (8/8) fine grained, medium plasticity, moist.		
		MH Silt - light bluish grey 5PB (8/1) with possible little mudstone, poorly graded, dry.		Sand Pack
100		**SW** Sand - brownish yellow 10YR (6/6) with gravel, fine to coarse grained, sub-angular to sub-rounded gravel, well graded, dry.	102.83- ft.	Screened Interval
		SW Sand - light grey 2.5Y (7/1) with gravel, fine grained, sub-rounded gravel, well graded, wet.		
110		**SW** Sand - red 2.5YR (5/6) with gravel, medium grained, sub-rounded gravel, well graded, wet.		
		CL Clay - grey 5YR (6/1) hard plasticity, moist.		
		CL Silty clay - dark grey 5YR (4/1) hard, moist.	Hole closed after 118-ft	
120				

Created By: WTR
Checked By: KMS

1015284

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-218
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
130		End of Log		
140				
150				

Created By: WTR
Checked By: KMS

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-219
TOTAL DEPTH: 126 ft.

PROJECT INFORMATION

PROJECT: Phase 2 Wells and April LTM Report
PROJECT NO.: 3202-019
SITE LOCATION: MI
PROJECT MANAGER: T. Holmes
FIELD STAFF: J. Anstaett
BOREHOLE STARTED: 4/21/2007 12:25
BOREHOLE FINISHED: 4/21/2007 17:05

DRILLING INFORMATION

DRILLING CO.: Prosonic
DRILLER: J. Asua
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6-in.
GROUND SURFACE ELEVATION: 295.07 (ft, msl)
WATER DEPTH/ DATE: 92.19-ft. toc -5/4/07
BOREHOLE USE: Monitoring Well

NOTES:

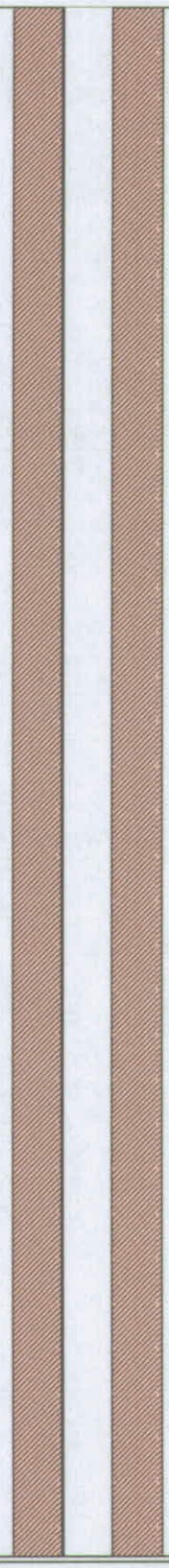
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		Grass and roots.		
		CL Silty clay - dark yellowish brown 10YR (4/4), low plasticity, moist.		
10		**CH** Silty clay - dark yellowish brown 10YR (4/4), medium plasticity, moist.		Grouted Annulus
		CL Sandy clay - yellowish brown 10YR (5/6), medium plasticity, fine grained sand, trace medium grained sand, moist.		
20		**CL** Sandy clay - dark red 10R (3/6), with gray mottling, fine grained sand, low plasticity, moist.		
		CL Sandy clay - dark red 10R (3/6), with gray mottling, fine grained sand, low plasticity, moist.		
30				

Created By: WTR
Checked By: KMS

1015286

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-219
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SP Clayey sand - red 2.5YR (5/8), fine grained sand, poorly graded, moist.		
40		**SP** Silty sand - brownish yellow 10YR (6/6), fine grained sand, poorly graded, dry.		
50		**SP** Silty sand - yellow 10YR (7/6), fine grained sand trace medium grained sand, poorly graded, dry.		
60		**MH** Sandy Silt - pale yellow 2.5Y (8/2), fine grained sand, possible silt stone, dry.		

Created By: WTR
Checked By: KMS

1015287

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-219

TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
70		**SW** Gravely sand - reddish yellow 7.5YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
		MH Sandy silt - gray 7.5YR (5/1), fine to medium grained sand, possible silt stone, dry.		
80		**SW** Sand - reddish yellow 7.5YR (7/8), with some gravel, fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		
90		**SW** Sand - yellow 10YR (7/8), with some gravel, fine to medium grained sand, some coarse grained sand, sub-rounded to sub-angular gravel, well graded, moist.		Bentonite Plug

Created By: WTR

Checked By: KMS

1015288

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-219
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
			92.19- ft.	Sand Pack
		SW Gravely sand - yellowish brown 10YR (6/8), fine to coarse grained sand, sub-rounded to sub-angular gravel, well graded, wet.		
100				Screened Interval
		SP Silty sand - very pale brown 10YR (8/3), fine grained sand, poorly graded, wet.		
		SP Silty sand - yellow 10YR (8/6), fine grained sand, poorly graded, wet.		
110		**CL** Silty clay - light gray 2.5Y (7/1), with brown mottling, low plasticity, moist.		
		CL Silty clay - light gray 2.5Y (7/1), with brown mottling, low plasticity, moist.		
		CL Silty clay - dark gray 2.5Y (4/1), medium plasticity, hard, moist.		
120				

Created By: WTR
Checked By: KMS

1015289

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-219
TOTAL DEPTH: 126 ft.

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
130		End of Log		
140				
150				

Created By: WTR
Checked By: KMS

1015290

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-229
TOTAL DEPTH: 210

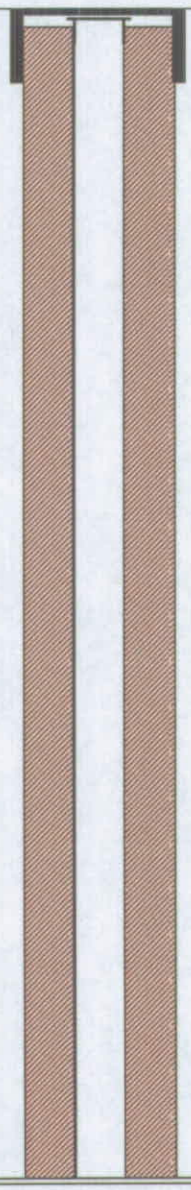
PROJECT INFORMATION

PROJECT: FOST-4
PROJECT NO.: 3202-031
SITE LOCATION: DF
PROJECT MANAGER: T. Holmes
FIELD STAFF: E. Van Schaik
BOREHOLE STARTED: 7/31/07 09:55
BOREHOLE FINISHED: 8/1/2007 13:30

DRILLING INFORMATION

DRILLING CO.: Boart Longyear
DRILLER: K. Smith
DRILLING METHOD/RIG: Sonic
BOREHOLE DIAMETER: 6"
GROUND SURFACE ELEVATION: 311.99
WATER DEPTH/ DATE: 160.83 ft. bgs 9/27/2007
BOREHOLE USE: Monitoring Well

NOTES:

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Silty clay - brown 7.5YR (4/4), crumbly, some gravel, low plasticity, dry.		
10		**CH** Clay - reddish brown 5YR (4/4), medium to high plasticity, soft, dry.		Grouted Annulus
20		**CL** Clay - yellowish red 5YR (4/6), medium plasticity, soft, dry.		
30		**CL** Sandy Clay - yellowish red 5YR (5/6), medium plasticity, soft, dry.		

Created By: WTR
Checked By:

FIELD BOREHOLE LOG

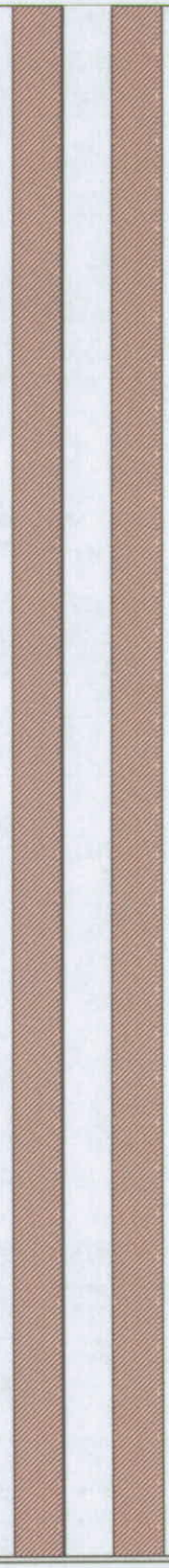
BOREHOLE NO.: MW-229
TOTAL DEPTH: 210

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy Clay - red 2.5YR (4/8), low plasticity, soft, dry.		
		SC Clayey sand - red 2.5YR (4/6), dry.		
		SC Clayey sand - red 2.5YR (4/8), dry.		
40		**SP** Sand - yellowish red 5YR (5/8), very fine grained, clayey, dry.		
		SP Sand - red 2.5YR (5/8), fine grained, dry.		
50		**SP** Sand - red 2.5YR (4/8), very fine to fine grained, trace clay, dry.		
		SC Clayey sand - dark red 2.5YR (3/6), very fine grained, dry.		
60		**SW** Gravelly sand - reddish yellow 5YR (6/8), fine grained, medium to coarse subangular to subrounded gravel, dry.		

1015292

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-229
TOTAL DEPTH: 210

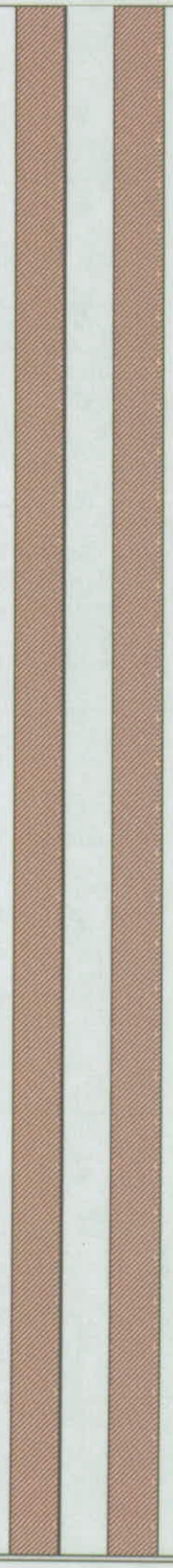
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
				
		SW Gravelly sand - yellowish red 5YR (5/8), fine grained, medium to coarse subangular to subrounded gravel, some extremely coarse gravel, silty, dry.		
70				
		ML Clayey silt - dark reddish brown 5YR (3/4), very fine to fine grained sand, moist.		
		SW Gravelly sand - yellowish red 5YR (5/8), fine grained, medium to coarse gravel, moist.		
80		**No Recovery** No Recovery		
90				

Created By: WTR
Checked By:

1015293

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-229
TOTAL DEPTH: 210

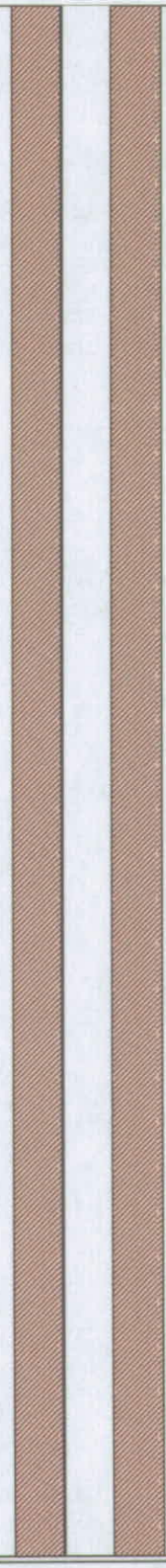
Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		SW Sand - yellow 10YR (7/6), fine grained, medium to very coarse gravel, subrounded, moist.		
		CL Clay - grey 10YR (5/1), low plasticity, moist.		
		CL Clay - grey 10YR (5/1), low plasticity, hard, moist.		
100				
110				
		CL Clay - grey 10YR (5/1), low plasticity, hard, moist.		
120				

Created By: WTR
Checked By:

1015294

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-229
TOTAL DEPTH: 210

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
130		**CL** Clay - grey 10YR (5/1), low plasticity, hard, trace lignite,moist.		
140		**CL** Clay - grey 10YR (5/1), low plasticity, hard, trace lignite,moist.		
150		**CL** Clay - grey 10YR (5/1), low plasticity, hard, trace lignite,moist.		

Created By: WTR
Checked By:

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-229
TOTAL DEPTH: 210

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Clay - grey 10YR (5/1), low plasticity, hard, trace very fine grained sand in lower 10 feet, moist.		
160		**CL** Sandy Clay - grey 10YR (5/1), low plasticity, hard, trace very fine grained sand, moist.	160.83 -ft. bgs.	
		CL Sandy Clay - grey 10YR (5/1), low to medium plasticity, moderatley hard, very fine grained sand, moist.		
170				
180				Bentonite Plug

Created By: WTR
Checked By:

1015296

FIELD BOREHOLE LOG

BOREHOLE NO.: MW-229
TOTAL DEPTH: 210

Depth	Soil Symbol	Soil Description	Well Completion	Well Description
		CL Sandy Clay - grey 10YR (5/1), medium plasticity, very fine grained sand, moist.		Bentonite Plug
		SP Sand - grey 10YR (5/1), very fine grained, clayey, moist.		
		SP Sand - grey 10YR (5/1), poorly sorted, some clay, moist.		Sand Pack
190				
		SP Sand - grey 10YR (5/1), very fine grained, little to no clay, moist.		Screened Interval
200				
210				

Created By: WTR
Checked By:

APPENDIX B

WELL INSTALLATION DIAGRAMS

1015298

WELL INSTALLATION DIAGRAM

WELL NO.: MW-197A

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: E. Van Schaik
DATE COMPLETED: 8/4/2006
WELL LOCATION: 400 feet west of south west corner of building 770.

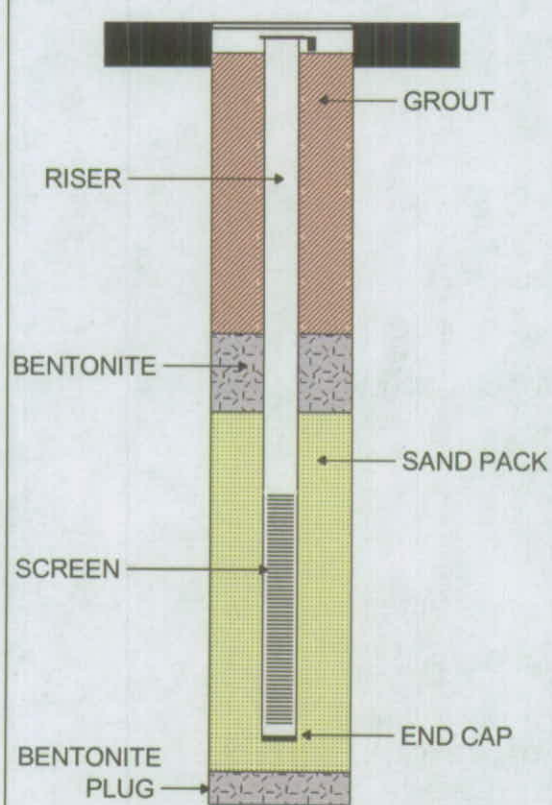
NORTHING: 276975.421
EASTING: 802042.303
GROUND SURFACE ELEVATION (ft, msl): 291.54
TOP OF CASING ELEVATION (ft, msl): 291.26
TOP OF SCREEN ELEVATION (ft, msl): 129.3

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 3-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 26-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/14/06
DEPTH TO WATER (ft.btoc): 92.96-ft. - 8/14/06

NOTES:
Bottom 8 feet of boring backfilled with bentonite before installing well.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 162
DEPTH TO TOP OF BENTONITE (ft, bgs): 150
DEPTH TO TOP OF SAND PACK (ft, bgs): 155

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.45-ft
TOTAL DEPTH OF WELL (ft, btoc): 177.4
DEPTH TO TOP OF BACKFILL (ft, bgs): 178
TOTAL DEPTH OF BORING (ft, bgs): 186

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015299

WELL INSTALLATION DIAGRAM

WELL NO.: MW-197B

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: E. Van Schaik
DATE COMPLETED: 8/4/2006
WELL LOCATION: 400 feet west of south west corner of building 770.

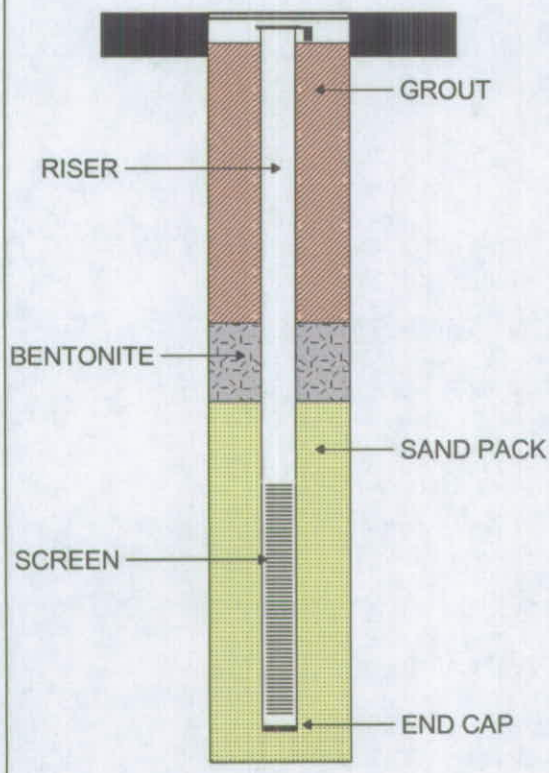
NORTHING: 276973.135
EASTING: 802036.92
GROUND SURFACE ELEVATION (ft, msl): 291.43
TOP OF CASING ELEVATION (ft, msl): 291.03
TOP OF SCREEN ELEVATION (ft, msl): 197.16

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 7-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 1-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/14/06
DEPTH TO WATER (ft.btoc): 92.82-ft. - 8/14/06

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 94.2
DEPTH TO TOP OF BENTONITE (ft, bgs): 84
DEPTH TO TOP OF SAND PACK (ft, bgs): 89

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.45-ft
TOTAL DEPTH OF WELL (ft, btoc): 109.6
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 111

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015300

WELL INSTALLATION DIAGRAM

WELL NO.: MW-198

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: D. Whitesides
DATE COMPLETED: 8/23/2006
WELL LOCATION: Building 835. East parking lot.

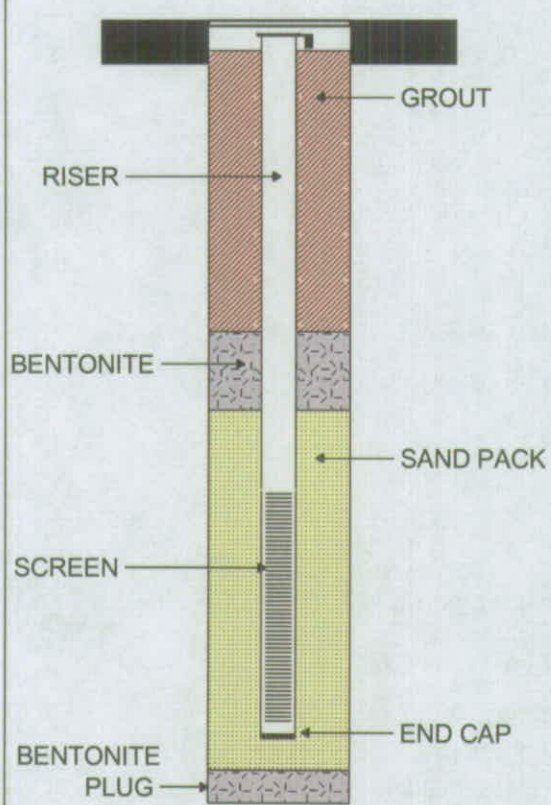
NORTHING: 277775.667
EASTING: 802141.934
GROUND SURFACE ELEVATION (ft, msl): 291.8
TOP OF CASING ELEVATION (ft, msl): 291.5
TOP OF SCREEN ELEVATION (ft, msl): 201.9

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 9-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/24/06
DEPTH TO WATER (ft.btoc): 93.9-ft. - 8/24/06

NOTES:
Bottom 9.9 feet of boring backfilled with bentonite before installing well.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 89.6
DEPTH TO TOP OF BENTONITE (ft, bgs): 79
DEPTH TO TOP OF SAND PACK (ft, bgs): 84

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.45-ft
TOTAL DEPTH OF WELL (ft, btoc): 105.1
DEPTH TO TOP OF BACKFILL (ft, bgs): 106.1
TOTAL DEPTH OF BORING (ft, bgs): 116

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015301

WELL INSTALLATION DIAGRAM

WELL NO.: MW-199A

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: E. Van Schaik
DATE COMPLETED: 8/7/2006
WELL LOCATION: 500 feet east of building 835 and 420 feet north of Memphis Depot Pky.

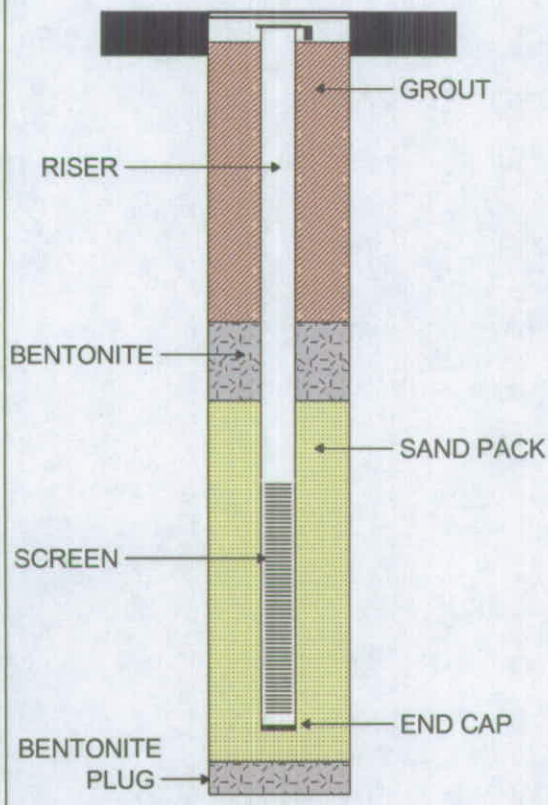
NORTHING: 277756.4
EASTING: 802573.517
GROUND SURFACE ELEVATION (ft, msl): 301.84
TOP OF CASING ELEVATION (ft, msl): 301.53
TOP OF SCREEN ELEVATION (ft, msl): 157.5

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 11-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 9-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/14/06
DEPTH TO WATER (ft.btoc): 108.52-ft. - 8/14/06

NOTES: Bottom 10.6 feet of boring backfilled with bentonite before installing well. 100 feet of steel pipe left in hole 14 - 114 feet. Grouted in.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 144.0
DEPTH TO TOP OF BENTONITE (ft, bgs): 134
DEPTH TO TOP OF SAND PACK (ft, bgs): 139

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.45-ft
TOTAL DEPTH OF WELL (ft, btoc): 159.4
DEPTH TO TOP OF BACKFILL (ft, bgs): 160.4
TOTAL DEPTH OF BORING (ft, bgs): 171

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015302

WELL INSTALLATION DIAGRAM

WELL NO.: MW-199B

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: E. Van Schaik
DATE COMPLETED: 8/8/2006
WELL LOCATION: 500 feet east of building 835 and 420 feet north of Memphis Depot Pky.

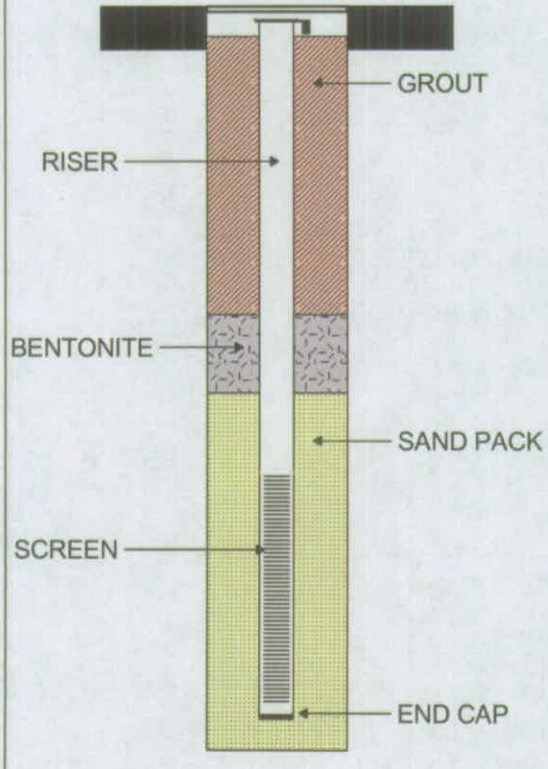
NORTHING: 277751.738
EASTING: 802575.657
GROUND SURFACE ELEVATION (ft, msl): 302.07
TOP OF CASING ELEVATION (ft, msl): 301.73
TOP OF SCREEN ELEVATION (ft, msl): 199.3

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 7-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 1-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/14/06
DEPTH TO WATER (ft.btoc): 104.5-ft. - 8/14/06

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 102.4
DEPTH TO TOP OF BENTONITE (ft, bgs): 92
DEPTH TO TOP OF SAND PACK (ft, bgs): 97

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.45-ft
TOTAL DEPTH OF WELL (ft, btoc): 117.8
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 118

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015303

WELL INSTALLATION DIAGRAM

WELL NO.: MW-200

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: E. Van Schaik
DATE COMPLETED: 8/9/2006
WELL LOCATION: 130 feet east of W. E. Freeman and 250 feet south of Memphis Depot Pky.

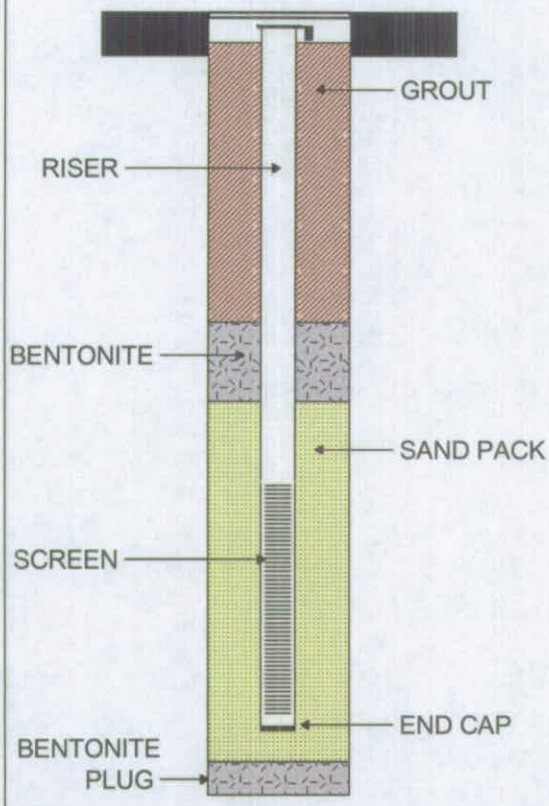
NORTHING: 277006.104
EASTING: 802859.392
GROUND SURFACE ELEVATION (ft, msl): 300.51
TOP OF CASING ELEVATION (ft, msl): 300.18
TOP OF SCREEN ELEVATION (ft, msl): 196.98

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 1-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 11-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/16/06
DEPTH TO WATER (ft.btoc): 102.53-ft. - 8/16/06

NOTES: Bottom 7 feet of boring backfilled with bentonite before installing well.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 103.2

DEPTH TO TOP OF BENTONITE (ft, bgs): 92

DEPTH TO TOP OF SAND PACK (ft, bgs): 97

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.45-ft

TOTAL DEPTH OF WELL (ft, btoc): 118.37
DEPTH TO TOP OF BACKFILL (ft, bgs): 119
TOTAL DEPTH OF BORING (ft, bgs): 126

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015304

WELL INSTALLATION DIAGRAM

WELL NO.: MW-201

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: D. Whitesides
DATE COMPLETED: 8/22/2006
WELL LOCATION: South of building 360 on Danielson Place (380 feet east of west corner of building).

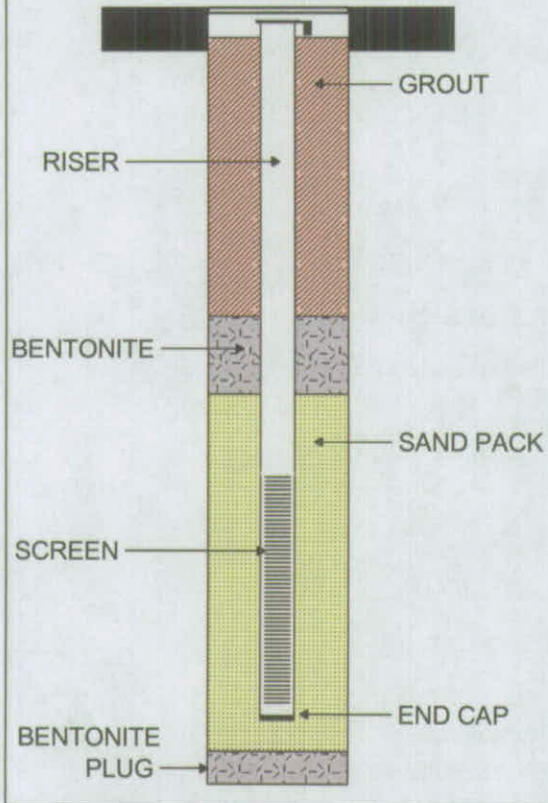
NORTHING: 276660.708
EASTING: 805218.45
GROUND SURFACE ELEVATION (ft, msl): 304.33
TOP OF CASING ELEVATION (ft, msl): 304.23
TOP OF SCREEN ELEVATION (ft, msl): 237.31

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 1-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 8-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/24/06
DEPTH TO WATER (ft.btoc): 80.11-ft. - 8/24/06

NOTES: Bottom 2.5 feet of boring backfilled with bentonite before installing well.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 66.92

DEPTH TO TOP OF BENTONITE (ft, bgs): 55

DEPTH TO TOP OF SAND PACK (ft, bgs): 61

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.45-ft

TOTAL DEPTH OF WELL (ft, btoc): 82.09
DEPTH TO TOP OF BACKFILL (ft, bgs): 83.5
TOTAL DEPTH OF BORING (ft, bgs): 86

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015305

WELL INSTALLATION DIAGRAM

WELL NO.: MW-202A

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: D. Whitesides
DATE COMPLETED: 8/22/2006
WELL LOCATION: 400 feet north of building 835 and 300 feet west of W. E. Freeman Dr.

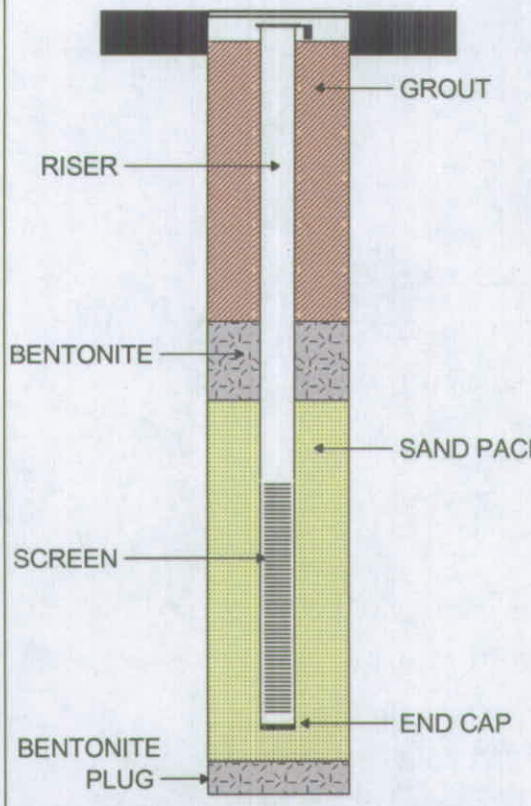
NORTHING: 278685.735
EASTING: 802111.272
GROUND SURFACE ELEVATION (ft, msl): 299.69
TOP OF CASING ELEVATION (ft, msl): 299.23
TOP OF SCREEN ELEVATION (ft, msl): 122.73

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 1-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 23-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/24/06
DEPTH TO WATER (ft.btoc): 125.73-ft. - 8/24/06

NOTES:
Bottom 6.6 feet of boring backfilled with bentonite before installing well.

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 176.5
DEPTH TO TOP OF BENTONITE (ft, bgs): 165
DEPTH TO TOP OF SAND PACK (ft, bgs): 170

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.45-ft
TOTAL DEPTH OF WELL (ft, btoc): 191.67
DEPTH TO TOP OF BACKFILL (ft, bgs): 191.4
TOTAL DEPTH OF BORING (ft, bgs): 198

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015306

WELL INSTALLATION DIAGRAM

WELL NO.: MW-202B

PROJECT: DDMT - Main Installation New Plume Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: D. Whitesides
DATE COMPLETED: 8/22/2006
WELL LOCATION: 400 feet north of building 835 and 300 feet west of W. E. Freeman Dr.

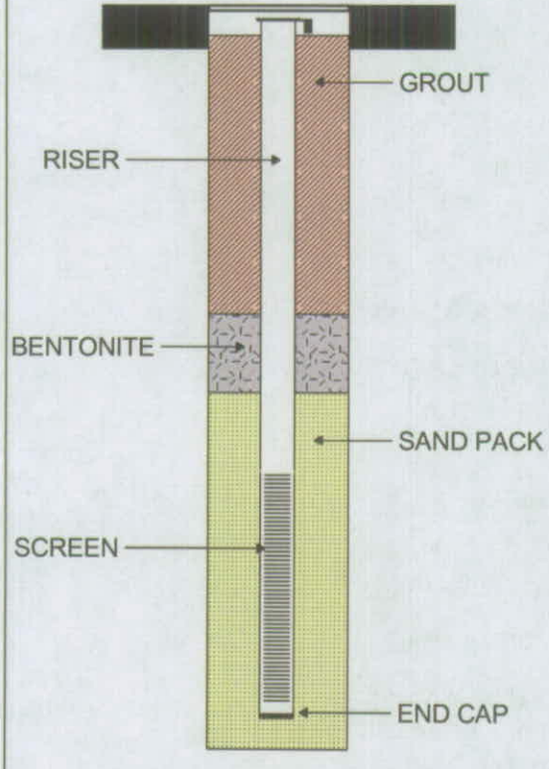
NORTHING: 278692.786
EASTING: 802112.043
GROUND SURFACE ELEVATION (ft, msl): 299.74
TOP OF CASING ELEVATION (ft, msl): 299.51
TOP OF SCREEN ELEVATION (ft, msl): 180.42

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 1-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 8/24/06
DEPTH TO WATER (ft.btoc): 123.82-ft. - 8/24/06

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 119.09

DEPTH TO TOP OF BENTONITE (ft, bgs): 108

DEPTH TO TOP OF SAND PACK (ft, bgs): 113

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.45-ft

TOTAL DEPTH OF WELL (ft, btoc): 134.26
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 136

Prepared by: WTR **Date: 12/14/06** **Checked by: KMS** **Date: 12/14/06**

1015307

WELL INSTALLATION DIAGRAM

WELL NO.: MW-203A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/28/07
WELL LOCATION: 300 ft. east of bldg 970 and 520 ft. south of Memphis Depot Pkwy.

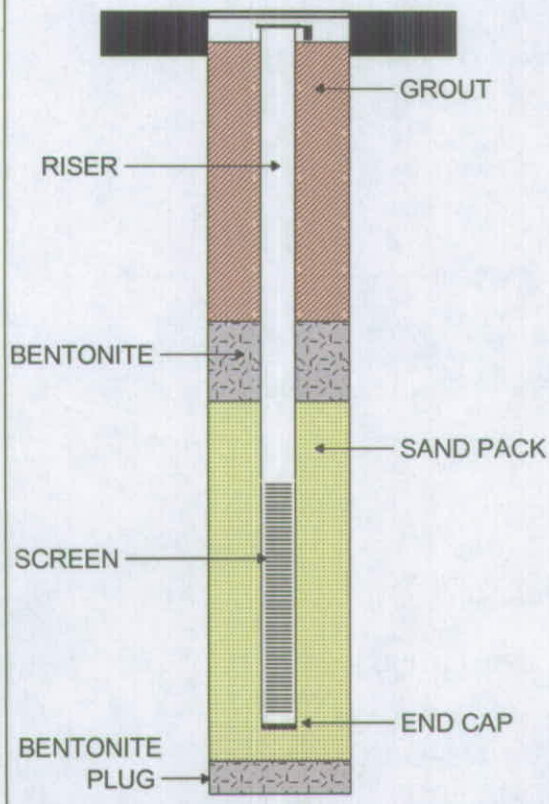
NORTHING: 276841.61
EASTING: 801740.37
GROUND SURFACE ELEVATION (ft, msl): 290.78
TOP OF CASING ELEVATION (ft, msl): 290.59
TOP OF SCREEN ELEVATION (ft, msl): 147.6

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 10-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 24-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/4/2007
DEPTH TO WATER (ft.btoc): 91.79-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 142.9
DEPTH TO TOP OF BENTONITE (ft, bgs): 131
DEPTH TO TOP OF SAND PACK (ft, bgs): 137

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.2
TOTAL DEPTH OF WELL (ft, btoc): 158.1
DEPTH TO TOP OF BACKFILL (ft, bgs): 162
TOTAL DEPTH OF BORING (ft, bgs): 176

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015308

WELL INSTALLATION DIAGRAM

WELL NO.: MW-203B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/17/07
WELL LOCATION: 300 ft. east of bldg 970 and 520 ft. south of Memphis Depot Pkwy.

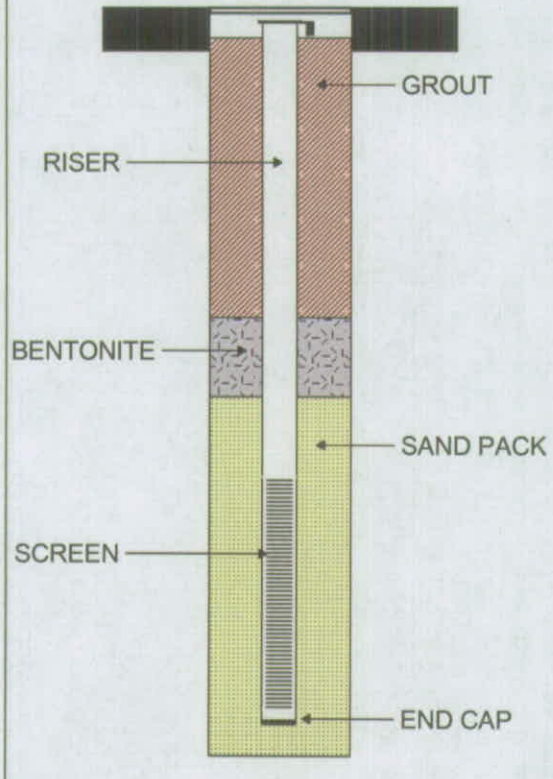
NORTHING: 276821.58
EASTING: 801741.76
GROUND SURFACE ELEVATION (ft, msl): 290.75
TOP OF CASING ELEVATION (ft, msl): 290.51
TOP OF SCREEN ELEVATION (ft, msl): 197.7

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/24/2007
DEPTH TO WATER (ft.btoc): 91.72-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 92.8
DEPTH TO TOP OF BENTONITE (ft, bgs): 81
DEPTH TO TOP OF SAND PACK (ft, bgs): 87

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.4
TOTAL DEPTH OF WELL (ft, btoc): 108.2
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 110

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015309

WELL INSTALLATION DIAGRAM

WELL NO.: MW-204A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/7/07
WELL LOCATION: 340 ft. SE of bldg 770 and 600 ft. south of Memphis Depot Pkwy.

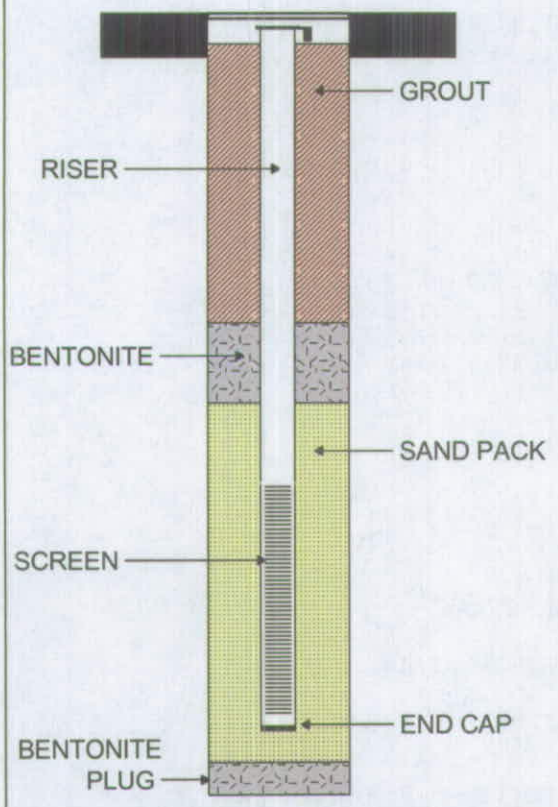
NORTHING: 276724.66
EASTING: 802168.25
GROUND SURFACE ELEVATION (ft, msl): 292.49
TOP OF CASING ELEVATION (ft, msl): 292.21
TOP OF SCREEN ELEVATION (ft, msl): 158.9

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2.5-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 16-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/20/2007
DEPTH TO WATER (ft.btoc): 94.32-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 133.3

DEPTH TO TOP OF BENTONITE (ft, bgs): 122

DEPTH TO TOP OF SAND PACK (ft, bgs): 128

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 148.6
DEPTH TO TOP OF BACKFILL (ft, bgs): 154
TOTAL DEPTH OF BORING (ft, bgs): 157

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015310

WELL INSTALLATION DIAGRAM

WELL NO.: MW-204B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/9/07
WELL LOCATION: 300 ft. east of bldg 970 and 520 ft. south of Memphis Depot Pkwy.

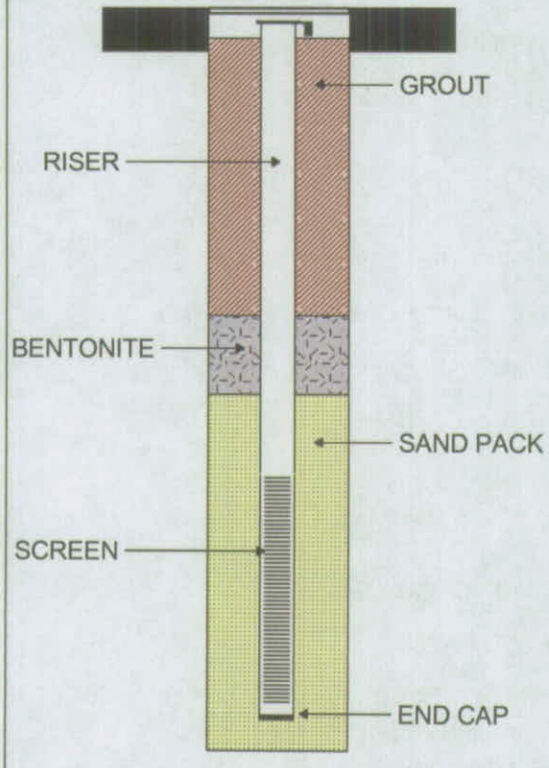
NORTHING: 276707.82
EASTING: 802167
GROUND SURFACE ELEVATION (ft, msl): 292.67
TOP OF CASING ELEVATION (ft, msl): 292.32
TOP OF SCREEN ELEVATION (ft, msl): 197.8

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 8-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/20/2007
DEPTH TO WATER (ft.btoc): 94.34-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 94.5

DEPTH TO TOP OF BENTONITE (ft, bgs): 85

DEPTH TO TOP OF SAND PACK (ft, bgs): 91

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 109.8
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 112

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015311

WELL INSTALLATION DIAGRAM

WELL NO.: MW-205A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/10/07
WELL LOCATION: 170 ft. west of bldg. 770 and 150 ft. south of Memphis Depot Pkwy.

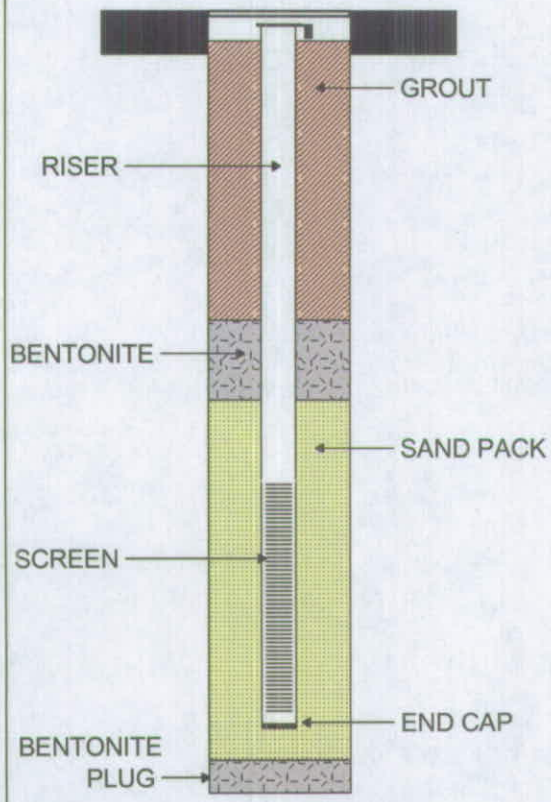
NORTHING: 277157.28
EASTING: 802277.37
GROUND SURFACE ELEVATION (ft, msl): 292.32
TOP OF CASING ELEVATION (ft, msl): 291.93
TOP OF SCREEN ELEVATION (ft, msl): 150.9

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 20-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/19/2007
DEPTH TO WATER (ft.btoc): 94.64-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 140.9
DEPTH TO TOP OF BENTONITE (ft, bgs): 131
DEPTH TO TOP OF SAND PACK (ft, bgs): 137

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 156.2
DEPTH TO TOP OF BACKFILL (ft, bgs): 163
TOTAL DEPTH OF BORING (ft, bgs): 166.5

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015312

WELL INSTALLATION DIAGRAM

WELL NO.: MW-205B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/11/07
WELL LOCATION: 170 ft. west of bldg. 770 and 150 ft. south of Memphis Depot Pkwy.

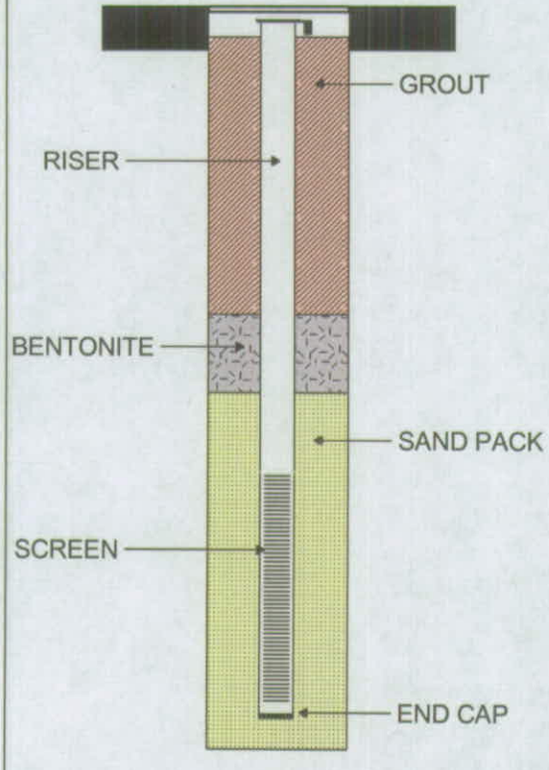
NORTHING: 277173.13
EASTING: 802277.76
GROUND SURFACE ELEVATION (ft, msl): 292.04
TOP OF CASING ELEVATION (ft, msl): 291.82
TOP OF SCREEN ELEVATION (ft, msl): 194.8

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 16-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/19/2007
DEPTH TO WATER (ft.btoc): 94.44-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 97

DEPTH TO TOP OF BENTONITE (ft, bgs): 86

DEPTH TO TOP OF SAND PACK (ft, bgs): 92

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 112.3
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 116.5

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015313

WELL INSTALLATION DIAGRAM

WELL NO.: MW-206A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/25/07
WELL LOCATION: 60 ft. east of W.E. Freeman Dr. and 50 ft. south of Memphis Depot Pkwy.

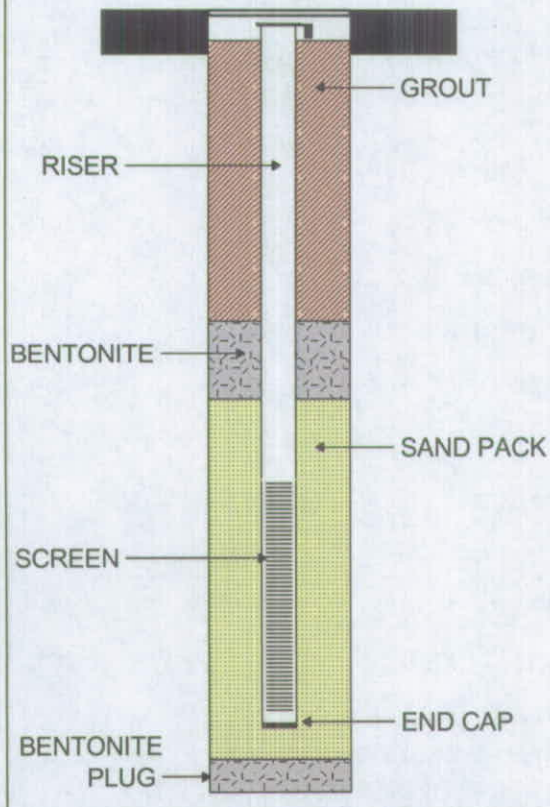
NORTHING: 277219.28
EASTING: 802792.28
GROUND SURFACE ELEVATION (ft, msl): 300.35
TOP OF CASING ELEVATION (ft, msl): 299.92
TOP OF SCREEN ELEVATION (ft, msl): 172.6

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 10.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 16-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/4/2007
DEPTH TO WATER (ft.btoc): 103.49-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 127.3
DEPTH TO TOP OF BENTONITE (ft, bgs): 114
DEPTH TO TOP OF SAND PACK (ft, bgs): 120

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.2
TOTAL DEPTH OF WELL (ft, btoc): 142.5
DEPTH TO TOP OF BACKFILL (ft, bgs): 147.4
TOTAL DEPTH OF BORING (ft, bgs): 156

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015314

WELL INSTALLATION DIAGRAM

WELL NO.: MW-206B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/26/07
WELL LOCATION: 60 ft. east of W.E. Freeman Dr. and 50 ft. south of Memphis Depot Pkwy.

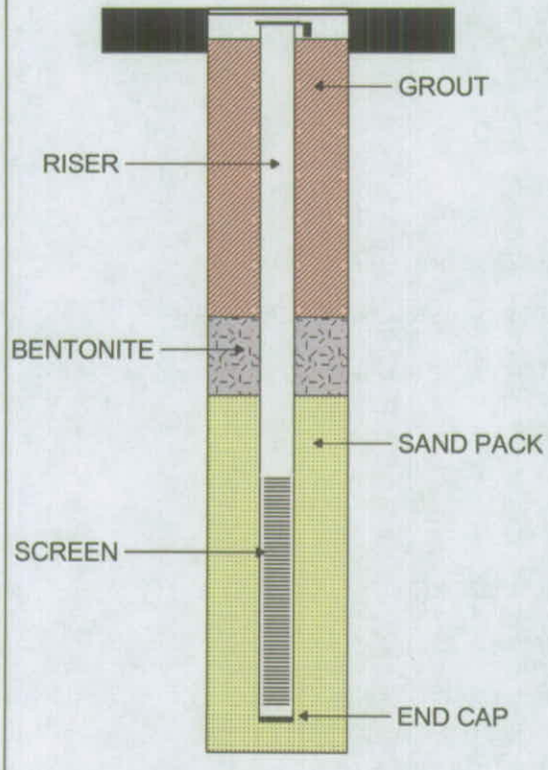
NORTHING: 277200.85
EASTING: 802794.78
GROUND SURFACE ELEVATION (ft, msl): 300.12
TOP OF CASING ELEVATION (ft, msl): 299.9
TOP OF SCREEN ELEVATION (ft, msl): 203.2

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 7-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 16-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/4/2007
DEPTH TO WATER (ft.btoc): 103.43-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 96.7

DEPTH TO TOP OF BENTONITE (ft, bgs): 86

DEPTH TO TOP OF SAND PACK (ft, bgs): 92

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.2

TOTAL DEPTH OF WELL (ft, btoc): 111.9
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 115

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015315

WELL INSTALLATION DIAGRAM

WELL NO.: MW-207A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/15/07
WELL LOCATION: Intersection of Troyer Ave. and Sitler St.

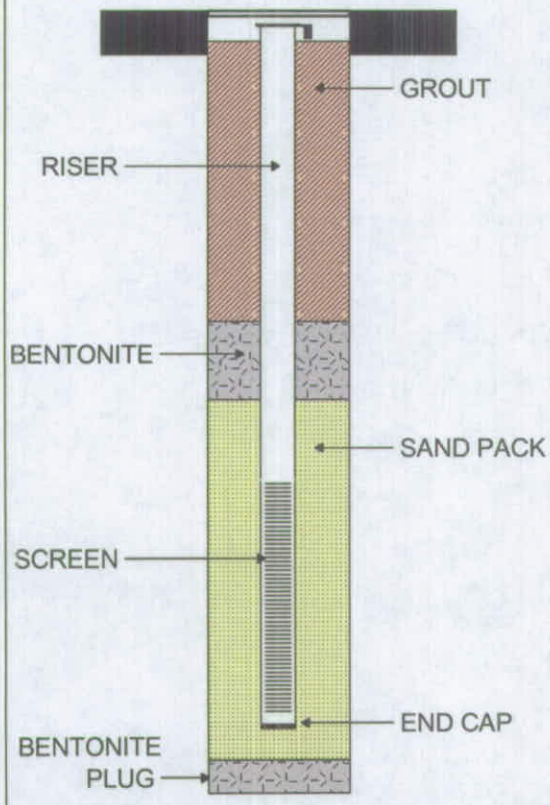
NORTHING: 277652.65
EASTING: 803191.86
GROUND SURFACE ELEVATION (ft, msl): 303.99
TOP OF CASING ELEVATION (ft, msl): 303.78
TOP OF SCREEN ELEVATION (ft, msl): 154.1

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 7-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 23-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 3/22/2007
DEPTH TO WATER (ft.btoc): 108.01-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 149.7
DEPTH TO TOP OF BENTONITE (ft, bgs): 138
DEPTH TO TOP OF SAND PACK (ft, bgs): 144

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 165
DEPTH TO TOP OF BACKFILL (ft, bgs): 167
TOTAL DEPTH OF BORING (ft, bgs): 176

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015316

WELL INSTALLATION DIAGRAM

WELL NO.: MW-207B

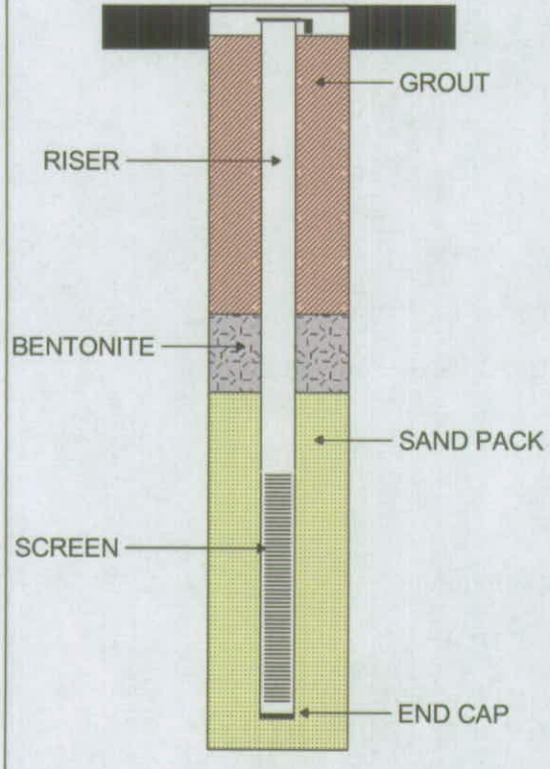
PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/17/07
WELL LOCATION: Intersection of Troyer Ave. and Sitler St.

NORTHING: 277665.39
EASTING: 803193.06
GROUND SURFACE ELEVATION (ft, msl): 304.03
TOP OF CASING ELEVATION (ft, msl): 303.83
TOP OF SCREEN ELEVATION (ft, msl): 195.6

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 3/23/2007
DEPTH TO WATER (ft.btoc): 107.69-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)	Well Details
	DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft. LENGTH OF RISER (ft): 108.3 DEPTH TO TOP OF BENTONITE (ft, bgs): 94 DEPTH TO TOP OF SAND PACK (ft, bgs): 100 LENGTH OF SCREEN (ft): 15 LENGTH OF END CAP: 0.2 TOTAL DEPTH OF WELL (ft, btoc): 123.5 DEPTH TO TOP OF BACKFILL (ft, bgs): NA TOTAL DEPTH OF BORING (ft, bgs): 126

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015317

WELL INSTALLATION DIAGRAM

WELL NO.: MW-208A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/24/07
WELL LOCATION: 60 ft. northeast of curb at intersection of W.E. Freeman and Memphis Deppot Pkwy.

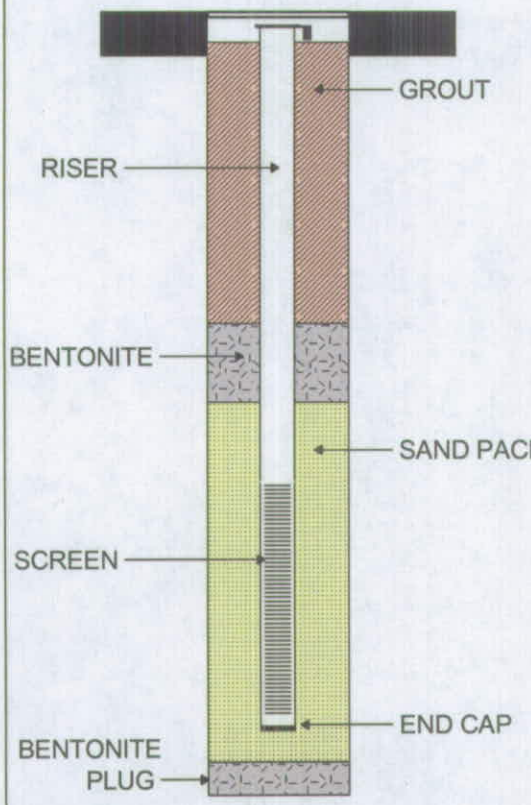
NORTHING: 277382.04
EASTING: 802799.25
GROUND SURFACE ELEVATION (ft, msl): 301.91
TOP OF CASING ELEVATION (ft, msl): 301.5
TOP OF SCREEN ELEVATION (ft, msl): 118.1

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 10.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2 -50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 42-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/3/2007
DEPTH TO WATER (ft.btoc): 105.39-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 183.4

DEPTH TO TOP OF BENTONITE (ft, bgs): 170

DEPTH TO TOP OF SAND PACK (ft, bgs): 176

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 198.7
DEPTH TO TOP OF BACKFILL (ft, bgs): 202
TOTAL DEPTH OF BORING (ft, bgs): 206

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015318

WELL INSTALLATION DIAGRAM

WELL NO.: MW-208B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/24/07
WELL LOCATION: 60 ft. northeast of curb at intersection of W.E. Freeman and Memphis Deppot Pkwy.

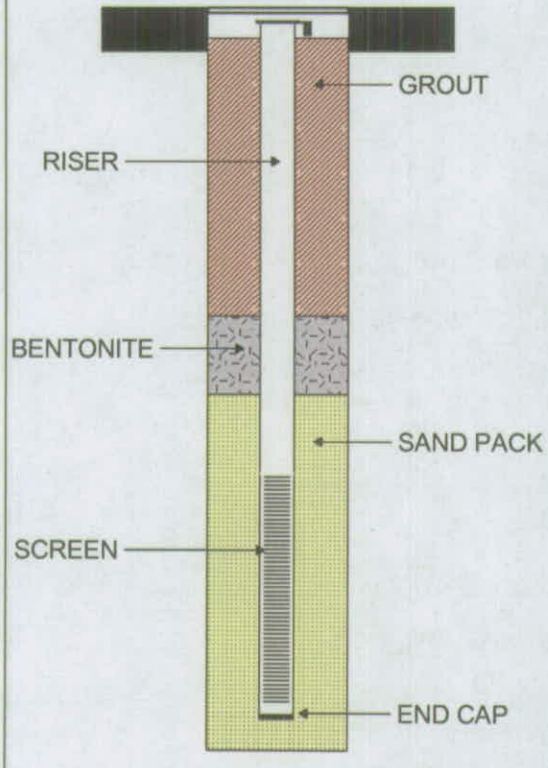
NORTHING: 277396.9
EASTING: 802814.96
GROUND SURFACE ELEVATION (ft, msl): 302.08
TOP OF CASING ELEVATION (ft, msl): 301.79
TOP OF SCREEN ELEVATION (ft, msl): 195.1

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 7-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 18-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/3/2007
DEPTH TO WATER (ft.btoc): 105.42-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 106.7

DEPTH TO TOP OF BENTONITE (ft, bgs): 94

DEPTH TO TOP OF SAND PACK (ft, bgs): 100

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 122
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 126

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015319

WELL INSTALLATION DIAGRAM

WELL NO.: MW-209A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/3/07
WELL LOCATION: 245 ft. north of Memphis Depot Pkwy. and 190 ft. west of W.E. Freeman Dr.

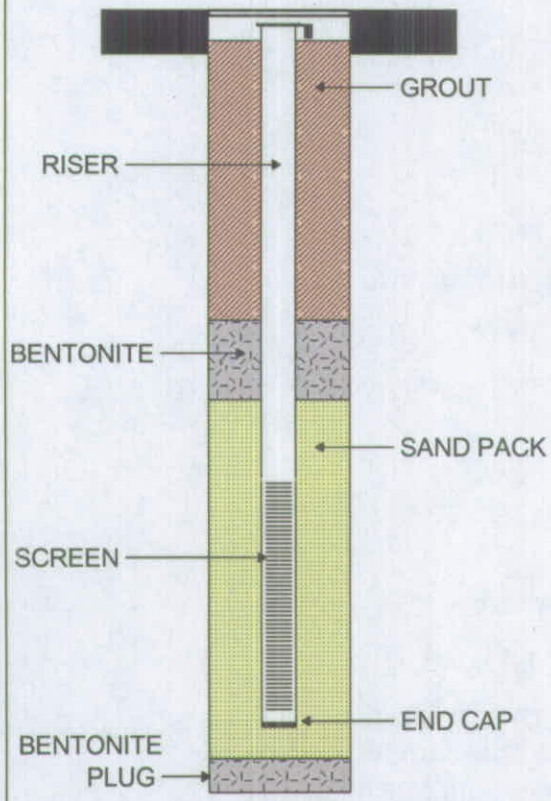
NORTHING: 277574.28
EASTING: 802507.1
GROUND SURFACE ELEVATION (ft, msl): 298.36
TOP OF CASING ELEVATION (ft, msl): 298.05
TOP OF SCREEN ELEVATION (ft, msl): 109.1

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 44-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/18/2007
DEPTH TO WATER (ft.btoc): 103.73-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 188.9

DEPTH TO TOP OF BENTONITE (ft, bgs): 178

DEPTH TO TOP OF SAND PACK (ft, bgs): 184

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 204.2
DEPTH TO TOP OF BACKFILL (ft, bgs): 157
TOTAL DEPTH OF BORING (ft, bgs): 210

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015320

WELL INSTALLATION DIAGRAM

WELL NO.: MW-209B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/4/07
WELL LOCATION: 245 ft. north of Memphis Depot Pkwy. and 190 ft. west of W.E. Freeman Dr.

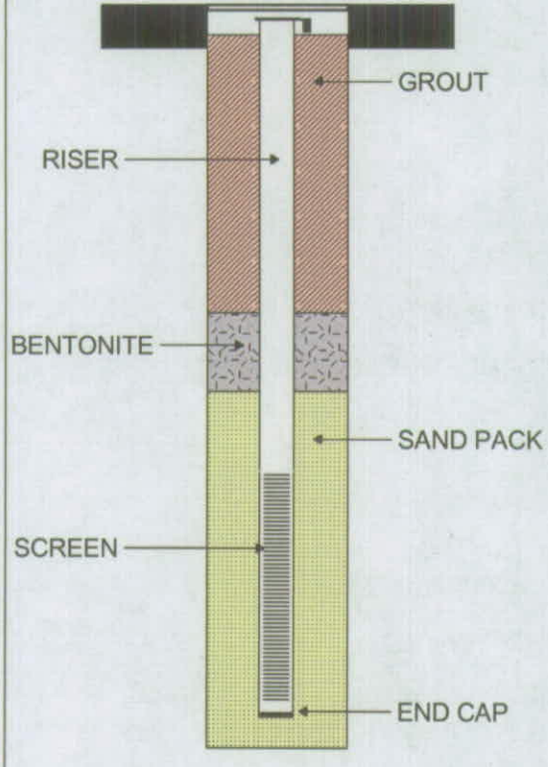
NORTHING: 277581.5
EASTING: 802520.13
GROUND SURFACE ELEVATION (ft, msl): 298.72
TOP OF CASING ELEVATION (ft, msl): 298.49
TOP OF SCREEN ELEVATION (ft, msl): 196.2

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 13-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 22-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/18/2007
DEPTH TO WATER (ft.btoc): 101.59-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 102.3
DEPTH TO TOP OF BENTONITE (ft, bgs): 92
DEPTH TO TOP OF SAND PACK (ft, bgs): 98

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 117.6
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 121

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015321

WELL INSTALLATION DIAGRAM

WELL NO.: MW-210A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/19/07
WELL LOCATION: 190 ft. south of Bldg. 865.

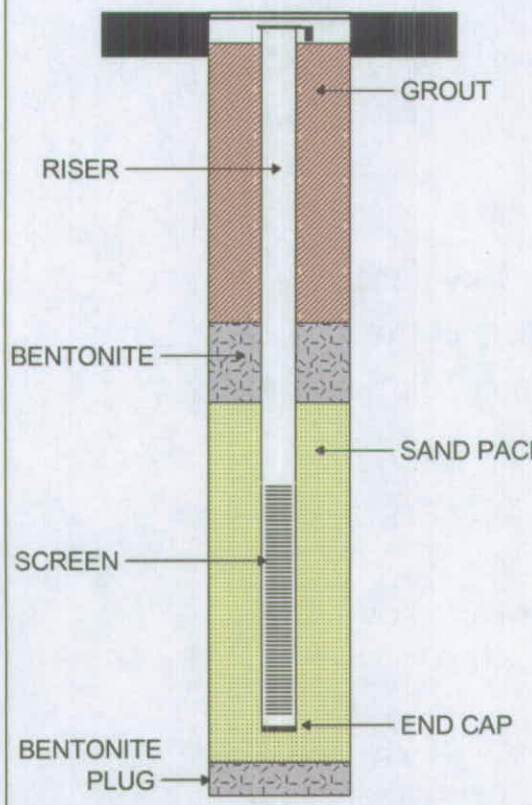
NORTHING: 277238.49
EASTING: 801958.05
GROUND SURFACE ELEVATION (ft, msl): 289.78
TOP OF CASING ELEVATION (ft, msl): 289.66
TOP OF SCREEN ELEVATION (ft, msl): 112.6

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 12.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 5.5-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 40-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/24/07-4/25/07
DEPTH TO WATER (ft.btoc): 98.31-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 177.1
DEPTH TO TOP OF BENTONITE (ft, bgs): 165
DEPTH TO TOP OF SAND PACK (ft, bgs): 171

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 192.4
DEPTH TO TOP OF BACKFILL (ft, bgs): 198
TOTAL DEPTH OF BORING (ft, bgs): 216

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015322

WELL INSTALLATION DIAGRAM

WELL NO.: MW-210B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/20/07
WELL LOCATION: 190 ft. south of Bldg. 865.

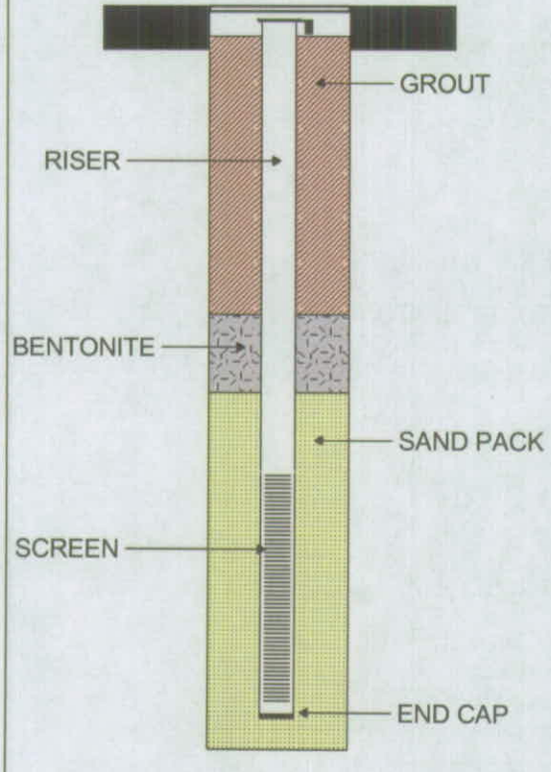
NORTHING: 277228.18
EASTING: 801951.94
GROUND SURFACE ELEVATION (ft, msl): 289.53
TOP OF CASING ELEVATION (ft, msl): 289.29
TOP OF SCREEN ELEVATION (ft, msl): 192.3

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 7.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/24/2007
DEPTH TO WATER (ft.btoc): 91.6-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 96.9
DEPTH TO TOP OF BENTONITE (ft, bgs): 85
DEPTH TO TOP OF SAND PACK (ft, bgs): 91

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 112.2
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 114

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015323

WELL INSTALLATION DIAGRAM

WELL NO.: MW-211

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/21/07
WELL LOCATION: 190 ft. east of W. E. Freeman Dr. and 670 ft. north of Memphis Depot Pkwy.

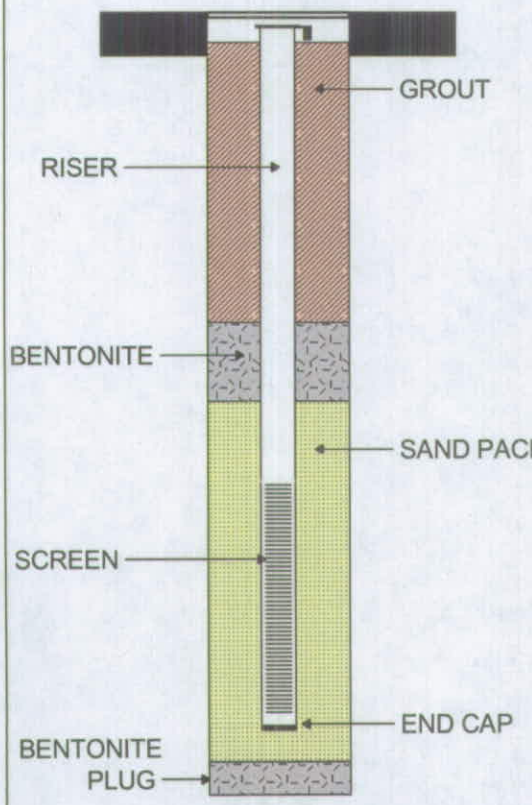
NORTHING: 278000.59
EASTING: 802973.69
GROUND SURFACE ELEVATION (ft, msl): 304.09
TOP OF CASING ELEVATION (ft, msl): 303.74
TOP OF SCREEN ELEVATION (ft, msl): 137.5

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 28-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/3/2007
DEPTH TO WATER (ft.btoc): 109.01-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 166.3
DEPTH TO TOP OF BENTONITE (ft, bgs): 154
DEPTH TO TOP OF SAND PACK (ft, bgs): 160

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 181.6
DEPTH TO TOP OF BACKFILL (ft, bgs): 184
TOTAL DEPTH OF BORING (ft, bgs): 186

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015324

WELL INSTALLATION DIAGRAM

WELL NO.: MW-212

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/5/07
WELL LOCATION: 120 ft. east of bldg. 835 and 670 ft. north if Memphis Depot Pkwy.

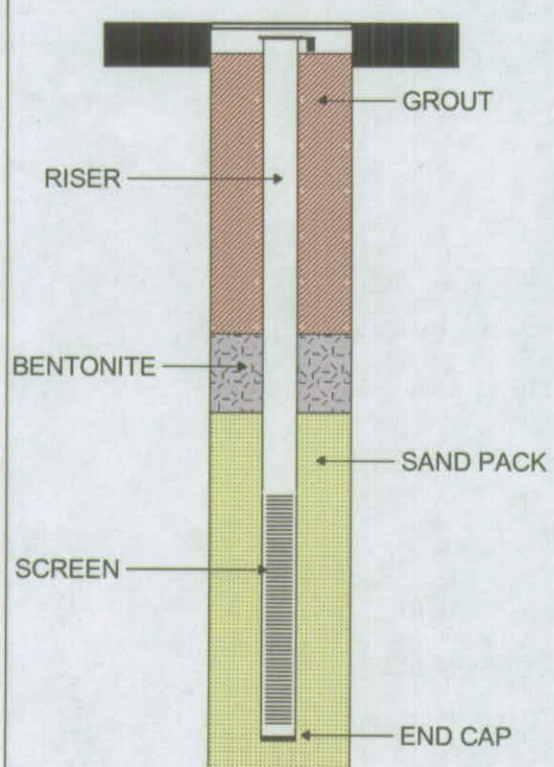
NORTHING: 278028.36
EASTING: 802225.44
GROUND SURFACE ELEVATION (ft, msl): 295.68
TOP OF CASING ELEVATION (ft, msl): 295.34
TOP OF SCREEN ELEVATION (ft, msl): 209.7

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 8-94lb. Bags
DEVELOPMENT METHOD: Bailer
DATE DEVELOPED: 4/18/2007
DEPTH TO WATER (ft.btoc): 97.67-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 85.7
DEPTH TO TOP OF BENTONITE (ft, bgs): 74
DEPTH TO TOP OF SAND PACK (ft, bgs): 80

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 101
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 107

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

SSC 1015325

WELL INSTALLATION DIAGRAM

WELL NO.: MW-213

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/6/07
WELL LOCATION: 265 ft. west northwest from northwest corner of bldg. 835.

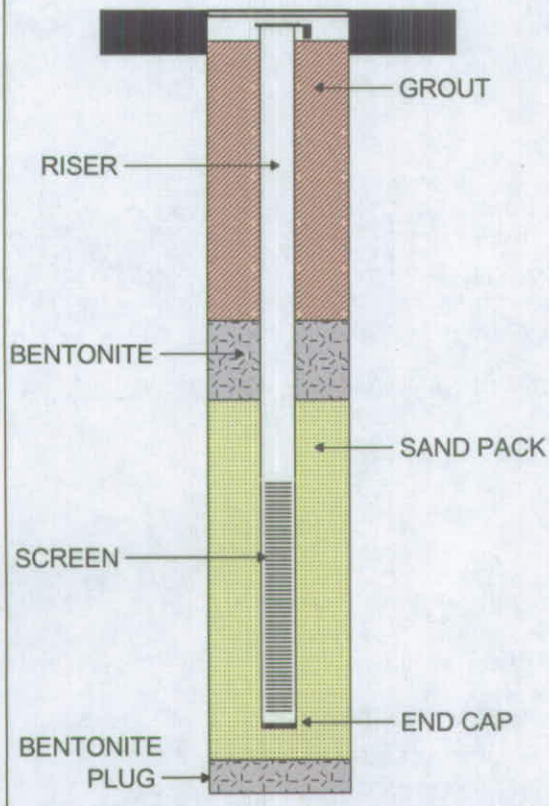
NORTHING: 278426.83
EASTING: 801668.99
GROUND SURFACE ELEVATION (ft, msl): 294.12
TOP OF CASING ELEVATION (ft, msl): 293.83
TOP OF SCREEN ELEVATION (ft, msl): 216.9

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 16-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/18/2007
DEPTH TO WATER (ft.btoc): 92.12-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 76.9

DEPTH TO TOP OF BENTONITE (ft, bgs): 64

DEPTH TO TOP OF SAND PACK (ft, bgs): 70

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 92.2
DEPTH TO TOP OF BACKFILL (ft, bgs): 100
TOTAL DEPTH OF BORING (ft, bgs): 106

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015326

WELL INSTALLATION DIAGRAM

WELL NO.: MW-214A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/13/07
WELL LOCATION: Intersection of Troyer Ave. and 5th St.

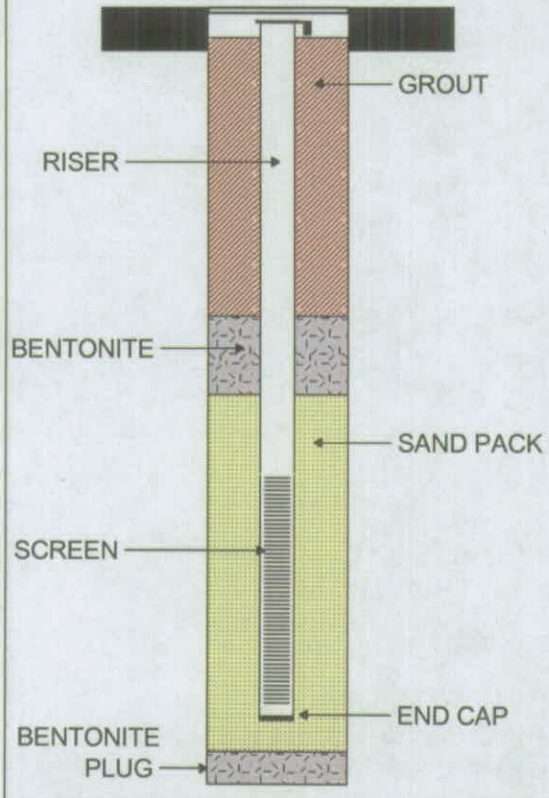
NORTHING: 277877.62
EASTING: 803906.94
GROUND SURFACE ELEVATION (ft, msl): 303.96
TOP OF CASING ELEVATION (ft, msl): 303.61
TOP OF SCREEN ELEVATION (ft, msl): 184.5

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 10-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 18-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 3/22/2007
DEPTH TO WATER (ft.btoc): 102.85-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 119.1

DEPTH TO TOP OF BENTONITE (ft, bgs): 106

DEPTH TO TOP OF SAND PACK (ft, bgs): 113.5

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 134.4
DEPTH TO TOP OF BACKFILL (ft, bgs): 137
TOTAL DEPTH OF BORING (ft, bgs): 147

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015327

WELL INSTALLATION DIAGRAM

WELL NO.: MW-214B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/14/07
WELL LOCATION: Intersection of Troyer Ave. and 5th St.

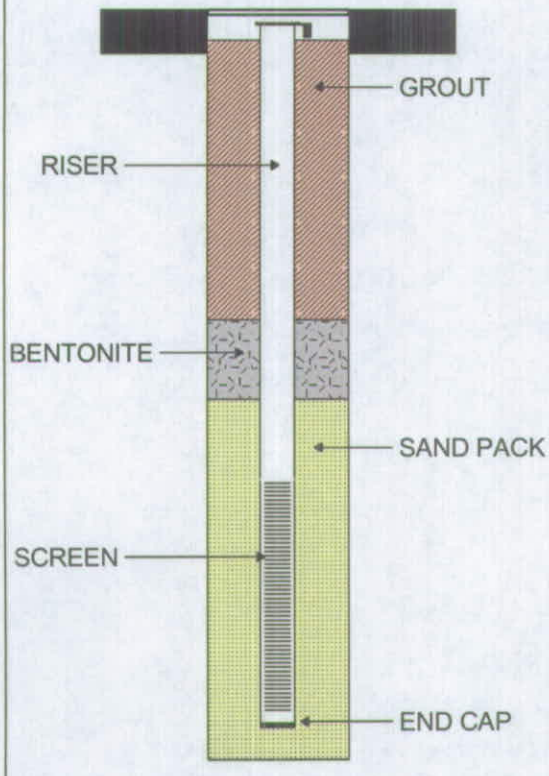
NORTHING: 277875.84
EASTING: 803922.2
GROUND SURFACE ELEVATION (ft, msl): 303.96
TOP OF CASING ELEVATION (ft, msl): 303.7
TOP OF SCREEN ELEVATION (ft, msl): 202.1

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 10-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 3/21/2007
DEPTH TO WATER (ft.btoc): 102.5-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 101.6

DEPTH TO TOP OF BENTONITE (ft, bgs): 90

DEPTH TO TOP OF SAND PACK (ft, bgs): 96

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.2

TOTAL DEPTH OF WELL (ft, btoc): 116.8
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 119

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015328

WELL INSTALLATION DIAGRAM

WELL NO.: MW-215A

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/9/07
WELL LOCATION: South loading area bldg. 550.

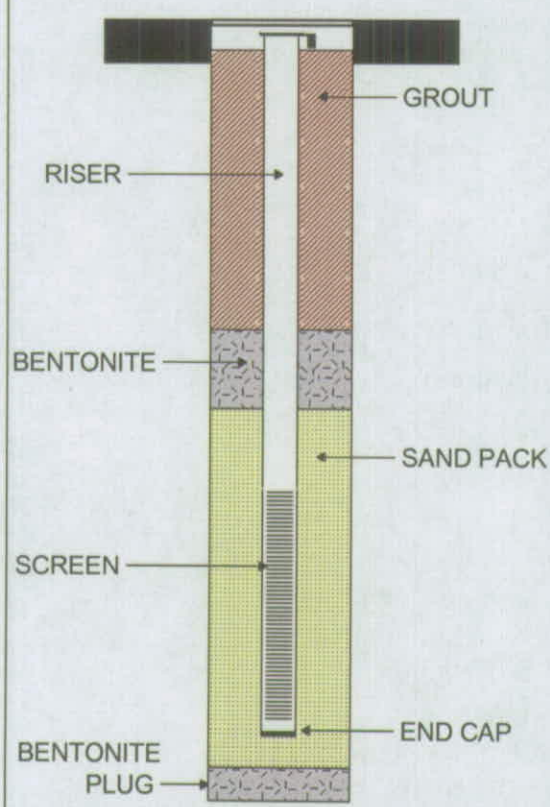
NORTHING: 277298.37
EASTING: 804164.31
GROUND SURFACE ELEVATION (ft, msl): 304.86
TOP OF CASING ELEVATION (ft, msl): 304.5
TOP OF SCREEN ELEVATION (ft, msl): 175.7

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 12.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 1.5-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 18-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 3/21/2007
DEPTH TO WATER (ft.btoc): 108.25-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 128.8
DEPTH TO TOP OF BENTONITE (ft, bgs): 114
DEPTH TO TOP OF SAND PACK (ft, bgs): 119

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 144.1
DEPTH TO TOP OF BACKFILL (ft, bgs): 151
TOTAL DEPTH OF BORING (ft, bgs): 170

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015329

WELL INSTALLATION DIAGRAM

WELL NO.: MW-215B

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/10/07
WELL LOCATION: South loading area bldg. 550.

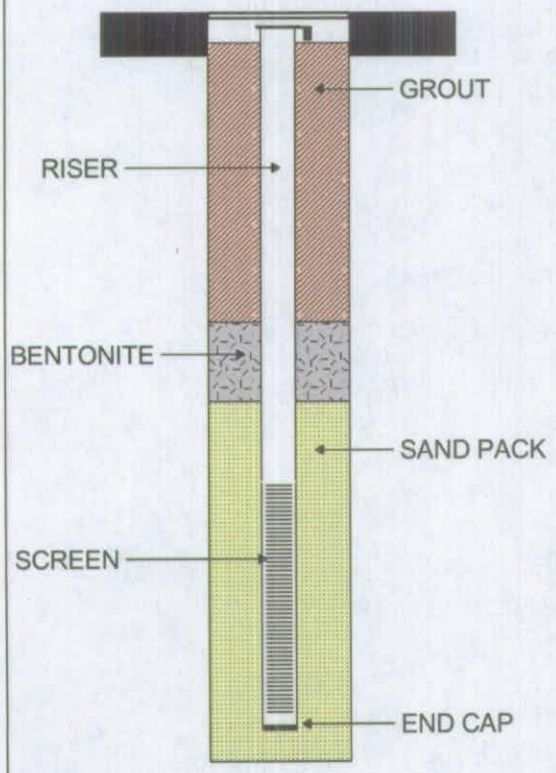
NORTHING: 277298.27
EASTING: 804177.33
GROUND SURFACE ELEVATION (ft, msl): 304.98
TOP OF CASING ELEVATION (ft, msl): 304.56
TOP OF SCREEN ELEVATION (ft, msl): 199.2

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 1.5-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 3/21/2007
DEPTH TO WATER (ft.btoc): 108.34-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 105.4
DEPTH TO TOP OF BENTONITE (ft, bgs): 94
DEPTH TO TOP OF SAND PACK (ft, bgs): 99

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 120.7
DEPTH TO TOP OF BACKFILL (ft, bgs): 123.5
TOTAL DEPTH OF BORING (ft, bgs): 123.5

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015330

WELL INSTALLATION DIAGRAM

WELL NO.: MW-216

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/16/07
WELL LOCATION: 150 ft. north of Amido Ave. and 290 ft. west of W. E. Freeman Dr.

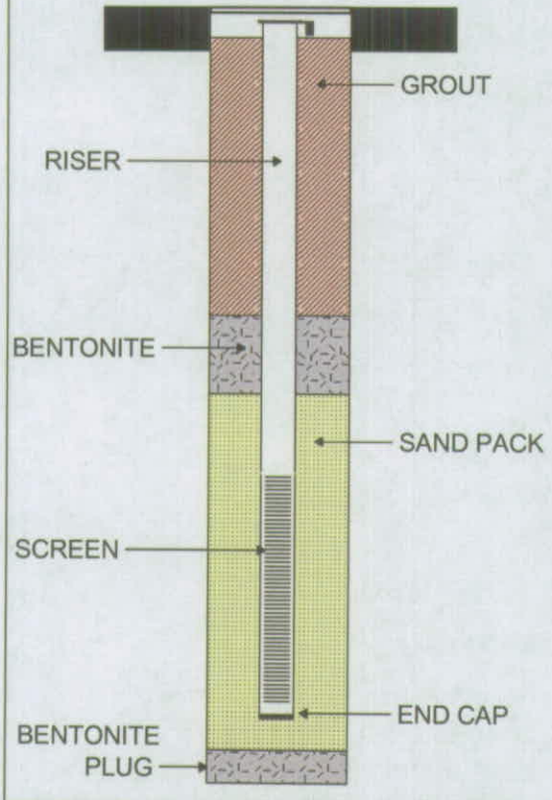
NORTHING: 276024.68
EASTING: 801995.93
GROUND SURFACE ELEVATION (ft, msl): 297.63
TOP OF CASING ELEVATION (ft, msl): 297.34
TOP OF SCREEN ELEVATION (ft, msl): 197.4

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 8.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 3-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 16-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/23/07-4/24/07
DEPTH TO WATER (ft.btoc): 96.6-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 99.9

DEPTH TO TOP OF BENTONITE (ft, bgs): 89

DEPTH TO TOP OF SAND PACK (ft, bgs): 95

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 115.2

DEPTH TO TOP OF BACKFILL (ft, bgs): 120

TOTAL DEPTH OF BORING (ft, bgs): 127

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015331

WELL INSTALLATION DIAGRAM

WELL NO.: MW-217

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/21/07
WELL LOCATION: Northeast of intersection of Danielson Pl. and Danielson St. (Bldg 360).

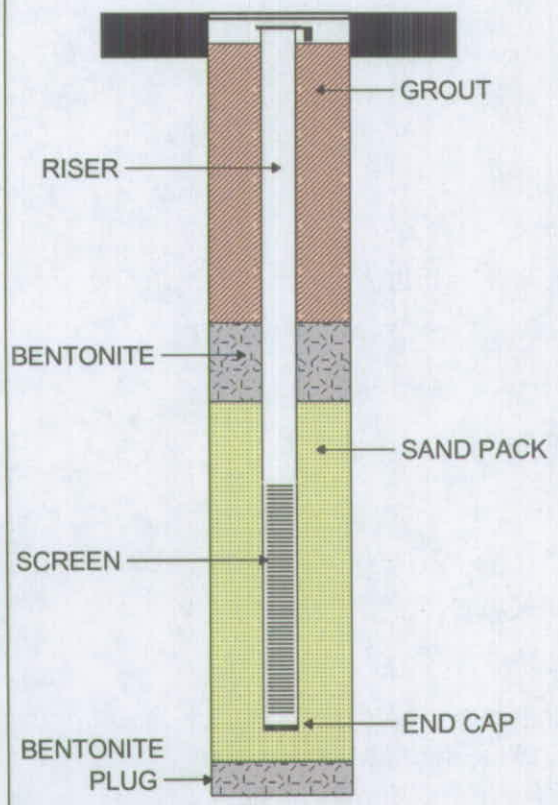
NORTHING: 276670.6
EASTING: 805213.69
GROUND SURFACE ELEVATION (ft, msl): 304.51
TOP OF CASING ELEVATION (ft, msl): 304.18
TOP OF SCREEN ELEVATION (ft, msl): 202.4

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 10-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 3.5-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 8-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/23/2007
DEPTH TO WATER (ft.btoc): 108-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 101.8

DEPTH TO TOP OF BENTONITE (ft, bgs): 90

DEPTH TO TOP OF SAND PACK (ft, bgs): 96

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 117.1

DEPTH TO TOP OF BACKFILL (ft, bgs): 119

TOTAL DEPTH OF BORING (ft, bgs): 126

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015332

WELL INSTALLATION DIAGRAM

WELL NO.: MW-218

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 3/7/07
WELL LOCATION: 65 ft. north of Bldg. 360 and 300 ft. west of Lloyd St.

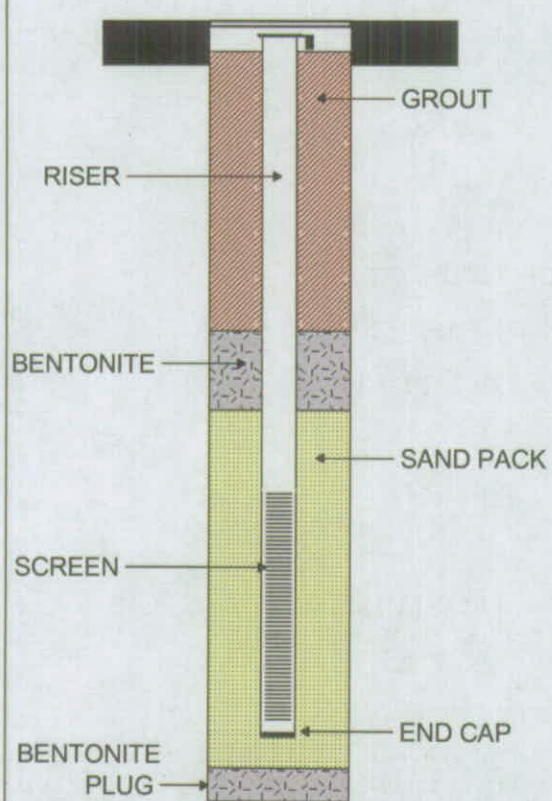
NORTHING: 276936.7
EASTING: 805628.44
GROUND SURFACE ELEVATION (ft, msl): 306
TOP OF CASING ELEVATION (ft, msl): 305.6
TOP OF SCREEN ELEVATION (ft, msl): 206.7

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 2-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 3/20/2007
DEPTH TO WATER (ft.btoc): 102.83-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 98.9
DEPTH TO TOP OF BENTONITE (ft, bgs): 88
DEPTH TO TOP OF SAND PACK (ft, bgs): 94

LENGTH OF SCREEN (ft): 15
LENGTH OF END CAP: 0.3
TOTAL DEPTH OF WELL (ft, btoc): 114.2
DEPTH TO TOP OF BACKFILL (ft, bgs): 116.5
TOTAL DEPTH OF BORING (ft, bgs): 126

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015333

WELL INSTALLATION DIAGRAM

WELL NO.: MW-219

PROJECT: DDMT - Phase 2 Wells
PROJECT NUMBER: 3202-019
SITE LOCATION: MI
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: Jim Anstaett
DATE COMPLETED: 4/22/07
WELL LOCATION: 85 ft. east of Perry Rd. and 685 ft. north of Ball Rd.

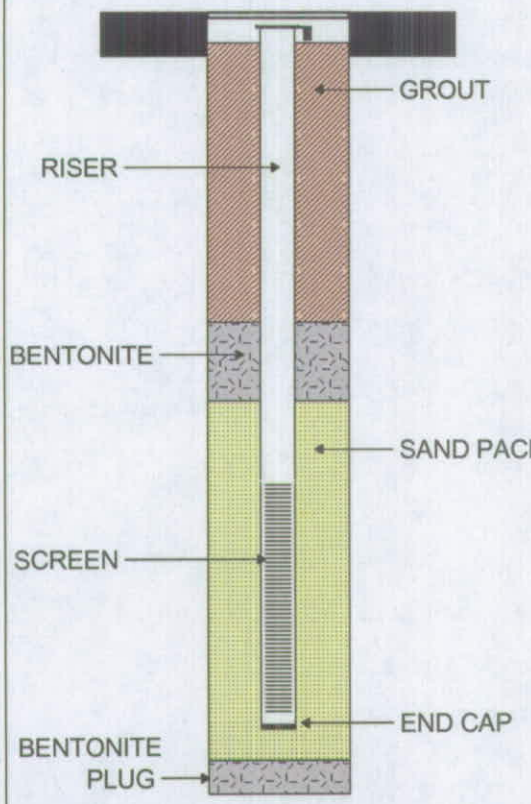
NORTHING: 276429.6
EASTING: 800460.96
GROUND SURFACE ELEVATION (ft, msl): 295.07
TOP OF CASING ELEVATION (ft, msl): 294.9
TOP OF SCREEN ELEVATION (ft, msl): 197.2

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9.5-50lb. Bags
TYPE OF BENTONITE IN SEAL: 3/8" Shur Plug Chips
QUANTITY OF BENTONITE IN SEAL: 4-50lb. Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 12-94lb. Bags
DEVELOPMENT METHOD: Grundfos RediFlow II
DATE DEVELOPED: 4/25/2007
DEPTH TO WATER (ft.btoc): 92.19-ft. - 5/4/2007

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3-ft. by 3-ft.

LENGTH OF RISER (ft): 97.7

DEPTH TO TOP OF BENTONITE (ft, bgs): 86

DEPTH TO TOP OF SAND PACK (ft, bgs): 92

LENGTH OF SCREEN (ft): 15

LENGTH OF END CAP: 0.3

TOTAL DEPTH OF WELL (ft, btoc): 113
DEPTH TO TOP OF BACKFILL (ft, bgs): 118
TOTAL DEPTH OF BORING (ft, bgs): 126

Prepared by: WTR **Date: 5/16/2007** **Checked by: KMS** **Date: 5/16/2007**

1015334

WELL INSTALLATION DIAGRAM

WELL NO.: MW-229

PROJECT: FOST-4
PROJECT NUMBER: 3202-031
SITE LOCATION: DF
e2M PROJECT MANAGER: T. Holmes
e2M FIELD STAFF: E. Van Schaik
DATE COMPLETED: 8/1/2007
WELL LOCATION:

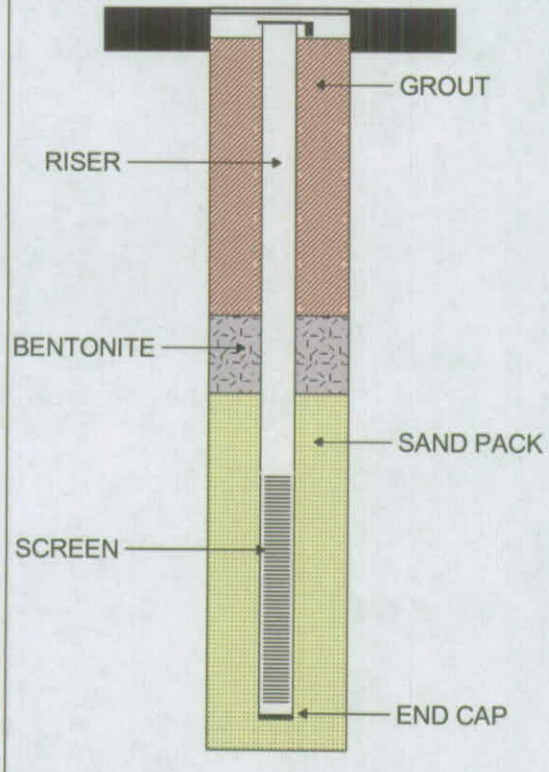
NORTHING: 279293.98
EASTING: 802836.28
GROUND SURFACE ELEVATION (ft, msl): 311.99
TOP OF CASING ELEVATION (ft, msl): 311.77
TOP OF SCREEN ELEVATION (ft, msl): 123.34

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

TYPE OF FILTER PACK: Sand
GRADATION OF FILTER PACK: 10-20
QUANTITY OF FILTER PACK: 9 Bags
TYPE OF BENTONITE IN SEAL: Shur Plug 3/8"
QUANTITY OF BENTONITE IN SEAL: 1 Bag
TYPE OF GROUT: Portland Type I
QUANTITY OF GROUT: 16 Bags
DEVELOPMENT METHOD: Grunfos Pump
DATE DEVELOPED: 8/3/2007 - 8/8/2007
DEPTH TO WATER (ft.btoc): 160.61

NOTES:

Well Completion (Not to Scale)



Well Details

DIMENSIONS OF CONCRETE PAD: 3' x 3'

LENGTH OF RISER (ft): 188.43

DEPTH TO TOP OF BENTONITE (ft, bgs): 178.6

DEPTH TO TOP OF SAND PACK (ft, bgs): 184.1

LENGTH OF SCREEN (ft): 20

LENGTH OF END CAP: 0.22

TOTAL DEPTH OF WELL (ft, btoc): 208.65
DEPTH TO TOP OF BACKFILL (ft, bgs): NA
TOTAL DEPTH OF BORING (ft, bgs): 210

Prepared by: **Date:** **Checked by:** **Date:**

APPENDIX C

COMPLETE ANALYTICAL RESULTS

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-1	DR1-1A	DR1-2	DR1-4	DR1-5
	Field Sample ID	DR1-1-LB-1	DR1-1A-LB-1	DR1-2-LB-1	DR1-4-LB-1	DR1-5-LB-1
	Lab Sample ID	L0610711-01	L0610051-01	L0610708-01	L0610762-01	L0610708-02
	Date Collected	10/23/2006	10/2/2006	10/24/2006	10/25/2006	10/24/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	0.425 J
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0 4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	4.72 J	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	0.324	0.163 J	<0.3	0 129 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	1.02	0 634 J	0 602 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	2.46	1.18	1.82	12.4	57
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0 255 J	6 28	<1	1 33	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-5A	DR1-6	DR1-6A	DR1-7	DR1-8
	Field Sample ID	DR1-5A-LB-1	DR1-6-LB-1	DR1-6A-LB-1	DR1-7-LB-1	DR1-8-LB-1
	Lab Sample ID	L0610711-02	L0610708-03	L0610708-04	L0610762-02	L0610601-01
	Date Collected	10/23/2006	10/24/2006	10/24/2006	10/25/2006	10/18/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	0.223 J	<1	0.335 J	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	0.133 J	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.306	<0.3	0.18 J	<0.3	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	3.46	1.59	4.81	0.374 J	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	23.8	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	50.9	184	28.4	5.68	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	98.1	1.85	118	0.76 J	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR2-2	DR2-2 DUP	DR2-3	DR2-4	DR2-6
	Field Sample ID	DR2-2-LB-1	DR2-2 DUP- LB-1	DR2-3-LB-1	DR2-4-LB-1	DR2-6-LB-1
	Lab Sample ID	L0610100-01	L0610100-04	L0610100-02	L0610186-01	L0610509-01
	Date Collected	10/3/2006	10/3/2006	10/3/2006	10/5/2006	10/17/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0.5	<0 5	0 226 J
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	50.4
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	0.154 J
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	1.08
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	0 475 J
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	4 19	4.26	4.2	4.06	82.7
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	1.05	1.07	0.939	1.06	27.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	1 9	1.84	0 601 J	<1	9.97
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	23.2	23.3	22.8	7.15	77.2
Toluene	ug/L	0.946 J	0 942 J	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	3.13	2.85	2.47	1.61	15.5
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

1015339

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-16	MW-19	MW-22	MW-23	MW-24
	Field Sample ID	MW-16-LB-1	MW-19-LB-1	MW-22-LB-1	MW-23-LB-1	MW-24-LB-1
	Lab Sample ID	L0610474-01	L0610509-06	L0610602-01	L0610602-02	L0610602-03
	Date Collected	10/16/2006	10/17/2006	10/18/2006	10/18/2006	10/18/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	<0.3	<0.3	<0.3	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	0.527 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	0.79 J	<1	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	<1	0.531 J	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-25A	MW-25A DUP	MW-26	MW-34	MW-36
	Field Sample ID	MW-25A-LB-1	MW-25A DUP-LB-1	MW-26-LB-1	MW-34-LB-1	MW-36-LB-1
	Lab Sample ID	L0610051-06	L0610051-02	L0610052-06	L0610474-04	L0610474-05
	Date Collected	10/2/2006	10/2/2006	10/2/2006	10/16/2006	10/16/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	0.316 J	<0.5	<0 5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0 4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	--	--	--	--	--
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	--	--	--	--	--
Carbon tetrachloride	ug/L	2 66	2.65	5.24	0.381 J	<1
Chlorobenzene	ug/L	<0 5	<0.5	<0 5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 608	0.571	0.935	0.531	<0 3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	0 45 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0.6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	0.377 B	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	8.61	8.78	25.5	0 336 J	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0.352 J	0 458 J	1.77	1.06	<1
Trichlorofluoromethane	ug/L	<1	0 434 J	<1	<1	<1
Vinyl acetate	ug/L	--	--	--	--	--
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J Estimated result based on QC data or reported below RL
B· Estimated result possibly biased high or false positive based on blank data

1015341

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-38	MW-39	MW-39A	MW-50	MW-52
	Field Sample ID	MW-38-LB-1	MW-39-LB-1	MW-39A-LB-1	MW-50-LB-1	MW-52-LB-1
	Lab Sample ID	L0610509-07	L0610509-08	L0610509-09	L0610603-01	L0610051-07
	Date Collected	10/17/2006	10/17/2006	10/17/2006	10/18/2006	10/2/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	--	--	--	--	--
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0.4	<0 4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	--	--	--	--	--
Carbon tetrachloride	ug/L	1.24	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.513	<0.3	0 251 J	0 746	0 899
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	0 622 J	0 418 J	0 483 J	0.639 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	2 94 J	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyttoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	149	196	0 263 J	10 2
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	4 63	8 94	4.68	1.5	1 04
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	--	--	--	--	--
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID / Field Sample ID / Lab Sample ID / Date Collected	units	MW-52 DUP / MW-52 DUP-LB-1 / L0610051-03 / 10/2/2006	MW-53 / MW-53-LB-1 / L0610509-10 / 10/17/2006	MW-55 / MW-55-LB-1 / L0610474-06 / 10/16/2006	MW-62 / MW-62-LB-1 / L0610119-01 / 10/4/2006	MW-63A / MW-63A-LB-1 / L0610711-05 / 10/23/2006
1,1,1,2-Tetrachloroethane		ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,1,1-Trichloroethane		ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		ug/L	<0.5	<0 5	<0 5	<0 5	<0.5
1,1,2-Trichloroethane		ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane		ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene		ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane		ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane		ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
1,2-Dichloropropane		ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane		ug/L	<0.4	<0 4	<0 4	<0.4	<0.4
1,4-Dichlorobenzene		ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
1-Chlorohexane		ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane		ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene		ug/L	<1	<1	<1	<1	<1
2-Hexanone		ug/L	–	–	–	–	–
4-Chlorotoluene		ug/L	<1	<1	<1	<1	<1
Acetone		ug/L	<10	<10	<10	<10	<10
Benzene		ug/L	<0 4	<0.4	<0.4	<0 4	<0 4
Bromobenzene		ug/L	<1	<1	<1	<1	<1
Bromochloromethane		ug/L	<1	<1	<1	<1	<1
Bromodichloromethane		ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform		ug/L	<1	<1	<1	<1	<1
Bromomethane		ug/L	<3	<3	<3	<3	<3
Carbon disulfide		ug/L	–	–	–	–	–
Carbon tetrachloride		ug/L	<1	<1	<1	0.279 J	<1
Chlorobenzene		ug/L	<0.5	<0 5	<0.5	<0 5	<0.5
Chloroethane		ug/L	<1	<1	<1	<1	<1
Chloroform		ug/L	0 825	<0.3	<0 3	0.25 J	<0.3
Chloromethane		ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		ug/L	0.71 J	<1	<1	0 26 J	<1
cis-1,3-Dichloropropene		ug/L	<0.5	<0 5	<0.5	<0 5	<0.5
Dibromochloromethane		ug/L	<0 5	<0.5	<0 5	<0.5	<0 5
Dibromomethane		ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane		ug/L	<1	<1	<1	<1	<1
Ethylbenzene		ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene		ug/L	<0.6	<0.6	<0 6	<0.6	<0 6
Isopropylbenzene		ug/L	<1	<1	<1	<1	<1
m-,p-Xylene		ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)		ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		ug/L	<5	2.29 J	<5	<5	1.19 J
Methylene chloride		ug/L	0.457 B	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		ug/L	<10	<10	<10	<10	<10
Naphthalene		ug/L	<1	<1	<1	<1	<1
n-Butylbenzene		ug/L	<1	<1	<1	<1	<1
n-Propylbenzene		ug/L	<1	<1	<1	<1	<1
o-Xylene		ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene		ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene		ug/L	<1	<1	<1	<1	<1
Styrene		ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene		ug/L	<1	<1	<1	<1	<1
Tetrachloroethene		ug/L	10.3	2.26	<1	<1	1.24
Toluene		ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		ug/L	<1	<1	<1	<1	<1
Trichloroethene		ug/L	1.12	<1	<1	77.7 J	0.765 J
Trichlorofluoromethane		ug/L	<1	<1	<1	<1	<1
Vinyl acetate		ug/L	–	–	–	–	–
Vinyl chloride		ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-63B	MW-64	MW-66A	MW-84	MW-86
	Field Sample ID	MW-63B-LB-1	MW-64-LB-1	MW-66A-LB-1	MW-84-LB-1	MW-86-LB-1
	Lab Sample ID	L0610711-06	L0610711-07	L0610603-02	L0610509-11	L0610761-02
	Date Collected	10/23/2006	10/23/2006	10/18/2006	10/17/2006	10/25/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	1.06	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	0 192 J
1,2-Dichloroethane	ug/L	<0 5	5.6	1.09	2.52	1.09
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	1.81
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0.4	<0.4	1.64
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0 4	0 143 J
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	2.9	<1	4	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0.5	<0.5	0.182 J
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.604	1.01	<0 3	0.494	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	0.397 J	<1	<1	180
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	0 796 J	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	3.71	18.2	1.79	0.868 J	0 388 J
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	1.12	28 9	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	0 976 J

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B· Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-88	MW-88 DUP	MW-89	MW-90	MW-92
	Field Sample ID	MW-88-LB-1	MW-88 DUP-LB-1	MW-89-LB-1	MW-90-LB-1	MW-92-LB-1
	Lab Sample ID	L0610100-05	L0610100-03	L0610709-06	L0610709-07	L0610187-01
	Date Collected	10/3/2006	10/3/2006	10/24/2006	10/24/2006	10/5/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	0.51 J	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	8.73 J
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	8.59	8.31	0.7 J	0.466 J	27.2
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	1.78	1.74	0.348	3.11	8.02
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	1.3	1.42	0.404 J	0.294 J	10.8
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	26.4	25.6	0.363 J	26.7	193
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	3.5	3.66	2.13	2.53	6.14
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-93	MW-94A	MW-96	MW-96 DUP	MW-97
	Field Sample ID	MW-93-LB-1	MW-94A-LB-1	MW-96-LB-1	MW-96 DUP-LB-1	MW-97-LB-1
	Lab Sample ID	L0610603-03	L0610709-08	L0610051-08	L0610051-04	L0610762-03
	Date Collected	10/18/2006	10/24/2006	10/2/2006	10/2/2006	10/25/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	0 433 J	0 387 J	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0.4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	4.5	4.42	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	0.139 J	0.975	0.934	0.228 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	0.624 J	0.883 J	0 9 J	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0.6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	0.296 B	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	52 2	2.84	2 81	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	5.58	<1	0.259 J	14 7
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-98	MW-99	MW-100B	MW-102B	MW-103
	Field Sample ID	MW-98-LB-1	MW-99-LB-1	MW-100B-LB-1	MW-102B-LB-1	MW-103-LB-1
	Lab Sample ID	L0610761-03	L0610602-04	L0610711-03	L0610627-01	L0610102-01
	Date Collected	10/25/2006	10/18/2006	10/23/2006	10/19/2006	10/3/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	2.45
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	1.7
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.133 J	0.22 J	<0 3	<0.3	12.2
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0 252 J	<1	112	<1	0.322 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0.5	<0 5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0 5	<0.5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	30 9	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	33 1	<1	101	<1	<1
Toluene	ug/L	<1	<1	0.502 J	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	0.39 J	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2.37	<1	43 1	<1	5.04
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	0.716 J	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-104	MW-107T	MW-107B	MW-108	MW-113
	Field Sample ID	MW-104-LB-1	MW-107T-LB-1	MW-107B-LB-1	MW-108-LB-1	MW-113-LB-1
	Lab Sample ID	L0610102-02	L0610509-05	L0610509-02	L0610709-01	L0610711-04
	Date Collected	10/3/2006	10/17/2006	10/17/2006	10/24/2006	10/23/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	0 917 J	<1	<1	0.37 J	<1
1,1-Dichloroethene	ug/L	1.68	<1	<1	0.618 J	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	14.5
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	0.169 J
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0 5	<0.5	0.744
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	0 682 J
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0 4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0.4	<0 4	<0 4	0.131 J
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	75 6
Chlorobenzene	ug/L	<0 5	<0.5	<0 5	<0 5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	15 9	<0.3	<0 3	11 7	33.8
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0 446 J	<1	<1	0.75 J	54.9
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0.5	<0 5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	0.564 J	0.377 J	5.41	182
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	17.6	0 999 J	0.585 J	32	25.9
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-125	MW-140	MW-141	MW-143	MW-142
	Field Sample ID	MW-125-LB-1	MW-140-LB-1	MW-141-LB-1	MW-143-LB-1	MW-142-LB-1
	Lab Sample ID	L0610051-05	L0610710-01	L0610710-02	L0610625-01	L0610052-03
	Date Collected	10/2/2006	10/23/2006	10/23/2006	10/19/2006	10/2/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	0 465 J	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0 4	<0 4	<0 4
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	0.313 J	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.168 J	0.162 J	2.37	<0.3	<0 3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	16.3	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0 5	<0 5	<0.5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0 6	<0.6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	18.5	<5	<5	4.26 J	1.15 J
Methylene chloride	ug/L	0.341 B	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	35 6	0.424 J	27.6	<1	<1
Toluene	ug/L	0 282 J	<1	<1	<1	0.338 J
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	13 3	1.49	3.56	0.7 J	0.371 J
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-197A	MW-142 DUP	MW-197B	MW-198	MW-198 DUP
	Field Sample ID	MW-197A-LB-1	MW-142 DUP-LB-1	MW-197B-LB-1	MW-198-LB-1	MW-198 DUP-LB-1
	Lab Sample ID	L0610709-02	L0610052-01	L0610052-04	L0610052-05	L0610052-02
	Date Collected	10/24/2006	10/2/2006	10/2/2006	10/2/2006	10/2/2006
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0 4	<0 4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	0 279 J
Chlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.237 J	<0.3	<0 3	<0 3	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.447 J	<1	0 625 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	1.51 J	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	130	<1	179	<1	<1
Toluene	ug/L	<1	0.29 J	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2.04	0 335 J	8 51	3.28	3.25
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Well ID	MW-199A	MW-199B	MW-200	MW-201	MW-202A
Field Sample ID	MW-199A-LB-1	MW-199B-LB-1	MW-200-LB-1	MW-201-LB-1	MW-202A-LB-1
Lab Sample ID	L0610710-03	L0610710-04	L0610761-01	L0610601-05	L0610710-07
Date Collected	10/23/2006	10/23/2006	10/25/2006	10/18/2006	10/23/2006
Analyte	units				
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	11.7 J	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	0.719 J	<1	0.338 J	0.365 J
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.126 J	0.197 J	<0.3	1.15	0.232 J
Chloromethane	ug/L	<1	<1	<1	0.528 J	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	0.466 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	1.17 J	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	0.289 J	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	0.632 J	72	<1	0.257 J
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	99.2 J	5.47	<1	1.85
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

APPENDIX C-1
ANALYTICAL RESULTS , VOCs - OCTOBER 2006
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID Field Sample ID Lab Sample ID Date Collected units	MW-202B MW-202B-LB-1 L0610709-03 10/24/2006 ug/L	PZ-03 PZ-03-LB-1 L0610187-02 10/5/2006 ug/L	PZ-06 PZ-06-LB-1 L0610121-01 10/4/2006 ug/L	PZ-07 PZ-07-LB-1 L0610186-02 10/5/2006 ug/L	IW-6 IW-6-LB-1 ug/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		–	–	–	–	–
4-Chlorotoluene		<1	<1	<1	<1	<1
Acetone		<10	<10	3 14 J	3.98 J	233 J
Benzene		0.131 J	<0 4	<0.4	<0.4	0 188 J
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		<3	<3	<3	<3	<3
Carbon disulfide		–	–	–	–	–
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		0 778	0 198 J	<0.3	<0.3	<0 3
Chloromethane		<1	<1	<1	<1	1.63 J
cis-1,2-Dichloroethene		<1	<1	<1	<1	0 835 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)		<10	<10	<10	<10	93.5 J
Methyl t-butyl ether (MTBE)		<5	<5	<5	<5	28
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		5.51	3.89	<1	<1	<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		0 811 J	0 917 J	<1	<1	0 581 J
Trichlorofluoromethane		<1	0 412 J	<1	<1	<1
Vinyl acetate		–	–	–	–	–
Vinyl chloride		<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-2
ANALYTICAL RESULTS , VOCs - JANUARY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-197A	MW-197A DUP	MW-197B	MW-198	MW-199A
	Field Sample ID	MW-197A-RW-2	MW-197A DUP	MW-197B-RW-2	MW-198-RW-2	MW-199A-RW-2
	Lab Sample ID	L0701585-01	L0701585-04	L0701586-03	L0701586-02	L0701585-05
	Date Collected	1/24/2007	1/24/2007	1/24/2007	1/24/2007	1/24/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	0.657 J	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0 5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	0.915 J	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 226 J	<0.3	0.227 J	0 2 J	<0 3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0 345 J	<1	0.484 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0.5	<0 5	<0.5
Dibromochloromethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	0 922 J
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	125	127	166	<1	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2.04	1.97	8.76	25.8	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

< Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-2
ANALYTICAL RESULTS , VOCs - JANUARY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-199B	MW-200	MW-202A	MW-202B
	Field Sample ID	MW-199B-RW-2	MW-200-RW-2	MW-202A-RW-2	MW-202B-RW-2
	Lab Sample ID	L0701586-01	L0701586-06	L0701585-02	L0701585-03
	Date Collected	1/24/2007	1/24/2007	1/24/2007	1/24/2007
Analyte	units				
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0.5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0 4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1
2-Hexanone	ug/L	--	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–
Carbon tetrachloride	ug/L	0 949 J	<1	0.749 J	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1
Chloroform	ug/L	0.179 J	<0.3	0.198 J	0 857
Chloromethane	ug/L	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	0.303 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0.5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1
Tetrachloroethene	ug/L	0.497 J	81 9	0 326 J	8 42
Toluene	ug/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1
Trichloroethene	ug/L	115	5 94	1.59	1 27
Trichlorofluoromethane	ug/L	<1	<1	<1	<1
Vinyl acetate	ug/L	–	--	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B· Estimated result possibly biased high or false positive based on blank data

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-1A	DR1-4	DR1-5	DR1-5A	DR1-6
	Field Sample ID	DR1-1A-LS-3	DR1-4-LS-3	DR1-5-LS-3	DR1-5A-LS-3	DR1-6-LS-3
	Lab Sample ID	L0704355-11	L0704355-12	L0704380-14	L0704355-13	L0704355-14
	Date Collected	4/13/2007	4/13/2007	4/16/2007	4/13/2007	4/13/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	0 366 J	<0.5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	0.212 J	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0 4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.313	<0.3	<0.3	0 274 J	<0 3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0 416 J	8.09	<1	3.19	1 91
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0.6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	33.3	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	0.959 J	<1	69.2	49.6	173
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	4.57	<1	<1	84	1.83
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

1015355

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-6A	DR2-2	DR2-3	DR2-6	MW-25A
	Field Sample ID	DR1-6A-LS-3	DR2-2-LS-3	DR2-3-LS-3	DR2-6-LS-3	MW-25A-LS-3
	Lab Sample ID	L0704355-15	L0704355-19	L0704381-03	L0704381-04	L0704355-17
	Date Collected	4/13/2007	4/13/2007	4/15/2007	4/15/2007	4/13/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	0.179 J	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	63 8	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	0.207 J	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	1.05	<0.5
1,2-Dichloropropane	ug/L	0 48 J	<1	<1	0.559 J	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0 4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0 5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	0.159 J	<0 4	<0 4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	6.78	4.29	92	2 54
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.236 J	1.76	0.913	33.1	0.507
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5 98	3.47	0 673 J	14 1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	0 421 J	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	34 4	49.2	23.9	90 8	10 3
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	139	3.49	2.28	16 4	0 525 J
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-26	MW-26 DUP	MW-39	MW-39A	MW-52
	Field Sample ID	MW-26-LS-3	MW-26 DUP-LS-3	MW-39-LS-3	MW-39A-LS-3	MW-52-LS-3
	Lab Sample ID	L0704380-01	L0704380-18	L0704355-01	L0704355-02	L0704380-09
	Date Collected	4/16/2007	4/16/2007	4/13/2007	4/13/2007	4/16/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	5.23	5.65	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	1.05	1.15	0.155 J	0.215 J	0.828
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.313 J	0.41 J	0.462 J	0.4 J	0.938 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	20.1	23.6	106	176	10.8
Toluene	ug/L	0.329 J	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	1.56	1.75	8.17	4.04	1.4
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-62	MW-64	MW-86	MW-88	MW-90
	Field Sample ID	MW-62-LS-3	MW-64-LS-3	MW-86-LS-3	MW-88-LS-3	MW-90-LS-3
	Lab Sample ID	L0704412-07	L0704412-02	L0704380-02	L0704355-18	L0704380-10
	Date Collected	4/17/2007	4/17/2007	4/16/2007	4/13/2007	4/16/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	0.88	<0 5	<0 5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	0.558 J
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	0 526 J
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	1 6	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	0 152 J	<1	<1
1,2-Dichloroethane	ug/L	<0 5	0 495 J	0.695	<0 5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	1.24	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	0.986	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	--	--	--	--	--
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	2 9 J	4.22 J	<10
Benzene	ug/L	<0 4	<0.4	<0.4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	--	--	--	--	--
Carbon tetrachloride	ug/L	0.703 J	3.26	<1	3.88	0.401 J
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.311	0 818	0.212 J	0.671	3 18
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	1.16	0.345 J	119	0.588 J	0.313 J
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	0 362 J	18 1	2.11	18.5	26.7
Toluene	ug/L	<1	<1	0 276 J	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	102	30.6	0 989 J	2.94	2.4
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	--	--	--	--	--
Vinyl chloride	ug/L	2 71	<1	<1	<1	<1

< Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-90 DUP	MW-92	MW-94A	MW-96	MW-97
	Field Sample ID	MW-90 DUP-LS-3	MW-92-LS-3	MW-94A-LS-3	MW-96-LS-3	MW-97-LS-3
	Lab Sample ID	L0704380-16	L0704380-03	L0704380-11	L0704380-12	L0704380-13
	Date Collected	4/16/2007	4/16/2007	4/16/2007	4/16/2007	4/16/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	0 524 J	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0 5	0.261 J	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0 4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0 4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	7.67	<1	3.47	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	3 16	13.2	0.196 J	0.901	0.292 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.286 J	7.32	0 532 J	0 814 J	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	1 52	<1	<1	0.469 J
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	29 9	159	48	4.35	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2.62	5.01	6.08	0.419 J	18.8
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

1015359

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-97 DUP	MW-98	MW-100B	MW-104	MW-108
	Field Sample ID	MW-97 DUP-LS-3	MW-98-LS-3	MW-100B-LS-3	MW-104-LS-3	MW-108-LS-3
	Lab Sample ID	L0704380-17	L0704355-03	L0704355-08	L0704355-09	L0704381-07
	Date Collected	4/16/2007	4/13/2007	4/13/2007	4/13/2007	4/16/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	0.868 J	0.304 J
1,1-Dichloroethene	ug/L	<1	<1	<1	1.83	0.553 J
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0.4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0.5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0.4	<0 4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0 5	<0.5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 204 J	0.147 J	<0.3	13.7	10 8
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	94 4	0.589 J	0.634 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0 5	<0 5	<0.5
Dibromochloromethane	ug/L	<0.5	<0 5	<0 5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	32 7	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	35 2	98.9	<1	6 03
Toluene	ug/L	<1	<1	0.404 J	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	0.432 J	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	19.8	2 63	39.4	17	33 5
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	0.595 J	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-113	MW-125	MW-141	MW-197A	MW-197B
	Field Sample ID	MW-113-LS-3	MW-125-LS-3	MW-141-LS-3	MW-197A-LS-3	MW-197B-LS-3
	Lab Sample ID	L0704380-04	L0704355-10	L0704412-04	L0704355-04	L0704355-05
	Date Collected	4/16/2007	4/13/2007	4/17/2007	4/13/2007	4/13/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	13.7	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	0 701	0 399 J	<0 5	<0 5	<0.5
1,2-Dichloropropane	ug/L	0 62 J	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0 4	<0.4	<0 4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0 4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	89.1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	35.9	<0.3	2.46	0 212 J	0 208 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	46 3	10 3	<1	0 432 J	0.792 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	14	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	163	33.1	21.3	114	138
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	24.1	9.27	3 02	2.28	9.11
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

1015361

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID / Field Sample ID / Lab Sample ID / Date Collected	units	MW-198 MW-198-LS-3 L0704381-01 4/15/2007	MW-199A MW-199A-LS-3 L0704355-06 4/13/2007	MW-199B MW-199B-LS-3 L0704355-07 4/13/2007	MW-200 MW-200-LS-3 L0704381-02 4/15/2007	MW-202A DUP MW-202A DUP-LS-3 L0704381-19 4/16/2007
1,1,1,2-Tetrachloroethane		ug/L	<0 5	<0 5	<0.5	<0 5	<0.5
1,1,1-Trichloroethane		ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		ug/L	<0 5	<0.5	<0 5	<0.5	<0 5
1,1,2-Trichloroethane		ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane		ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene		ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane		ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane		ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
1,2-Dichloropropane		ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane		ug/L	<0 4	<0.4	<0 4	<0 4	<0 4
1,4-Dichlorobenzene		ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1-Chlorohexane		ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane		ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene		ug/L	<1	<1	<1	<1	<1
2-Hexanone		ug/L	–	–	–	–	–
4-Chlorotoluene		ug/L	<1	<1	<1	<1	<1
Acetone		ug/L	<10	<10	<10	<10	<10
Benzene		ug/L	<0 4	<0 4	<0.4	<0 4	<0.4
Bromobenzene		ug/L	<1	<1	<1	<1	<1
Bromochloromethane		ug/L	<1	<1	<1	<1	<1
Bromodichloromethane		ug/L	<0.5	<0.5	<0 5	<0.5	<0 5
Bromoform		ug/L	<1	<1	<1	<1	<1
Bromomethane		ug/L	<3	<3	<3	<3	<3
Carbon disulfide		ug/L	–	–	–	–	–
Carbon tetrachloride		ug/L	0.32 J	<1	0 555 J	<1	0 374 J
Chlorobenzene		ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
Chloroethane		ug/L	<1	<1	<1	<1	<1
Chloroform		ug/L	0.146 J	<0.3	0 232 J	0.146 J	0 227 J
Chloromethane		ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		ug/L	<1	<1	<1	0.532 J	<1
cis-1,3-Dichloropropene		ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
Dibromochloromethane		ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
Dibromomethane		ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane		ug/L	<1	<1	<1	<1	<1
Ethylbenzene		ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene		ug/L	<0 6	<0.6	<0 6	<0 6	<0.6
Isopropylbenzene		ug/L	<1	<1	<1	<1	<1
m-,p-Xylene		ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)		ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		ug/L	<5	1 28 J	<5	<5	<5
Methylene chloride		ug/L	<1	<1	<1	<1	0.822 B
MIBK (methyl isobutyl ketone)		ug/L	<10	<10	<10	<10	<10
Naphthalene		ug/L	<1	<1	<1	<1	<1
n-Butylbenzene		ug/L	<1	<1	<1	<1	<1
n-Propylbenzene		ug/L	<1	<1	<1	<1	<1
o-Xylene		ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene		ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene		ug/L	<1	<1	<1	<1	<1
Styrene		ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene		ug/L	<1	<1	<1	<1	<1
Tetrachloroethene		ug/L	<1	<1	0 715 J	70.2	0.302 J
Toluene		ug/L	<1	<1	<1	<1	0.472 J
trans-1,2-Dichloroethene		ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		ug/L	<1	<1	<1	<1	<1
Trichloroethene		ug/L	20 2	<1	115	7 49	1 77
Trichlorofluoromethane		ug/L	<1	<1	<1	<1	<1
Vinyl acetate		ug/L	–	–	–	–	–
Vinyl chloride		ug/L	<1	<1	<1	<1	<1

<, Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-202A	MW-202B	MW-203A	MW-203B	MW-204A
	Field Sample ID	MW-202A-LS-3	MW-202B-LS-3	MW-203A-LS-3	MW-203B-LS-3	MW-204A-LS-3
	Lab Sample ID	L0704381-08	L0704381-09	L0704412-05	L0704714-01	L0704560-01
	Date Collected	4/16/2007	4/16/2007	4/17/2007	4/27/2007	4/23/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0 5	0 291 J	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0.5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	0.382 J	<1	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 213 J	0.752	<0.3	<0.3	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	50.1	0.763 J
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0.5	<0 5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0.6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	0.433 B
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	0.316 J	8.6	62 6	38.4	38 8
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	1.88	1.46	1 27	8 97	1 19
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

1015363

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-204B	MW-205A	MW-205B	MW-206A	MW-206B
	Field Sample ID	MW-204B-LS-3	MW-205A-LS-3	MW-205B-LS-3	MW-206A-LS-3	MW-206B-LS-3
	Lab Sample ID	L0704560-02	L0704560-03	L0704560-04	L0704381-05	L0704381-06
	Date Collected	4/23/2007	4/23/2007	4/23/2007	4/15/2007	4/15/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0.5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0 4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	7 38 J
Benzene	ug/L	<0 4	<0 4	<0.4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0 5	<0 5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0 3	0 238 J	0.206 J	0.155 J	0.139 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0 906 J	0 337 J	0 546 J	0 607 J	0 582 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	26.3	102	129	76.6	57.2
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2.37	3.69	7 2	9.81	8.94
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J· Estimated result based on QC data or reported below RL
B· Estimated result possibly biased high or false positive based on blank data

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID Field Sample ID Lab Sample ID Date Collected units	MW-207A MW-207A-LS-3 L0704381-12 4/16/2007 ug/L	MW-207B MW-207B-LS-3 L0704381-13 4/16/2007 ug/L	MW-208A MW-208A-LS-3 L0704381-14 4/16/2007 ug/L	MW-208B MW-208B-LS-3 L0704381-17 4/16/2007 ug/L	MW-208B DUP MW-208B DUP-LS-3 L0704381-20 4/16/2007 ug/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	0.307 J	0.367 J
1,1,2-Trichloroethane		<1	<1	<1	<1	<1
1,1-Dichloroethane		0 265 J	<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	1.16	<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		–	–	–	–	–
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		<3	<3	<3	<3	<3
Carbon disulfide		–	–	–	–	–
Carbon tetrachloride		<1	1 36	<1	<1	<1
Chlorobenzene		<0 5	<0.5	<0.5	<0.5	<0 5
Chloroethane		<1	<1	<1	<1	<1
Chloroform		5 86	3 09	0.216 J	<0.3	<0.3
Chloromethane		<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		0.468 J	<1	0.554 J	1.12	1 17
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		2.18 B	0.289 B	0.308 B	<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		7 92	35 7	174 J	3 42	3 3
Toluene		0.471 J	0.368 J	<1	<1	0.417 J
trans-1,2-Dichloroethene		<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		<1	<1	<1	<1	<1
Trichloroethene		21.4	12.1	8 12	18.4	18
Trichlorofluoromethane		<1	<1	<1	<1	<1
Vinyl acetate		–	–	–	–	–
Vinyl chloride		<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

1015365

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-209A	MW-209B	MW-210A	MW-210B	MW-211
	Field Sample ID	MW-209A-LS-3	MW-209B-LS-3	MW-210A-LS-3	MW-210B-LS-3	MW-211-LS-3
	Lab Sample ID	L0704560-05	L0704560-06	L0704714-02	L0704714-03	L0704381-18
	Date Collected	4/23/2007	4/23/2007	4/27/2007	4/27/2007	4/16/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0 4	<0 4	<0 4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	2.66 J	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	0.327 J	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0 3	0.251 J	0 201 J	0 15 J	0 139 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	0.828 J	0.646 J	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	1.43 J	<5	<5	<5	<5
Methylene chloride	ug/L	<1	0.319 B	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	0.326 J	<1	38.2	32.4	<1
Toluene	ug/L	<1	0.561 B	0.426 J	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0.576 J	6.4	5.85	7.29	0.536 J
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<, Not detected above Reporting Limit (RL)
J Estimated result based on QC data or reported below RL
B· Estimated result possibly biased high or false positive based on blank data

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-212	MW-214A	MW-214B	MW-215A	MW-215A DUP
	Field Sample ID	MW-212-LS-3	MW-214A-LS-3	MW-214B-LS-3	MW-215A-LS-3	MW-215A DUP-LS-3
	Lab Sample ID	L0704714-04	L0704380-15	L0704412-01	L0704380-05	L0704380-19
	Date Collected	4/27/2007	4/16/2007	4/17/2007	4/16/2007	4/16/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0.5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	0.297 J	0.326 J	0 203 J	0 22 J
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	0.257 J	0 601 J	0 645 J	0 679 J	0 652 J
Chlorobenzene	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 289 J	2 63	2 06	1.66	1 66
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1 .	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	2 76 J	1 97 J	1.85 J	1.85 J
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	8.83	6.4	5.81	5.52
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	34.4	5.59	4 24	7.82	7.83
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

1015367

APPENDIX C-3
ANALYTICAL RESULTS , VOCs - APRIL 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-215B	MW-216	MW-217	MW-218	MW-219
	Field Sample ID	MW-215B-LS-3	MW-216-LS-3	MW-217-LS-3	MW-218-LS-3	MW-219-LS-3
	Lab Sample ID	L0704380-06	L0704714-05	L0704714-06	L0704412-03	L0704714-08
	Date Collected	4/16/2007	4/27/2007	4/27/2007	4/17/2007	4/27/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	0.64	1.67	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	0.626 J	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	0.666 J	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	0.287 J	0.671	1.49
1,2-Dichloropropane	ug/L	<1	<1	<1	0.336 J	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	--	--	--	--	--
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	2.63 J	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	--	--	--	--	--
Carbon tetrachloride	ug/L	0.956 J	<1	34.8	15.1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.68	<0.3	5.05	3.15	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	1.34	0.459 J	0.643 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	4.36	<1	18.4	17.7	16.3
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	1.52	<1	29.5	44.2	1.72
Trichlorofluoromethane	ug/L	<1	<1	<1	0.515 J	<1
Vinyl acetate	ug/L	--	--	--	--	--
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-4
ANALYTICAL RESULTS , VOCs - JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Well ID / Field Sample ID / Lab Sample ID / Date Collected	units	MW-49 MW-49-LQ-4 L0707151-01 7/9/2007	MW-49 DUP MW-49 DUP-LQ-4 L0707157-017 7/9/2007	MW-197A MW-197A-LQ-4 L0707157-001 7/9/2007	MW-197A DUP MW-197A DUP-LQ-4 L0707157-009 7/9/2007	MW-197B MW-197B-LQ-4 L0707157-002 7/9/2007
1,1,1,2-Tetrachloroethane		ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
1,1,1-Trichloroethane		ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
1,1,2-Trichloroethane		ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane		ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene		ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene		ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane		ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane		ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane		ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane		ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,2-Dichloropropane		ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene		ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane		ug/L	<0 4	<0 4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene		ug/L	<0 5	<0 5	<0 5	<0 5	<0 5
1-Chlorohexane		ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane		ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene		ug/L	<1	<1	<1	<1	<1
2-Hexanone		ug/L	–	–	–	–	–
4-Chlorotoluene		ug/L	<1	<1	<1	<1	<1
Acetone		ug/L	<10	<10	<10	<10	<10
Benzene		ug/L	<0.4	<0.4	<0 4	<0 4	<0.4
Bromobenzene		ug/L	<1	<1	<1	<1	<1
Bromochloromethane		ug/L	<1	<1	<1	<1	<1
Bromodichloromethane		ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Bromoform		ug/L	<1	<1	<1	<1	<1
Bromomethane		ug/L	<3	<3	<3	<3	<3
Carbon disulfide		ug/L	–	–	–	–	–
Carbon tetrachloride		ug/L	<1	<1	<1	<1	<1
Chlorobenzene		ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Chloroethane		ug/L	<1	<1	<1	<1	<1
Chloroform		ug/L	<0.3	<0.3	0.208 J	0 198 J	<0 3
Chloromethane		ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		ug/L	<1	<1	0.419 J	0.449 J	5.29
cis-1,3-Dichloropropene		ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Dibromochloromethane		ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
Dibromomethane		ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane		ug/L	<1	<1	<1	<1	<1
Ethylbenzene		ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene		ug/L	<0.6	<0 6	<0.6	<0.6	<0 6
Isopropylbenzene		ug/L	<1	<1	<1	<1	<1
m-,p-Xylene		ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)		ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)		ug/L	<5	<5	<5	<5	<5
Methylene chloride		ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)		ug/L	<10	<10	<10	<10	<10
Naphthalene		ug/L	<1	<1	<1	<1	<1
n-Butylbenzene		ug/L	<1	<1	<1	<1	<1
n-Propylbenzene		ug/L	<1	<1	<1	<1	<1
o-Xylene		ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene		ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene		ug/L	<1	<1	<1	<1	<1
Styrene		ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene		ug/L	<1	<1	<1	<1	<1
Tetrachloroethene		ug/L	0.285 J	0.373 J	103	91.7	134
Toluene		ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		ug/L	<1	<1	<1	<1	<1
Trichloroethene		ug/L	<1	<1	2.31	2.14	10.2
Trichlorofluoromethane		ug/L	<1	<1	<1	<1	<1
Vinyl acetate		ug/L	–	–	–	–	–
Vinyl chloride		ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

1015369

APPENDIX C-4
ANALYTICAL RESULTS , VOCs - JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-198	MW-199A	MW-199B	MW-200	MW-202A
	Field Sample ID	MW-198-LQ-4	MW-199A-LQ4	MW-199B-LQ-4	MW-200-LQ-4	MW-202A-LQ-4
	Lab Sample ID	L0707205-09	L0707271-01	L0707239-001	L0707205-10	L0707239-002
	Date Collected	7/10/2007	7/12/2007	7/11/2007	7/10/2007	7/11/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	0 581 J	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0.5	<0 5	<0.5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	0.145 J	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	0.267 J	<1	1.05	<1	0.904 J
Chlorobenzene	ug/L	<0 5	<0.5	<0 5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	0 132 J	0 279 J	<0.3	0.249 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	0.543 J	0 251 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0 5	<0.5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	1 6 J	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	0.361 J	0 517 J	62 9	0 371 J
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	15.1	<1	136	7 49	2 22
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

< Not detected above Reporting Limit (RL)
J. Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-4
ANALYTICAL RESULTS , VOCs - JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-202B	MW-203A	MW-203B	MW-204A	MW-204B
	Field Sample ID	MW-202B-LQ-4	MW-203A-LQ-4	MW-203B-LQ-4	MW-204A-LQ-4	MW-204B-LQ-4
	Lab Sample ID	L0707239-005	L0707157-003	L0707157-006	L0707205-01	L0707239-006
	Date Collected	7/11/2007	7/9/2007	7/9/2007	7/10/2007	7/11/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	1.38
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	0.156 J	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0.5	<0 5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0 5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	4.42 B	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0.4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	1.05	<0.3	<0.3	<0.3	0.125 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	63.5	0 785 J	0 916 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0.6	<0.6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	0 53 J	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	8.16	69.1 J	21.1	36 2	17.2
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2.2	1.46	7 68	1.17	4.88
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<. Not detected above Reporting Limit (RL)
J. Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

1015371

APPENDIX C-4
ANALYTICAL RESULTS , VOCs - JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-205A	MW-205B	MW-206A	MW-206B	MW-207A
	Field Sample ID	MW-205A-LQ-4	MW-205B-LQ-4	MW-206A-LQ-4	MW-206B-LQ-4	MW-207A-LQ-4
	Lab Sample ID	L0707205-02	L0707205-03	L0707239-003	L0707239-004	L0707205-04
	Date Collected	7/10/2007	7/10/2007	7/11/2007	7/11/2007	7/10/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	0.324 J
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0.4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	--	--	--	--	--
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0 4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0 5	<0.5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	--	--	--	--	--
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0 5	<0.5	<0 5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.222 J	<0 3	<0.3	0.14 J	9 99
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0 465 J	0 616 J	0.765 J	0 722 J	0 387 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0.6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	0.965 J
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	180	149	99.2	77.5	8.32
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	5 84	9.22	10.1	11	18.6
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	--	--	--	--	--
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-4
ANALYTICAL RESULTS , VOCs - JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-207B	MW-208A	MW-208B	MW-209A	MW-209A DUP
	Field Sample ID	MW-207B-LQ-4	MW-208A-LQ-4	MW-208B-LQ-4	MW-209A-LQ-4	MW-209A DUP-LQ-4
	Lab Sample ID	L0707239-007	L0707205-05	L0707239-008	L0707205-06	L0707205-08
	Date Collected	7/11/2007	7/10/2007	7/11/2007	7/10/2007	7/10/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	0.542	<0.5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	2.02	<0.5	<0 5	<0.5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0 5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	1.91	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	2.54	0.228 J	0 131 J	0 165 J	0.16 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	0 541 J	1.3	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0.6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	2 02 J	1.98 J
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	32.5	193	2.8	<1	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	17.6	8.26	15.7	0 487 J	0 518 J
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

1015373

APPENDIX C-4
ANALYTICAL RESULTS , VOCs - JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-209B	MW-210A	MW-210B	MW-211	MW-212
	Field Sample ID	MW-209B-LQ-4	MW-210A-LQ-4	MW-210B-LQ-4	MW-211-LQ-4	MW-212-LQ-4
	Lab Sample ID	L0707239-009	L0707157-007	L0707157-008	L0707205-07	L0707157-011
	Date Collected	7/11/2007	7/9/2007	7/9/2007	7/10/2007	7/9/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0 5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0 4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	0.283 J	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	0 962 J	<1	<1	<1	0.479 J
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.56	0.199 J	<0.3	<0.3	0.135 J
Chloromethane	ug/L	<1	<1	<1	0.279 J	<1
cis-1,2-Dichloroethene	ug/L	<1	0.813 J	0.57 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	36.1	24.4	<1	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	7.2	6.05	8.42	0 576 J	47.9
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-4
ANALYTICAL RESULTS , VOCs - JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-214A	MW-214A DUP	MW-214B	MW-215A	MW-215B
	Field Sample ID	MW-214A-LQ-4	MW-214A DUP-LQ-4	MW-214B-LQ-4	MW-215A-LQ-4	MW-215B-LQ-4
	Lab Sample ID	L0707205-11	L0707205-15	L0707239-010	L0707205-12	L0707157-012
	Date Collected	7/10/2007	7/10/2007	7/11/2007	7/10/2007	7/9/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	0 321 J	0 281 J	0.321 J	0 242 J	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	–	–	–	–	–
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3	<3
Carbon disulfide	ug/L	–	–	–	–	–
Carbon tetrachloride	ug/L	0.476 J	0.452 J	1 05	0.538 J	1.01
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	2 32	2 29	1.85	1.67	0.71
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<0 5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	2 47 J	2.45 J	1.79 J	2.09 J	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	6.81	6.62	6	5.58	4.39
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	4 49	4.41	3.83	8.12	1.53
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	–	–	–	–	–
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J. Estimated result based on QC data or reported below RL
B· Estimated result possibly biased high or false positive based on blank data

1015375

APPENDIX C-4
ANALYTICAL RESULTS , VOCs - JULY 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-216	MW-217	MW-218	MW-219
	Field Sample ID	MW-216-LQ-4	MW-217-LQ-4	MW-218-LQ-4	MW-219-LQ-4
	Lab Sample ID	L0707205-13	L0707157-013	L0707157-016	L0707205-14
	Date Collected	7/10/2007	7/9/2007	7/9/2007	7/10/2007
Analyte	units				
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	0 612 J	1.72	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	0 652 J	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	0.565	1.31
1,2-Dichloropropane	ug/L	<1	<1	0 362 J	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0.4	<0 4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1
2-Hexanone	ug/L	--	--	--	--
4-Chlorotoluene	ug/L	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0.4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1
Bromomethane	ug/L	<3	<3	<3	<3
Carbon disulfide	ug/L	--	--	--	--
Carbon tetrachloride	ug/L	<1	42.3 J	13.3	<1
Chlorobenzene	ug/L	<0 5	<0.5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1
Chloroform	ug/L	0.169 J	5.33	2 79	<0.3
Chloromethane	ug/L	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	1.45	0.468 J	1.06
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	25 4 J	16.7	27.6
Toluene	ug/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1
Trichloroethene	ug/L	<1	40 6 J	47.6	2.79
Trichlorofluoromethane	ug/L	<1	0.308 J	0 6 J	<1
Vinyl acetate	ug/L	--	--	--	--
Vinyl chloride	ug/L	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-1	DR1-1A	DR1-2	DR1-4	DR1-5
	Field Sample ID	DR1-1-LA-5	DR1-1A-LA-5	DR1-2-LA-5	DR1-4-LA-5	DR1-5-LA-5
	Lab Sample ID	L0710045-01	L0710045-02	L0710045-03	L0710045-04	L0710045-05
	Date Collected	10/1/2007	10/1/2007	10/1/2007	10/1/2007	10/1/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	0.307	<0.3	<0.3	0.148 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.969 J	0.312 J	0.48 J	5.29	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	2.49	0.813 J	1.52	<1	69.9
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	3.61	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

1015377

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR1-5A	DR1-6	DR1-6A	DR1-7	DR1-8
	Field Sample ID	DR1-5A-LA-5	DR1-6-LA-5	DR1-6A-LA-5	DR1-7-LA-5	DR1-8-LA-5
	Lab Sample ID	L0710045-06	L0710045-07	L0710045-10	L0710045-11	L0710045-12
	Date Collected	10/1/2007	10/1/2007	10/1/2007	10/1/2007	10/1/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0.5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0.5	<0 5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0 4	<0 4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 252 J	<0.3	0.183 J	<0.3	<0 3
Chloromethane	ug/L	<1	0 319 B	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	3 16	1 42	4 24	0.344 J	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0.5	<0 5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	28 4	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	46 8	191 J	30 2	5.15	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	78.6	1.58	107	0 812 J	0.341 J
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

< Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	DR2-2	DR2-2 DUP	DR2-3	DR2-4	DR2-6
	Field Sample ID	DR2-2-LA-5	DR2-2 DUP-LA-5	DR2-3-LA-5	DR2-4-LA-5	DR2-6-LA-5
	Lab Sample ID	L0710045-15	L0710045-19	L0710045-16	L0710045-17	L0710045-18
	Date Collected	10/1/2007	10/1/2007	10/1/2007	10/1/2007	10/1/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0.5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	78
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	0 246 J
1,2-Dichloroethane	ug/L	<0.5	<0 5	<0 5	<0.5	1 27
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	0 666 J
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0.4	<0.4	<0 4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	2 81 J	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	10.8	11.3	4.12	3.96	82.8
Chlorobenzene	ug/L	<0.5	<0 5	<0 5	<0.5	0 169 J
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	2.86	3 16	0.76	0 973	43 1
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	5.7	5.51	0.549 J	<1	31.6
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	76 7	90.6	20.6	9.28	115
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	4 04	4 31	2.15	1.54	19.7
Trichlorofluoromethane	ug/L	<1	<1	<1	0.383 J	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-25A	MW-26	MW-34	MW-38	MW-38 DUP
	Field Sample ID	MW-25A-LA-5	MW-26-LA-5	MW-34-LA-5	MW-38-LA-5	MW-38 DUP-LA-5
	Lab Sample ID	L0710147-21	L0710045-14	L0710045-20	L0710045-21	L0710045-29
	Date Collected	10/3/2007	10/1/2007	10/1/2007	10/1/2007	10/1/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0.4	<0 4	<0 4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	3.16 J	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0 4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	2.38	6.52	1 05	1 37	1.05
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.531	1.29	0.434	0.646	0.528
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	0 41 J	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0 6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	9.24	29	0.753 J	0.446 J	0.542 J
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0.433 J	1 75	1.38	4.37	3.84
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<, Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B· Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-39	MW-39A	MW-52	MW-62	MW-63A
	Field Sample ID	MW-39-LA-5	MW-39A-LA-5	MW-52-LA-5	MW-62-LA-5	MW-63A-LA-5
	Lab Sample ID	L0710045-22	L0710076-06	L0710147-22	L0710147-23	L0710076-01
	Date Collected	10/1/2007	10/2/2007	10/3/2007	10/3/2007	10/2/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0.4	<0 4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	4.13 J	3 42 J	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	0.744 J	<1
Chlorobenzene	ug/L	<0 5	<0.5	<0 5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 225 J	0 215 J	0.75	0.476	<0 3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0 435 J	0 362 J	0.993 J	0.33 J	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	0.532 J
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	111	162	9.62	0 8 J	1 23
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	8.81	4.4	1.17	184	1 09
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-63B	MW-64	MW-86	MW-88	MW-89
	Field Sample ID	MW-63B-LA-5	MW-64-LA-5	MW-86-LA-5	MW-88-LA-5	MW-89-LA-5
	Lab Sample ID	L0710076-02	L0710147-26	L0710180-05	L0710180-06	L0710045-23
	Date Collected	10/2/2007	10/3/2007	10/4/2007	10/4/2007	10/1/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	1 11	<0.5	<0.5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	0 433 J	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	1.83	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	0 148 J	<1	<1
1,2-Dichloroethane	ug/L	<0 5	3.19	0.766	<0.5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	1.58	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	1.27	<0.4	<0 4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0 5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	2 86 J	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	2.82	<1	4.83	0.56 J
Chlorobenzene	ug/L	<0.5	<0 5	0 126 J	<0 5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	1.44	0 891	0.341	0.827	0.224 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	0.363 J	117	0.751 J	0 279 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	2.95	17.1	5.14	21.3	0 644 J
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	2 1	30 2	1.79	3 42	1 55
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J Estimated result based on QC data or reported below RL
B. Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-89 DUP	MW-90	MW-92	MW-93	MW-94A
	Field Sample ID	MW-89 DUP-LA-5	MW-90-LA-5	MW-92-LA-5	MW-93-LA-5	MW-94A-LA-5
	Lab Sample ID	L0710045-30	L0710045-24	L0710180-07	L0710180-01	L0710180-02
	Date Collected	10/1/2007	10/1/2007	10/4/2007	10/4/2007	10/4/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	0 238 J
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	0.762 J	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	0.579 J	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0 5	<0.5	<0 5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0 4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	4.19 J	<10	<10
Benzene	ug/L	<0.4	<0 4	<0.4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	0 582 J	0.462 J	6 45	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 205 J	3.64	11	<0 3	0.129 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.294 J	0 36 J	67.5	<1	0 61 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
Dibromochloromethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	7.65 J	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	0.619 J	50.7	55	<1	43.5
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	1.62	3.69	3.12	<1	7.44
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

< Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

1015383

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-96	MW-97	MW-98	MW-99	MW-99 DUP
	Field Sample ID	MW-96-LA-5	MW-97-LA-5	MW-98-LA-5	MW-99-LA-5	MW-99 DUP-LA-5
	Lab Sample ID	L0710180-08	L0710076-15	L0710147-01	L0710147-11	L0710147-19
	Date Collected	10/4/2007	10/2/2007	10/3/2007	10/3/2007	10/3/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0.4	<0 4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	3 4	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.739	0.255 J	<0 3	0.2 J	0.237 J
Chloromethane	ug/L	<1	0 265 J	0 33 J	<1	<1
cis-1,2-Dichloroethene	ug/L	0 836 J	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
Dibromochloromethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0.6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	4 33	<1	36 9	<1	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	25.7	2 69	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J Estimated result based on QC data or reported below RL
B· Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-100B	MW-102B	MW-103	MW-104	MW-107B
	Field Sample ID	MW-100B-LA-5	MW-102B-LA-5	MW-103-LA-5	MW-104-LA-5	MW-107B-LA-5
	Lab Sample ID	L0710076-16	L0710147-12	L0710180-03	L0710180-04	L0710076-07
	Date Collected	10/2/2007	10/3/2007	10/4/2007	10/4/2007	10/2/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	2 3	0.894 J	<1
1,1-Dichloroethene	ug/L	<1	<1	1 94	1.98	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	0.415 J
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.3	<0.3	11.7	12 8	<0 3
Chloromethane	ug/L	0.263 J	<1	<1	0 25 J	<1
cis-1,2-Dichloroethene	ug/L	143	<1	0.35 J	0.554 J	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	36.1	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	29.6	0.308 J	<1	<1	0.476 J
Toluene	ug/L	0 515 J	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	0 605 J	<1	<1	<1	<1.
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	12.6	<1	6 63	17.8	0 95 J
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	1.02	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

1015385

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-108	MW-113	MW-125	MW-140	MW-141
	Field Sample ID	MW-108-LA-5	MW-113-LA-5	MW-125-LA-5	MW-140-LA-5	MW-141-LA-5
	Lab Sample ID	L0710045-25	L0710180-09	L0710076-17	L0710076-08	L0710076-09
	Date Collected	10/1/2007	10/4/2007	10/2/2007	10/2/2007	10/2/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	0.351 J	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	0.657 J	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	13.5	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	0 139 J	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	0.661	0.342 J	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	0.552 J	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0 4	<0 4	<0.4	<0 4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	0 461 J	96 9	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0 5	<0 5	<0.5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	12.1	36 4	<0.3	0 16 J	2.09
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.71 J	50 2	26 3	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0 5	<0.5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	19.2	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	5 03	151	48.3	0 59 J	18
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	38 4 J	26	16	1 19	2.52
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<, Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-142	MW-197A	MW-197A DUP	MW-197B	MW-198
	Field Sample ID	MW-142-LA-5	MW-197A-LA-5	MW-197A DUP-LA-5	MW-197B-LA-5	MW-198-LA-5
	Lab Sample ID	L0710147-13	L0710147-02	L0710147-09	L0710147-03	L0710076-18
	Date Collected	10/3/2007	10/3/2007	10/3/2007	10/3/2007	10/2/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0 4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0.4	<0.4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	0 438 J
Chlorobenzene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0 3	0.179 J	0.177 J	0.166 J	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	0.445 J	0 477 J	10 7	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	3.26 J	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	87.3	87.1	105 J	<1
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	0.709 J	2.42	2 47	10 3	6 53
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

1015387

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-199A	MW-199B	MW-200	MW-202A	MW-202B
	Field Sample ID	MW-199A-LA-5	MW-199B-LA-5	MW-200-LA-5	MW-202A-LA-5	MW-202B-LA-5
	Lab Sample ID	L0710076-10	L0710076-11	L0710147-14	L0710045-28	L0710076-12
	Date Collected	10/2/2007	10/2/2007	10/3/2007	10/1/2007	10/2/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0 5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0 4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0.5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0.4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	0 376 J	<1	0 552 J	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	<0 3	0.146 J	<0.3	0.238 J	0.907
Chloromethane	ug/L	<1	<1	0.311 J	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	0 419 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	1.55 J	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	0.393 J	73.9	0 672 J	3.82
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	78 6	6.88	1.66	1.36
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-202B DUP	MW-203A	MW-203B	MW-204A	MW-204B
	Field Sample ID	MW-202B DUP-LA-5	MW-203A-LA-5	MW-203B-LA-5	MW-204A-LA-5	MW-204B-LA-5
	Lab Sample ID	L0710076-14	L0710147-04	L0710147-05	L0710076-20	L0710076-21
	Date Collected	10/2/2007	10/3/2007	10/3/2007	10/2/2007	10/2/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0 5	<0.5	1 36
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0 4	<0 4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0 5	<0 5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	3.77 J	<10	<10	<10
Benzene	ug/L	<0 4	<0.4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0 5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 924	0.128 J	<0 3	<0.3	<0.3
Chloromethane	ug/L	0.361 J	<1	<1	<1	0.274 J
cis-1,2-Dichloroethene	ug/L	<1	0 294 J	55	0 846 J	1.05
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0 5	<0.5	<0 5
Dibromochloromethane	ug/L	<0.5	<0 5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	3.79	86.8	13.9	37	19
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	1.28	1.69	7.92	1.06	4 7
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

1025369

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-205A	MW-205A DUP	MW-205B	MW-206A	MW-206B
	Field Sample ID	MW-205A-LA-5	MW-205A DUP-LA-5	MW-205B-LA-5	MW-206A-LA-5	MW-206B-LA-5
	Lab Sample ID	L0710147-06	L0710147-10	L0710180-13	L0710147-15	L0710147-16
	Date Collected	10/3/2007	10/3/2007	10/4/2007	10/3/2007	10/3/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0.5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0 5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	2.79 J	<10
Benzene	ug/L	<0 4	<0.4	<0.4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.185 J	0.195 J	0 15 J	0.166 J	0 148 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.538 J	0.506 J	4.41	0.762 J	0.698 J
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0 6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	145	143	100	76 4	64 9
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	6.25	6 2	8 74	12.4	11
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-207A	MW-207B	MW-208A	MW-208B	MW-209A
	Field Sample ID	MW-207A-LA-5	MW-207B-LA-5	MW-208A-LA-5	MW-208B-LA-5	MW-209A-LA-5
	Lab Sample ID	L0710147-07	L0710147-08	L0710180-14	L0710180-15	L0710180-18
	Date Collected	10/3/2007	10/3/2007	10/4/2007	10/4/2007	10/4/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0 5	0.344 J	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	0.27 J	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	0.888	<0 5	<0 5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0.5	<0.5	<0.5	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0.4	<0.4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	1.37	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	8.28	1.9	0 214 J	<0.3	<0.3
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	0.479 J	<1	0.557 J	1.08	0 727 J
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0 5	<0 5	<0.5
Dibromochloromethane	ug/L	<0.5	<0 5	<0 5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0.6	<0 6	<0.6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	0 342 J	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	10.3	23.7	163	3.02	28 8
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	21 6	62	8 44	15	5 63
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

< Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

1015391

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-209B	MW-210A	MW-210B	MW-211	MW-212
	Field Sample ID	MW-209B-LA-5	MW-210A-LA-5	MW-210B-LA-5	MW-211-LA-5	MW-212-LA-5
	Lab Sample ID	L0711117-03	L0710180-19	L0711117-04	L0710076-13	L0710147-27
	Date Collected	10/5/2007	10/4/2007	10/5/2007	10/2/2007	10/3/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0 5	<0 5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0 5	<0 5	<0.5	<0 5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0 5	<0.5	<0.5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	<10
Benzene	ug/L	<0.4	<0 4	<0 4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	1 86	<1	<1	<1	0 568 J
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0 215 J	0.136 J	0.143 J	<0.3	0.13 J
Chloromethane	ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	0 433 J	<1	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0 5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0 5	<0.5	<0.5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0 6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	1.89 J	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	21	<1	0.516 J
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	14.8	0.404 J	10.7	0 436 J	41.7
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<. Not detected above Reporting Limit (RL)
J· Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-214A	MW-214A DUP	MW-214B	MW-215A	MW-215B
	Field Sample ID	MW-214A-LA-5	MW-214A DUP-LA-5	MW-214B-LA-5	MW-215A-LA-5	MW-215B-LA-5
	Lab Sample ID	L0710147-28	L0710147-30	L0710147-29	L0710180-10	L0710180-11
	Date Collected	10/3/2007	10/3/2007	10/3/2007	10/4/2007	10/4/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	0.316 J	0 382 J	0.394 J	<0.5	<0 5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0 4	<0 4	<0 4	<0.4
1,4-Dichlorobenzene	ug/L	<0 5	<0 5	<0 5	<0 5	<0 5
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	4.96 J	4.53 J	4.24 J	<10	<10
Benzene	ug/L	<0 4	<0 4	<0 4	<0 4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	0.725 J	0 774 J	0 76 J	0.671 J	0.894 J
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	2.26	2 37	1.47	1.76	0 651
Chloromethane	ug/L	<1	<1	<1	0.271 J	<1
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<0.5	<0.5	<0.5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0.6	<0.6	<0 6	<0.6	<0.6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	1.94 J	2 17 J	1.28 J	1.99 J	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	6.99	6 9	4.89	6.95	4.49
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	4.11	4.03	3.06	7.79	1.47
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	MW-216	MW-217	MW-218	MW-219	PZ-03
	Field Sample ID	MW-216-LA-5	MW-217-LA-5	MW-218-LA-5	MW-219-LA-5	PZ-03-LA-5
	Lab Sample ID	L0710076-22	L0710076-03	L0710076-04	L0710147-17	L0711117-01
	Date Collected	10/2/2007	10/2/2007	10/2/2007	10/3/2007	10/5/2007
Analyte	units					
1,1,1,2-Tetrachloroethane	ug/L	<0.5	<0 5	<0 5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	0 547	1.56	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	0 651 J	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	0.731 J	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	0.342 J	0.542	1.02	<0 5
1,2-Dichloropropane	ug/L	<1	<1	0 355 J	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0 4	<0.4	<0 4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	0 413 J
1-Chlorohexane	ug/L	<1	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	<10	<10
4-Chlorotoluene	ug/L	<1	<1	<1	<1	<1
Acetone	ug/L	<10	<10	<10	<10	4.56 J
Benzene	ug/L	<0.4	<0 4	<0.4	<0.4	<0 4
Bromobenzene	ug/L	<1	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0 5	<0 5	<0.5	<0.5
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	53 4	17 6	<1	<1
Chlorobenzene	ug/L	<0.5	<0 5	<0 5	<0 5	<0 5
Chloroethane	ug/L	<1	<1	<1	<1	<1
Chloroform	ug/L	0.183 J	5.18	2 45	<0 3	0 139 J
Chloromethane	ug/L	0.266 J	<1	<1	<1	<1
cis-1,2-Dichloroethene	ug/L	<1	1.89	0 508 J	1 01	<1
cis-1,3-Dichloropropene	ug/L	<0 5	<0.5	<0.5	<0.5	<0 5
Dibromochloromethane	ug/L	<0 5	<0.5	<0.5	<0 5	<0 5
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0 6	<0 6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	<10	<10
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	<5	<5
Methylene chloride	ug/L	<1	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	31.3	18 5	33 9	0.523 J
Toluene	ug/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1	<1
Trichloroethene	ug/L	<1	39 4	42 8	3 37	0 321 J
Trichlorofluoromethane	ug/L	<1	0.319 J	0.617 J	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1

<: Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX C-5
ANALYTICAL RESULTS , VOCs - OCTOBER 2007
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Well ID	PZ-03 DUP	PZ-06	MW-229	IW-06
	Field Sample ID	PZ-03 DUP-LA-5	PZ-06-LA-5	MW-229-LA5	IW-06-LA-5
	Lab Sample ID	L0711117-05	L0711117-02	L0710208-01	L0710076-19
	Date Collected	10/5/2007	10/5/2007	10/5/2007	10/2/2007
Analyte	units				
1,1,1,2-Tetrachloroethane	ug/L	<0 5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	<1	<1	<1	<1
1,1-Dichloroethane	ug/L	<1	<1	<1	<1
1,1-Dichloroethene	ug/L	<1	<1	<1	<1
1,1-Dichloropropene	ug/L	<1	<1	<1	<1
1,2,3-Trichlorobenzene	ug/L	<1	<1	<1	<1
1,2,3-Trichloropropane	ug/L	<1	<1	<1	<1
1,2,4-Trichlorobenzene	ug/L	<1	<1	<1	<1
1,2,4-Trimethylbenzene	ug/L	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	ug/L	<2	<2	<2	<2
1,2-Dibromoethane	ug/L	<1	<1	<1	<1
1,2-Dichlorobenzene	ug/L	<1	<1	<1	<1
1,2-Dichloroethane	ug/L	<0.5	<0 5	<0.5	<0.5
1,2-Dichloropropane	ug/L	<1	<1	<1	<1
1,3,5-Trimethylbenzene	ug/L	<1	<1	<1	<1
1,3-Dichlorobenzene	ug/L	<1	<1	<1	<1
1,3-Dichloropropane	ug/L	<0.4	<0.4	<0.4	<0.4
1,4-Dichlorobenzene	ug/L	<0.5	<0.5	0.162 J	<0.5
1-Chlorohexane	ug/L	<1	<1	<1	<1
2,2-Dichloropropane	ug/L	<1	<1	<1	<1
2-Chlorotoluene	ug/L	<1	<1	<1	<1
2-Hexanone	ug/L	<10	<10	<10	466 J
4-Chlorotoluene	ug/L	<1	<1	<1	<1
Acetone	ug/L	<10	<10	3.26 J	1550 B
Benzene	ug/L	<0 4	<0.4	<0 4	0 169 J
Bromobenzene	ug/L	<1	<1	<1	<1
Bromochloromethane	ug/L	<1	<1	<1	<1
Bromodichloromethane	ug/L	<0 5	<0.5	<0 5	<0 5
Bromoform	ug/L	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1
Carbon disulfide	ug/L	<1	<1	0.575 J	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5
Chloroethane	ug/L	<1	<1	<1	<1
Chloroform	ug/L	<0.3	<0.3	<0.3	<0.3
Chloromethane	ug/L	<1	<1	<1	0.739 J
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	2.16
cis-1,3-Dichloropropene	ug/L	<0.5	<0.5	<0 5	<0 5
Dibromochloromethane	ug/L	<0.5	<0 5	<0 5	<0.5
Dibromomethane	ug/L	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1
Hexachlorobutadiene	ug/L	<0 6	<0 6	<0.6	<0 6
Isopropylbenzene	ug/L	<1	<1	<1	<1
m-,p-Xylene	ug/L	<2	<2	<2	<2
MEK (2-Butanone)	ug/L	<10	<10	<10	1380
Methyl t-butyl ether (MTBE)	ug/L	<5	<5	<5	27 8
Methylene chloride	ug/L	<1	<1	<1	<1
MIBK (methyl isobutyl ketone)	ug/L	<10	<10	<10	<10
Naphthalene	ug/L	<1	<1	<1	<1
n-Butylbenzene	ug/L	<1	<1	<1	<1
n-Propylbenzene	ug/L	<1	<1	<1	<1
o-Xylene	ug/L	<1	<1	<1	<1
p-Isopropyltoluene	ug/L	<1	<1	<1	<1
sec-Butylbenzene	ug/L	<1	<1	<1	<1
Styrene	ug/L	<1	<1	<1	<1
tert-Butylbenzene	ug/L	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1
Toluene	ug/L	0.998 J	0.864 J	2.37	<1
trans-1,2-Dichloroethene	ug/L	<1	<1	<1	<1
trans-1,3-Dichloropropene	ug/L	<1	<1	<1	<1
Trichloroethene	ug/L	<1	<1	<1	1.38
Trichlorofluoromethane	ug/L	<1	<1	<1	<1
Vinyl acetate	ug/L	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1

<, Not detected above Reporting Limit (RL)
J: Estimated result based on QC data or reported below RL
B: Estimated result possibly biased high or false positive based on blank data

APPENDIX D

DATA QUALITY EVALUATION

DATA QUALITY EVALUATION

Long-Term Monitoring (LTM) at the Main Installation was conducted by HDR|e²M during five quarterly events from October 2006 through October 2007. Wells were selected for sampling in accordance with the LTM Plan in Appendix B of the *Main Installation Final Remedial Design, Rev.1* (RD) (CH2M HILL, 2004). Groundwater samples were submitted to Kemron Environmental Services, Inc. (KES) 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 five LTM events from October 2006 through October 2007. The LTM well locations are provided in Figure 2 of this 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. 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 bottles met EPA requirements for environmentally clean containers. Sample labels were pre-printed and chain-of-custody forms were created by scanning the labels electronically (using a personal data assistant or PDA) to facilitate sample tracking from the field through the laboratory to the final laboratory report. 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 for were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) by method 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, laboratory 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

DQE was completed on the data reported for the LTM sampling events from October 2006 through October 2007. The objective was to review the chemical data reports submitted by the laboratory and to assess the data in relation to the DQOs 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 and Precision (Surrogates, Matrix Spike/Matrix Spike Duplicate, 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 in this appendix. The SDGs and associated groundwater samples are listed on Table D-1.

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). The precision goals were determined to be acceptable. Complete discussion of the duplicates is provided in the attached DQE narratives.

Accuracy

Accuracy 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).

In the October 2006 event, acetone was out high in the LCS associated with several samples; these are qualified as estimated J. Since this is an indication of possible high bias, no qualifiers are added to non-detect results. The MS/MSD associated with one sample in October 2006 indicated an elevated TCE recovery and in October 2007 indicated a low TCE recovery. The results were qualified as estimated J, but it is not likely that this represents a significant matrix bias.

Complete 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.

Trip blanks, field blanks, and some method blanks contained VOCs that resulted in the qualification of data as possible false positives or biased high values based on the blank data. This resulted in the "B"

1015399

qualification of some of the acetone,and methylene chloride results in the water samples. The "B"-qualified data were reported at levels below MCLs or reporting limits and therefore should not adversely impact.

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 stated in the DDMT RA SAP for DDMT is 90%. Total analytical completeness for each of the LTM groundwater sampling events was over 99 percent, which meets the completeness DQO stated in the RA SAP.

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. 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). 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.

Biennial Event – October 2006

A total of 73 groundwater samples were collected from the 72 LTM wells in October 2006. Well MW-107 has two screened intervals, and groundwater samples were collected from both intervals. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- Acetone, 2-butanone, and 4-methyl-2-pentanone (MIBK) are the only compounds for which any calibration response factor deficiencies have been observed. Since these are typically "poor responders", all samples associated with response factors less than 0.01 in the initial calibration are qualified as follows: when the affected target is detected, the result is qualified estimated as J. J-qualified results are usable as estimates with a possible bias.
- The same compounds showed low responses in the continuing calibration as were observed in the initial calibrations. Qualifiers are not added for these outliers where the targets are already qualified from the initial calibration.
- The MS/MSD associated with MW-62-LB-1 (SDG L0110119), indicated an elevated TCE recovery and the sample result is 77 ug/L, which is 3.9 times higher than the spike level. The result is qualified as estimated J, but it is not likely that this represents a significant matrix bias.
- Methylene chloride was observed in several method blanks. The detections in associated samples were less than 10x the method blank (corrected for dilution), therefore the results were qualified as UB and are usable as non-detects.
- There were a number of elevated LCS recoveries for acetone. When the high recovery was associated with a non-detect in samples, no qualifier was added. In samples where the target is detected, the result is qualified as estimated J,

Quarterly Event – January 2007

A total of 8 groundwater samples were collected from 8 LTM wells in January 2007. Samples were analyzed for TCL VOCs The data are usable with no qualifications necessary.

Semi-Annual Event – April 2007

A total of 64 groundwater samples were collected from the 64 LTM wells in April 2007. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- Toluene was observed in one method blank. The detections in associated samples were less than 5x the method blank, therefore the results were qualified as UB and are usable as non-detects. The "B"-qualified data were reported at levels below the reporting limit and, therefore, should not adversely impact data quality.

1015401

Quarterly Event – July 2007

A total of 34 groundwater samples were collected from the 35 LTM wells in July 2007. One well (MW-213) was dry at the time of sampling. Samples were analyzed for TCL VOCs. The data are usable with qualifications as described below:

- Acetone was observed in one method blank. Whenever acetone is detected in associated samples at a level less than 10x the method blank, the result is qualified as UB and are usable as non-detects.

Annual Event – October 2007

A total of 85 groundwater samples were collected from 87 LTM wells in October 2007. Well MW-213 was dry and a sample could not be collected. Piezometer PZ-07 was blocked and a sample could not be collected. 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.
- The MS/MSD associated with MW-108-LA-5 (SDG L0710045), indicated a low TCE recovery. The result is qualified as estimated J for low bias.
- Acetone and chloromethane was observed in two trip blanks. Whenever acetone is detected in associated samples at a level less than 10x the method blank (corrected for dilution), the result is qualified as UB, Since chloromethane was detected below the reporting limit, it was also qualified as UB. Such results are usable as non-detects.

SUMMARY

The sample data collected from October 2006 through October 2007 LTM sampling at the Main Installation met the data quality objectives and are of sufficient quality to support the evaluation of remedial actions.

TABLE D-1
SDG SUMMARY TABLE
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

SDG	Groundwater Samples			Quality Control Samples
Biennial Sampling Event - October 2006				
L0610051	MW-25A MW-52	MW-96 MW-125	DR1-1A	TB-100206 LTMDUP1 LTMDUP2
L0610052	MW-26 MW-142	MW-197B	MW-198	LTMDUP5 LTMDUP6
L0610100	MW-88	DR2-2	DR2-3	TB-100306 LTMDUP3 LTMDUP7
L0610102	MW-103	MW-104		
L0610119	MW-62			TB-100406 MW-62 MS MW-62 MSD
L0610121	PZ-06			
L0610186	DR2-4	PZ-07		
L0610187	MW-92	PZ-03		TB-100506
L0610474	MW-16 MW-34	MW-36	MW-55	TB-101606 MW-16 MS MW-16 MSD
L0610509	MW-19 MW-38 MW-39	MW-39A MW-53 MW-84	MW-107T MW-107B DR2-6	TB-101706 MW-107B MS MW-107B MSD
L0610601	MW-201 DR1-8	DR1-8	IW-6	IW-6 MS IW-6 MSD
L0610602	MW-22 MW-23	MW-24	MW-99	TB-101106 TB-101806
L0610603	MW-50	MW-66A	MW-93	MW-93 MS MW-93 MSD
L0610625	MW-143			
L0610627	MW-102B			
L0610708	DR1-2 DR1-5	DR1-6	DR1-6A	
L0610709	MW-89 MW-90	MW-94A MW-108	MW-197A MW-202B	TB-102406 MW-202B MS MW-202B MSD
L0610710	MW-140 MW-141	MW-199A MW-199B	MW-202A	TB-102306 MW-199B MS MW-199B MSD
L0610711	MW-63A MW-63B MW-64	MW-100B MW-113	DR1-1 DR1-5A	
L0610761	MW-86	MW-98	MW-200A	TB-100906
L0610762	MW-97	DR1-4	DR1-7	
Quarterly Monitoring Event - January 2007				
L0701585	MW-197A MW-199A	MW-202A	MW-202B	TB-012208
L0701586	MW-197B MW-198	MW-199B	MW-200	MW-198 MS MW-198 MSD

1015403

TABLE D-1
SDG SUMMARY TABLE
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

SDG	Groundwater Samples			Quality Control Samples
Semi-Annual Sampling Event - April 2007				
L0704355	DR1-1A DR1-4 DR1-5A DR1-6A DR1-6 DR2-2	MW-100B MW-104 MW-125 MW-197A MW-197B MW-199A	MW-199B MW-25A MW-39A MW-39 MW-88 MW-98	TB-041307
L0704380	DR1-5 MW-113 MW-214A MW-215A MW-215B	MW-26 MW-52 MW-86 MW-90	MW-92 MW-94A MW-96 MW-97	DUP1 DUP2 DUP3 DUP6 MW-215B MS MW-215B MSD
L0704381	DR2-3 DR2-6 MW-108 MW-198 MW-200	MW-202A MW-202B MW-206A MW-206B MW-207A	MW-207B MW-208A MW-208B MW-211	TB-041607 DUP 4 DUP 5 MW-202B MS MW-202B MSD MW-208A MS MW-208A MSD
L0704412	MW-141 MW-203A	MW-214B MW-218	MW-62 MW-64	TB-041707
L0704560	MW-204A MW-204B	MW-205A MW-205B	MW-209A MW-209B	TB-042307
L0704714	MW-203B MW-210A MW-210B	MW-212 MW-216	MW-217 MW-219	TB-042707
Quarterly Sampling Event - July 2007				
L0707157	MW-197A MW-197B MW-203A MW-203B	MW-210A MW-210B MW-212	MW-215B MW-217 MW-218	LTM-RB1 DUP 1 MW-203A MS MW-203A MSD MW-217 MS MW-217 MSD
L0707205	MW-198 MW-200 MW-204A MW-205A MW-205B	MW-207A MW-208A MW-209A MW-211 MW-214A	MW-215A MW-216 MW-219 MW-49	TB-071007 DUP-2 DUP-3 DUP-4
L0707239	MW-199B MW-202A MW-202B MW-204B	MW-206A MW-206B MW-207B	MW-208B MW-209B MW-214B	TB-071107
L0707271	MW-199A			TB-071207

TABLE D-1
SDG SUMMARY TABLE
ANNUAL LONG-TERM MONITORING REPORT - 2007
Main Installation - Defense Depot Memphis, Tennessee

SDG	Groundwater Samples			Quality Control Samples
Annual Sampling Event - October 2007				
L0710045	MW-26	DR1-1	DR1-7	TB-100107
	MW-34	DR1-1A	DR1-8	DUP1
	MW-38	DR1-2	DR2-2	DUP2
	MW-39	DR1-4	DR2-3	DUP6
	MW-89	DR1-5	DR2-4	MW-108 MS
	MW-90	DR1-5A	DR2-6	MW-108 MSD
	MW-108	DR1-6	MW-229	DR1-6 MS
	MW-202A	DR1-6A		DR1-6 MSD
L0710076	MW-39A	MW-140	MW-204A	TB-100207
	MW-63A	MW-141	MW-204B	DUP5
	MW-63B	MW-198	MW-211	
	MW-97	MW-199A	MW-216	
	MW-100B	MW-199B	MW-217	
	MW-107	MW-202B	MW-218	
	MW-125	IW-06		
L0710147	MW-25A	MW-197A	MW-206B	LTM-RB1
	MW-52	MW-197B	MW-207A	TB-100307
	MW-62	MW-200	MW-207B	DUP3
	MW-64	MW-203A	MW-212	DUP4
	MW-98	MW-203B	MW-214A	DUP8
	MW-99	MW-205A	MW-214B	DUP9
	MW-102B	MW-206A	MW-219	MW-62 MS
	MW-142			MW-62 MSD
L0710180	MW-86	MW-103	MW-208B	TB-100407
	MW-88	MW-104	MW-209A	MW-208B MS
	MW-92	MW-113	MW-210A	MW-208B MSD
	MW-93	MW-205B	MW-215A	
	MW-94A	MW-208A	MW-215B	
	MW-96			
L0711117	PZ-03	MW-209B	MW-210B	TB-100507
	PZ-06			DUP7
L0710695	MW-230			

1015405

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

8260B/5030B
SDG: L0610627, L0610708, L0610710, L0610711, L0610602, L0610762, L0610603, L0610709, L0610761, L0610187, L0610121, L0610186, L0610051, L0610119, L0610100, L0610102, L0610052, L0610625, L0610474, L0610509, L0610601

PROJECT: E2m, Memphis Defense Depot Long Term Monitoring

LABORATORY: Kemron Environmental Services, Marietta, OH

SAMPLE MATRIX: Water

SAMPLING DATE (Month/Year): October 2006

NO. OF SAMPLES: 8260B/5030B (Waters) – 91 samples (11 Trip blanks)

ANALYSES REQUESTED: SW-846 8260B

SAMPLE NO.: See attached result forms and associated edd

DATA REVIEWER: Sammy Huntington and John Huntington (Gateway Enterprises)

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

Telephone Logs included Yes____ No _X__

Contractual Violations Yes____ No _X___

The EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 1999, and the SW-846 Method 8260B has 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 is a Level III Report.

B. Chain of Custody Documentation was complete and accurate.
Yes _____ No _X__
The project manager is informed of the following and the chain information is to be updated for the project file.

None of the SDGs have a customary chain of custody. Those have a running list of samples with date and time collected with no relinquished and received areas at the bottom of each page. They do not have page numbers. Some of the time there is a typed area of the last page with the samplers name, date and time with a shaded area for the signature. The person receiving the samples must remember to write in their name and the sample receipt information as there is no area for that established. In addition, as indicated in the previous section, some sample names are truncated on the chain of custody, making them an unacceptable record for those samples.

Our understanding is that the chain of custody is an electronic sample documentation system. We would recommend developing an improved set of chain of custody documents to be generated from this system that provide a more clear hardcopy documentation of the electronic process, particularly once the samples are received at the laboratory. There needs to be signature lines for relinquished and received on all pages of the chain of custody and the pages need to be numbered and uniquely identified.

L0610051, L0610100, L0610102: Sample Checklist states that there were no custody seals on the coolers.

L0610052: Sample Checklist states that there were no custody seals on the coolers and NA to "were they intact".

C. Samples were received at the required temperature, preservation and intact with no bubbles.
Yes ___X___ No _____
Cooler temperature was in many cases below 2°C but narratives noted that all samples were received in good condition. When samples are below the lower EPA limit of 2° C, as long as there is no damage to the samples, no qualifier is required.

Sample Checklist states that all samples are preserved.

L0610051, L0610509, L0610052: The cooler temperature was 0°C but the Sample Checklist states that the samples weren't frozen.

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 >0.05.

Yes____ No _X_ NA____

Acetone, 2-butanone, and 4-methyl-2-pentanone (MIBK) are the only compounds for which any calibration response factor deficiencies have been observed. Per the project manager, the 2001 EPA CLP validation guidance has been applied to the common 'poor responders". They are the only compounds for which any calibration response factor deficiencies have been observed. See the table below for details. The validation guidance 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.

All samples associated with response factors less than 0.01 in the initial calibration are qualified as follows: When the affected target is detected, the result is qualified as JC#, where # is the low response. J-qualified results are usable as estimates with a possible bias.

It is worth noting that the low responses observed are between 0.037-0.05. Thus they are not as variable as is typically observed when response is low. 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. Because there is no generally applicable relationship between the magnitude of the response factor and the potential bias represented, the data have been qualified per guidance. If any of the compounds showing low response are of critical importance, further review of supporting data might provide a less coarse evaluation of the potential for false negatives.

SDG	ICAL Date	Lab Sample #	Analyte	RRF OUT	Qualifiers Added
L0610627	10/23/06 23:48	1	acetone	.040	
L0610708	10/30/06 17:15	1-4	acetone	.045	
			4-methyl-2-pentanone	.049	
L0610710	10/30/06 17:15	4	acetone	.045	
			4-methyl-2-pentanone	.049	
	10/23/06 23:48	1-3, 7,8	acetone	.040	
L0610711	10/30/06 17:15	7	acetone	.049	
	10/23/06 23:48	1-6	acetone	040	
L0610601	10/23/06 23:48	1,2,5	acetone	.040	JC0.04 detects
L0610602	10/23/06 23:48	1-6	acetone	.040	
L0610603	10/23/06 23:48	1-3	acetone	.040	
L0610709	10/20/06 16:29	3	acetone	.042	
	10/30/06 17:15	1,2,6-9	acetone	.049	
L0610187	9/26/06 17:01	1-3	acetone	.037	JC0.037 detects
			4-methyl-2-pentanone	.043	
L0610121	9/26/06 17:01	1	acetone	.037	JC0.037 detect
			4-methyl-2-pentanone	.043	
L0610186	9/26/06 17:01	1,2	acetone	.037	JC0.037 detects
			4-methyl-2-pentanone	.043	
L0610051	9/26/06 17:01	1-5, 9	acetone	.037	
			4-methyl-2-pentanone	.043	
	9/1/06 13:30	6-8	acetone	.042	
			2-butanone	.049	
			4-methyl-2-pentanone	.042	
L0610509	10/23/06 23:48	1,2,7-12 and 5-6 and 9	acetone	.040	

SDG	ICAL Date	Lab Sample #	Analyte	RRF OUT	Qualifiers Added
L0610119	9/26/06 17:01	1,2	acetone	.037	
			4-methyl-2-pentanone	.043	
L0610100	9/1/06 13:30	1-6	acetone	.042	
			2-butanone	.049	
			4-methyl-2-pentanone	.042	
L0610474	10/20/06 16:29	4,5	acetone	.042	
	9/1/06 13:30	6	acetone	.042	
			2-butanone	.049	
			4-methyl-2-pentanone	.042	
	10/23/06 23:48	1,7	acetone	.040	
L0610102	9/1/06 13:30	1,2	acetone	.042	
			2-butanone	.049	
			4-methyl-2-pentanone	.042	
L0610625	10/23/06 23:48	1	acetone	.040	
L0610052	9/1/06 13:30	1-6	acetone	.042	
			2-butanone	.049	
			4-methyl-2-pentanone	.042	
L0610761	ICAL OK				None
L0610762	ICAL OK				None

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 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 were met.
Yes_____ No __X__ NA____
The CCVs were analyzed at the proper frequency. The same compounds showed low responses in the continuing calibration as were observed in the initial calibrations. Qualifiers are not added for these outliers where the targets are already qualified from the initial calibration. Data have been qualified for CCV responses in the same manner as the ICAL. No data are qualified for %D as no quantitation has been performed (all data non-detect). Note that most LCS recoveries are acceptable or else biased high for these compounds indicating either acceptable quantitation or a high bias in the mid-range of concentration.

2. The percent difference (%D) limits of ± 25% were met.
Yes _____ No __X__ NA___
See the table 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. Data have been qualified from the response factors if noted and RFs are not noted if they are essentially the same as the ICAL.

SDG	CCV Date	Lab Sample #	Analyte	RRF outliers	%D outliers	Qualifiers Added
L0610601	10/27/06 7:45	2RE	acetone	.039		From ICAL
			bromomethane		29.1	None, ND
L0610603	10/27/06 7:45	3	acetone	.039		From ICAL

SDG	CCV Date	Lab Sample #	Analyte	RRF outliers	%D outliers	Qualifiers Added
			bromomethane		29.1	None, ND
L0610709	11/3/06 13:04	3	acetone	.043		From ICAL
			carbon tetrachloride		25.8	None, ND
L0610187	10/14/06 10:21	1-3	acetone	.042		From ICAL
			naphthalene		26.9	None, ND
			4-methyl-2-pentanone	.045		From ICAL
L0610121	10/14/06 10.21	1,2	acetone	.042		From ICAL
			4-methyl-2-pentanone	.045		From ICAL
			naphthalene		26.9	None, ND

IV. GC/MS INSTRUMENT PERFORMANCE CHECK

The BFB (VOA) or 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____

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 current contract, which are the current laboratory limits.

Yes ___X___ No ____

VII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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 _____

8260B: There are 7 MS/MSDs which meets the 1:20 ratio.

A. The MS and MSD percent recoveries were within the limits defined in the contract, which are the current laboratory control chart limits.

Yes _____ No __X___NA___

The full target list has been spiked. Most MS/MSD recoveries and RPDs are in control. Instances where spike recoveries are out of limits are shown in the table below. In several instances, the sample amount is 4x the spike level or greater. In such cases, the recovery is not statistically valid and is not calculated, because the anticipated normal analytical variability is on the order of the spike level. Thus no qualifiers are added. For the MS/MSD associated with MW-62-LB-1 (SDG L0110119), the TCE recovery is elevated and the sample result is 77 ug/L, which is 3.9 times higher than the spike level. The result is qualified as JS201 for the highest recovery, but it is not likely that this represents a significant matrix bias.

Method	SDG	Client Sample ID	Lab Sample ID	Analyte	MS/MSD/RPD	Qualifiers
8260B	L0610710	MW-199B-LB-1	4	trichloroethene	13.5/10.5/OK	None, sample > 4x spike
	L0610601	IW-6-LB-1	2	2-butanone	OK/37/OK	None, sample > 4x spike
				naphthalene	142/OK/OK	None, ND

Method	SDG	Client Sample ID	Lab Sample ID	Analyte	MS/MSD/RPD	Qualifiers
	L0610603	MW-93-LB-1	3	All in control		None
	L0610709	MW-202B-LB-1	3	bromodichloromethane	123/122/OK	None, ND
	L0610509	MW-107B-LB-1	2	All in control		None
	L0610119	MW-62-LB-1	1	trichloroethene	186/201/OK	JS201
	L0610474	MW-16-LB-1	1	All in control		None

A. The MSD relative percent differences (RPD) were within the defined contract limits.
Yes __X_ No _____NA____

A. The MS/MSD were client samples.
Yes _X_ No ____NA____

VIII. LABORATORY CONTROL SAMPLE

B. Laboratory Control Samples (LCS) was analyzed for every analysis performed and for every 20 samples.
Yes _X___ No ____
An LCS is run except in the cases where an MS/MSD is not present. In those cases, an LCS/LCSD is analyzed. In the table below, only the LCS recovery is noted if that is all that was run with the set.

C. The LCS percent recoveries were within the limits defined in the contract (the MS limits are used as a reference or laboratory-specific limits for this matrix are defined).
Yes _____ No __ X ____
The full target list has been spiked. There are a number of elevated recoveries observed as shown in the table below. When a high 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. For low recoveries, non-detected results are qualified but no such results are present in this data set.

SDG	Lab Sample #	Batch	Targets Detected	LCS/LCSD/RPD	Qualifiers
L0610708	1-4	WG226498	Bromodichloromethane	124	None, ND
L0610710	4	WG226498	Bromodichloromethane	124	None, ND
L0610711	7	WG226498	Bromodichloromethane	124	None, ND
L0610709	1,2,6-9	WG226498	bromodichloromethane	124	None, ND
	3	WG226774	bromodichloromethane	123	None, ND
L0610187	1-3	WG225098	acetone	137/137/OK	JL137 detects
L0610186	1,2	WG225098	acetone	137/137/OK	JL137 detects
L0610051	6-8	WG224550	acetone	146/145/OK	None, ND
L0610052	2,3	WG224550	acetone	146/145/OK	None, 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 indicated in the table, below the reporting limit. 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#, where # is the corrected method blank level. Such results are usable as nondetects. Qualifiers added are summarized in the table below. For other targets, the factor used is 5x.

SDG	Lab Sample #	Batch	Targets Detected	Results	Qualifiers

SDG	Lab Sample #	Batch	Targets Detected	Results	Qualifiers
L0610708	1-4	WG226498	naphthalene	.221	None, ND
L0610710	4	WG226498	1,2,3-trichlorobenzene	.221	None, ND
			1,2,4-trichlorobenzene	.204	None, ND
			naphthalene	.221	None, ND
L0610711	7	WG226498	1,2,3-trichlorobenzene	.221	None, ND
			1,2,4-trichlorobenzene	.204	None, ND
			naphthalene	.221	None, ND
L0610709	1,2 6-9	WG226498	1,2,3-trichlorobenzene	.221	None, ND
			1,2,4-trichlorobenzene	.204	None, ND
			naphthalene	.221	None, ND
L0610121	1	WG224876	1,2,3-trichlorobenzene	.321	None, ND
			methylene chloride	388	None, ND
			naphthalene	.306	None, ND
L0610051	1-5, 9	WG224489	methylene chloride	.287	UB.287 detections
	6-8	WG224550	1,2,3-trichlorobenzene	.245	None, ND
			1,2,4-tnchlorobenzene	.203	None, ND
			1,2-dichlorobenzene	.141	None, ND
			1,4-dichlorobenzene	.219	None, ND
			methylene chloride	.345	None, ND
L0610119	1,2	WG224876	1,2,3-trichlorobenzene	.321	None, ND
			methylene chloride	.388	UB.388 detections
			naphthalene	.306	None, ND
L0610100	1-6	WG224873	1,2,3-tnchlorobenzene	.146	None, ND
			hexachlorobutadiene	.279	None, ND
			naphthalene	.309	None, ND
L0610474	1,4-7	WG225732	methylene chloride	.278	None, ND
L0610102	1,2	WG224873	1,2,3-trichlorobenzene	.146	None, ND
			hexachlorobutadiene	.279	None, ND
			naphthalene	.309	None, ND
L0610052	2,3	WG224550	1,2,3-trichlorobenzene	.245	None, ND
			1,2,4-trichlorobenzene	.203	None, ND
			1,2-dichlorobenzene	.141	None, ND
			1,4-dichlorobenzene	.219	None, ND
			methylene chloride	.345	None, ND
			Hexachlorobutadiene	.317	None, ND
	1,4,5,6	wg224873	1,2,3-trichlorobenzene	.146	None, ND
			hexachlorobutadiene	.279	None, ND
			naphthalene	.309	None, ND

C. If Field Blanks were identified, no blank contamination was found.
Yes____ No __X__
There were eleven (11) trip blanks. No qualifiers resulted from trip blank contamination, either because there was no contamination, because the associated samples had no detections of the contaminants present, or because the results were already qualified due to method blanks.

SDG	Sample ID	Lab Sample ID	Analyte	Results	Qualifiers
L0610710	TB-102306-LB-1	8	methylene chloride	.272	None, ND
L0610602	TB-101106-LB-1	5	methylene chloride	.329	None, ND
	TB-101806-LB-1	6	All in control		None

SDG	Sample ID	Lab Sample ID	Analyte	Results	Qualifiers
L0610709	TB-102406-LB-1	9	methylene chloride	.299	None, ND
L0610187	TB-100506-LB-1	3	All in control		None
L0610051	TB-100206-LB-1	9	methylene chloride	.417	None, UB from MB
L0610509	TB-101706-LB-1	12	All in control		None
L0610119	TB-100406-LB-1	4	methylene chloride	.259	None, UB from MB
L0610100	TB-100306-LB-1	6	methylene chloride	.363	None, ND
L0610474	TB-101606-LB-1	7	All in control		None
L0610761	TB-100906-LB-1	4	All in control		None

X. FIELD QC

If Field duplicates were identified, they met guidance 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 7 samples identifiable as field duplicates. All are in control as shown in the table below.

Method	SDG	Client Sample ID	Parent Sample	Observations
8260B	L0610051	LTMDUP1-LB-1	MW-25A-LB-1	OK
	L0610051	LTMDUP2-LB-1	MW-52-LB-1	OK
	L0610051	LTMDUP4-LB-1	MW-96-LB-1	OK
	L0610052	LTMDUP5-LB-1	MW-142-LB-1	OK
	L0610052	LTMDUP6-LB-1	MW-198-LB-1	OK
	L0610100	LTMDUP3-LB-1	MW-88-LB-1	OK
	L0610100	LTMDUP7-LB-1	DR2-2-LB-1	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____

Dilutions were necessary in only two cases to achieve the proper quantification of high-level targets, which raises the EQLs for all other targets in the run. In one case (IW-6-LB-1), both the diluted and undiluted run is reported. In the other case (MW-39A-LB-1) only the diluted run is reported. In the case of sample IW-6-LB-1, acetone was above the upper calibration limit in the first analysis and this result is qualified as JE to indicate that it should be regarded as an estimate.

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/Deliverables:

This is a Level III Report.

The project manager is informed of the following and the chain information is to be updated for the project file.

None of the SDGs have a customary chain of custody. Those have a running list of samples with date and time collected with no relinquished and received areas at the bottom of each page. They do not have page numbers. Some of the time there is a typed area of the last page with the samplers name, date and time with a shaded area for the signature. The person receiving the samples must remember to write in their name and the sample receipt information as there is no area for that established. In addition, as indicated in the previous section, some sample names are truncated on the chain of custody, making them an unacceptable record for those samples.

Our understanding is that the chain of custody is an electronic sample documentation system. We would recommend developing an improved set of chain of custody documents to be generated from this system that provide a more clear hardcopy documentation of the electronic process, particularly once the samples are received at the laboratory. There needs to be signature lines for relinquished and received on all pages of the chain of custody and the pages need to be numbered and uniquely identified.
L0610051, L0610100, L0610102: Sample Checklist states that there were no custody seals on the coolers.

L0610052: Sample Checklist states that there were no custody seals on the coolers and NA to "were they intact".

Sample Condition

Cooler temperature was in many cases below 2°C but narratives noted that all samples were received in good condition. When samples are below the lower EPA limit of 2° C, as long as there is no damage to the samples, no qualifier is required.

Sample Checklist states that all samples are preserved.
L0610051, L0610509, L0610052: The cooler temperature was 0°C but the Sample Checklist states that the samples weren't frozen.

Initial Calibrations:

Acetone, 2-butanone, and 4-methyl-2-pentanone (MIBK) are the only compounds for which any calibration response factor deficiencies have been observed. Per the project manager, the 2001 EPA CLP validation guidance has been applied to the common 'poor responders". They are the only compounds for which any calibration response factor deficiencies have been observed. See the table below for details. The validation guidance 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.

All samples associated with response factors less than 0.01 in the initial calibration are qualified as follows: When the affected target is detected, the result is qualified as JC#, where # is the low response. J-qualified results are usable as estimates with a possible bias.

It is worth noting that the low responses observed are between 0.037-0.05. Thus they are not as variable as is typically observed when response is low. 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. Because there is no generally applicable relationship between the magnitude of the response factor and the potential bias represented, the data have been qualified per guidance. If any of the compounds showing low response are of critical importance, further review of supporting data might provide a less coarse evaluation of the potential for false negatives.

Continuing Calibrations:

The CCVs were analyzed at the proper frequency. The same compounds showed low responses in the continuing calibration as were observed in the initial calibrations. Qualifiers are not added for these outliers where the targets are already qualified from the initial calibration. Data have been qualified for CCV responses in the same manner as the ICAL. No data are qualified for %D as no quantitation has been performed (all data non-detect). Note that most LCS recoveries are acceptable or else biased high for these compounds indicating either acceptable quantitation or a high bias in the mid-range of concentration.

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. No data have been qualified from the response factors and RFs are not noted if they are essentially the same as the ICAL.

Matrix Spikes:

8260B: There are7 MS/MSDs which meets the 1:20 ratio.

The full target list has been spiked. Most MS/MSD recoveries and RPDs are in control. Instances where spike recoveries are out of limits are shown in the table below. In several instances, the sample amount is 4x the spike level or greater. In such cases, the recovery is not statistically valid and is not calculated, because the anticipated normal analytical variability is on the order of the spike level. Thus no qualifiers are added. For the MS/MSD associated with MW-62-LB-1 (SDG L0110119), the TCE recovery is elevated and the sample result is 77 ug/L, which is 3.9 times higher than the spike level. The result is qualified as JS201 for the highest recovery, but it is not likely that this represents a significant matrix bias.

Method Blanks:

Contamination was observed in some method blanks indicated in the table within the report, below the reporting limit. 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#, where # is the corrected method blank level. Such results are usable as nondetects. Qualifiers added are summarized in the table below. For other targets, the factor used is 5x.

Field Blanks:

There were eleven (11) trip blanks. No qualifiers resulted from trip blank contamination, either because there was no contamination, because the associated samples had no detections of the contaminants present, or because the results were already qualified due to method blanks.

LCS Recoveries:

The full target list has been spiked. There are a number of elevated recoveries observed as shown in the table within the report. When a high 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. For low recoveries, non-detected results are qualified but no such results are present in this data set.

EQLs:

Dilutions were necessary in only two cases to achieve the proper quantification of high-level targets, which raises the EQLs for all other targets in the run. In one case (IW-6-LB-1), both the diluted and undiluted run is reported. In the other case (MW-39A-LB-1) only the diluted run is reported. In the case of sample IW-6-LB-1, acetone was above the upper calibration limit in the first analysis and this result is qualified as JE to indicate that it should be regarded as an estimate.

Field QC:

There are 7 samples identifiable as field duplicates. All are in control.

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

8260B/5030B
SDG: L0701585, L0701586

PROJECT: Memphis Defense Depot, Long Term Monitoring for e2m Denver

LABORATORY: Kemron Environmental Services, Marietta, OH

SAMPLE MATRIX: Water

SAMPLING DATE (Month/Year): January, 2007

NO. OF SAMPLES: 8260B/5030B (Waters) – 10 samples including (1 Trip Blank)

ANALYSES REQUESTED: SW-846 8260B

SAMPLE NO.: See attached result forms and associated edd

DATA REVIEWER: Sammy Huntington and John Huntington (Gateway Enterprises)

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

Telephone Logs included Yes___ No _X__

Contractual Violations Yes___ No _X___

The EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 2001, and the SW-846 Method 8260B has 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 is a Level III Report.

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 _____

Samples were received at 1 deg C. This is below the regulatory lower limit of 2 deg C, but when samples are undamaged, lower temperatures do not negatively impact sample integrity and no qualifiers are added.

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 >0.05.
Yes __X__ No ____ NA____

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 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.

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. The

likelihood of matrix bias for these compounds in this site matrix is assessed in the MS/MSD section of this report.

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 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) were met.
Yes __X___ No ____ NA____

The CCVs were analyzed at the proper frequency. The same compounds showed low responses in the continuing calibration as were observed in the initial calibrations. Qualifiers are not added for these outliers since none were below the lower limit of 0.01. No data have been qualified from the response factors and RRFs are not noted since they are essentially the same as the ICAL. This consistency of response for the poor-responding compounds is an indication that there is no significant bias for the laboratory water matrix.

2. The percent difference (%D) limits of ± 25% were met.
Yes __X___ No ___ NA___

IV. GC/MS INSTRUMENT PERFORMANCE CHECK
The BFB (VOA) or 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____

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 current contract, which are the current laboratory limits.
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 is 1 MS/MSD which meets the 1:20 ratio. The parent sample is MW-198-RW-2.

B. The MS and MSD percent recoveries were within the limits defined in the contract, which are the current laboratory control chart limits.
Yes __X___ No __ ___NA___

The full target list has been spiked

C. The MSD relative percent differences (RPD) were within the defined contract limits.
Yes __X ___ No _____NA____

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 contract (the MS limits are used as a reference or laboratory-specific limits for this matrix are defined).
Yes __X____ No __ ____

The full target list has been spiked. .

IX. BLANKS
A. Method Blanks were analyzed at the required frequency and for each matrix and analysis.
Yes _X___ No____

B. No blank contamination was found in the Method Blank.
Yes __X__ No _ ___

C. If Field Blanks were identified, no blank contamination was found.
Yes____ No __X__

There is one trip blank, TB-012208, in SDG L0701585. Methylene chloride is detected in this trip blank at a level of 0.319 ug/L, below the PQL. No qualifiers are required for associated samples since methylene chloride is not detected in them.

X. FIELD QC
If Field duplicates were identified, they met guidance 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 is one field duplicate. Observations are summarized in the table.

SDG	Client Sample ID	Parent Sample	Observations
L0701585	DUP-1-RW-2	MW-197A-RW2	In control

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____

Dilutions were necessary in some cases to achieve the proper quantification of high-level targets, which raises the EQLs for all other targets in the run. In such cases, the both results are provided in hardcopy except for the analytes that are above the upper range in the initial run. These are only shown for the reanalysis.

In the EDD, only the initial run is provided for most analytes, and only the reanalysis is provided for the analytes which are above the upper linear range in the first run.

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 and there have been no qualifiers applied.
The following is noted:

Sample Condition:
Samples were received at 1 deg C. This is below the regulatory lower limit of 2 deg C, but when samples are undamaged, lower temperatures do not negatively impact sample integrity and no qualifiers are added.

Matrix Spikes:
There is 1 MS/MSD which meets the 1:20 ratio. The parent sample is MW-198-RW-2. Recoveries and RPDs are in control.

Field Blanks:
There is one trip blank, TB-012208, in SDG L0701585. Methylene chloride is detected in this trip blank at a level of 0.319 ug/L, below the PQL. No qualifiers are required for associated samples since methylene chloride is not detected in them.

Field QC:
There is one field duplicate. Observations are summarized in the table within the report. It is in control.

1015421

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

8260B/5030B
SDG: L070: 4714, 4560, 4381, 4380, 4355, 4412

PROJECT: Memphis Defense Depot, LS-3 Long Term Monitoring for e2m, Texas

LABORATORY: Kemron Environmental Services, Marietta, OH

SAMPLE MATRIX: Water

SAMPLING DATE (Month/Year): April, 2007

NO. OF SAMPLES: 8260B/5030B (Waters) – 75 samples including 5 Trip Blanks, 2 Rinse Blanks

ANALYSES REQUESTED: SW-846 8260B

SAMPLE NO.: See attached result forms and associated edd

DATA REVIEWER: Sammy Huntington and John Huntington (Gateway Enterprises)

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

Telephone Logs included Yes____ No _X__

Contractual Violations Yes____ No _X___

The EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 2002, and the SW-846 Method 8260B has 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 is a Level III Report. No raw data are provided, nor required for review.

B. Chain of Custody Documentation was complete and accurate.
Yes _____ No _X__

The project manager is informed of the following and the chain information is to be updated for the project file.

Most of the SDGs do not have a customary chain of custody. Those have a running list of samples with date and time collected with no relinquished and received areas at the bottom of each page. They do not have page numbers. They have been improved since we first pointed out these issues in that each page does have a printed area for the sampler name, date, time, and signature. However, there is no similar printed area for receipt signatures, dates, and times to be entered, and in this case only the first page has been so signed by the laboratory.

A few sample names are being truncated on the Chain of Custody because the field width is not sufficient to allow the full name to appear. This seems to be a relatively minor issue for this set of samples.

Our understanding is that the chain of custody is a printout of an electronic sample documentation system. We iterate our recommendation that the printout be improved to add a printed area for the laboratory to receive the samples, and to include page numbers. Preferably, the laboratory signature should appear on each page of the Chain of Custody, but at the very least should appear each time a new COC# is applied. Alternatively, some type of electronic signature system could be used using a system compliant with EPA's proposed cross-media electronic reporting rule. The present system does not appear fulfill the authentication criteria for sample tracking.

C. Samples were received at the required temperature, preservation and intact with no bubbles.
Yes ___X___ No _____

One of the SDGs had a cooler that was under 2°C but the Sample Checklist states that the samples weren't frozen. No qualifiers are required under these circumstances.

All of the SDGs stated NA on the Sample Receiving Checklist to whether the samples were pH tested and of acceptable range.

In addition, new EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be less than 6° C. Thus the sample receipt conditions are fully compliant with applicable regulations.

II. ANALYTICAL REPORT FORMS

A. The Analytical Report or Data Sheets are present and complete for all requested analyses.
Yes _X_ No ____

B. Holding Times
1. The contract holding times were met for all analyses (Time of sample receipt to time of analysis (VOA) or 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.
Yes __X__ No ____ NA____

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.

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. In this case, the MS/MSD recoveries are in control for these compounds, so it appears that there is not a severe matrix bias for them.

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 or a linear curve was used.
Yes _____ No ____ NA____

There is one target that is shown in the ICAL forms with %RSD greater than 30%, the validation limit. These instances where this occurred and the laboratory did not use an acceptable regression curve in place of the response factor average are shown in the table below. Because none of these outliers are associated with detected targets, and because the %RSD is not so severely out of limits to indicate a significant probability of a false negative, no qualifiers are applied.

SDG	ICAL Date	Lab Sample #	Analyte	%RSD	RRF OUT	Qualifiers Added
L0704380	3/14/07 21:05	6, 9-14	1,2,3-trichlorobenzene	36		None, ND

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) were met.
Yes __X__ No ____ NA____

The CCVs were analyzed at the proper frequency. The same compounds showed low responses in the continuing calibration as were observed in the initial calibrations. Qualifiers are not added for these outliers since none were below the lower limit of 0.01. No data have been qualified from the response factors and RRFs are not noted since they are essentially the same as the ICAL. This consistency of response for the poor-responding compounds is an indication that there is no significant bias for the laboratory water matrix.

2. The percent difference (%D) limits of ± 25% were met.
Yes _X___ No ____ NA___

IV. GC/MS INSTRUMENT PERFORMANCE CHECK
The BFB (VOA) performance check was injected once at the beginning of each 12-hour period and relative abundance criteria for the ions were met.
Yes __X___ No ____ NA____

V. INTERNAL STANDARDS
The Internal Standards met the 100% upper and -50% lower limits criteria and the Retention times were within the required windows.
Yes __X___ No ____ NA____

VI. SURROGATE
Surrogate spikes were analyzed with every sample.
Yes _X___ No____

And met the recovery limits defined in the current contract, which are the current laboratory limits.
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 which does not meet the 1:20 ratio.

Method	SDG	Client Sample ID	Lab Sample ID
8260B\5030B	L0704380	MW-215B-LS-3-MS	L0704380-06
	L0704381	MW-202B-LS-3-MS	L0704381-09
		MW-208A-LS-3-MS	L0704381-14

B. The MS and MSD percent recoveries were within the limits defined in the contract, which are the current laboratory control chart limits.
Yes _____ No __X ___NA___

The full target list has been spiked. Most MS/MSD recoveries and RPDs are in control. Instances where spike recoveries are out of limits are shown in the table below. In one case, the sample amount is 4x the spike level or greater. In such cases, the recovery cannot realistically be calculated, because the anticipated normal analytical variability is on the order of the spike level. Thus no qualifiers are added. In the only

other outlier, the recovery is high and the parent has no detection of the analyte. Hence no qualifier is added for this apparent high bias.

SDG	Client Sample ID	Lab Sample ID	Analyte	MS/MSD/RPD	Qualifiers
L0704381	MW-208A-LS-3	L0704381-14	Bromodichloromethane	124/123/OK	None, ND
L0704381	MW-208A-LS-3		Tetrachloroethene	-55.5/-82.5/OK	None, sample > 4x spike

C. The MSD relative percent differences (RPD) were within the defined contract limits.
Yes __X___ No ___NA____

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 contract (the MS limits are used as a reference or laboratory-specific limits for this matrix are defined).
Yes ___X___ No _____

The full target list has been spiked.

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 indicated in the table, below the reporting limit. 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#, where # is the corrected method blank level. Such results are usable as nondetects. Qualifiers added are summarized in the table below. For other targets, the factor used is 5x. In most cases, the blank contaminants are higher-boiling targets that are probably carryover from standards and are not present in the samples, so the method blanks have little impact on the results. Only toluene in one method blank resulted in a qualification.

SDG	Lab Sample #	Batch	Targets Detected	Results	Qualifiers
L0704714	1-5, 7	WG239856	1,2,3 Trichlorobenzene	.146F	None, ND
L0704412	6,7	WG238606	1,2,4 Trichlorobenzene	.203F	None, ND
			Naphthalene	.214F	None, ND
	4	WG238579	1,2,3 Trichlorobenzene	.306F	None, ND
			Hexachlorobutadiene	.449*	None, ND
L0704560	4-6	WG239194	Toluene	.259F	UB0.26 detect
L0704355	11-5, 7-13	WG238321	1,2,3 Trichlorobenzene	.286F	None, ND
			1,2,4 Trichlorobenzene	.202F	None, ND
			Hexachlorobutadiene	.386*	None, ND
	6, 14,15,17-19	WG238366	1,2,3 Trichlorobenzene	.281F	None, ND
			Hexachlorobutadiene	.343*	None, ND
	16	WG238366	1,2,3 Trichlorobenzene	284F	None, ND

SDG	Lab Sample #	Batch	Targets Detected	Results	Qualifiers
			1,2,4 Trichlorobenzene	.202F	None, ND
			Hexachlorobutadiene	.399*	None, ND
L0704381	1-5	WG238366	1,2,3 Trichlorobenzene	.284F	None, ND
			1,2,4 Trichlorobenzene	.202F	None, ND
			Hexachlorobutadiene	.399*	None, ND
	6-9, 12,13, 17-21	WG238492	1,2,3 Trichlorobenzene	.266F	None, ND
			Hexachlorobutadiene	.419*	None, ND
	14	WG238579	1,2,3 Trichlorobenzene	.306F	None, ND
			Hexachlorobutadiene	.449*	None, ND
L0704380	1-5	WG238492	1,2,3 Trichlorobenzene	.266F	None, ND
			Hexachlorobutadiene	.419*	None, ND
	15-19	WG238579	1,2,3 Trichlorobenzene	.306F	None, ND

C. If Field Blanks were identified, no blank contamination was found.
Yes____ No__X__

There are 5 trip blanks. There are detections observed below the reporting limit as shown in the table. Some of these are qualified UB due to detections in the associated method blank, thus are not used for qualifying associated samples. 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.

SDG	Sample ID	Lab Sample ID	Analyte	Results	Qualifiers
L0704560	TB-042307-LS-3	7	Methylene Chloride	.668F	UTB0.67 detections
L0704355	TB-041307-IS-2	16	All in control		None
L0704714	TB-042707-LS-3	7	Methylene Chloride	.591F	None, ND
L0704381	TB-041607-LS-3	21	Methylene Chloride	1.46	UTB1.5 detections
L0704412	TB-041707-LS-3	6	Methylene Chloride	.618F	None, ND

X. FIELD QC

If Field duplicates were identified, they met guidance 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 6 identified field duplicates. Observations are summarized in the table. Agreement is generally very good between the field duplicate and the parent sample.

Method	SDG	Client Sample ID	Parent Sample	Observations
8260B	L0704380	DUP1-LS-3	MW-26-LS-3	OK
8260B	L0704380	DUP2-LS-3	MW-90-LS-3	OK
8260B	L0704380	DUP3-LS-3	MW-97-LS-3	OK
8260B	L0704380	DUP6-LS-3	MW-215A-LS-3	OK
8260B	L0704381	DUP4-LS-3	MW-202A-LS-3	OK
8260B	L0704381	DUP5-LS-3	MW-208B-LS-3	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/Deliverables:
The project manager is informed of the following and the chain information is to be updated for the project file.

Most of the SDGs do not have a customary chain of custody. Those have a running list of samples with date and time collected with no relinquished and received areas at the bottom of each page. They do not have page numbers.
They have been improved since we first pointed out these issues in that each page does have a printed area for the sampler name, date, time, and signature. However, there is no similar printed area for receipt signatures, dates, and times to be entered, and in this case only the first page has been so signed by the laboratory.

A few sample names are being truncated on the Chain of Custody because the field width is not sufficient to allow the full name to appear. This seems to be a relatively minor issue for this set of samples.

Our understanding is that the chain of custody is a printout of an electronic sample documentation system. We reiterate our recommendation that the printout be improved to add a printed area for the laboratory to receive the samples, and to include page numbers. Preferably, the laboratory signature should appear on each page of the Chain of Custody, but at the very least should appear each time a new COC# is applied. Alternatively, some type of electronic signature system could be used using a system compliant with EPA's proposed cross-media electronic reporting rule. The present system does not appear fulfill the authentication criteria for sample tracking.

Sample Condition:
One of the SDGs had a cooler that was under 2°C but the Sample Checklist states that the samples weren't frozen. No qualifiers are required under these circumstances.

All of the SDGs stated NA on the Sample Receiving Checklist to whether the samples were pH tested and of acceptable range.

In addition, new EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be less than 6° C. Thus the sample receipt conditions are fully compliant with applicable regulations.

Initial Calibrations:
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.

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. In this case, the MS/MSD recoveries are in control for these compounds, so it appears that there is not a severe matrix bias for them.

There are several targets that are shown in the ICAL forms with %RSD greater than 30%, the validation limit. These instances where this occurred and the laboratory did not use an acceptable regression curve in place of the response factor average are shown in the table within the report. Because none of these outliers are associated with detected targets, and because the %RSD is not so severely out of limits to indicate a significant probability of a false negative, no qualifiers are applied.

Continuing Calibrations:
The CCVs were analyzed at the proper frequency. The same compounds showed low responses in the continuing calibration as were observed in the initial calibrations. Qualifiers are not added for these outliers since none were below the lower limit of 0.01. No data have been qualified from the response factors and RRFs are not noted since they are essentially the same as the ICAL. This consistency of response for the poor-responding compounds is an indication that there is no significant bias for the laboratory water matrix.

Matrix Spikes:
There are 3 MS/MSDs which meets the 1:20 ratio.

The full target list has been spiked. Most MS/MSD recoveries and RPDs are in control. Instances where spike recoveries are out of limits are shown in the table within the report. In one case, the sample amount is 4x the spike level or greater. In such cases, the recovery cannot realistically be calculated, because the anticipated normal analytical variability is on the order of the spike level. Thus no qualifiers are added. In

the only other outlier, the recovery is high and the parent has no detection of the analyte. Hence no qualifier is added for this apparent high bias.

Method Blanks:
Contamination was observed in some method blanks indicated in the table within the report, below the reporting limit. 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#, where # is the corrected method blank level. Such results are usable as nondetects. Qualifiers added are summarized in the table below. For other targets, the factor used is 5x. In most cases, the blank contaminants are higher-boiling targets that are probably carryover from standards and are not present in the samples, so the method blanks have little impact on the results. Only toluene in one method blank resulted in a qualification.

Field Blanks:
There are 5 trip blanks. There are detections observed below the reporting limit as shown in the table in the report body. Some of these are qualified UB due to detections in the associated method blank, thus are not used for qualifying associated samples. 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.

Field QC:
There are 6 identified field duplicates. Observations are summarized in the table within the report. Agreement is generally very good between the field duplicate and the parent sample.

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

8260B/5030B
SDG: L070: 7157, 7205, 7239, 7271, 7151

PROJECT: Memphis Defense Depot, LQ-4 Long Term Monitoring

LABORATORY: Kemron Environmental Services, Marietta, OH

SAMPLE MATRIX: Water

SAMPLING DATE (Month/Year): July, 2007

NO. OF SAMPLES: 8260B/5030B (Waters) – 45 samples including 4 Trip Blanks

ANALYSES REQUESTED: SW-846 8260B

SAMPLE NO.: See attached result forms and associated edd

DATA REVIEWER: Sammy Huntington and John Huntington (Gateway Enterprises)

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

Telephone Logs included Yes___ No _X__

Contractual Violations Yes___ No _X___

The EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 2001, and the SW-846 Method 8260B has 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 is a Level III Report. Raw data are not reviewed, nor required.

B. Chain of Custody Documentation was complete and accurate.
Yes _____ No __X__

The project manager is informed of the following and the chain information is to be updated for the project file.

Most of the SDGs do not have a customary chain of custody. Those have a running list of samples with date and time collected with no relinquished and received areas at the bottom of each page. They do not have page numbers.

They have been improved since we first pointed out these issues in that each page does have a printed area for the sampler name, date, time, and signature. However, there is no similar printed area for receipt signatures, dates, and times to be entered, and in this case only the first page has been so signed by the laboratory.

A few sample names are being truncated on the Chain of Custody because the field width is not sufficient to allow the full name to appear. This seems to be a relatively minor issue for this set of samples.

Our understanding is that the chain of custody is a printout of an electronic sample documentation system. We reiterate our recommendation that the printout be updated to add a printed area for the laboratory to receive the samples, and to include page numbers. Preferably, the laboratory signature should appear on each page of the Chain of Custody, but at the very least should appear each time a new COC# is applied. Alternatively, some type of electronic signature system could be used using a system compliant with EPA's proposed cross-media electronic reporting rule. The present system does not appear to fulfill the authentication criteria for sample tracking.

SDG L0707239: The checklist states sample "MW-199A-LQ4 missing (all 3 VOA). There is no indication in the data package about how this discrepancy was resolved, but it is apparent that the sample was retaken on 7/12/07 and provided to the laboratory, logged in under SDG L0707271.

There are no notations made on the chain of custody itself to reflect the fact that this sample was not received. If the laboratory checklist is separated from the chain of custody this could cause confusion. We recommend that in such cases, the laboratory make notations in both areas.

C. Samples were received at the required temperature, preservation and intact with no bubbles.
Yes ___X___ No _____

SDG L0707151, had "NA" checked on the sample receiving checklist for the "correct preservatives used "item. This was also true of L0707157 (14 samples). All other SDGs included checklists with this item checked as "yes."

8260B waters are normally preserved with HCl unless there are dissolved carbonates that would produce headspace in the presence of acid. There does not appear to be any other information in the data packages that would allow confirmation of proper preservation for these samples. Since most samples were analyzed in less than 7 days, there would be no negative consequences if they had not been preserved. Only SDGs L0707239 and L0707271 had samples analyzed at between 8-9 days of holding time.

All of the SDGs stated NA on the Sample Receiving Checklist to whether the samples were pH tested and of acceptable range. This is normal, since the laboratory cannot check the pH of VOA samples on receipt. Any such checks are normally conducted at the bench after the samples have been analyzed.

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_____

Assuming that all samples were properly preserved with HCl.

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, assuming acid preservation).
Yes _X__ No____

Assuming that all samples were properly preserved with HCl.

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.
Yes __X__ No ____ NA____

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.

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 or a linear curve was used.
Yes _____ No __X__ NA____

There is one target (acetone) that is shown in the ICAL forms with %RSD greater than 30%, the validation limit. These instances where this occurred and the laboratory did not use an acceptable regression curve in place of the response factor average are shown in the table below. There are two samples that would be qualified JC49 due to the fact that acetone is detected in the sample. However, these samples are qualified as non-detects due to method blank levels (see method blank section) and are therefore not qualified.

SDG	ICAL Date	Lab Sample #	Instrument #	Analyte	%RSD	RRF OUT	Qualifiers Added
L0707157	6/30/07 18:16	1,2,6-8,11-16	10	acetone	49.4		None, detections UB from MB
L0707205	6/30/07 18:16	1-5	10	acetone	49.4		None, ND

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) were met.
Yes _X___ No ____ NA____

The CCVs were analyzed at the proper frequency. The same compounds showed low responses in the continuing calibration as were observed in the initial calibrations. Qualifiers are not added for these outliers since none were below the lower limit of 0.01.

2. The percent difference (%D) limits of ± 25% were met.
Yes ___ No _X__ NA___

There is one CCV in which bromomethane had a %D outside the 25% validation limit. Since the analyte is not detected in associated samples, no qualifiers are added.

SDG	CCV	Lab Sample #	Instrument #	Analyte	%RSD	RRF OUT	Qualifiers Added
L0707151	7/11/07 7:52	1	8	Bromomethane	27.4		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____

VI. SURROGATE
Surrogate spikes were analyzed with every sample.
Yes _X___ No____

And met the recovery limits defined in the current contract, which are the current laboratory limits.
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 which does meet the 1:20 ratio.

Method	SDG	Client Sample ID	Lab Sample ID
8260B\5030B	L0707157	MW203A-LQ-4	3
		MW-217-LQ-4	13

B. The MS and MSD percent recoveries were within the limits defined in the contract, which are the current laboratory control chart limits.
Yes _____ No __X___NA___

The full target list has been spiked. Most MS/MSD recoveries and RPDs are in control. Instances where spike recoveries are out of limits are shown in the table below. In one case, the sample amount is 4x the spike level or greater. In such cases, the recovery cannot realistically be calculated, because the anticipated normal analytical variability is on the order of the spike level. Thus no qualifiers are added in this instance.

SDG	Client Sample ID	Lab Sample ID	Analyte	MS/MSD/RPD	Qualifiers
L0707157	MW-203A-LQ-4	3	Tetrachloroethene	40.3/42.8/OK	JS40 parent detection
	MW-217-LQ-4	13	Carbon Tetrachloride	50.1/41.5/OK	JS42 parent detection
			Trichloroethene	57.5/59.1/OK	JS48 parent detection
			Tetrachloroethene	64.3/61.2/OK	JS61 parent detection

C. The MSD relative percent differences (RPD) were within the defined contract limits.
Yes __X___ No ___NA____

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 contract (the MS limits are used as a reference or laboratory-specific limits for this matrix are defined).
Yes _____ No __X___

The full target list has been spiked. Only one target is out of limits in one LCS on the high side. It is not detected in associated samples and no qualifier has been added.

SDG	Lab Sample #	Batch	Targets Detected	LCS/LCSD/RPD	Qualifiers
L0707151	1	WG244486	Bromomethane	147/151/OK	None, 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 indicated in the table, below the reporting limit. 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#, where # is the corrected method blank level. Such results are usable as nondetects. Qualifiers added are summarized in the table below. For other targets, the factor used is 5x. In most cases, the blank contaminants are higher-boiling targets that are probably carryover from standards and are not present in the samples, so the method blanks have little impact on the results. Only acetone in one method blank resulted in qualification.

SDG	Lab Sample #	Batch	Targets Detected	Results	Qualifiers
L0707151	1	WG244486	1,2,3-Trichlorobenzene	.267F	None, ND
			Hexachlorobutadiene	.494*	None, ND
			Naphthalene	.213F	None, ND
L0707157	3,9,10,17,18	WG244835	Acetone	4.93F	UB4.9 detections
L0707205	16 TB	WG244975	1,2,3-Trichlorobenzene	.235F	None, ND
	6-15	WG244894	1,2,3-Trichlorobenzene	.306F	None, ND
			1,2,4-Trichlorobenzene	.265F	None, ND
			Hexachlorobutadiene	.394*	None, ND
			Naphthalene	.270F	None, ND

C. If Field Blanks were identified, no blank contamination was found.
Yes____ No __X__

There are 4 trip blanks. There are detections observed below the reporting limit as shown in the table. None have resulted in qualification, because associated samples are either non-detected or are qualified already due to method blank levels.

SDG	Sample ID	Lab Sample ID	Analyte	Results	Qualifiers
L0707157	TB-070907-LQ-4	10	Acetone	8.04F	None, UB from MB
			Chloromethane	.298F	None, ND
			Methylene Chloride	.989F	None, ND
L0707239	TB-071107-LQ-4	11	Chloromethane	.771F	None, ND
			Methylene Chloride	.306F	None, ND
L0707271	TB-071107-LQ-4	2	Chloromethane	.789F	None, ND
			Methylene Chloride	.308F	None, ND
L0707205	TB-071007-LQ-4	16	All in control		None

X. FIELD QC

If Field duplicates were identified, they met guidance 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 _____ No ____ NA____

There are 4 identified field duplicates. Observations are summarized in the table. Agreement is generally very good between the field duplicate and the parent sample. For DUP-3, the parent sample was identified by the client as MW-49-LQ-4, but no such sample name appears in the data set. The results for MW-49-DUNN are a very close match to those for DUP-3, and we are assuming for this report that this is the proper sample.

Method	SDG	Sample ID	Duplicate ID	Comments
8260B	L0707157	MW-197A-LQ-4	DUP 1	OK
	L0707205	MW-209A-LQ-4	DUP 2	OK
	L0707205	MW-214A-LQ-4	DUP 4	OK
	L0707151	MW-49-LQ-4	DUP-3	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____

EQLs are typical. In cases where dilutions were needed due to elevated target levels, the EQLs for the other compounds are correspondingly increased.

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/Deliverables:

The project manager is informed of the following and the chain information is to be updated for the project file.

Most of the SDGs do not have a customary chain of custody. Those have a running list of samples with date and time collected with no relinquished and received areas at the bottom of each page. They do not have page numbers.

They have been improved since we first pointed out these issues in that each page does have a printed area for the sampler name, date, time, and signature. However, there is no similar printed area for receipt signatures, dates, and times to be entered, and in this case only the first page has been so signed by the laboratory.

A few sample names are being truncated on the Chain of Custody because the field width is not sufficient to allow the full name to appear. This seems to be a relatively minor issue for this set of samples.

Our understanding is that the chain of custody is a printout of an electronic sample documentation system. We reiterate our recommendation that the printout be improved to add a printed area for the laboratory to receive the samples, and to include page numbers. Preferably, the laboratory signature should appear on each page of the Chain of Custody, but at the very least should appear each time a new COC# is applied. Alternatively, some type of electronic signature system could be used using a system compliant with EPA's proposed cross-media electronic reporting rule. The present system does not appear fulfill the authentication criteria for sample tracking.

SDG L0707239: The checklist states sample "MW-199A-LQ4 missing (all 3 VOA). There is no indication in the data package about how this discrepancy was resolved, but it is apparent that the sample was retaken on 7/12/07 and provided to the laboratory, logged in under SDG L0707271.

There are no notations made on the chain of custody itself to reflect the fact that this sample was not received. If the laboratory checklist is separated from the chain of custody this could cause confusion. We recommend that in such cases, the laboratory make notations in both areas.

Sample Condition:
SDG L0707151, which consists of one sample, had "NA" checked on the sample receiving checklist for the "correct preservatives used "item. This was also true of L0707157 (14 samples). All other SDGs included checklists with this item checked as "yes."

8260B waters are normally preserved with HCl unless there are dissolved carbonates that would produce headspace in the presence of acid. There does not appear to be any other information in the data packages that would allow confirmation of proper preservation for these samples. Since most samples were analyzed in less than 7 days, there would be no negative consequences if they had not been preserved. Only SDGs L0707239 and L0707271 had samples analyzed at between 8-9 days of holding time.

All of the SDGs stated NA on the Sample Receiving Checklist to whether the samples were pH tested and of acceptable range. This is normal, since the laboratory cannot check the pH of VOA samples on receipt. Any such checks are normally conducted at the bench after the samples have been analyzed.

Initial Calibrations:
There is one target (acetone) that is shown in the ICAL forms with %RSD greater than 30%, the validation limit. These instances where this occurred and the laboratory did not use an acceptable regression curve in place of the response factor average are shown in the table within the report. There are two samples that would be qualified JC49 due to the fact that acetone is detected in the sample. However, these samples are qualified as non-detects due to method blank levels (see method blank section) and are therefore not qualified.

Continuing Calibrations:
There is one CCV in which bromomethane had a %D outside the 25% validation limit. Since the analyte is not detected in associated samples, no qualifiers are added.

Matrix Spikes:
There are 3 MS/MSDs which does meet the 1:20 ratio.

The full target list has been spiked. Most MS/MSD recoveries and RPDs are in control. Instances where spike recoveries are out of limits are shown in the table within the report body. In one case, the sample amount is 4x the spike level or greater. In such cases, the recovery cannot realistically be calculated, because the anticipated normal analytical variability is on the order of the spike level. Thus no qualifiers are added in this instance.

LCS Recoveries:
The full target list has been spiked. Only one target is out of limits in one LCS on the high side. It is not detected in associated samples and no qualifier has been added.

Method Blanks:
Contamination was observed in some method blanks indicated in the table within the report, below the reporting limit. 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#, where # is the corrected method blank level. Such results are usable as nondetects. Qualifiers added are summarized in the table below. For other targets, the factor used is 5x. In most cases, the blank contaminants are higher-boiling targets that are probably carryover from standards and are not present in the samples, so the method blanks have little impact on the results. Only acetone in one method blank resulted in qualification.

Field Blanks:
There are 4 trip blanks. There are detections observed below the reporting limit as shown in the table within the report. None have resulted in qualification, because associated samples are either non-detected or are qualified already due to method blank levels.

Field QC:
There are 4 identified field duplicates. Observations are summarized in the table within the report. Agreement is generally very good between the field duplicate and the parent sample.

1015439

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

8260B/5030B
SDG: L071: 0208, 0076, 147, 0180, 0045, 1117

PROJECT: Memphis Defense Depot, LA-5 Long Term Monitoring for e2m Texas

LABORATORY: Kemron Environmental Services, Marietta, OH

SAMPLE MATRIX: Water

SAMPLING DATE (Month/Year): October, 2007

NO. OF SAMPLES: 8260B/5030B (Waters) – 100 samples including 5 Trip Blanks and 1 rinse blank.

ANALYSES REQUESTED: SW-846 8260B

SAMPLE NO.: See attached result forms and associated edd

DATA REVIEWER: Sammy Huntington and John Huntington (Gateway Enterprises)

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

Telephone Logs included Yes____ No _X__

Contractual Violations Yes____ No _X___

The EPA Contract Laboratory Program National Functional Guidelines for Organic Review, 2001, and the SW-846 Method 8260B has 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 is a Level III Report.

B. Chain of Custody Documentation was complete and accurate.

Yes _____ No _X__

The project manager is informed of the following and the chain information is to be updated for the project file.

Most of the SDGs do not have a customary chain of custody. Those have a running list of samples with date and time collected with no relinquished and received areas at the bottom of each page. They do not have page numbers.

SDG L07100076: The Sample Receiving Checklist does not list the chain of custody numbers.

SDG L0710147: The Sample Receiving Checklist lists one chain of custody number but there are two others that also appear to be applicable to this SDG.

SDG L0711117: The chain of custody does not have a laboratory receipt signature or date. The Sample Receiving Checklist shows a cooler ID number, but this is not shown on the chain of custody. The chain of custody bears a chain of custody number, but this is not shown on the Sample Receiving Checklist, although there is a location on the form for this information to be entered. The checklist refers to samples in the discrepancy section that are not a part of this SDG.

SDG L0710208: The chain of custody does not have a laboratory receipt signature or date. The Sample Receiving Checklist appears to be the same one associated with SDG L0711117 above. It shows a cooler ID number, but this is not shown on the chain of custody (which is a conventional chain of custody). The chain of custody bears a chain of custody number, but this is not shown on the Sample Receiving Checklist, although there is a location on the form for this information to be entered. The checklist refers to samples in the discrepancy section that are not a part of this SDG.

C. Samples were received at the required temperature, preservation and intact with no bubbles.

Yes __X___ No _____

As far as can be determined from the available documentation, samples reported were in acceptable condition. There is no comment in the narrative that indicates integrity issues.

Three of the SDGs had a cooler that was under 2°C but the Sample Checklist states that the samples weren't frozen. No qualifiers are required under these circumstances.

In addition, new EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be less than 6° C. Thus the sample receipt conditions are fully compliant with applicable regulations.

SDG L0710045: There were several discrepancies noted on the Sample Receiving Checklist. Sample MW-229-LA-5 was received but not listed on chain, and the containers had large air bubbles. The resolution was not noted but this sample is not included in this SDG, and was apparently resampled and submitted on SDG L0710208. Sample MW-108-LA-5-MS is noted as being listed on the chain but the samples labeled as MSD. Since the report includes the MS, apparently there was a resolution but it is not noted. There were bubbles noted in three samples, TB-100107-LA-5 in two containers; MW-108-LA-5 in one container; MW-108-LA-5-MSD in one container. Bubbles are described as the size of a pea. It is apparent that there were other

containers available, but in any event bubbles of that size are not normally considered an issue and no qualifiers would be required.

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.
Yes __X__ No ____ NA____
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.

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. In this case, the MS/MSD recoveries are in control for these compounds, so it appears that there is not a severe matrix bias for them.

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 (50% for poor responders) for all other compounds 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) were met.
Yes _____ No __X__ NA____
The CCVs were analyzed at the proper frequency. The same compounds showed low responses in the continuing calibration as were observed in the initial calibrations. Qualifiers are not added for these outliers since none were below the lower limit of 0.01. No data have been qualified from the response factors and RRFs are not noted since they are essentially the same as the ICAL. This consistency of response for the poor-responding compounds is an indication that there is no significant bias for the laboratory water matrix.

2. The percent difference (%D) limits of ± 25% were met (50% for the poor responders).
Yes ____ No __X__ NA___
Dichlorodifluoromethane and vinyl acetate gave continuing calibration %D values that were outside the 25% validation limit in some cases. No qualifiers have been added since detections of these compounds were not observed.

SDG	CCV Date	Lab Sample #	Analyte	%D	Qualifiers Added
L071117	10/14/07 11:40	3-6	Dichlorodifluoromethane	26.8	None, all ND
			Vinyl Acetate	38.2	None, all ND
L0710045	10/9/07 8:20	23,24,28-30	Vinyl Acetate	42.6	None, all ND
L0710208	10/13/07 12:48	1	Vinyl Acetate	54.4	None, all ND
L0710147	10/11/07 6:39	15-19, 21-23, 26-30	Vinyl Acetate	44.0	None, all 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 ____ No ____ NA_X__
Not part of this review level.

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 _____ No ____ NA__ X __
Not part of this review level.

VI. SURROGATE
Surrogate spikes were analyzed with every sample.
Yes _ X ___ No____

And met the recovery limits defined in the current contract, which are the current laboratory limits.
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 4 MS/MSDs which does not meet the 1:20 ratio. There are 6 field blanks and 9 field duplicates. If these are removed from the sample count, there are 85 unique field samples.

Method	SDG	Client Sample ID	Parent Sample ID
8260B\5030B	L0710045	DR1-6-LA-5	L0710045-07

Method	SDG	Client Sample ID	Parent Sample ID
		MW-108-LA-5	L0710045-25
	L0710147	MW-62-LA-5	L0710147-23
	L0710180	MW-208B-LA-5	L0710180-15

B. The MS and MSD percent recoveries were within the limits defined in the contract, which are the current laboratory control chart limits.
Yes _____ No __X___NA___
The full target list has been spiked. Most MS/MSD recoveries and RPDs are in control. Instances where spike recoveries are out of limits are shown in the table below. In two cases, the sample amount is 4x the spike level or greater. In such cases, the recovery cannot realistically be calculated, because the anticipated normal analytical variability is on the order of the spike level. Thus no qualifiers are added. In the only other outlier, the associated parent result has been qualified as JS#, where # is the recovery. The result could be biased low approximately proportional to the recovery.

SDG	Client Sample ID	Lab Sample ID	Analyte	MS/MSD/RPD	Qualifiers
L0710045	MW-108-LA-5	25	Trichloroethene	67.1/64.4/OK	JS64
	DR1-6-LA-5	7	Tetrachloroethene	-93.8/-113/OK	None, parent > 4x spike
L0710180	MW-208B-LA-5	15	All in control		None
L0710147	MW-62-LA-5	23	Trichloroethene	-74.7/-103/OK	None, parent > 4x spike

C. The MSD relative percent differences (RPD) were within the defined contract limits.
Yes __X___ No ___NA____

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 contract (the MS limits are used as a reference or laboratory-specific limits for this matrix are defined).
Yes _____ No __X___
The full target list has been spiked. Undetected data are not qualified for high spikes.

SDG	Lab Sample #	Batch	Targets Detected	LCS/LCSD/RPD	Qualifiers
L0710076	1-4, 6-17	WG252406	2-Butanone	139/138/OK	None, all ND
L0710045	17-22, 25	WG252193	2-Butanone	141	None, all 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 indicated in the table, below the reporting limit. 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#, where # is the corrected method blank level. Such results are usable as nondetects. In this case, no samples are qualified due to method blank contamination.

SDG	Lab Sample #	Batch	Analyte	Results	Qualifiers Added
L0710076	1-4, 6-17	WG252406	1,2,3 Trichlorobenzene	.338F	None, ND
			1,2,4 Trichlorobenzene	.242F	None, ND
			Hexachlorobutadiene	.279F	None, ND
			o-Xylene	.343F	None, ND
	5, 18-22	WG252517	1,2,3 Trichlorobenzene	.303F	None, ND
			1,2,4 Trichlorobenzene	.215F	None, ND
L0711117	3-6	WG252783	Methylene Chloride	.326F	None, ND
	1-2	WG252774	1,2,3 Trichlorobenzene	.323F	None, ND
			1,2,4 Trichlorobenzene	.226F	None, ND
			Hexachlorobutadiene	.306*	None, ND
			Naphthalene	.287F	None, ND
L0710147	15-19, 21-23, 26-30	WG252525	Methylene Chloride	.405F	None, ND
	1,2	WG252517	1,2,3 Trichlorobenzene	.303F	None, ND
			1,2,4 Trichlorobenzene	.215F	None, ND
	3, 5-14	WG252531	1,2,3 Trichlorobenzene	.280F	None, ND
			1,2,4 Trichlorobenzene	.207F	None, ND
			Methylene Chloride	.310F	None, ND
L0710147	4, 20	WG252642	1,2,3 Trichlorobenzene	.254F	None, ND
L0710180	1-4, 15	WG252642	1,2,3 Trichlorobenzene	.254F	None, ND
	5-14, 18, 19	WG252670	1,2,3 Trichlorobenzene	280F	None, ND
			Hexachlorobutadiene	.307F	None, ND
			Naphthalene	.262F	None, ND

C. If Field Blanks were identified, no blank contamination was found.
Yes____ No __X__

There are 5 trip blanks and one rinse blank. There are detections observed below the reporting limit as shown in the table. Some of these are qualified UB due to detections in the associated method blank, thus are not used for qualifying associated samples. 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 UEB# for equipment rinse blanks.

SDG	Sample ID	Lab Sample ID	Analyte	Results	Qualifiers
L0710076	TB-100207-LA-5	5	Acetone	3.99F	UTB# detected target
L0710147	TB-100307-LA-5	20	OK		None
L0711117	TB-100507-LA-5	6	OK		None
L0710180	TB-100407-LA-5	12	OK		None
L0710045	TB-100107-LA-5	13	Chloromethane	.257F	UTB.26 detection
L0710147	LTM-RB1-LA-5	18	1,4-Dichlorobenzene	0.13F	None, ND
			Benzene	0.15 F	None, ND
			Naphthalene	0.20 F	None, ND
			Toluene	0.28 F	None, ND

X. FIELD QC

If Field duplicates were identified, they met guidance 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. Observations are summarized in the table. Agreement is generally very good between the field duplicate and the parent sample.

SDG	Field Duplicate	Parent Sample	Observations
L0710045	DUP1	MW-38-LA-5	OK
L0710045	DUP2	MW-89-LA-5	OK
L0710147	DUP3	MW-99-LA-5	OK
L0710147	DUP4	MW-197A-LA-5	OK
L0710076	DUP5	MW-202B-LA-5	OK
L0710045	DUP6	DR2-2-LA-5	OK
L0711117	DUP7	PZ-03-LA-5	OK
L0710147	DUP8	MW-205A-LA-5	OK
L0710147	DUP9	MW-214A-LA-5	OK

XI. SYSTEM PERFORMANCE

A. The RICs, chromatograms, tunes and general system performance were acceptable for all instruments and analytical systems.
Yes ____ No____ NA__X__
Not part of this review level

B. The suggested EQLs for the sample matrices in this set were met.
Yes _X__ No____ NA____

XII. 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/Deliverables:
The project manager is informed of the following and the chain information is to be updated for the project file.

Most of the SDGs do not have a customary chain of custody. Those have a running list of samples with date and time collected with no relinquished and received areas at the bottom of each page. They do not have page numbers.

SDG L07100076: The Sample Receiving Checklist does not list the chain of custody numbers.

SDG L0710147: The Sample Receiving Checklist lists one chain of custody number but there are two others that also appear to be applicable to this SDG.

SDG L0711117: The chain of custody does not have a laboratory receipt signature or date. The Sample Receiving Checklist shows a cooler ID number, but this is not shown on the chain of custody. The chain of custody bears a chain of custody number, but this is not shown on the Sample Receiving Checklist, although there is a location on the form for this information to be entered. The checklist refers to samples in the discrepancy section that are not a part of this SDG.

SDG L0710208: The chain of custody does not have a laboratory receipt signature or date. The Sample Receiving Checklist appears to be the same one associated with SDG L0711117 above. It shows a cooler ID number, but this is not shown on the chain of custody (which is a conventional chain of custody). The chain of custody bears a chain of custody number, but this is not shown on the Sample Receiving Checklist, although there is a location on the form for this information to be entered. The checklist refers to samples in the discrepancy section that are not a part of this SDG.

Sample Condition:
As far as can be determined from the available documentation, samples reported were in acceptable condition. There is no comment in the narrative that indicates integrity issues.

Three of the SDGs had a cooler that was under 2°C but the Sample Checklist states that the samples weren't frozen. No qualifiers are required under these circumstances.

In addition, new EPA regulations (See Federal Register, March 12, 2007, 40CFR Part 122) require only that the temperature of samples delivered to the laboratory be less than 6° C. Thus the sample receipt conditions are fully compliant with applicable regulations.

SDG L0710045: There were several discrepancies noted on the Sample Receiving Checklist. Sample MW-229-LA-5 was received but not listed on chain, and the containers had large air bubbles. The resolution was not noted but this sample is not included in this SDG, and was apparently resampled and submitted on SDG L0710208. Sample MW-108-LA-5-MS is noted as being listed on the chain but the samples labeled as MSD. Since the report includes the MS, apparently there was a resolution but it is not noted. There were bubbles noted in three samples, TB-100107-LA-5 in two containers; MW-108-LA-5 in one container; MW-108-LA-5-MSD in one container. Bubbles are described as the size of a pea. It is apparent that there were other containers available, but in any event bubbles of that size are not normally considered an issue and no qualifiers would be required.

Continuing Calibrations:
Dichlorodifluoromethane and vinyl acetate gave continuing calibration %D values that were outside the 25% validation limit in some cases. No qualifiers have been added since detections of these compounds were not observed.

Matrix Spikes:
There are 4 MS/MSDs which does not meet the 1:20 ratio. There are 6 field blanks and 9 field duplicates. If these are removed from the sample count, there are 85 unique field samples.

The full target list has been spiked. Most MS/MSD recoveries and RPDs are in control. Instances where spike recoveries are out of limits are shown in the table below. In two cases, the sample amount is 4x the spike level or greater. In such cases, the recovery cannot realistically be calculated, because the anticipated normal analytical variability is on the order of the spike level. Thus no qualifiers are added. In the only

other outlier, the associated parent result has been qualified as JS#, where # is the recovery. The result could be biased low approximately proportional to the recovery

Method Blanks:
Contamination was observed in some method blanks indicated in the table in the report body, below the reporting limit. 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#, where # is the corrected method blank level. Such results are usable as nondetects. In this case, no samples are qualified due to method blank contamination.

Field Blanks:
There are 5 trip blanks and one rinse blank. There are detections observed below the reporting limit as shown in the table. Some of these are qualified UB due to detections in the associated method blank, thus are not used for qualifying associated samples. 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 UEB# for equipment rinse blanks.

Field QC:
There are 9 identified field duplicates. Observations are summarized in the table.. Agreement is generally very good between the field duplicate and the parent sample.

APPENDIX E

HISTORICAL CVOC RESULTS

DR1-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	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	0.8J	–	–	–	–	–
Carbon tetrachloride	µg/L	<1J	<1	<1	<1	<1	<1
Chloroform	µg/L	0.24J	<1	<1	<1	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.8J	1.2	1	1.1	1.02	0.969 J
Tetrachloroethene	µg/L	2.8	3.3	3.3J	3	2.46	2.49
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	0.3J	0.29J	0.3J	0.255 J	<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

1015449

1015450

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR1 CLUSTER A 5/27/04	DR1-1A 11/13/04	DR1-1A 2/16/05	DR1-1A 5/18/05	DR1-1A-LB-1 10/2/06
	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	0.72J	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	0.66J	0.18J	0.21B	0.16B	0.324
cis-1,2-Dichloroethene	µg/L	0.72J	0.85J	1	0.75J	0.634
Tetrachloroethene	µg/L	1.5	1.8	1.8	1.6	1.18
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3.5	4	6.9	5.2	6.28
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

DR1-1A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	DR1-1A-LS-3	DR1-1A-LA-5
	Sample Date	4/13/07	10/1/2007
	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	0.313	0.307
cis-1,2-Dichloroethene	µg/L	0.416 J	0.312 J
Tetrachloroethene	µg/L	0.959 J	0.813 J
trans-1,2-Dichloroethene	µg/L	<1	<1
Trichloroethene	µg/L	4.57	3.61
Vinyl chloride	µg/L	<1	<1

NOTES

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW826(
-- 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

1015451

1015452

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
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	0.68J	–	–	–	–	–
Carbon tetrachloride		µg/L	<1	<1	<1	<1	<1	<1
Chloroform		µg/L	<1	<1	<1	<1	0.163	<0.3
cis-1,2-Dichloroethene		µg/L	0.68J	0.77J	0.67J	0.75J	0.602	0.48 J
Tetrachloroethene		µg/L	1.8	2.5J	2.3	2.1	1.82	1.52
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

DR1-3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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
1,1,1-Trichloroethane		µg/L	<1	<1.2	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1.2	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	<2	–	–	–	–	–
Carbon tetrachloride		µg/L	<1	<1.2	<1	<1	<1	<1
Chloroform		µg/L	<1	<1.2	<1	<1	<0.3	<1
cis-1,2-Dichloroethene		µg/L	<1	<1.2	<1	0.22J	<1	<1
Tetrachloroethene		µg/L	34	43J	46	47	45.7	54.7
trans-1,2-Dichloroethene		µg/L	<1	<1.2	<1	<1	<1	<1
Trichloroethene		µg/L	2.6	3.2	3.7	4.1	4.18	5.13
Vinyl chloride		µg/L	<1	<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

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

10154453

1015454

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	DR1-3-EBT-2	DR1-3-EBT-3	DR1-3-EBT-4	DR1-3-EBT-5
Analyte	**Sample Date**	3/7/2007	6/1/2007	9/19/2007	12/13/2007
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<1	<1
cis-1,2-Dichloroethene	µg/L	27.6	32.9	30.7	22.6
Tetrachloroethene	µg/L	8.31	2.18	0.45 J	0.904 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	2.74	0.572 J	<1	0.303 J
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES

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

– not analyzed

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

DR1-4

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	DR1-4	DR1-4	DR1-4	DR1-4	DR1-4-LB-1	DR1-4-LS-3	DR1-4-LA-5
	Sample Date	5/21/2004	11/11/2004	2/15/2005	5/17/2005	10/25/2006	4/13/2007	10/1/2007
	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	<1J	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	8.09	5.29
Tetrachloroethene	µg/L	4.8	8.3J	9.3	8.9	12.4	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.72J	1.1	1.1	1	1.33	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

-- not analyzed

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

10154455

03015456

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1J	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<2	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1J	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	0.129	<0.3	0.148 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	4.3	11	17	15	57	69.2	69.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

-- not analyzed

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

DR1-5A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
	Sample Date	5/27/2004	11/12/2004	2/21/2005	5/19/2005	10/23/2006	4/13/2007	10/1/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<1.7	<5	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1.7	<5	0.25J	0.19J	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	1.7J	–	–	–	–	–	–
Carbon tetrachloride	µg/L	<1.7	<5	<1	<1	<1	<1	<1
Chloroform	µg/L	0.71J	<5	0.4B	0.29B	0.306	0.274 J	0.252 J
cis-1,2-Dichloroethene	µg/L	1.7	5.2	4.6	4.1	3.46	3.19	3.16
Tetrachloroethene	µg/L	24	47	55	47	50.9	49.6	46.8
trans-1,2-Dichloroethene	µg/L	<1.7	<5	<1	<1	<1	<1	<1
Trichloroethene	µg/L	47	110	110	100	98.1	84	78.6
Vinyl chloride	µg/L	<1.7	<5	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

10154457

1015458

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	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	3.3	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	3.3	6.2	4.1	3.8	1.59	1.91	1.42
Tetrachloroethene	µg/L	13	21	20	26	184	173	191 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.6	2.4	2.2	2.1	1.85	1.83	1.58
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

-- not analyzed

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

DR1-6A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	DR1-6A	DR1-6A	DR1-6A	DR1-6A	DR1-6A-LB-1	DR1-6A-LS-3	DR1-6A-LA-5
	Sample Date	6/26/2004	11/10/2004	2/17/2005	5/18/2005	10/24/2006	4/13/2007	10/1/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<3.3	<3.3	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	0.32 B	<3.3	0.4J	0.21 J	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<6.7	–	–	–	–	–	–
Carbon tetrachloride	µg/L	<1	<3.3	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<3.3	0.17 J	<1	0.18	0.236 J	0.183 J
cis-1,2-Dichloroethene	µg/L	–	3J	4.1	3.5	4.81	5.98	4.24
Tetrachloroethene	µg/L	–	17	28	21	28.4	34.4	30.2
trans-1,2-Dichloroethene	µg/L	–	<3.3	<1	<1	<1	<1	<1
Trichloroethene	µg/L	9.1	88	140	97	118	139	107
Vinyl chloride	µg/L	–	<3.3	<1	<2	<1	<1	<1

NOTES:

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

– not analyzed

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

10154459

10154460

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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-LB-1 10/25/2006	DR1-7-LA-5 10/1/2007
	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	0.46 J	-	-	-	-	-
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	0.18 J	0.19 J	<1	<1	<0.3	<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
Tetrachloroethene	µg/L	30	26	27	27	5.68	5.15
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.6	1.8	2.2	2	0.76 J	0.812 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR1-8 6/24/2004	DR1-8 11/11/2004	DR1-8 2/18/2005	DR1-8 5/19/2005	DR1-8-LB-1 10/18/2006	DR1-8-LA-5 10/1/2007
	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	<1J	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	0.341 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES:

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

-- not analyzed

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

1015461

10154462

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
	UNIT						
1,1,1-Trichloroethane	µg/L	<5.3	<8.3	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<5.3	<8.3	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	16	–	–	–	–	–
Carbon tetrachloride	µg/L	25	35	24	32	32.3	29 J
Chloroform	µg/L	16	16	12	13	9.91	13.3
cis-1,2-Dichloroethene	µg/L	16	24	21	22	17	34.7
Tetrachloroethene	µg/L	180	280	190	250	176	191
trans-1,2-Dichloroethene	µg/L	<5.3	<8.3	<1	<1	0.319 J	<1
Trichloroethene	µg/L	7.3	9.8	7.8	9.1	8.51	8.49
Vinyl chloride	µg/L	<5.3	<8.3	<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

DR2-1

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	DR2-1-EBT-2	DR2-1-EBT-3	DR2-1-EBT-4	DR2-1-EBT-5
	Sample Date	3/8/2007	5/29/2007	9/12/2007	12/10/2007
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--
Carbon tetrachloride	µg/L	22.6	25.7 J	13.4	15.5
Chloroform	µg/L	10	8.76	8.58	11.3
cis-1,2-Dichloroethene	µg/L	19.3	15.2	50.4	7.71
Tetrachloroethene	µg/L	194	160	138	192
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	7.91	7.21	4.54	5.72
Vinyl chloride	µg/L	<1	<1	1.25	<1

NOTES:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW82

– 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

10154463

10154464

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
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	1.8	5	4.2	4.7	4.19	6.78	10.8
Chloroform		µg/L	0.64J	1.5	1.5	1.2B	1.05	1.76	2.86
cis-1,2-Dichloroethene		µg/L	<1	2.7	2.5	2.4	1.9	3.47	5.7
Tetrachloroethene		µg/L	10	36	16	40	23.2	49.2	76.7
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.6	4.1	2.8	3.8	3.13	3.49	4.04
Vinyl chloride		µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

DR2-3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	DR2-3	DR2-3	DR2-3	DR2-3	DR2-3-LB-1	DR2-3-LS-3	DR2-3-LA-5
	Sample Date	5/23/2004	11/14/2004	2/24/2005	5/20/2005	10/3/2006	4/15/2007	10/1/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<1.7	<1.4	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1.7	<1.4	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	1.4 J	--	--	--	--	--	--
Carbon tetrachloride	µg/L	4.1 J	5.6	6.1	4.7	4.2	4.29	4.12
Chloroform	µg/L	1.8	1.9	1.8 B	1.2 B	0.939	0.913	0.76
cis-1,2-Dichloroethene	µg/L	1.4 J	1.8	1.8	1.2	0.601 J	0.673 J	0.549 J
Tetrachloroethene	µg/L	47	43	33	33	22.8	23.9	20.6
trans-1,2-Dichloroethene	µg/L	<1.7	<1.4	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2	2.7	2.7	2.6	2.47	2.28	2.15
Vinyl chloride	µg/L	<1.7	<1.4	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

10154465

10154466

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR2-4 5/24/2004	DR2-4 11/14/2004	DR2-4 2/22/2005	DR2-4 5/20/2005	DR2-4-LB-1 10/5/2006	DR2-4-LA-5 10/1/2007
	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	2.2	3.8	3.7	3.6	4.06	3.96
Chloroform	µg/L	1	0.94 J	0.84 J	0.77 B	1.06	0.973
cis-1,2-Dichloroethene	µg/L	<1	0.27 J	0.22 J	0.22 J	<1	<1
Tetrachloroethene	µg/L	12	14	12	10	7.15	9.28
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.9	2.2	1.9	1.7	1.61	1.54
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

DR2-5

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR2-5 6/23/2004	DR2-5 11/14/2004	DR2-5 2/23/2005	DR2-5 5/23/2005	DR2-5-BL 8/31/2006	DR2-5-EBT-1 12/7/2006
	UNIT						
1,1,1-Trichloroethane	µg/L	<6.7	<5.7	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<6.7	<5.7	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	44	–	–	–	–	–
Carbon tetrachloride	µg/L	240	200	200	260	142	100
Chloroform	µg/L	82	68	64	79	46.7	35.8
cis-1,2-Dichloroethene	µg/L	44	39	41	35J	31	27.7
Tetrachloroethene	µg/L	88	71	75	88	54.2	45.3
trans-1,2-Dichloroethene	µg/L	<6.7	<5.7	<1	<1	0.506 J	0.287 J
Trichloroethene	µg/L	29	25	32	21J	18.3	15.4
Vinyl chloride	µg/L	<6.7	<5.7	<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

10154467

1015468

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	DR2-5-EBT-2 3/13/2007	DR2-5-EBT-3 5/29/2007	DR2-5-EBT-4 9/13/2007	DR2-5-EBT-5 12/10/2007
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--	--
Carbon tetrachloride	µg/L	130	132 J	123	138
Chloroform	µg/L	43	37.6	42.2	43.6
cis-1,2-Dichloroethene	µg/L	32.9	25.9	30.5	33.7
Tetrachloroethene	µg/L	48.4	41.1	46.8	57.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	18.5	14.4	16	18.9
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW82

-- 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

DR2-6

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	DR2-6	DR2-6	DR2-6	DR2-6	DR2-6-LB-1	DR2-6-LS-3	DR2-6-LA-5
	Sample Date	6/22/2004	11/13/2004	2/24/2005	5/23/2005	10/17/2006	4/15/2007	10/1/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<1.7	<2	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1.7	<2	<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
Chloroform	µg/L	16	25	1.5B	29	27.3	33.1	43.1
cis-1,2-Dichloroethene	µg/L	7.3	13	0.69J	16	9.97	14.1	31.6
Tetrachloroethene	µg/L	44	75	36	78	77.2	90.8	115
trans-1,2-Dichloroethene	µg/L	<1.7	<2	<1	<1	<1	<1	<1
Trichloroethene	µg/L	11	13	2.2	16	15.5	16.4	19.7
Vinyl chloride	µg/L	<1.7	<2	<1	<1	<1	<1	<1

NOTES

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

– not analyzed

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

1015469

10154470

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	IW6-EBT-B-101-106	IW6-EBT-TS7-101-106	IW6-EBT-TS7-OIL	IW-6	IW-6	IW-6
	Sample Date	5/21/2002	1/20/2003	1/23/2003	5/27/2004	11/13/2004	2/23/2005
	UNIT						
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<0U	<2.5	<10	<2.8
1,1-Dichloroethene	µg/L	<0.5	<0.5	<0U	<2.5	<10	<2.8
1,2-Dichloroethene (Total)	µg/L	–	–	<0U	<5	–	–
Carbon tetrachloride	µg/L	<0.25	<0.25	<0U	<2.5	<10	<2.8
Chloroform	µg/L	<0.125	<0.125	<0U	<2.5	<10	<2.8
cis-1,2-Dichloroethene	µg/L	0.67J	<0.25	<0U	<2.5	<10	<2.8
Tetrachloroethene	µg/L	17	<0.25	<0U	<2.5	<10	<2.8
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	<0U	<2.5	<10	<2.8
Trichloroethene	µg/L	34	<0.25	<0U	<2.5	<10	<2.8
Vinyl chloride	µg/L	<0.25	<0.25	<0U	<2.5	<10	<2.8

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

IW-06

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	IW-6	IW-6-LB-1	IW-6-LA-5
	Sample Date	5/23/2005	10/18/2006	10/2/2007
	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	<1	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.48J	0.835 J	2.16
Tetrachloroethene	µg/L	0.29J	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	0.581 J	1.38
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

10154771

1015472

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

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

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

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

NOTES:

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

– not analyzed

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

10154473

10154774

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW222	MW223	MW224	MW225	MW22NA	MW22-99-104BL	MW-022	MW-22-LB-1
	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
	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	<1	<0.3
cis-1,2-Dichloroethene	µg/L	–	–	–	–	0.5J	<1	<1	0.527 J
Tetrachloroethene	µg/L	<10	2J	<10	<10	0.9J	0.27J	<1	0.79 J
trans-1,2-Dichloroethene	µg/L	–	–	–	–	<1	<1	<1	<1
Trichloroethene	µg/L	2J	4J	1J	<10	1	<1	<1	0.531 J
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

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW232	MW233	MW234	MW235	MW23NA	MW23-95-100BL	MW-23	MW-23-LB-1
	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
	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	<1	<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	<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

10154475

1015429

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW242	MW243	MW244	MW245	MW24NA	MW24-109-111BL	MW-24	MW-24-LB-1
	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
	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	<1	<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	<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

MW-25A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW25A-111102 11/11/2002	MW-25A 5/12/2004	MW-25A 2/21/2005	MW-25A-LB-1 10/2/2006	MW-25A-LS-3 4/13/2007	MW-25A-LA-5 10/3/2007
	UNIT						
1,1,1-Trichloroethane	µg/L	<0.25	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<0.5	<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
Chloroform	µg/L	0.517 J	0.57J	0.59B	0.608	0.507	0.531
cis-1,2-Dichloroethene	µg/L	<0.25	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5.64	8	9.3	8.61	10.3	9.24
trans-1,2-Dichloroethene	µg/L	<0.25	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.453 J	0.6 J	0.57 J	0.352 J	0.525 J	0.433 J
Vinyl chloride	µg/L	<0.25	<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

10154477

1015478

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW262	MW263	MW264	MW265	MW-26-106-BL	MW26-EBT-TS13	MW26-EBT-TS14
	Sample Date	6/20/1997	9/26/1997	3/28/1998	10/20/1998	3/21/2002	7/24/2003	8/18/2003
	UNIT							
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<5	<0.25	<0.25
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<5	<0.5	<0.5
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	–	–	–
Carbon tetrachloride	µg/L	4 J	4 J	4 J	4 J	3.7 J	3.29	5.17 J
Chloroform	µg/L	1 J	<10	2 J	1 J	<1	1.11	1.28
cis-1,2-Dichloroethene	µg/L	–	–	–	–	<5	<0.25	<0.25
Tetrachloroethene	µg/L	12	11	14	16	8.1	7.92	13.8
trans-1,2-Dichloroethene	µg/L	–	–	–	–	<5	<0.25	<0.25
Trichloroethene	µg/L	2 J	2 J	2 J	2 J	1.6 J	1.72	1.9
Vinyl chloride	µg/L	<10	<10	<10	<10	<10	<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-26

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-26	MW-26	MW-26	MW-26	MW-26-LB-1	MW-26-LS-3	MW-26-LA-5
	Sample Date	4/2/2004	11/13/2004	2/22/2005	5/24/2005	10/2/2006	4/16/2007	10/1/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<2.5	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<2.5	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<5	–	–	–	–	–	–
Carbon tetrachloride	µg/L	5.3	7.2	7.5	7.2	5.24	5.23	6.52
Chloroform	µg/L	1.4 B	1.6	1.7	1.8 B	0.935	1.05	1.29
cis-1,2-Dichloroethene	µg/L	0.76 J	0.64 J	0.71 J	0.57 J	0.45 J	0.313 J	0.41 J
Tetrachloroethene	µg/L	25	40	40	35	25.5	20.1	29
trans-1,2-Dichloroethene	µg/L	<2.5	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.1 J	2.3	2.2	2.5	1.77	1.56	1.75
Vinyl chloride	µg/L	<2.5	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

10154479

10154480

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW342 6/19/1997	MW343 9/26/1997	MW344 3/27/1998	MW-34-Y1Q1 2/4/1999	MW-34-Y1Q2 5/25/1999	MW-34-Y1Q3 8/27/1999
	UNIT						
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	–	–	–
Carbon tetrachloride	µg/L	<10	<10	<10	1.01	1.23	0.51 J
Chloroform	µg/L	2 J	1 J	<10	4.34	<1	0.66 J
cis-1,2-Dichloroethene	µg/L	–	–	–	1.03	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	–	–	–	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	4.39	<1	0.64 J
Vinyl chloride	µg/L	<10	<10	<10	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-34-Y1Q4	MW-34-Y2Q1	MW-34	MW-34-Y2Q3	MW-34-Y2Q4	MW-34
	Sample Date	11/3/1999	2/16/2000	5/18/2000	8/24/2000	11/7/2000	2/20/2001
	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	1.04	1.03	0.86 J	<1	0.82 J
Chloroform	µg/L	<1	1.98	3.49	<1	<1	4.24
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	0.85 J	2.15	2.55	1.43	1.62
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

10154481

10154482

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-34-Y3S2-A	MW-34-Y3S2-B	MW-34-Y3S2-C	MW34-147-152BL	MW-34-3_020410	MW-34-2_020410
	Sample Date	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-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1	0.96 J	0.7 J	<1	<1
Chloroform	µg/L	1.46	<1	<1	3	<1	7.78
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	1.48	2	0.93 J	0.9 J	0.97 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES

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

– not analyzed

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 MONITORING REPORT – 2007
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
	Sample Date	4/10/2002	10/1/2002	10/1/2002	10/1/2002	4/8/2003	4/8/2003
	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	10.5	<1	2.56	1.26	4.45	7.66
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.16	<1	<1	<1	0.74	120
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

1015483

10154484

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-34-1 4/8/2003	MW34-EBT-TS13 7/24/2003	MW-34-1 10/28/2003	MW-34-2 10/28/2003	MW-34-3 10/28/2003	MW-34,152 4/28/2004
1,1,1-Trichloroethane		µg/L	<1	<0.25	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<0.5	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	–	–	–	–	–	–
Carbon tetrachloride		µg/L	1.08	<0.25	<1	<1	<1	<1
Chloroform		µg/L	13.9	<0.125	3	<1	<1	1.2
cis-1,2-Dichloroethene		µg/L	<1	<0.25	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<0.25	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<0.25	<1	<1	<1	<1 J
Trichloroethene		µg/L	1.75	0.476 J	<1	<1	<1	0.29 J
Vinyl chloride		µg/L	<1	<0.25	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-34,147	MW-34,142	MW-34,138	MW-34	MW34,152	MW34,147.3
Analyte	Sample Date	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	<4	<4	<1	<1 J	<1 J
1,1-Dichloroethene	µg/L	<1	<4	<4	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	–	–	<2	–	–
Carbon tetrachloride	µg/L	0.19 J	<4	<4	0.4 J	0.35 J	0.64 J
Chloroform	µg/L	1.2	1.2 J	1.1 J	0.29 J	1.7	2.4
cis-1,2-Dichloroethene	µg/L	<1	<4	<4	<1	<1	<1
Tetrachloroethene	µg/L	<1	<4	<4	0.55 J	<1	<1
trans-1,2-Dichloroethene	µg/L	<1 J	<4 J	<4 J	<1	<1	<1
Trichloroethene	µg/L	0.39 J	<4	<4	0.5 J	0.54 J	0.83 J
Vinyl chloride	µg/L	<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

10154485

10154486

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW34,142.3	MW-34	MW-34	MW-34	MW-34-LB-1	MW-34	MW-34
Analyte	Sample Date	10/20/2004	11/11/2004	2/23/2005	5/23/2005	10/16/2006	10/1/2007	11/7/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<1 J	<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	0.62 J	0.55 J	0.41 J	0.44 J	0.381 J	1.05	0.479
Chloroform	µg/L	3.8	0.51B	1.1	0.31B	0.531	0.434	0.371
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	0.52 J	0.37 J	0.46 J	0.336 J	0.753 J	0.34
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.98 J	0.49 J	0.4 J	0.67 J	1.06	1.38	1.39
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-36

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW362	MW363	MW365	MW-36-197-202BL	MW-36-1_030423	MW-36-2_030423	MW-36-3_030423
	Sample Date	6/19/1997	9/24/1997	10/13/1998	3/18/2002	4/23/2003	4/23/2003	4/23/2003
	UNIT							
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	–	–	–	–
Carbon tetrachloride	µg/L	<10	<10	<10	<1	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<1	<1	0.97	0.92
cis-1,2-Dichloroethene	µg/L	–	–	–	<1	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	–	–	–	<1	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<1	<1	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<1	<1	<1	<1

NOTES.

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

– not analyzed

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

1015487

10154888

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-36-2 10/28/2003	MW-36-1 10/28/2003	MW-36-3 10/28/2003	MW36,192.3 4/28/2004	MW36,197.9 4/28/2004	MW36,202.9 4/28/2004
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	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1 J	<1 J	<1 J
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

MW-36

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-36	MW36,202.7	MW36,197.7	MW36,192.7	MW-36-LB-1
Analyte	Sample Date	5/24/2004	10/21/2004	10/21/2004	10/21/2004	10/16/2006
	UNIT					
1,1,1-Trichloroethane	µg/L	<1	<1 J	<1 J	<1 J	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<2	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1 J	<1 J	<1 J	<1
Chloroform	µg/L	<1	<1	<1	<1	<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

1015489

1015460

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
1,1,1-Trichloroethane		µg/L	<10	<10	<10	<10	<1
1,1-Dichloroethene		µg/L	<10	<10	<10	<10	<1
1,2-Dichloroethene (Total)		µg/L	<10	<10	<10	<10	–
Carbon tetrachloride		µg/L	<10	<10	<10	<10	<1
Chloroform		µg/L	<10	<10	<10	<10	<1
cis-1,2-Dichloroethene		µg/L	–	–	–	–	<1
Tetrachloroethene		µg/L	<10	<10	<10	<10	<1
trans-1,2-Dichloroethene		µg/L	–	–	–	–	<1
Trichloroethene		µg/L	<10	1J	1J	<10	<1
Vinyl chloride		µg/L	<10	<10	<10	<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

MW-38

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-38	MW-38-LB-1	MW-38-LA-5
	Sample Date	5/20/2004	10/17/2006	10/1/2007
	UNIT			
1,1,1-Trichloroethane	µg/L	<9.1	<1	<1
1,1-Dichloroethene	µg/L	<9.1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<18	–	–
Carbon tetrachloride	µg/L	<9.1	1.24	1.37
Chloroform	µg/L	<9.1	0.513	0.646
cis-1,2-Dichloroethene	µg/L	<9.1	<1	<1
Tetrachloroethene	µg/L	<9.1	<1	0.446 J
trans-1,2-Dichloroethene	µg/L	<9.1	<1	<1
Trichloroethene	µg/L	<9.1	4.63	4.37
Vinyl chloride	µg/L	<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

1015491

10154492

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW392	MW393	MW394	MW395	MW39NA	MW39-107-112BL	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
	UNIT							
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<3.3
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<3.3
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	--	<6.7
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<3.3
Chloroform	µg/L	<10	<10	<10	<10	<1	0.18 J	<3.3
cis-1,2-Dichloroethene	µg/L	--	--	--	--	0.4 J	0.48 J	<3.3
Tetrachloroethene	µg/L	6 J	9 J	8 J	8 J	12	8.2	120
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<3.3
Trichloroethene	µg/L	5 J	8 J	7 J	7 J	5	3.8	10
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<3.3

NOTES:

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

-- not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-39	MW-39	MW-39	MW-39	MW-39-LB-1	MW-39-LS-3	MW-39-LA-5
	Sample Date	5/23/2004	11/9/2004	2/15/2005	5/16/2005	10/17/2006	4/13/2007	10/1/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<2.5	<4	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<2.5	<4	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<5	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<2.5	<4	<1	<1	<1	<1	<1
Chloroform	µg/L	<2.5	<4	0.17 J	0.17 B	<0.3	0.155 J	0.225 J
cis-1,2-Dichloroethene	µg/L	<2.5	<4	0.52 J	0.68 J	0.622 J	0.462 J	0.435 J
Tetrachloroethene	µg/L	95	130	79	110	149	106	111
trans-1,2-Dichloroethene	µg/L	<2.5	<4	<1	<1	<1	<1	<1
Trichloroethene	µg/L	7.2	10	7.6	11	8.94	8.17	8.81
Vinyl chloride	µg/L	<2.5	<4	<1	<1	<1	<1	<1

NOTES:

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

-- not analyzed

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

10154493

10154494

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-39A	MW-39A	MW-39A	MW-39A	MW-39A-LB-1	MW-39A-LS-3	MW-39A-LA-5
	Sample Date	5/23/2004	11/9/2004	2/15/2005	5/16/2005	10/17/2006	4/13/2007	10/2/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<5	<6.7	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<5	<6.7	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	--	--	--	--	--	--
Carbon tetrachloride	µg/L	<5 J	<6.7	<1	<1	<1	<1	<1
Chloroform	µg/L	<5	<6.7	0.22 J	0.23 B	0.251 J	0.215 J	0.215 J
cis-1,2-Dichloroethene	µg/L	<5	<6.7	0.59 J	0.51 J	0.418 J	0.4 J	0.362 J
Tetrachloroethene	µg/L	140	150	190	150	196	176	162
trans-1,2-Dichloroethene	µg/L	<5	<6.7	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.8	8.3	8.7	7.9	4.68	4.04	4.4
Vinyl chloride	µg/L	<5	<6.7	<1	<1	<1	<1	<1

NOTES:

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

-- not analyzed

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-49

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-49	MW-49	MW-49	MW-49	MW-49-LQ-4
	Sample Date	6/17/1997	9/24/1997	3/25/1998	10/15/1998	7/9/2007
	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	<1	<1	<1	<1	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<0.3
cis-1,2-Dichloroethene	µg/L	–	–	–	–	<1
Tetrachloroethene	µg/L	<1	<1	<1	1 J	0.285 J
trans-1,2-Dichloroethene	µg/L	–	–	–	–	<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

1015495

1015496

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW502	MW503	MW504	MW505	MW50-117.5-122.5BL	MW-50	MW-50-LB-1
	Sample Date	6/19/1997	9/24/1997	3/25/1998	10/16/1998	3/19/2002	5/17/2004	10/18/2006
	UNIT							
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1 J	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	<10	<10	<10	<10	--	0.52 J	--
Carbon tetrachloride	µg/L	<10	<10	<10	<10	<1	<1	<1
Chloroform	µg/L	<10	<10	<10	<10	0.25 J	0.23 J	0.746
cis-1,2-Dichloroethene	µg/L	--	--	--	--	0.48 J	0.52 J	0.483 J
Tetrachloroethene	µg/L	<10	<10	<10	<10	<1	<1	0.263 J
trans-1,2-Dichloroethene	µg/L	--	--	--	--	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	1.2	1.1	1.5
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1

NOTES:

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

-- not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW522	MW523	MW524	MW525	MW52-96.5-101.5BL	MW-52
	Sample Date	6/18/1997	9/24/1997	3/25/1998	10/16/1998	3/19/2002	5/6/2004
	UNIT						
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<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
Chloroform	µg/L	<10	<10	<10	<10	0.35 J	0.68 J
cis-1,2-Dichloroethene	µg/L	–	–	–	–	0.53 J	0.58 J
Tetrachloroethene	µg/L	4 J	2 J	4 J	<10	6.4	4.7
trans-1,2-Dichloroethene	µg/L	–	–	–	–	<1	<1 J
Trichloroethene	µg/L	<10	<10	1 J	<10	0.59 J	0.34 J
Vinyl chloride	µg/L	<10	<10	<10	<10	<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

10154497

10154498

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-52	MW-52-LB-1	MW-52-LS-3	MW-52-LA-5
	Sample Date	2/21/2005	10/2/2006	4/16/2007	10/3/2007
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.77B	0.899	0.828	0.75
cis-1,2-Dichloroethene	µg/L	0.6 J	0.639 J	0.938 J	0.993 J
Tetrachloroethene	µg/L	6.2	10.2	10.8	9.62
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	0.67 J	1.04	1.4	1.17
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020. SW8240, SW8260, SW8

– 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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW532 6/19/1997	MW533 9/26/1997	MW534 3/26/1998	MW535 10/19/1998	MW53-75-80BL 3/18/2002	MW-53 5/10/2004	MW-53-LB-1 10/17/2006
	UNIT							
1,1,1-Trichloroethane	µg/L	<10	<10	<10	<10	<1	<1	<1
1,1-Dichloroethene	µg/L	<10	<10	<10	<10	<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
Chloroform	µg/L	<10	<10	<10	<10	<1	<1	<0.3
cis-1,2-Dichloroethene	µg/L	–	–	–	–	<1	<1	<1
Tetrachloroethene	µg/L	<10	<10	<10	<10	0.6 J	0.59 J	2.26
trans-1,2-Dichloroethene	µg/L	–	–	–	–	<1	<1	<1
Trichloroethene	µg/L	<10	<10	<10	<10	<1	<1	<1
Vinyl chloride	µg/L	<10	<10	<10	<10	<1	<1	<1

NOTES:

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

– not analyzed

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

1015499

10155500

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

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

NOTES:

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW625	MW62NA	MW62-94-95BL	MW62	MW62	MW-62
	Sample Date	10/26/1998	3/23/2000	3/18/2002	2/4/2004	4/7/2004	5/11/2004
	UNIT						
1,1,1-Trichloroethane	µg/L	<10	<1	<1	<0.25	<0.25	<3.3
1,1-Dichloroethene	µg/L	<10	<1	1.3	<0.5	<0.5	<3.3
1,2-Dichloroethene (Total)	µg/L	<10	–	–	–	–	<6.7
Carbon tetrachloride	µg/L	<10	<1	<1	1.38	1.19	<3.3
Chloroform	µg/L	<10	0.2 J	0.18 J	0.368 J	0.431 J	<3.3
cis-1,2-Dichloroethene	µg/L	–	<1	190	0.418 J	<0.25	<3.3
Tetrachloroethene	µg/L	<10	<1	<1	0.318 J	0.853	<3.3
trans-1,2-Dichloroethene	µg/L	–	<1	<1	<0.25	<0.25	<3.3
Trichloroethene	µg/L	37	32	6.5	134	183	100
Vinyl chloride	µg/L	<10	<1	28	1.27	<0.25	<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

1015501

1015502

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-62 2/18/2005	MW-62 5/16/2005	MW-62-LB-1 10/4/2006	MW-62-LS-3 4/17/2007	MW-62-LA-5 10/3/2007
	UNIT					
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	0.23 J	0.35 J	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–
Carbon tetrachloride	µg/L	0.56 J	0.84 J	0.279 J	0.703 J	0.744 J
Chloroform	µg/L	0.46 J	0.23B	0.25 J	0.311	0.476
cis-1,2-Dichloroethene	µg/L	<1	1.3	0.26 J	1.16	0.33 J
Tetrachloroethene	µg/L	1.1	0.34 J	<1	0.362 J	0.8 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	150	92	77.7 J	102	184
Vinyl chloride	µg/L	<1	1.2 J	<1	2.71	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW63A 11/11/2002	MW-63A 5/7/2004	MW-63A 2/22/2005	MW-63A-LB-1 10/23/2006	MW-63A-LA-5 10/2/2007
	UNIT					
1,1,1-Trichloroethane	µg/L	<0.25	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<0.5	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	<2	–	–	–
Carbon tetrachloride	µg/L	<0.25	<1	<1	<1	<1
Chloroform	µg/L	5.03	<1	<1	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.42 J	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.466 J	0.32 J	0.64 J	1.24	1.23
trans-1,2-Dichloroethene	µg/L	<0.25	<1	<1	<1	<1
Trichloroethene	µg/L	1.67	0.68 J	0.63 J	0.765 J	1.09
Vinyl chloride	µg/L	<0.25	<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

10155103

10155504

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW63B 11/11/2002	MW63B 5/7/2004	MW63B 2/22/2005	MW-63B-LB-1 10/23/2006	MW-63B-LA-5 10/2/2007
1,1,1-Trichloroethane		µg/L	<0.25	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	0.709 J	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	–	<2	–	–	–
Carbon tetrachloride		µg/L	<0.25	<1	<1	<1	<1
Chloroform		µg/L	11.1	1.8	1.5	0.604	1.44
cis-1,2-Dichloroethene		µg/L	<0.25	<1	<1	<1	<1
Tetrachloroethene		µg/L	6.78	2.3	2.8	3.71	2.95
trans-1,2-Dichloroethene		µg/L	<0.25	<1	<1	<1	<1
Trichloroethene		µg/L	7.9	0.92 J	1.1	1.12	2.1
Vinyl chloride		µg/L	<0.25	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW645 10/25/1998	MW64-108-110BL 3/18/2002	MW-64 4/1/2004	MW-64 2/21/2005	MW-64-LB-1 10/23/2006	MW-64-LS-3 4/17/2007	MW-64-LA-5 10/3/2007
1,1,1-Trichloroethane		µg/L	<10	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<10	<1	0.55 J	0.35 J	<1	<1	<1
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
Chloroform		µg/L	1 J	0.85 J	0.86 B	0.92 B	1.01	0.818	0.891
cis-1,2-Dichloroethene		µg/L	–	0.45 J	0.41 J	0.31 J	0.397	0.345 J	0.363 J
Tetrachloroethene		µg/L	10	10	16	18	18.2	18.1	17.1
trans-1,2-Dichloroethene		µg/L	–	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	28	45	39	34	28.9	30.6	30.2
Vinyl chloride		µg/L	<10	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015505

1015506

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-66A	MW-66A	MW-66A	MW-66A	MW-66A-LB-1
	Sample Date	6/23/2004	11/13/2004	2/22/2005	5/23/2005	10/18/2006
	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	<2	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	1.7	2.2	1.8	2	1.79
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

MW-84

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW84-83-88BL	MW-84	MW-84-LB-1
	Sample Date	3/18/2002	5/24/2004	10/17/2006
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	<2	–
Carbon tetrachloride	µg/L	3.8	2.5	4
Chloroform	µg/L	0.52 J	0.39 J	0.494
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	0.37 J	0.48 J	0.868 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1

NOTES:

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

– not analyzed

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

1015507

1015508

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	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	77	110	140	130	120	110
Chloroform	µg/L	27	61	66	67	63	64
cis-1,2-Dichloroethene	µg/L	10	25	30	30	28	28
Tetrachloroethene	µg/L	34	45	67	54	49	31
trans-1,2-Dichloroethene	µg/L	<1	0.49 J	0.74 J	0.62 J	0.96 J	0.58 J
Trichloroethene	µg/L	20	21	26	23	25	21
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-85	MW-85	MW-85	MW-85	MW-85-BL	MW-85-EBT-1	MW-85-EBT-2
	Sample Date	4/2/2004	11/14/2004	2/22/2005	5/20/2005	8/30/2006	12/8/2006	3/12/2007
	UNIT					--		
1,1,1-Trichloroethane	µg/L	<4	<3.3	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<4	<3.3	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	17	–	--	–	--	–	--
Carbon tetrachloride	µg/L	110	120	110	110	188	179	123
Chloroform	µg/L	30	36	35	38	43.8	49.5	36.2
cis-1,2-Dichloroethene	µg/L	17	21	21	24	26.1	32.2	23.8
Tetrachloroethene	µg/L	46	57	51	48	74.8	73.4	58.6
trans-1,2-Dichloroethene	µg/L	<4	<3.3	<1	<1	<1	<1	<1
Trichloroethene	µg/L	18	22	22	24	25.1	24.4	20.3
Vinyl chloride	µg/L	<4	<3.3	<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

1015509

1015510

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-85-EBT-3	MW-85-EBT-4	MW-85-EBT-5
	Sample Date	5/29/2007	9/11/2007	12/10/2007
	UNIT			
1,1,1-Trichloroethane	µg/L	<1 J	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	106 J	75.1	34.3
Chloroform	µg/L	34.6	44.2	51.5
cis-1,2-Dichloroethene	µg/L	18.6	37.4	51
Tetrachloroethene	µg/L	37.8	32.5	21
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	15.5	14.3	9.15
Vinyl chloride	µg/L	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW6010/8020, 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 MONITORING REPORT – 2007
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
	Sample Date	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-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–	–	–
Carbon tetrachloride	µg/L	26	79	94	95	93	89	90
Chloroform	µg/L	34	73	84	81	80	80	78
cis-1,2-Dichloroethene	µg/L	18	47	58	59	57	55	53
Tetrachloroethene	µg/L	18	190	280	280	280	230	240
trans-1,2-Dichloroethene	µg/L	0.28 J	0.39 J	0.92 J	1.7	1	1.1	0.69 J
Trichloroethene	µg/L	5.2	21	25	25	25	23	24
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015511

10155512

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-86-8	MW-86-9	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
	Sample Date	11/30/2001	11/30/2001	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<0.25	<0.25	<0.25	<0.25	<0.25
1,1-Dichloroethene	µg/L	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–	–	–
Carbon tetrachloride	µg/L	89	37	65	1.74	<0.25	<0.25	<0.25
Chloroform	µg/L	83	98	57	88.1	94.4	85	70.1
cis-1,2-Dichloroethene	µg/L	56	76	27	29	33.1	29.3	63.3
Tetrachloroethene	µg/L	200	60	160	182	197	205	180
trans-1,2-Dichloroethene	µg/L	0.63 J	<1	<0.25	<0.25	<0.25	<0.25	<0.25
Trichloroethene	µg/L	24	12	18	21.1	22.7	20.7	25
Vinyl chloride	µg/L	<1	<1	<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-86

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW86-EBT-TS6-100-105	MW86-EBT-TS7-100-105	MW86-EBT-TS9-100-105	MW86-EBT-TS10-100-105	MW86-EBT-TS11-100-105	MW86-EBT-TS12-100-105	MW86-EBT-TS13-100-105	MW86-EBT-TS14-100-105
	Sample Date	12/16/2002	1/20/2003	3/24/2003	4/21/2003	5/19/2003	6/23/2003	7/21/2003	8/18/2003
	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	0.6 J	0.567 J	<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	46.8	19.7	13.1	17.1	11.9	6.72	11	12.1
cis-1,2-Dichloroethene	µg/L	201	196	177	173	144	127	137 J	120
Tetrachloroethene	µg/L	21.4	5.06	2.99	14.4	28.9	60.4	73.4	89.8
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	10.2	3.25	2.37	7.63	16.7	25.8	28.7	26.7
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

10155513

1015514

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-86 4/1/2004	MW-86 11/13/2004	MW-86 2/23/2005	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
1,1,1-Trichloroethane		µg/L	<5.7	<5.7	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<5.7	<5.7	<1	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	170	–	–	–	–	–	–
Carbon tetrachloride		µg/L	<5.7	<5.7	<1	<1	<1	<1	<1
Chloroform		µg/L	5.7B	<5.7	<1	<1	<0.3	0.212 J	0.341
cis-1,2-Dichloroethene		µg/L	170	180	170 J	130	180	119	117
Tetrachloroethene		µg/L	6.2	<5.7	<1	<1	0.388 J	2.11	5.14
trans-1,2-Dichloroethene		µg/L	<5.7	<5.7	<1	<1	<1	<1	<1
Trichloroethene		µg/L	2.7 J	<5.7	<1	<1	<1	0.989 J	1.79
Vinyl chloride		µg/L	<5.7	<5.7	0.59 J	0.38J	0.976 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-88

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-88-1	MW-88-2	MW-88-3	MW-88-4	MW-88-5	MW-88-6	MW-88-7
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
	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	3.2	2.9	1.8	1.3	1	3.1	5.2
Chloroform	µg/L	1.1	1	0.64 J	0.51 J	0.42 J	1.2	1.9
cis-1,2-Dichloroethene	µg/L	2.1	1.8	1.1	0.81 J	0.63 J	0.94 J	1.4
Tetrachloroethene	µg/L	8.1	5.3	2.5	2.3	2.2	8.8	29
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.1	0.97 J	0.71 J	0.58 J	0.52 J	3.8	5.6
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

- not analyzed

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

1015515

1015516

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-88-8	MW-88	MW-88	MW-88	MW-88	MW-88
	Sample Date	11/30/2001	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<0.25	<0.25	<0.25	<0.25	<0.25
1,1-Dichloroethene	µg/L	<1	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene (Total)	µg/L	-	-	-	-	-	-
Carbon tetrachloride	µg/L	5.6	4.7	5.54	6.61	5.3	5.79
Chloroform	µg/L	1.9	1.9	2.1	1.86	1.81	1.89
cis-1,2-Dichloroethene	µg/L	1.5	1.5	1.37	0.93 J	1.23	1.66
Tetrachloroethene	µg/L	27	17	17.2	21.8	16.1	23.8
trans-1,2-Dichloroethene	µg/L	<1	<0.25	<0.25	<0.25	<0.25	<0.25
Trichloroethene	µg/L	6.1	7.1	7.55	7.72	6.9	7.66
Vinyl chloride	µg/L	<1	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-88 12/16/2002	MW-88 1/20/2003	MW-88 3/24/2003	MW-88 4/21/2003	MW-88 5/19/2003	MW-88 6/23/2003
	UNIT						
1,1,1-Trichloroethane	µg/L	<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
1,2-Dichloroethene (Total)	µg/L	-	-	-	-	-	-
Carbon tetrachloride	µg/L	6.76 J	6.98	4.63	5.61 J	5.08	6.17 J
Chloroform	µg/L	1.88	1.64	1.23	1.43	1.71	1.93
cis-1,2-Dichloroethene	µg/L	1.22	0.99 J	0.793 J	0.869 J	1.1	1.32
Tetrachloroethene	µg/L	22.2	19.8	13.4	18.2	14.5	19.9
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Trichloroethene	µg/L	7.41	7.24	6.49	6.65	5.34	5.98
Vinyl chloride	µg/L	<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

10155517

1015518

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-88	MW-88	MW-88	MW-88	MW-88	MW-088
	Sample Date	7/21/2003	8/18/2003	4/1/2004	11/13/2004	2/22/2005	5/23/2005
	UNIT						
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<0.5	<0.5	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	–	1.5 J	–	–	–
Carbon tetrachloride	µg/L	8.17	7.3	7.9	6	6.2	3.5
Chloroform	µg/L	2.08	1.51	1.9 B	2.5	1.6	1.1 B
cis-1,2-Dichloroethene	µg/L	1.41 J	1.34	1.5	1.8	1.2	0.87 J
Tetrachloroethene	µg/L	21.8	21	22	22	20	14
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	<1	<1	<1	<1
Trichloroethene	µg/L	6.26	5.37	4.8	3.6	3.8	2.7
Vinyl chloride	µg/L	<0.25	<0.25	<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-88

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-88-LB-1	MW-88-LS-3	MW-88-LA-5
	Sample Date	10/3/2006	4/13/2007	10/4/2007
	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	8.59	3.88	4.83
Chloroform	µg/L	1.78	0.671	0.827
cis-1,2-Dichloroethene	µg/L	1.3	0.588 J	0.751 J
Tetrachloroethene	µg/L	26.4	18.5	21.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	3.5	2.94	3.42
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

1015519

1015520

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-89	MW-89	MW-89	MW-89	MW-89-LB-1	MW-89-LA-5
Analyte	Sample Date	3/19/2002	3/19/2002	5/22/2004	2/16/2005	10/24/2006	10/1/2007
	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	0.49 J	0.44 J	0.7 J	0.56 J
Chloroform	µg/L	<1	<1	0.32 J	0.3B	0.348	0.224 J
cis-1,2-Dichloroethene	µg/L	<1	<1	0.27 J	0.37 J	0.404 J	0.279 J
Tetrachloroethene	µg/L	<1	<1	0.3 J	0.29 J	0.363 J	0.644 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.89 J	<1	2	2.1	2.13	1.55
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

MW-90

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	--	--	MW-90	MW-90	MW-90-LB-1	MW-90-LS-3	MW-90-LA-5
	Sample Date	3/19/2002	3/19/2002	5/22/2004	2/16/2005	10/24/2006	4/16/2007	10/1/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<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
1,2-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
Chloroform	µg/L	8.9	3.5	7.4	6.1	3.11	3.18	3.64
cis-1,2-Dichloroethene	µg/L	0.44 J	<1	0.29 J	0.29 J	0.294 J	0.313 J	0.36 J
Tetrachloroethene	µg/L	58	8.8	19	19	26.7	26.7	50.7
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	10	2.7	7.2	4.3	2.53	2.4	3.69
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

-- not analyzed

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

10155521

10155522

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-92 11/30/2001	MW-92 11/30/2001	MW-92 11/30/2001	MW-92 11/30/2001	MW-92 11/30/2001	MW-92 11/30/2001	MW-92 4/1/2004	MW-92 11/14/2004
	UNIT								
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<5	<6.7
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<5	<6.7
1,2-Dichloroethene (Total)	µg/L	--	--	--	--	--	--	12	--
Carbon tetrachloride	µg/L	18	19	18	20	20	18	24	23
Chloroform	µg/L	6.2	6.5	6.1	6.7	6.9	7.7	9 B	9.4
cis-1,2-Dichloroethene	µg/L	6.1	6.6	6.2	7	7	3.2	12	12
Tetrachloroethene	µg/L	130	160	150	160	150	110	170	180
trans-1,2-Dichloroethene	µg/L	0.21 J	0.19 J	<1	<1	<1	<1	<5	<6.7
Trichloroethene	µg/L	4.3	4.5	4.2	4.5	4.5	3	5.2	5.7 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<5	<6.7

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-92	MW-92	MW-92-LB-1	MW-92-LS-3	MW-92-LA-5
	Sample Date	2/24/2005	5/20/2005	10/5/2006	4/16/2007	10/4/2007
	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	25	21	27.2	7.67	6.45
Chloroform	µg/L	8.6	7.6	8.02	13.2	11
cis-1,2-Dichloroethene	µg/L	11	11	10.8	7.32	67.5
Tetrachloroethene	µg/L	140	160	193	159	55
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.8	5.5	6.14	5.01	3.12
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

1015523

1015524

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-93	MW-93	MW-93	MW-93	MW-93	MW-93
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
	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	0.69 J	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	2.4	7	7.5	7.1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	0.19 J	0.64 J	0.84 J	0.77 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-93	MW-93	MW-93-LB-1
	Sample Date	11/30/2001	5/7/2004	10/18/2006
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	--	<2	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	<1	<1	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	7.3	0.16 J	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	0.86 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

1015525

10155526

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
1,1,1-Trichloroethane		µg/L	<1.4	<2	<1	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1.4	<2	<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
Chloroform		µg/L	<1.4	<2	0.19 J	<1	0.139 J	0.196 J	0.129 J
cis-1,2-Dichloroethene		µg/L	0.52 J	0.71 J	0.82 J	0.68 J	0.624 J	0.532 J	0.61 J
Tetrachloroethene		µg/L	37	47	42	47	52.2	48	43.5
trans-1,2-Dichloroethene		µg/L	<1.4	<2	<1	<1	<1	<1	<1
Trichloroethene		µg/L	4.2	6	6.5	5.8	5.58	6.08	7.44
Vinyl chloride		µg/L	<1.4	<2	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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-96

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-96-1	MW-96-2	MW-96-3	MW-96-4	MW-96-5	MW-96-6	MW-96
	Sample Date	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-Dichloroethene	µg/L	<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
Chloroform	µg/L	2	2.7	3.8	5.6	6.3	5.9	0.69 B
cis-1,2-Dichloroethene	µg/L	0.23 J	<1	<1	<1	<1	<1	0.67 J
Tetrachloroethene	µg/L	19	0.88 J	0.21 J	0.3 J	0.13 J	0.14 J	8.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.19 J	<1	<1	<1	<1	<1	0.22 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

10155?7

1015528

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-96 11/15/2004	MW-96 2/21/2005	MW-96 5/20/2005	MW-96 5/20/2005	MW-96-LS-3 4/16/2007	MW-96-LA-5 10/4/2007
	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	2.9	1.5	3.4	3.4	3.47	3.4
Chloroform	µg/L	0.6 J	0.5 B	0.64 B	0.64 B	0.901	0.739
cis-1,2-Dichloroethene	µg/L	0.52 J	0.34 J	19	0.6 J	0.814 J	0.836 J
Tetrachloroethene	µg/L	6.1	3.4	6.5	6.5	4.35	4.33
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	0.419 J	<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

MW-97

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-97	MW-97	MW-97	MW-97	MW-97	MW-97	MW-97
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001
	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	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES

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

-- not analyzed

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

1015529

1015530

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-97	MW-97	MW-97	MW-97-LB-1	MW-97-LS-3	MW-97-LA-5
	Sample Date	11/30/2001	3/31/2004	2/21/2005	10/25/2006	4/16/2007	10/2/2007
	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	0.16 B	0.228 J	0.292 J	0.255 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.14 J	2.2	5.8	14.7	18.8	25.7
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-98	MW-98	MW-98	MW-98	MW-98	MW-98
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	4/1/2004
	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	0.23 J	0.26 J	0.24 J	0.26 J	0.24 J	<1
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	1.5	3.7	7.7	5.5	4.4	17
trans-1,2-Dichloroethene	µg/L	<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
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

1015531

1015532

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-98 11/10/2004	MW-98 2/16/2005	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
	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	0.17 B	<1	<1	0.133 J	0.147 J	<0.3
cis-1,2-Dichloroethene	µg/L	0.22 J	<1	<1	0.252 J	<1	<1
Tetrachloroethene	µg/L	31	33	28	33.1	35.2	36.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.2	2.1	2	2.37	2.63	2.69
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

MW-99

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-99	MW-99	MW-99	MW-99	MW-99	MW-99	MW-99	MW-99
	Sample Date	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	11/30/2001	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

1015533

1015534

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-99	MW-99	MW-99	MW-99-LB-1	MW-99-LA-5
	Sample Date	11/30/2001	11/30/2001	5/18/2004	10/18/2006	10/3/2007
	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	–	–	<2		
Carbon tetrachloride	µg/L	<1	<1	<1 J	<1	<1
Chloroform	µg/L	<1	<1	<1	0.22 J	0.2 J
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	0.38 J	0.58 J	0.28 J	<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

MW-100B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	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
	Sample Date	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002
	UNIT					
1,1,1-Trichloroethane	µg/L	<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
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–
Carbon tetrachloride	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25
Chloroform	µg/L	0.19 J	<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
Tetrachloroethene	µg/L	49	1.56	25.3	14.5	1.77
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	<0.25	0.269 J	<0.25
Trichloroethene	µg/L	72	22.8	33.1	11.6	2.27
Vinyl chloride	µg/L	<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

10155535

1015539

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW100B-EBT-TS6-100-115 12/16/2002	MW100B-EBT-TS7 1/20/2003	MW100B-EBT-TS8-110-115 2/24/2003	MW100B-EBT-TS9-100-115 3/24/2003	MW100B-EBT-TS10-110-115 4/21/2003	MW100B-EBT-TS11-110-115 5/19/2003
1,1,1-Trichloroethane		µg/L	<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
1,2-Dichloroethene (Total)		µg/L	–	–	–	–	–	–
Carbon tetrachloride		µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloroform		µg/L	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125
cis-1,2-Dichloroethene		µg/L	24.1	26.4	28.7	59.4	61.3	75.2
Tetrachloroethene		µg/L	2.35	0.395 J	0.53	0.341 J	<0.25	<0.25
trans-1,2-Dichloroethene		µg/L	0.321 J	<0.25	<0.25	0.274 J	0.323 J	0.333 J
Trichloroethene		µg/L	2.06	0.4 J	0.407 J	<0.25	<0.25	<0.25
Vinyl chloride		µg/L	<0.25	2.57	0.436 J	0.968 J	0.797 J	0.819 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-100B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW100B-EBT-TS12-110-115	MW100B-EBT-TS13-110-115	MW-100B	MW-100B	MW-100B	MW-100B
	Sample Date	6/23/2003	7/21/2003	3/30/2004	11/12/2004	2/18/2005	5/18/2005
	UNIT						
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<5	<5	<1	<3.3
1,1-Dichloroethene	µg/L	<0.5	<0.5	<5	<5	0.41 J	0.3 J
1,2-Dichloroethene (Total)	µg/L	–	–	140	–	–	–
Carbon tetrachloride	µg/L	<0.25	<0.25	<5	<5	<1	<1
Chloroform	µg/L	<0.125	<0.125	<5	<5	<1	<1
cis-1,2-Dichloroethene	µg/L	88.2	89	140	160	120	100
Tetrachloroethene	µg/L	<0.25	<0.25	<5	<5	2.8	5.8
trans-1,2-Dichloroethene	µg/L	0.356 J	0.312 J	<5	<5	<1	<1
Trichloroethene	µg/L	<0.25	<0.25	<5	<5	3.4	6.2
Vinyl chloride	µg/L	0.646 J	0.66 J	<5	<5	<1	0.29 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

1015537

1015538

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-100B-LB-1	MW-100B-LS-3	MW-100B-LA-5
	Sample Date	10/23/2006	4/13/2007	10/2/2007
	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	112	94.4	143
Tetrachloroethene	µg/L	101	98.9	29.6
trans-1,2-Dichloroethene	µg/L	0.39 J	0.432 J	0.605 J
Trichloroethene	µg/L	43.1	39.4	12.6
Vinyl chloride	µg/L	0.716 J	0.595 J	1.02

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 MONITORING REPORT – 2007
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
	Sample Date	12/21/2001	12/21/2001	12/21/2001	3/30/2004	11/11/2004	2/18/2005
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<20	<17	<1.4
1,1-Dichloroethene	µg/L	<1	<1	<1	<20	<17	<1.4
1,2-Dichloroethene (Total)	µg/L	--	--	--	<40	--	--
Carbon tetrachloride	µg/L	<1	<1	<1	<20	<17	<1.4
Chloroform	µg/L	0.38 J	<1	0.42 J	<20	<17	0.27 B
cis-1,2-Dichloroethene	µg/L	0.34 J	0.27 J	0.39 J	<20	<17	<1.4
Tetrachloroethene	µg/L	530	450	460	450	450 J	470
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<20	<17	<1.4
Trichloroethene	µg/L	0.95 J	0.87 J	0.84 J	<20	<17	0.47 J
Vinyl chloride	µg/L	<1	<1	<1	<20	<17	<1.4

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

10015539

10155540

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-101,129 2/18/2005	MW-101,97.5 5/20/2005	MW-101,129 5/20/2005	MW-101T 8/25/2006	MW-101B 8/25/2006	MW-101T 12/7/2006	MW-101B 12/7/2006
1,1,1-Trichloroethane		µg/L	<1.3	<1.2	<1.2	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1.3	<1.2	<1.2	<1	<1	<1	<1
1,2-Dichloroethene (Total)		µg/L	–	–	–	–	–	–	–
Carbon tetrachloride		µg/L	<1.3	<1.2	<1.2	<1	<1	<1	<1
Chloroform		µg/L	0.31 B	0.24 B	0.23 B	0.261 J	0.233 J	0.155 J	0.156 J
cis-1,2-Dichloroethene		µg/L	0.3 J	0.32 J	<1.2	0.266 J	0.279 J	<1	<1
Tetrachloroethene		µg/L	460	350	340	251	239	196	192
trans-1,2-Dichloroethene		µg/L	<1.3	<1.2	<1.2	<1	<1	<1	<1
Trichloroethene		µg/L	0.43 J	<1.2	0.35 J	0.298 J	0.293 J	<1	<1
Vinyl chloride		µg/L	<1.3	<1.2	<1.2	<1	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020, SW8240, SW
– 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 bla
< 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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-101T	MW-101B	MW-101T	MW-101B	MW-101T	MW-101B	MW-101T	MW-101B
	Sample Date	3/6/2007	3/6/2007	5/30/2007	5/30/2007	9/11/2007	9/11/2007	12/11/2007	12/11/2007
	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 J	<1	<1	<1	<1
Chloroform	µg/L	0.164 J	0.129 J	0.148 J	0.206 J	0.162 J	0.164 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.621 J	9.4	0.428 J	1.01	0.609 J	7.35	0.578	5.26
Tetrachloroethene	µg/L	192	193	123	135	134	147	125	120
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	0.358 J	0.364 J	0.311 J	0.46 J	0.646 J	0.305	0.843
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1	<1

NOTES:

VOC samples analyzed using methods SW8010/8020. SW8240, SW
– 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 bla
< Not detected at sample reporting limit
R Unusable
UJ Undetected, reporting limit is inaccurate or imprecise

10155541

1015542

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

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

NOTES:

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

– not analyzed

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 MONITORING REPORT – 2007
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
	Sample Date	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-Dichloroethene	µg/L	1.1	1.1	1.2	1.4	1.2	1.5	1.1
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	16	17	16	17	16	15	14
cis-1,2-Dichloroethene	µg/L	0.39 J	0.37 J	0.36 J	0.39 J	0.36 J	0.34 J	0.33 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.8	5.6	4.9	4.9	4.6	4.4	3.9
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015543

10155544

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-103-3	MW-103-2	MW-103-1	MW-103	MW-103	MW-103-LB-1	MW-103-LA-5
	Sample Date	11/30/2001	11/30/2001	11/30/2001	5/11/2004	2/20/2005	10/3/2006	10/4/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	1.4	<1	<1	1.3	1.6	1.7	1.94
1,2-Dichloroethene (Total)	µg/L	--	--	--	0.44 J	--		
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	16	4.3	1.9	12	13	12.2	11.7
cis-1,2-Dichloroethene	µg/L	0.39 J	<1	<1	0.44 J	0.43 J	0.322 J	0.35 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	4.8	0.69 J	0.3 J	4	4.4	5.04	6.63
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES:

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

-- not analyzed

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 MONITORING REPORT – 2007
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
	Sample Date	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-Dichloroethene	µg/L	1.3	1.3	1.2	1.4	1.1	0.48 J
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	20	19	14	18	17	10
cis-1,2-Dichloroethene	µg/L	0.46 J	0.45 J	0.36 J	0.47 J	0.4 J	0.22 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	24	20	19	19	16	6.4
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015545

1015546

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-104-4	MW-104-3	MW-104-2	MW-104-1	MW-104	MW-104
Analyte	**Sample Date**	11/30/2001	11/30/2001	11/30/2001	11/30/2001	5/11/2004	2/21/2005
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	1.3	1.6
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	<2	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1	<1
Chloroform	µg/L	5	4.8	4.6	4	13	16
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	0.36 J	0.38 J
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.3	1.1	1.1	0.89 J	11	14
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

MW-104

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-104-LB-1	MW-104-LS-3	MW-104-LA-5
	Sample Date	10/3/2006	4/13/2007	10/4/2007
	UNIT			
1,1,1-Trichloroethane	µg/L	<1	<1	<1
1,1-Dichloroethene	µg/L	1.68	1.83	1.98
1,2-Dichloroethene (Total)	µg/L	--	--	--
Carbon tetrachloride	µg/L	<1	<1	<1
Chloroform	µg/L	15.9	13.7	12.8
cis-1,2-Dichloroethene	µg/L	0.446 J	0.589 J	0.554 J
Tetrachloroethene	µg/L	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	17.6	17	17.8
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:

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

1015547

1015548

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-107-147	MW-107-125B	MW-107	MW-107,153	MW-107,135.5
Analyte	Sample Date	12/21/2001	12/21/2001	5/26/2004	2/20/2005	2/20/2005
	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	–	–	<2	–	–
Carbon tetrachloride	µg/L	0.6 J	0.52 J	0.28 J	0.31 J	0.34 J
Chloroform	µg/L	0.16 J	0.14 J	<1	<1	<1
cis-1,2-Dichloroethene	µg/L	0.29 J	0.34 J	0.25 J	<1	<1
Tetrachloroethene	µg/L	0.67 J	0.95 J	<1	0.21 J	0.32 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.6	2.8	0.7 J	0.57 J	0.63 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

NOTES

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-107T-LB-1	MW-107B-LB-1	MW-107B-LA-5
	Sample Date	10/17/2006	10/17/2006	10/2/2007
	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	0.415 J
Chloroform	µg/L	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	0.564 J	0.377 J	0.476 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	0.999 J	0.585 J	0.95 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:

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

1015549

1015550

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT						
1,1,1-Trichloroethane	µg/L	<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
1,2-Dichloroethene (Total)	µg/L	–	0.46 J	–	–	–	–
Carbon tetrachloride	µg/L	<1	0.19 J	0.26 J	<1	<1	0.461 J
Chloroform	µg/L	6.4	8.2	6.9	11.7	10.8	12.1
cis-1,2-Dichloroethene	µg/L	0.18 J	0.46 J	0.33 J	0.75 J	0.634 J	0.71 J
Tetrachloroethene	µg/L	2.6	3.3	3.3	5.41	6.03	5.03
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	6.4	15	28	32	33.5	38.4 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES.

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-113-EBT-B-99.5-104.5 5/20/2002	MW113-EBT-TS1-99.5-104.5 7/8/2002	MW113-EBT-TS2-99.5-104.5 7/29/2002	MW113-EBT-TS3-99.5-104.5 9/3/2002	MW113-EBT-TS4-99.5-104.5 10/7/2002	MW113-EBT-TS5-99.5-104.5 11/11/2002	MW113-EBT-TS6-99.5-104.5 12/16/2002
1,1,1-Trichloroethane		µg/L	<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
1,2-Dichloroethene (Total)		µg/L	–	–	–	–	–	–	–
Carbon tetrachloride		µg/L	30	50	69.1	60.7	64.5	59	69.6 J
Chloroform		µg/L	76	79	98	90.6	83.2	78.2	87.6
cis-1,2-Dichloroethene		µg/L	44	48	55.5	59.9	92.4	77.3	83.4
Tetrachloroethene		µg/L	30	45	59.3	112	80.4	97	96.9
trans-1,2-Dichloroethene		µg/L	<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
Vinyl chloride		µg/L	<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

10155551

1015552

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW113-EBT-TS7-99.5-104.5	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
	Sample Date	1/20/2003	3/24/2003	4/21/2003	5/19/2003	6/23/2003	7/21/2003	8/18/2003
	UNIT							
1,1,1-Trichloroethane	µg/L	<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
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–	–	–
Carbon tetrachloride	µg/L	71.6	50.8	53.2 J	26	43.6 J	38	42.7
Chloroform	µg/L	93.8	70.8	81	84.4	89.8	89.7	80.4
cis-1,2-Dichloroethene	µg/L	94.1	69.7	71.2	71.6	93.9	102 J	109
Tetrachloroethene	µg/L	91.1	48.7	49.4	27.5	54.5	56.1	63.6
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	0.266 J	<0.25	<0.25	<0.25	<0.25
Trichloroethene	µg/L	30.4	23.3	21.1	15.3	19.7	19.3	18.5
Vinyl chloride	µg/L	<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-113

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-113	MW-113	MW-113	MW-113	MW-113-LB-1	MW-113-LS-3	MW-113-LA-5
	Sample Date	5/24/2004	11/14/2004	2/24/2005	5/20/2005	10/23/2006	4/16/2007	10/4/2007
	UNIT							
1,1,1-Trichloroethane	µg/L	<5	<5	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<5	<5	<1 J	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	100	–	–	–	–	–	–
Carbon tetrachloride	µg/L	20	44	49	47	75.6	89.1	96.9
Chloroform	µg/L	27	34	39	36	33.8	35.9	36.4
cis-1,2-Dichloroethene	µg/L	100	110	87	78	54.9	46.3	50.2
Tetrachloroethene	µg/L	64	100	130	130	182	163	151
trans-1,2-Dichloroethene	µg/L	<5	<5	<1	<1	<1	<1	<1
Trichloroethene	µg/L	8.8	15	21	22	25.9	24.1	26
Vinyl chloride	µg/L	<5	<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

1015553

1015554

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
	Sample Date	5/21/2002	7/8/2002	7/29/2002	9/3/2002	10/7/2002	11/11/2002
	UNIT						
1,1,1-Trichloroethane	µg/L	<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
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–	–
Carbon tetrachloride	µg/L	<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
cis-1,2-Dichloroethene	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	0.399 J
Tetrachloroethene	µg/L	8.9	8.1	<0.25	1.32	2.01	3.65
trans-1,2-Dichloroethene	µg/L	<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
Vinyl chloride	µg/L	<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-125

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW125-EBT-TS6-99-104	MW125-EBT-TS7-99-104	MW125-EBT-TS8-99-104	MW125-EBT-TS9-99-104	MW125-EBT-TS10-99-104	MW125-EBT-TS11-99-104
	Sample Date	12/16/2002	1/20/2003	2/24/2003	3/24/2003	4/21/2003	5/19/2003
	UNIT						
1,1,1-Trichloroethane	µg/L	<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
1,2-Dichloroethene (Total)	µg/L	–	–	–	–	–	–
Carbon tetrachloride	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Chloroform	µg/L	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125
cis-1,2-Dichloroethene	µg/L	8.99	40.8	19.7	15.4	34.9	8.1
Tetrachloroethene	µg/L	7.07	6.57	7.17	5.68	7.79	3.24
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Trichloroethene	µg/L	17.5	12.4	17	19	16.5	8.49
Vinyl chloride	µg/L	<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

1015555

1015556

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW125-EBT-TS12-99-104 6/23/2003	MW125-EBT-TS13-99-104 7/21/2003	MW-125 5/21/2004	MW-125 11/12/2004	MW-125 2/18/2005	MW-125 5/18/2005
	UNIT						
1,1,1-Trichloroethane	µg/L	<0.25	<0.25	<1.7	<3.3	<1	<1
1,1-Dichloroethene	µg/L	<0.5	<0.5	<1.7	<3.3	0.19 J	<1
1,2-Dichloroethene (Total)	µg/L	–	–	62	–	–	–
Carbon tetrachloride	µg/L	<0.25	<0.25	<1.7	<3.3	<1	<1
Chloroform	µg/L	<0.125	<0.125	<1.7	<3.3	<1	<1
cis-1,2-Dichloroethene	µg/L	15	1.99	62	38	34	47
Tetrachloroethene	µg/L	8.85	6.55	28	52 J	44	48
trans-1,2-Dichloroethene	µg/L	<0.25	<0.25	<1.7	<3.3	<1	<1
Trichloroethene	µg/L	13.9	5.53	18	26 J	24	26
Vinyl chloride	µg/L	<0.25	<0.25	<1.7	<3.3	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-125-LB-1	MW-125-LS-3	MW-125-LA-5
	Sample Date	10/2/2006	4/13/2007	10/2/2007
	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	0.168 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	16.3	10.3	26.3
Tetrachloroethene	µg/L	35.6	33.1	48.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1
Trichloroethene	µg/L	13.3	9.27	16
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

10155557

10155558

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
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	0.48 J	0.44 J	0.92 J	0.313 J	<1
Chloroform		µg/L	0.42 J	0.21 B	0.18 J	0.16 B	0.162 J	0.16 J
cis-1,2-Dichloroethene		µg/L	<1	0.28 J	0.22 J	0.22 J	<1	<1
Tetrachloroethene		µg/L	<1	0.38 J	0.42 J	0.42 J	0.424 J	0.59 J
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene		µg/L	0.54 J	1.4	1.4	1.3	1.49	1.19
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

MW-141

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-141	MW-141	MW-141	MW-141	MW-141-LB-1	MW-141-LS-3	MW-141-LA-5
	Sample Date	6/24/2004	11/9/2004	2/15/2005	5/17/2005	10/23/2006	4/17/2007	10/2/2007
	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	0.82 J	<1	<1	<1
Chloroform	µg/L	1.4	1.5 B	1.8	2 B	2.37	2.46	2.09
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5.9	19	26	31	27.6	21.3	18
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.2	2.1	2.2	2.8	3.56	3.02	2.52
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1	<1

NOTES.

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

– not analyzed

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

1015559

1015560

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	0.3 J	<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
Chloroform	µg/L	<1	0.25 B	0.17 B	<1	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.3 J	1.4	0.65 J	0.39 J	0.371 J	0.709 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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-143

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-143	MW-143	MW-143	MW-143	MW-143-LB-1
	Sample Date	5/5/2004	11/11/2004	2/17/2005	5/17/2005	10/19/2006
	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	<2	–	–	–	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1 J	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1 J	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	0.31 J	0.7 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

2115561

1015562

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-197A-LB-1	MW-197A-RW-2	MW-197A-LS-3	MW-197A-LQ-4	MW-197A-LA-5
Analyte	**Sample Date**	10/24/2006	1/24/2007	4/13/2007	7/9/2007	10/3/2007
	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	0.237 J	0.226 J	0.212 J	0.208 J	0.179 J
cis-1,2-Dichloroethene	µg/L	0.447 J	0.345 J	0.432 J	0.419 J	0.445 J
Tetrachloroethene	µg/L	130	125	114	103	87.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	2.04	2.04	2.28	2.31	2.42
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-197B

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-197B-LB-1	MW-197B-RW-2	MW-197B-LS-3	MW-197B-LQ-4	MW-197B-LA-5
Analyte	Sample Date	10/2/2006	1/24/2007	4/13/2007	7/9/2007	10/3/2007
	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	0.227 J	0.208 J	<0.3	0.166 J
cis-1,2-Dichloroethene	µg/L	0.625 J	0.484 J	0.792 J	5.29	10.7
Tetrachloroethene	µg/L	179	166	138	134	105 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	8.51	8.76	9.11	10.2	10.3
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

10015563

10.15564

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
	Sample Date	10/2/2006	1/24/2007	4/15/2007	7/10/2007	10/2/2007
	UNIT					
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	0.657 J	<1	<1	<1
Carbon tetrachloride	µg/L	<1	0.915 J	0.32 J	0.267 J	0.438 J
Chloroform	µg/L	<0.3	0.2 J	0.146 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	3.28	25.8	20.2	15.1	6.53
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-199A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-199A-LB-1	MW-199A-RW-2	MW-199A-LS-3	MW-199A-LQ-4	MW-199A-LA-5
	Sample Date	10/23/2006	1/24/2007	4/13/2007	7/12/2007	10/2/2007
	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	0.126 J	<0.3	<0.3	0.132 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	0.361 J	<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

1015565

1015566

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-199B-LB-1	MW-199B-RW-2	MW-199B-LS-3	MW-199B-LQ-4	MW-199B-LA-5
	Sample Date	10/23/2006	1/24/2007	4/13/2007	7/11/2007	10/2/2007
	UNIT					
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	0.581 J	<1
Carbon tetrachloride	µg/L	0.719 J	0.949 J	0.555 J	1.05	0.376 J
Chloroform	µg/L	0.197 J	0.179 J	0.232 J	0.279 J	0.146 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	0.632 J	0.497 J	0.715 J	0.517 J	0.393 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	99.2 J	115	115	136	78.6
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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-200

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-200A-LB-1	MW-200-RW-2	MW-200-LS-3	MW-200-LQ-4	MW-200-LA-5
	Sample Date	10/25/2006	1/24/2007	4/15/2007	7/10/2007	10/3/2007
	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	0.146 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
Tetrachloroethene	µg/L	72	81.9	70.2	62.9	73.9
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	5.47	5.94	7.49	7.49	6.88
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

1015567

1015568

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-201-LB-1
Analyte	**Sample Date**	10/18/2006
	UNIT	
1,1,1-Trichloroethane	µg/L	<1
1,1-Dichloroethene	µg/L	<1
1,2-Dichloroethene (Total)	µg/L	--
Carbon tetrachloride	µg/L	0.338 J
Chloroform	µg/L	1.15
cis-1,2-Dichloroethene	µg/L	<1
Tetrachloroethene	µg/L	<1
trans-1,2-Dichloroethene	µg/L	<1
Trichloroethene	µg/L	<1
Vinyl chloride	µg/L	<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-202A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-202A-LB-1	MW-202A-RW-2	MW-202A-LS-3	MW-202A-LQ-4	MW-202A-LA-5
Analyte	Sample Date	10/23/2006	1/24/2007	4/16/2007	7/11/2007	10/1/2007
	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	0.365 J	0.749 J	0.382 J	0.904 J	0.552 J
Chloroform	µg/L	0.232 J	0.198 J	0.213 J	0.249 J	0.238 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	0.251 J	<1
Tetrachloroethene	µg/L	0.257 J	0.326 J	0.316 J	0.371 J	0.672 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	1.85	1.59	1.88	2.22	1.66
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

1015569

1015570

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-202B-LB-1	MW-202B-RW-2	MW-202B-LS-3	MW-202B-LQ-4	MW-202B-LA-5
	Sample Date	10/24/2006	1/24/2007	4/16/2007	7/11/2007	10/2/2007
	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	0.778	0.857	0.752	1.05	0.907
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	5.51	8.42	8.6	8.16	3.82
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.811 J	1.27	1.46	2.2	1.36
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-203A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-203A	MW-203A-LQ-4	MW-203A-LA-5	MW-203A-LQ-6
	Sample Date	4/17/2007	7/9/2007	10/3/2007	1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1 J	<1	<1
Chloroform	µg/L	<0.3	<0.3	0.128 J	0.172 J
cis-1,2-Dichloroethene	µg/L	<1	<1	0.294 J	0.972 J
Tetrachloroethene	µg/L	62.6	69.1 J	86.8	108
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	1.27	1.46	1.69	1.93
Vinyl chloride	µg/L	<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

1015571

10155572

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-203B	MW-203B-LQ-4	MW-203B-LA-5	MW-203B-LQ-6
Analyte	**Sample Date**	4/27/2007	7/9/2007	10/3/2007	1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1 J	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	50.1	63.5	55	58.6
Tetrachloroethene	µg/L	38.4	21.1	13.9	9.39
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	8.97	7.68	7.92	6.31
Vinyl chloride	µg/L	<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-204A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-204A	MW-204A-LQ-4	MW-204A-LA-5	MW-204A-LQ-6
Analyte	Sample Date	4/23/2007	7/10/2007	10/2/2007	1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.763 J	0.785 J	0.846 J	0.922 J
Tetrachloroethene	µg/L	38.8	36.2	37	42.7
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	1.19	1.17	1.06	1.12
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015573

1015574

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-204B	MW-204B-LQ-4	MW-204B-LA-5	MW-204B-LQ-6
Analyte	**Sample Date**	4/23/2007	7/11/2007	10/2/2007	1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.125 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	0.906 J	0.916 J	1.05	2.3
Tetrachloroethene	µg/L	26.3	17.2	19	24.5
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	2.37	4.88	4.7	3.2
Vinyl chloride	µg/L	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-205A	MW-205A-LQ-4	MW-205A-LA-5	MW-205A-LQ-6
Analyte	**Sample Date**	4/23/2007	7/10/2007	10/3/2007	1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.238 J	0.222 J	0.185 J	0.165 J
cis-1,2-Dichloroethene	µg/L	0.337 J	0.465 J	0.538 J	3.12
Tetrachloroethene	µg/L	102	180	145	153
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	3.69	5.84	6.25	6.14
Vinyl chloride	µg/L	<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

1015575

1015576

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1
Chloroform		µg/L	0.206 J	<0.3	0.15 J	0.146 J
cis-1,2-Dichloroethene		µg/L	0.546 J	0.616 J	4.41	26.4
Tetrachloroethene		µg/L	129	149	100	82.3
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	7.2	9.22	8.74	9.75
Vinyl chloride		µg/L	<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-206A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-206A	MW-206A-LQ-4	MW-206A-LA-5	MW-206A-LQ-6
Analyte	**Sample Date**	4/15/2007	7/11/2007	10/3/2007	1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.155 J	<0.3	0.166 J	0.174 J
cis-1,2-Dichloroethene	µg/L	0.607 J	0.765 J	0.762 J	0.717 J
Tetrachloroethene	µg/L	76.6	99.2	76.4	114
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	9.81	10.1	12.4	12
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

10155577

10155578

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-206B	MW-206B-LQ-4	MW-206B-LA-5	MW-206B-LQ-6
Analyte	**Sample Date**	4/15/2007	7/11/2007	10/3/2007	1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.139 J	0.14 J	0.148 J	0.147 J
cis-1,2-Dichloroethene	µg/L	0.582 J	0.722 J	0.698 J	0.688 J
Tetrachloroethene	µg/L	57.2	77.5	64.9	69.5
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	8.94	11	11	11.7
Vinyl chloride	µg/L	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-207A	MW-207A-LQ-4	MW-207A-LA-5	MW-207A-LQ-6
	Sample Date	4/16/2007	7/10/2007	10/3/2007	1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	0.44 J
Chloroform	µg/L	5.86	9.99	8.28	10.6
cis-1,2-Dichloroethene	µg/L	0.468 J	0.387 J	0.479 J	0.382 J
Tetrachloroethene	µg/L	7.92	8.32	10.3	10.5
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	21.4	18.6	21.6	24.3
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015579

1015580

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1
Carbon tetrachloride		µg/L	1.36	1.91	1.37	1.13
Chloroform		µg/L	3.09	2.54	1.9	1.26
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Tetrachloroethene		µg/L	35.7	32.5	23.7	13
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	12.1	17.6	62	109
Vinyl chloride		µg/L	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	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
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1
Chloroform		µg/L	0.216 J	0.228 J	0.214 J	0.221 J
cis-1,2-Dichloroethene		µg/L	0.554 J	0.541 J	0.557 J	0.56 J
Tetrachloroethene		µg/L	174 J	193	163	198
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	8.12	8.26	8.44	8.45
Vinyl chloride		µg/L	<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

10155581

1015582

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.131 J	<0.3	<0.3
cis-1,2-Dichloroethene	µg/L	1.12	1.3	1.08	0.932 J
Tetrachloroethene	µg/L	3.42	2.8	3.02	1.68
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	18.4	15.7	15	13.2
Vinyl chloride	µg/L	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-209A	MW-209A-LQ-4	MW-209A-LA-5	MW-209A-LQ-6
	Sample Date	4/23/2007	7/10/2007	10/4/2007	1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<0.3	0.165 J	<0.3	0.131 J
cis-1,2-Dichloroethene	µg/L	<1	<1	0.727 J	<1
Tetrachloroethene	µg/L	0.326 J	<1	28.8	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	0.576 J	0.487 J	5.63	0.467 J
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015583

10155584

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.327 J	0.962 J	1.86	0.474 J
Chloroform	µg/L	0.251 J	0.56	0.215 J	0.198 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	0.357 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	6.4	7.2	14.8	11.7
Vinyl chloride	µg/L	<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-210A

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-210A 4/27/2007	MW-210A-LQ-4 7/9/2007	MW-210A-LA-5 10/4/2007	MW-210A-LQ-6 1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1 J	<1	<1	<1
Chloroform	µg/L	0.201 J	0.199 J	0.136 J	0.149 J
cis-1,2-Dichloroethene	µg/L	0.828 J	0.813 J	<1	0.757 J
Tetrachloroethene	µg/L	38.2	36.1	<1	23.3
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	5.85	6.05	0.404 J	5.55
Vinyl chloride	µg/L	<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

1015585

1015586

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-210B	MW-210B-LQ-4	MW-210B-LA-5	MW-210B-LQ-6
Analyte	**Sample Date**	4/27/2007	7/9/2007	10/5/2007	1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1 J	<1	<1	<1
Chloroform	µg/L	0.15 J	<0.3	0.143 J	0.14 J
cis-1,2-Dichloroethene	µg/L	0.646 J	0.57 J	0.433 J	0.529 J
Tetrachloroethene	µg/L	32.4	24.4	21	19.8
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	7.29	8.42	10.7	8.46
Vinyl chloride	µg/L	<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-211

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-211	MW-211-LQ-4	MW-211-LA-5	MW-211-LQ-6
Analyte	Sample Date	4/16/2007	7/10/2007	10/2/2007	1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Chloroform	µg/L	0.139 J	<0.3	<0.3	0.214 J
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	0.502 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	0.536 J	0.576 J	0.436 J	0.602 J
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015587

1015588

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-212 4/27/2007	MW-212-LQ-4 7/9/2007	MW-212-LA-5 10/3/2007	MW-212-LQ-6 1/9/2008
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1
Carbon tetrachloride		µg/L	0.257 J	0.479 J	0.568 J	0.635 J
Chloroform		µg/L	0.289 J	0.135 J	0.13 J	<0.3
cis-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Tetrachloroethene		µg/L	<1	<1	0.516 J	<1
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	34.4	47.9	41.7	43.9
Vinyl chloride		µg/L	<1	<1	<1	<1

NOTES:

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-214A 4/16/2007	MW-214A-LQ-4 7/10/2007	MW-214A-LA-5 10/3/2007	MW-214A-LQ-6 1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.601 J	0.476 J	0.725 J	0.575 J
Chloroform	µg/L	2.63	2.32	2.26	2.02
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	8.83	6.81	6.99	7.29
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	5.59	4.49	4.11	3.65
Vinyl chloride	µg/L	<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

1015589

1045590

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-214B	MW-214B-LQ-4	MW-214B-LA-5	MW-214B-LQ-6
Analyte	**Sample Date**	4/17/2007	7/11/2007	10/3/2007	1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.645 J	1.05	0.76 J	0.959 J
Chloroform	µg/L	2.06	1.85	1.47	1.44
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	6.4	6	4.89	5.44
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	4.24	3.83	3.06	2.88
Vinyl chloride	µg/L	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

	Sample Name	MW-215A	MW-215A-LQ-4	MW-215A-LA-5	MW-215A-LQ-6
Analyte	Sample Date	4/16/2007	7/10/2007	10/4/2007	1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.679 J	0.538 J	0.671 J	0.552 J
Chloroform	µg/L	1.66	1.67	1.76	1.68
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	5.81	5.58	6.95	7.01
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	7.82	8.12	7.79	10.2
Vinyl chloride	µg/L	<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

10155591

1015592

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-215B 4/16/2007	MW-215B-LQ-4 7/9/2007	MW-215B-LA-5 10/4/2007	MW-215B-LQ-6 1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	0.956 J	1.01	0.894 J	0.856 J
Chloroform	µg/L	0.68	0.71	0.651	0.61
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	4.36	4.39	4.49	4.71
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	1.52	1.53	1.47	1.36
Vinyl chloride	µg/L	<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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	MW-216	MW-216-LQ-4	MW-216-LA-5	MW-216-LQ-6
	Sample Date	4/27/2007	7/10/2007	10/2/2007	1/8/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1 J	<1	<1	<1
Chloroform	µg/L	<0.3	0.169 J	0.183 J	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES

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

– not analyzed

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

1015593

155594

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	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
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	34.8	42.3 J	53.4	57.3
Chloroform	µg/L	5.05	5.33	5.18	7.43
cis-1,2-Dichloroethene	µg/L	1.34	1.45	1.89	2.43
Tetrachloroethene	µg/L	18.4	25.4 J	31.3	31.7
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	29.5	40.6 J	39.4	35.9
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

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

– not analyzed

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 MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	MW-218 4/17/2007	MW-218-LQ-4 7/9/2007	MW-218-LA-5 10/2/2007	MW-218-LQ-6 1/9/2008
	UNIT				
1,1,1-Trichloroethane	µg/L	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	0.626 J	0.652 J	0.651 J	<1
Carbon tetrachloride	µg/L	15.1	13.3	17.6	15
Chloroform	µg/L	3.15	2.79	2.45	2.58
cis-1,2-Dichloroethene	µg/L	0.459 J	0.468 J	0.508 J	0.352 J
Tetrachloroethene	µg/L	17.7	16.7	18.5	17.2
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	44.2	47.6	42.8	42.5
Vinyl chloride	µg/L	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015595

10165596

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name / Sample Date	UNIT	MW-219 4/27/2007	MW-219-LQ-4 7/10/2007	MW-219-LA-5 10/3/2007	MW-219-LQ-6 1/9/2008
1,1,1-Trichloroethane		µg/L	<1	<1	<1	<1
1,1-Dichloroethene		µg/L	<1	<1	<1	<1
Carbon tetrachloride		µg/L	<1	<1	<1	<1
Chloroform		µg/L	<0.3	<0.3	<0.3	<0.3
cis-1,2-Dichloroethene		µg/L	0.643 J	1.06	1.01	0.875 J
Tetrachloroethene		µg/L	16.3	27.6	33.9	48
trans-1,2-Dichloroethene		µg/L	<1	<1	<1	<1
Trichloroethene		µg/L	1.72	2.79	3.37	3.74
Vinyl chloride		µg/L	<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

PZ-03

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	PZ-03	PZ03	PZ-03	PZ-03-LB-1	PZ-03-LA-5
	Sample Date	3/20/2002	5/26/2004	2/23/2005	10/5/2006	10/5/2007
	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	–	<2	–		
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	0.2J	0.198 J	0.139 J
cis-1,2-Dichloroethene	µg/L	0.55J	<1	0.26J	<1	<1
Tetrachloroethene	µg/L	7.1	4.4	5	3.89	0.523 J
trans-1,2-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	0.86J	0.6J	0.85J	0.917 J	0.321 J
Vinyl chloride	µg/L	<1	<1	<1	<1	<1

NOTES:

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

– not analyzed

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

1015597

1015598

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
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
	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	–	<2	–	–	–
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<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

PZ-07

HISTORICAL GROUNDWATER ANALYTICAL RESULTS, VOCs
ANNUAL LONG-TERM MONITORING REPORT – 2007
Main Installation - Defense Depot Memphis, Tennessee

Analyte	Sample Name	PZ-07	PZ-07	PZ-07	PZ-07	PZ-07	PZ-07-LB-1
	Sample Date	3/20/2002	3/30/2004	11/13/2004	2/23/2005	5/23/2005	10/5/2006
	UNIT						
1,1,1-Trichloroethane	µg/L	<1	<2	<1	<1	<1	<1
1,1-Dichloroethene	µg/L	<1	<2	<1	<1	<1	<1
1,2-Dichloroethene (Total)	µg/L	–	<4	–	–	–	–
Carbon tetrachloride	µg/L	<1	<2	<1	<1	<1	<1
Chloroform	µg/L	<1	<2	<1	<1	<1	<0.3
cis-1,2-Dichloroethene	µg/L	<1	<2	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<2	<1	<1	<1	<1
trans-1,2-Dichloroethene	µg/L	<1	<2	<1	<1	<1	<1
Trichloroethene	µg/L	0.31J	<2	0.42J	0.35J	<1	<1
Vinyl chloride	µg/L	<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:

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

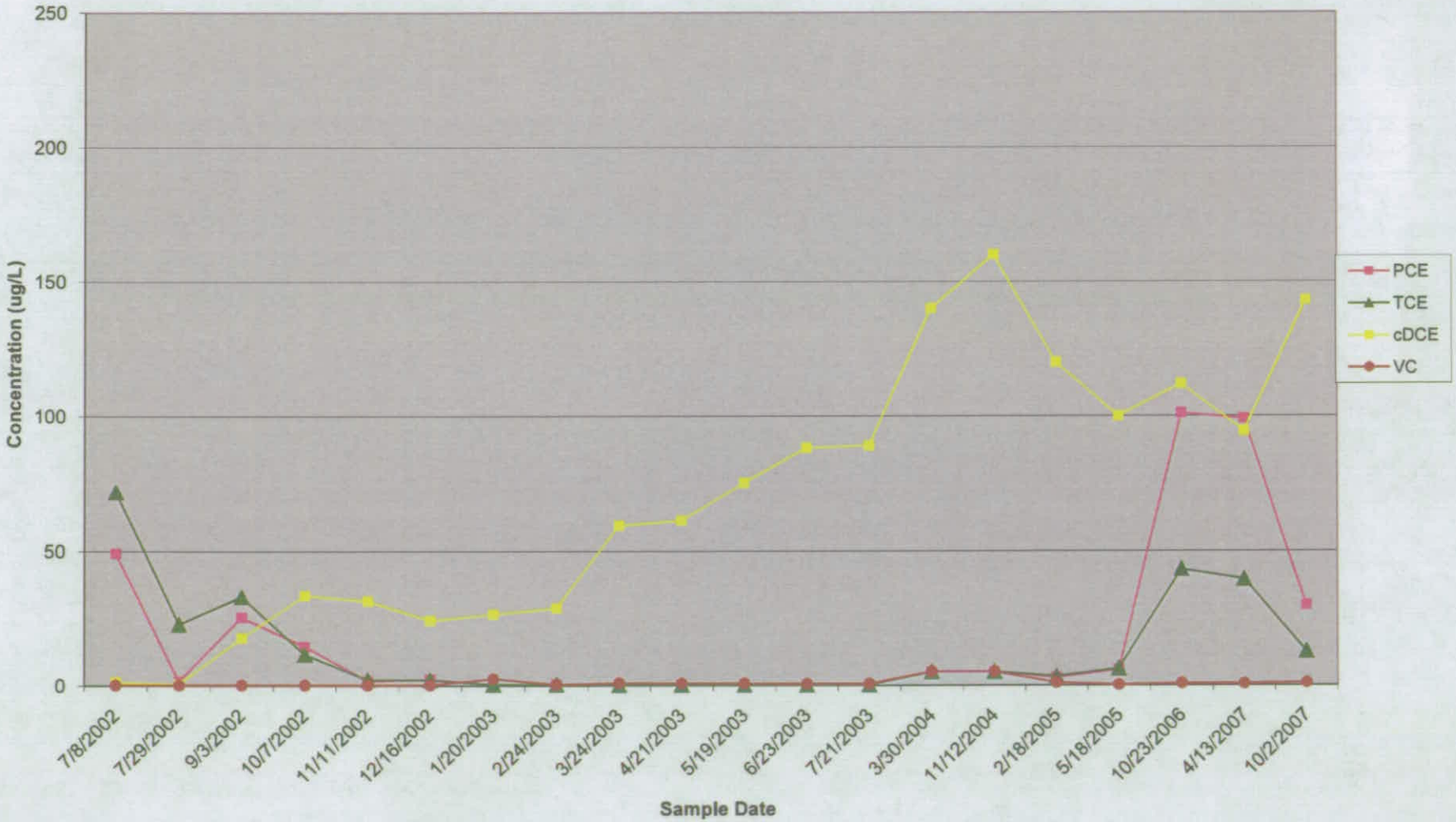
UJ Undetected, reporting limit is inaccurate or imprecise

1015599

APPENDIX F

CVOC TIME-TREND PLOTS

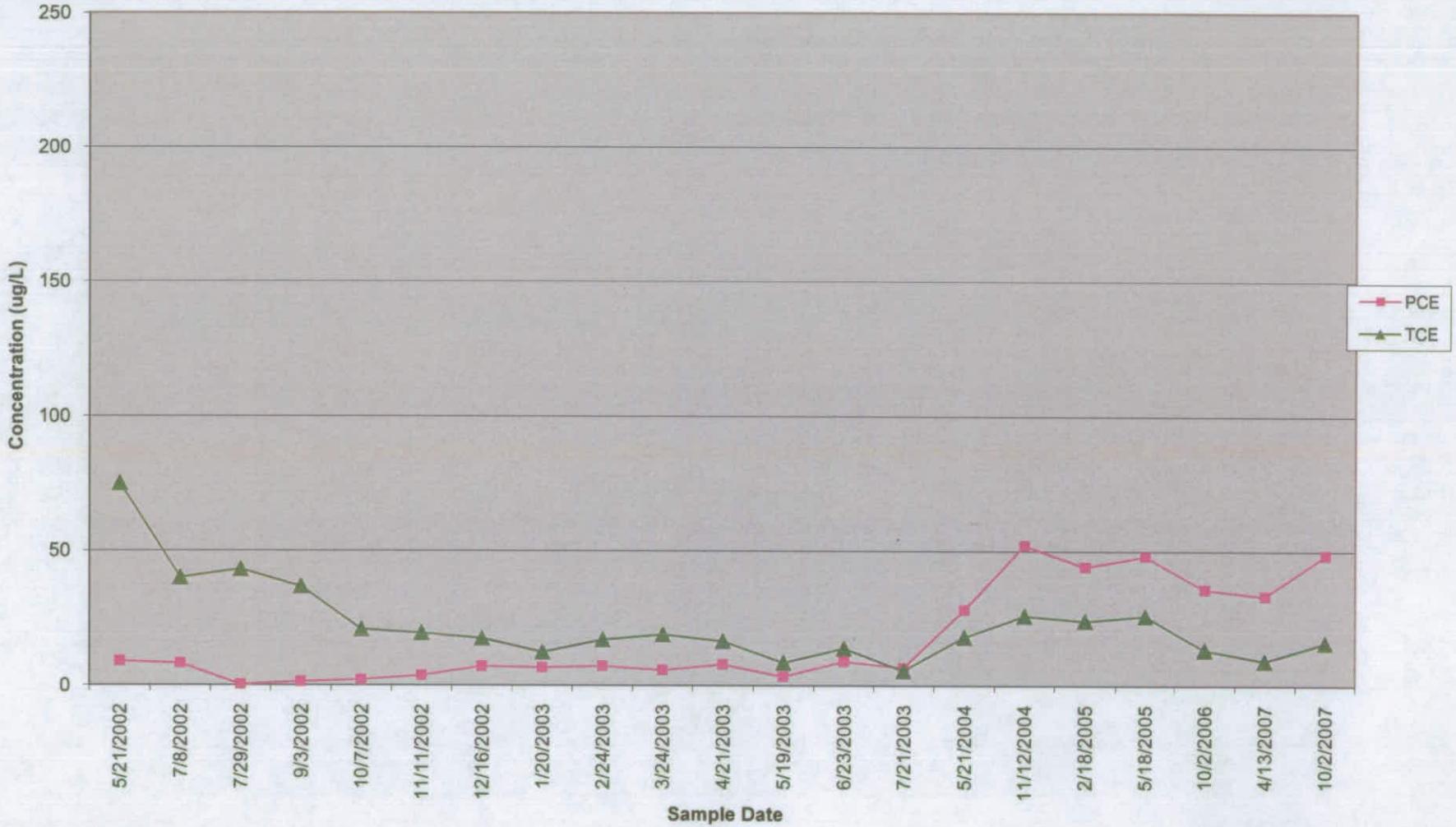
MW-100B
TTA-1 NORTH



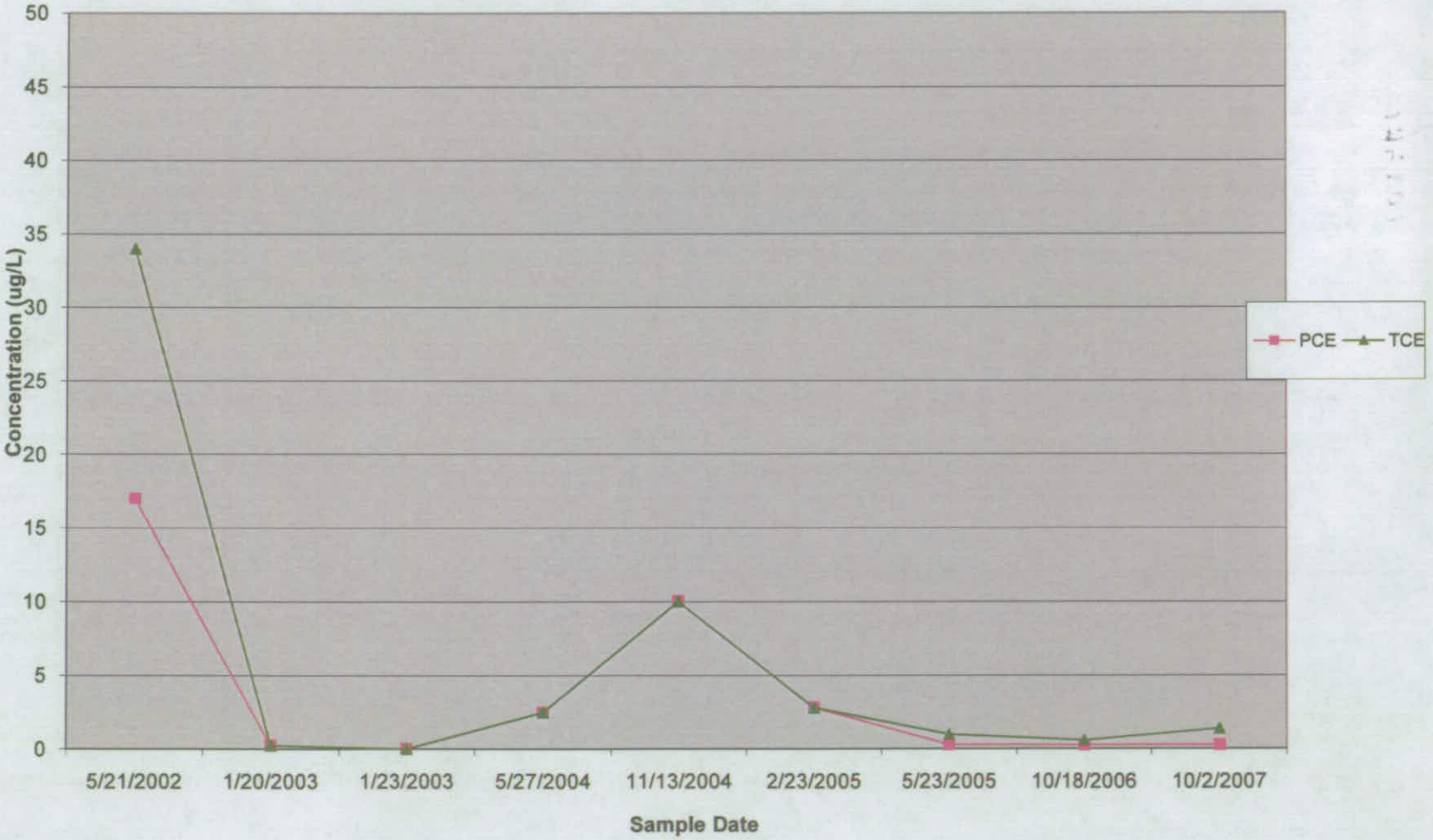
10156601

1015602

MW-125
TTA-1 NORTH



IW-06
TTA-1 NORTH



1015603

10156604

DR1-7
TTA-1 NORTH



MW-101 Bottom
TTA-1 SOUTH



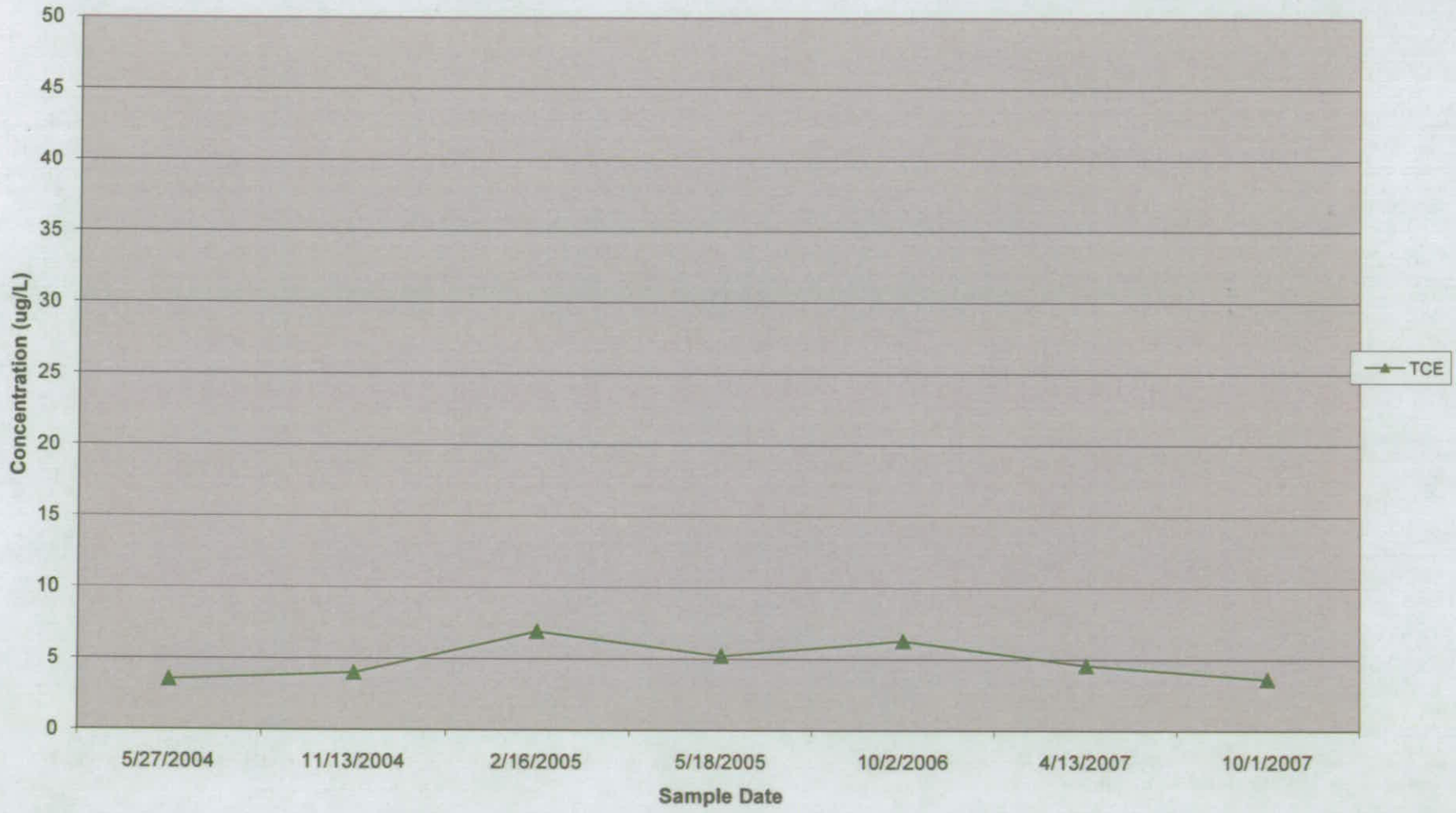
1015605

1015606

MW-101 Top
TTA-1 SOUTH



DR1-1A
TTA-1 SOUTH



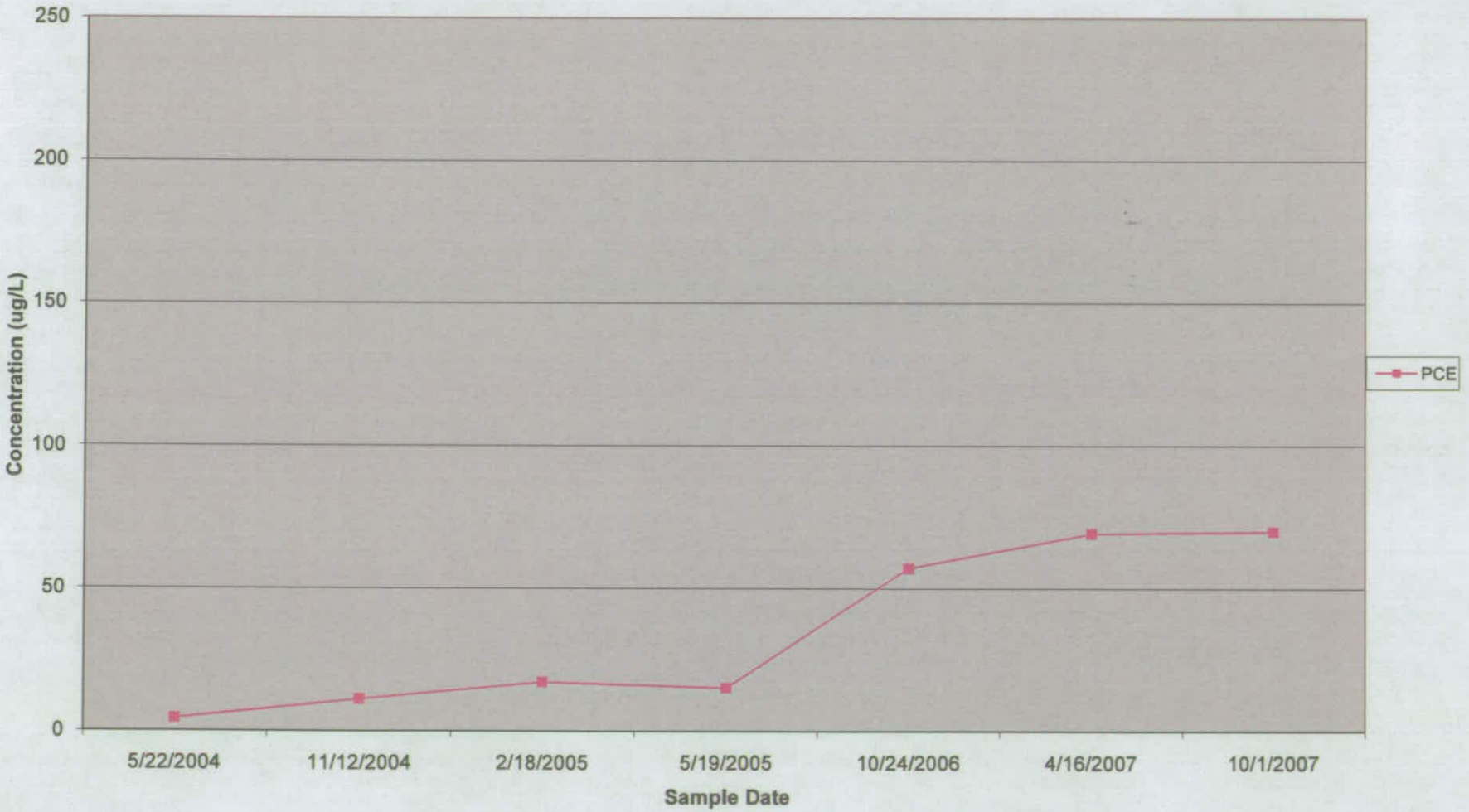
1015607

1015608

DR1-4
TTA-1 SOUTH



DR1-5
TTA-1 SOUTH



1015609

10156610

DR1-5A
TTA-1 SOUTH



DR1-6
TTA-1 SOUTH



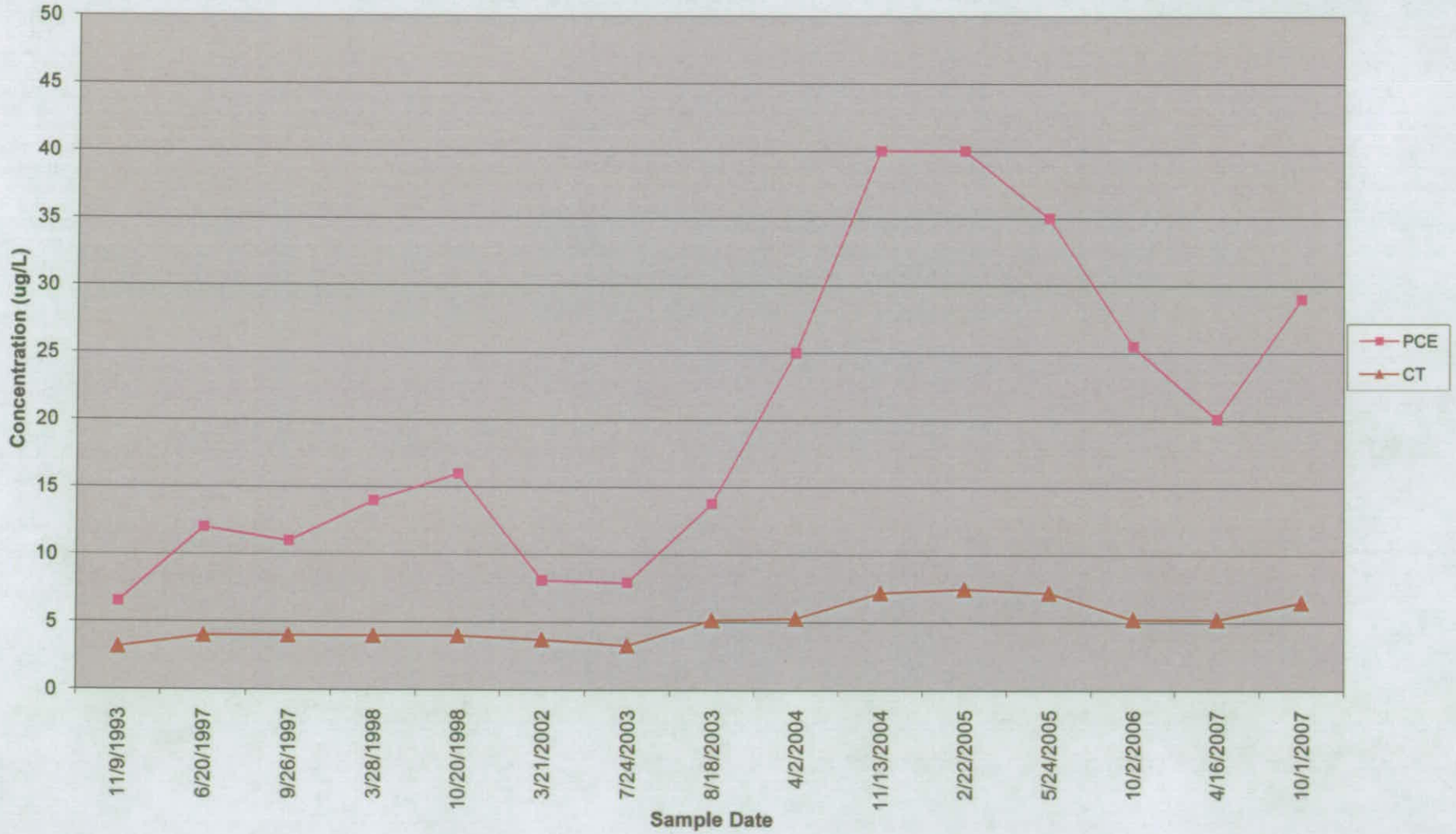
1015611

10156 12

DR1-6A
TTA-1 SOUTH

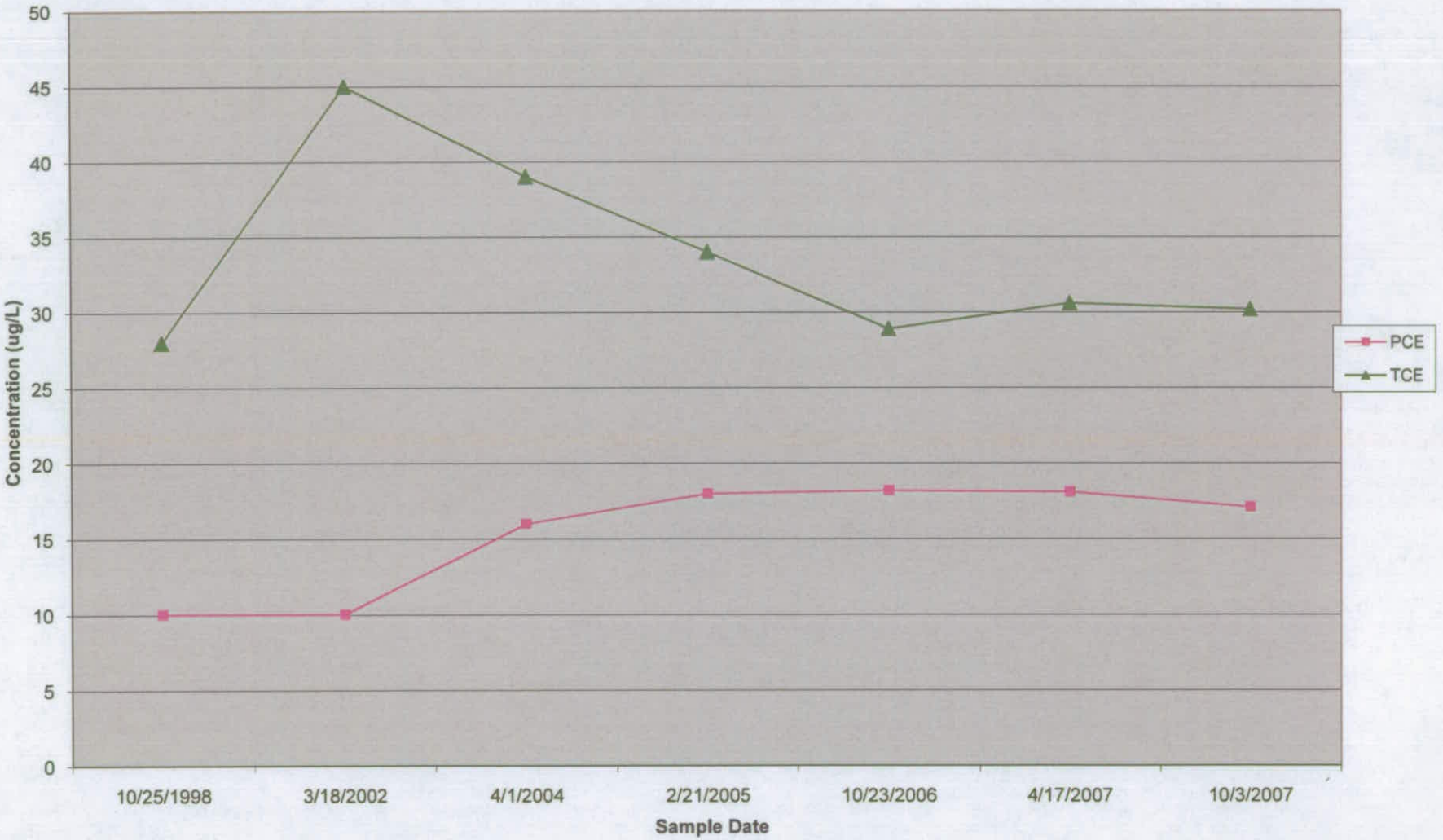


MW-26
TTA-2



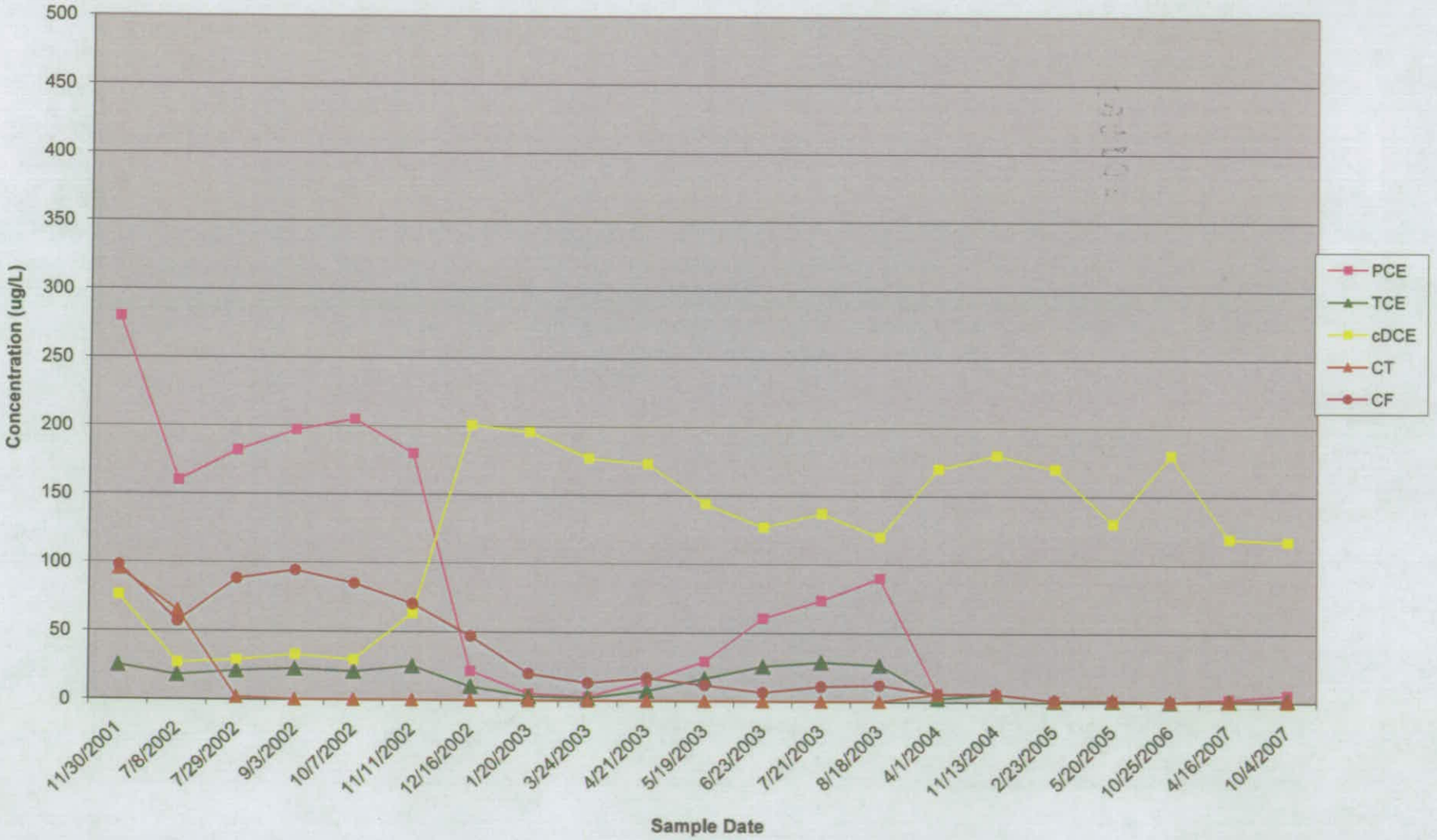
1015613

MW-64
TTA-2



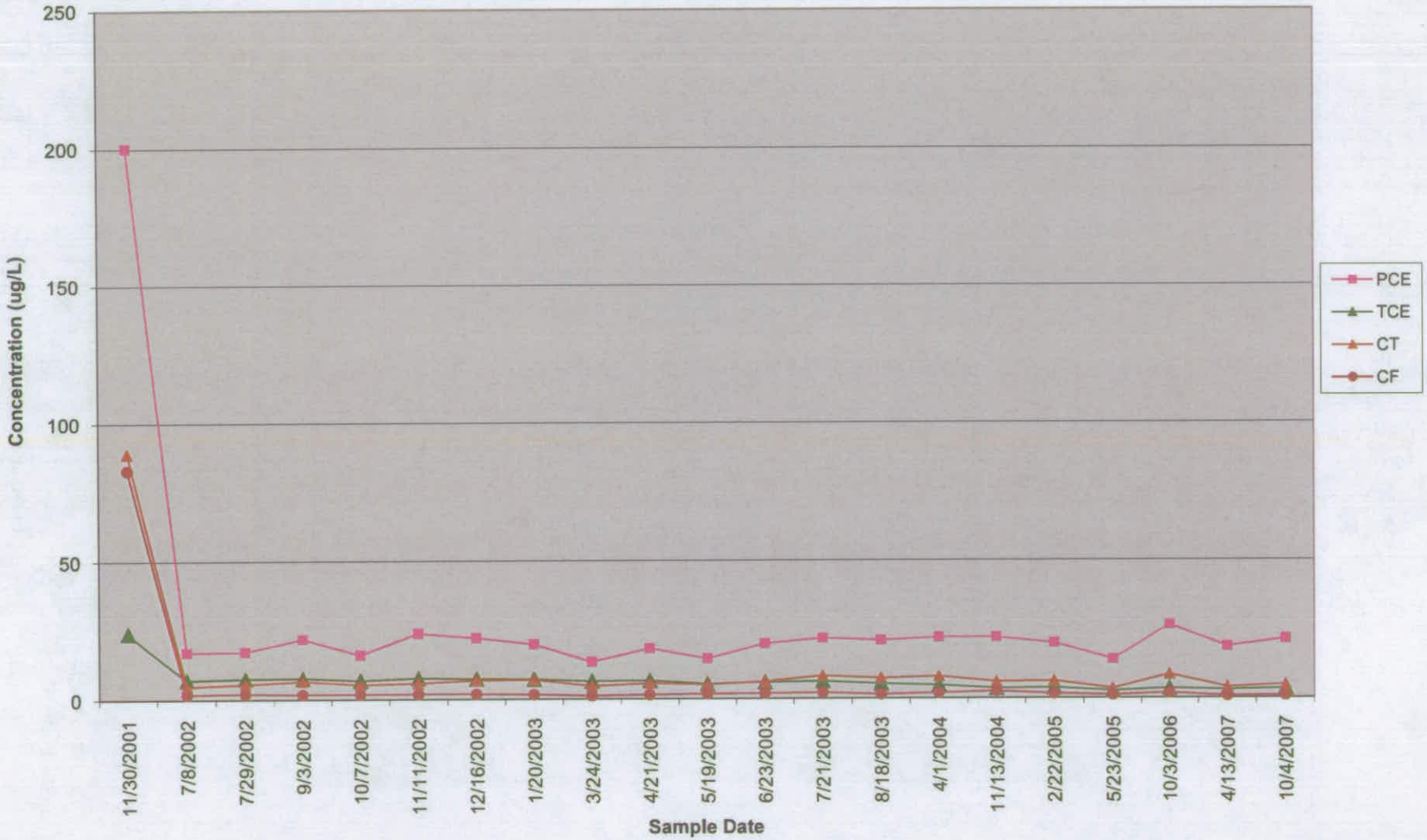
1015614

MW-86
TTA-2



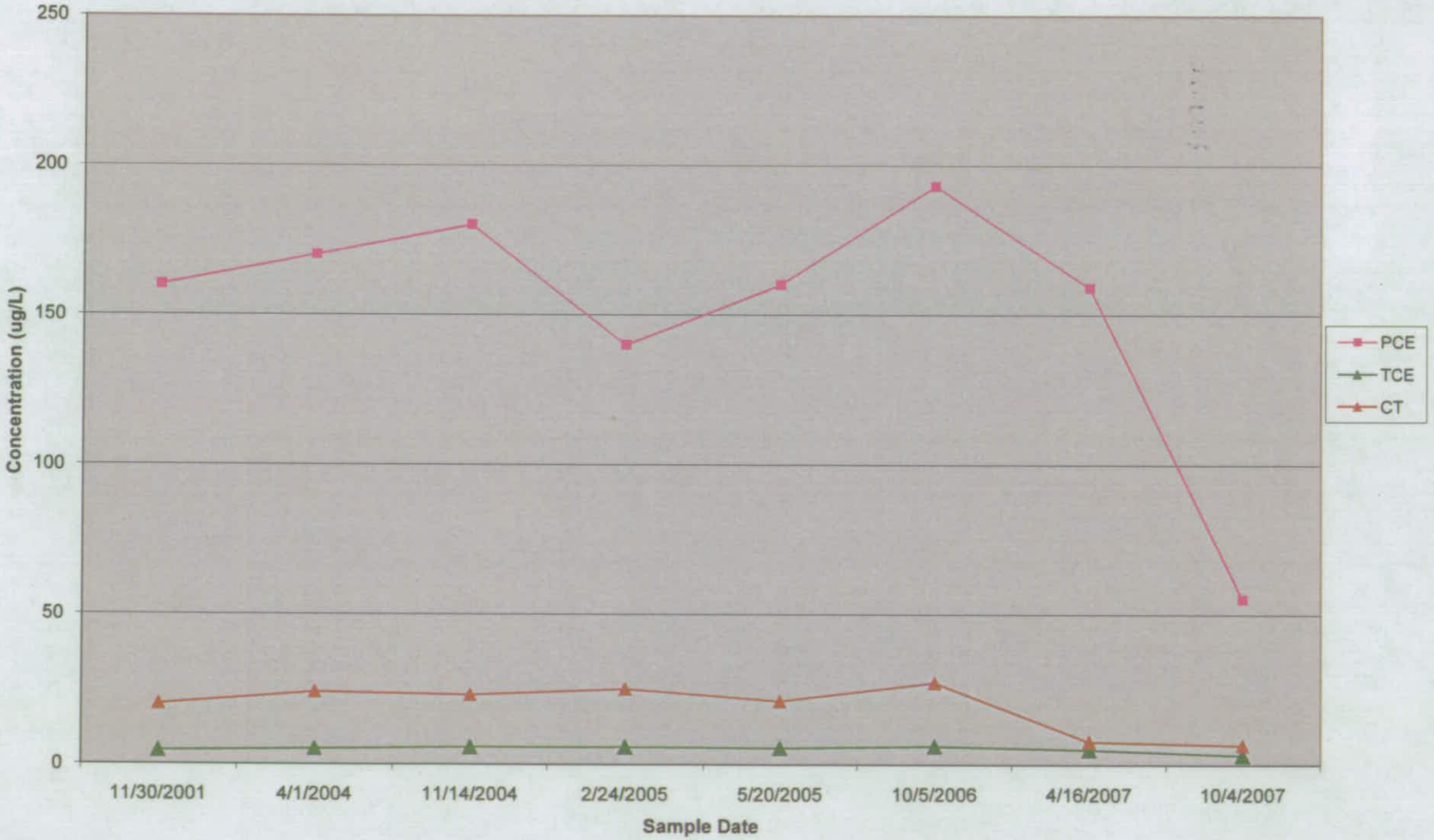
10015615

MW-88
TTA-2



10156161

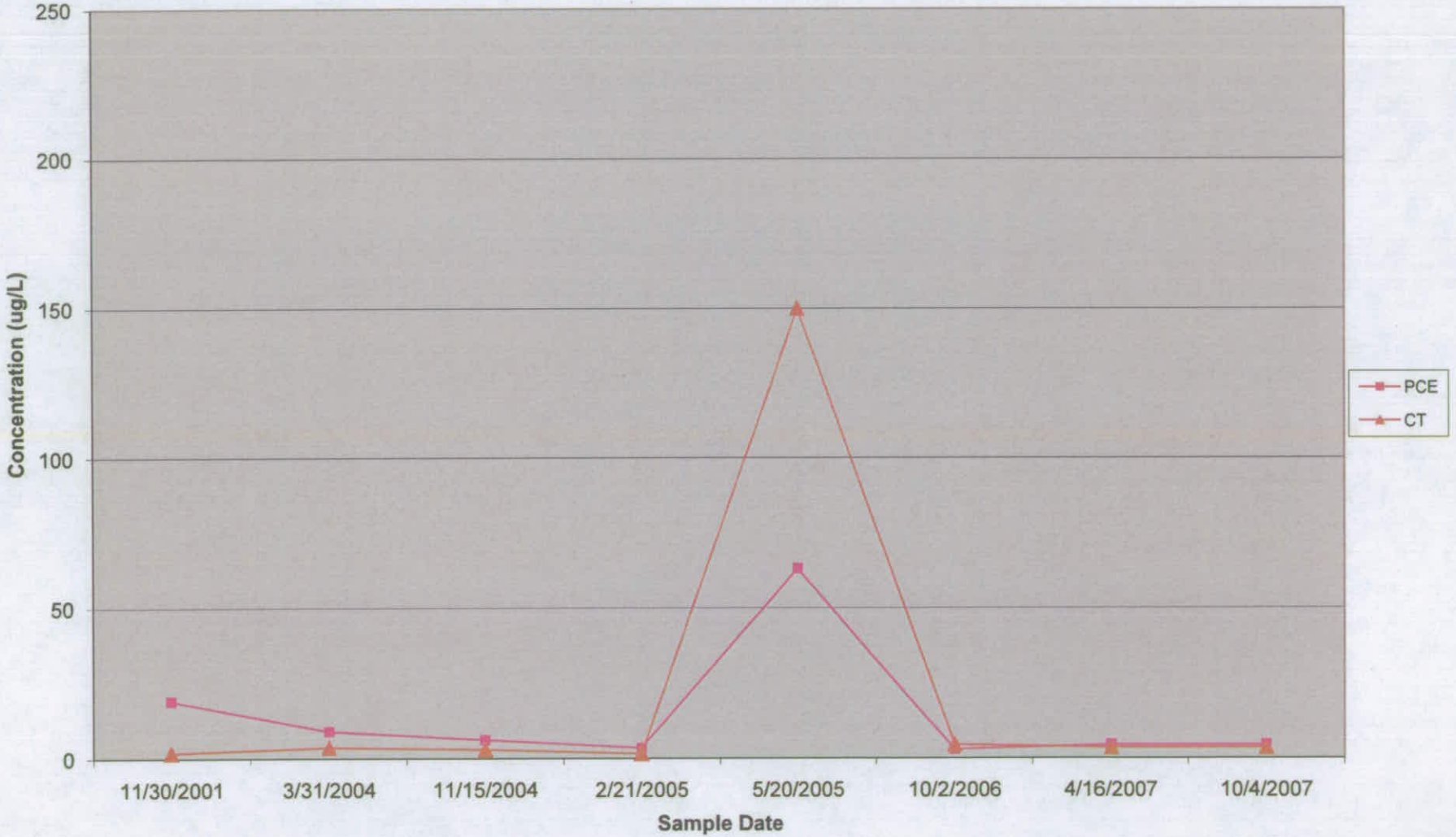
MW-92
TTA-2



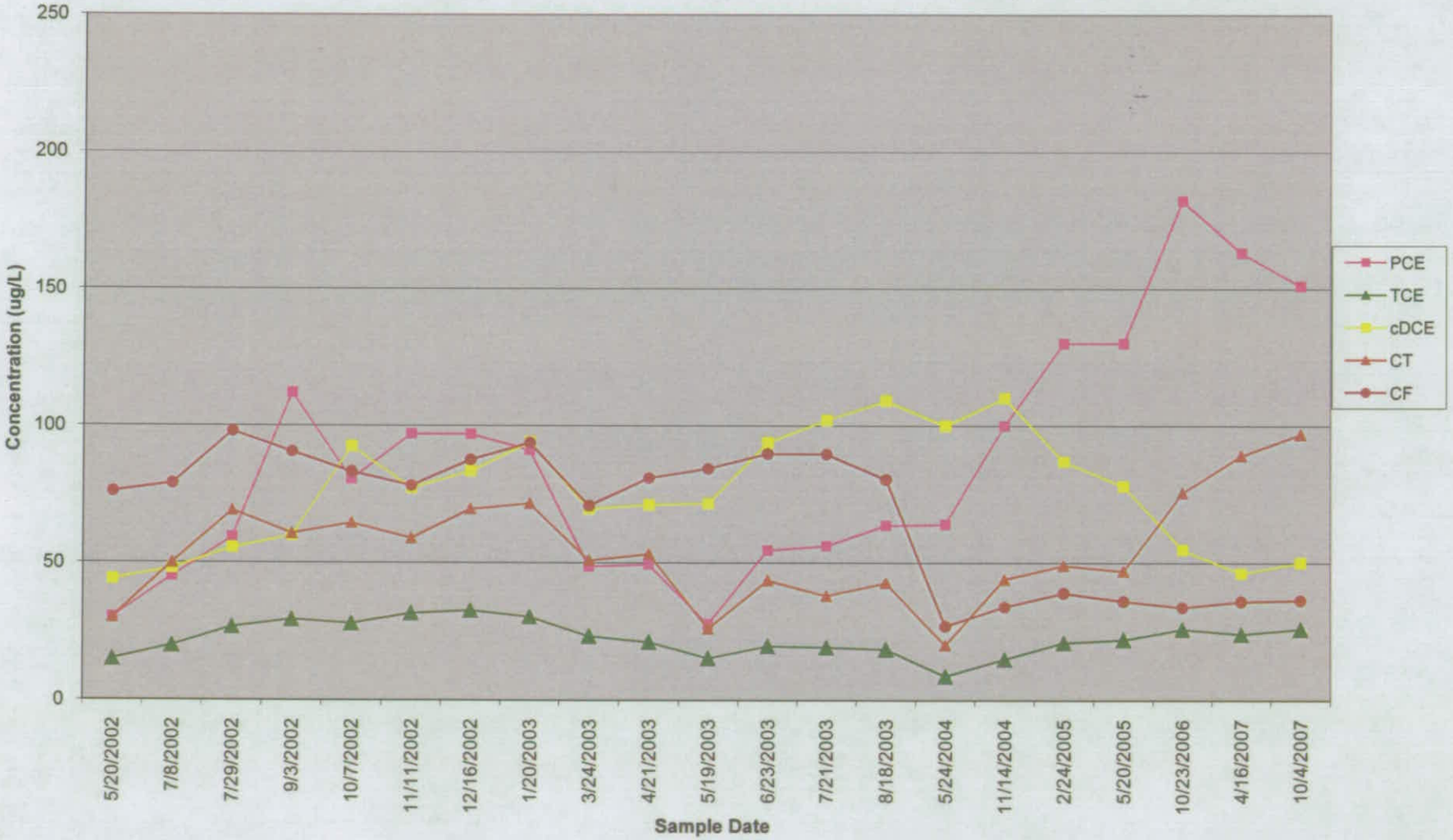
1015617

10015618

MW-96
TTA-2



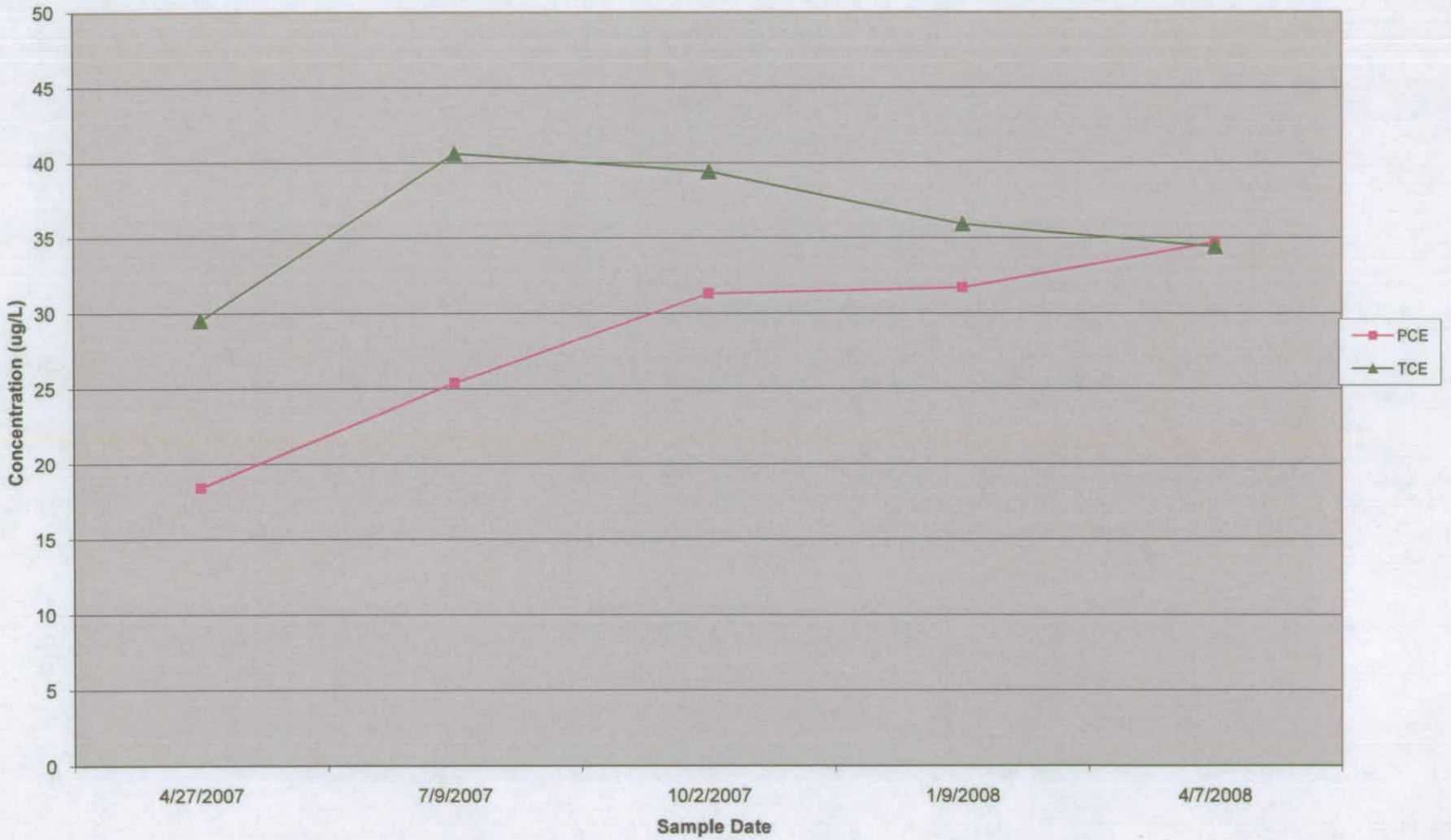
MW-113
TTA-2



0015619

1015620

MW-217
TTA-2



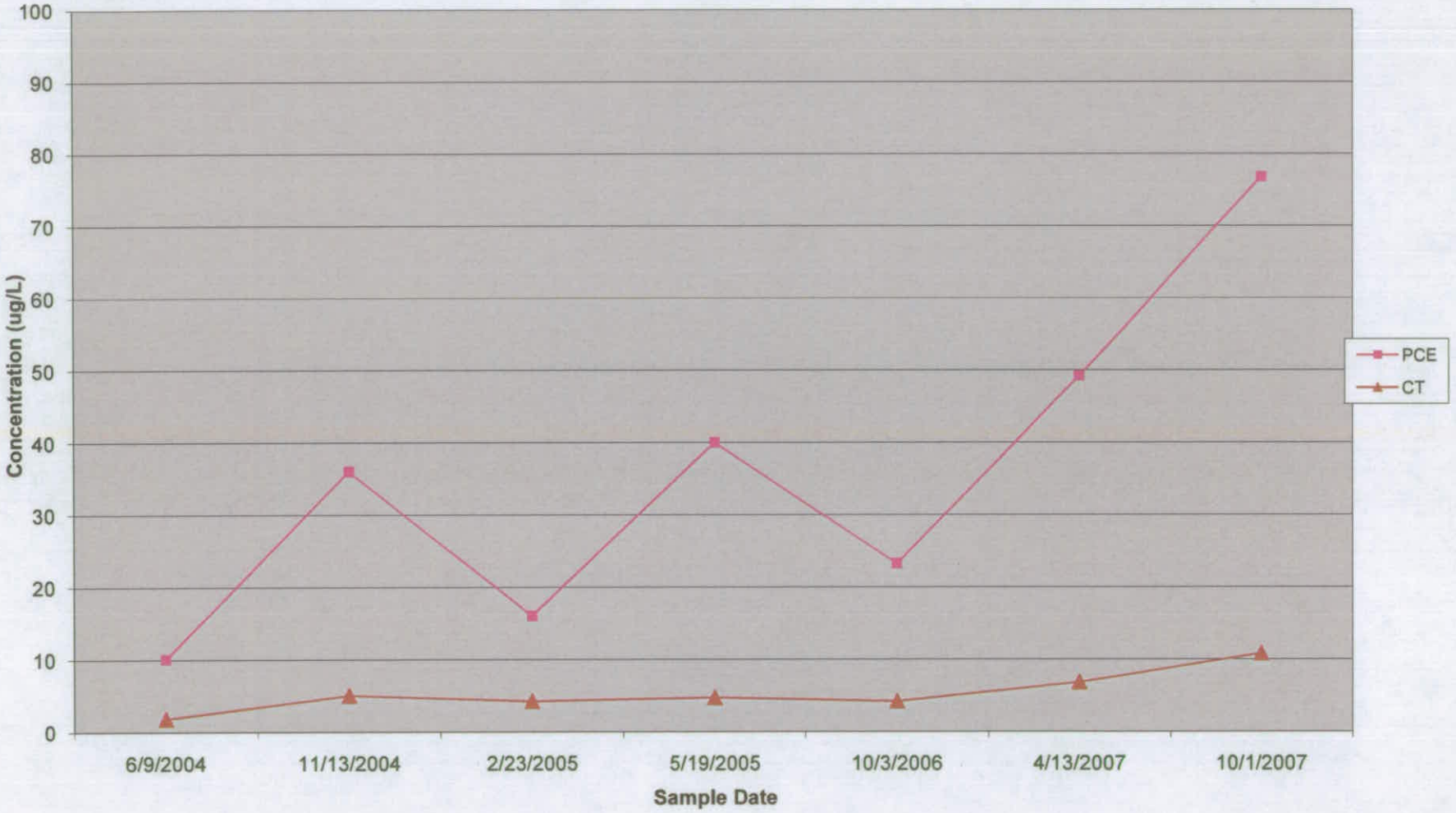
MW-218
TTA-2



1015621

DR2-2
TTA-2

1015622



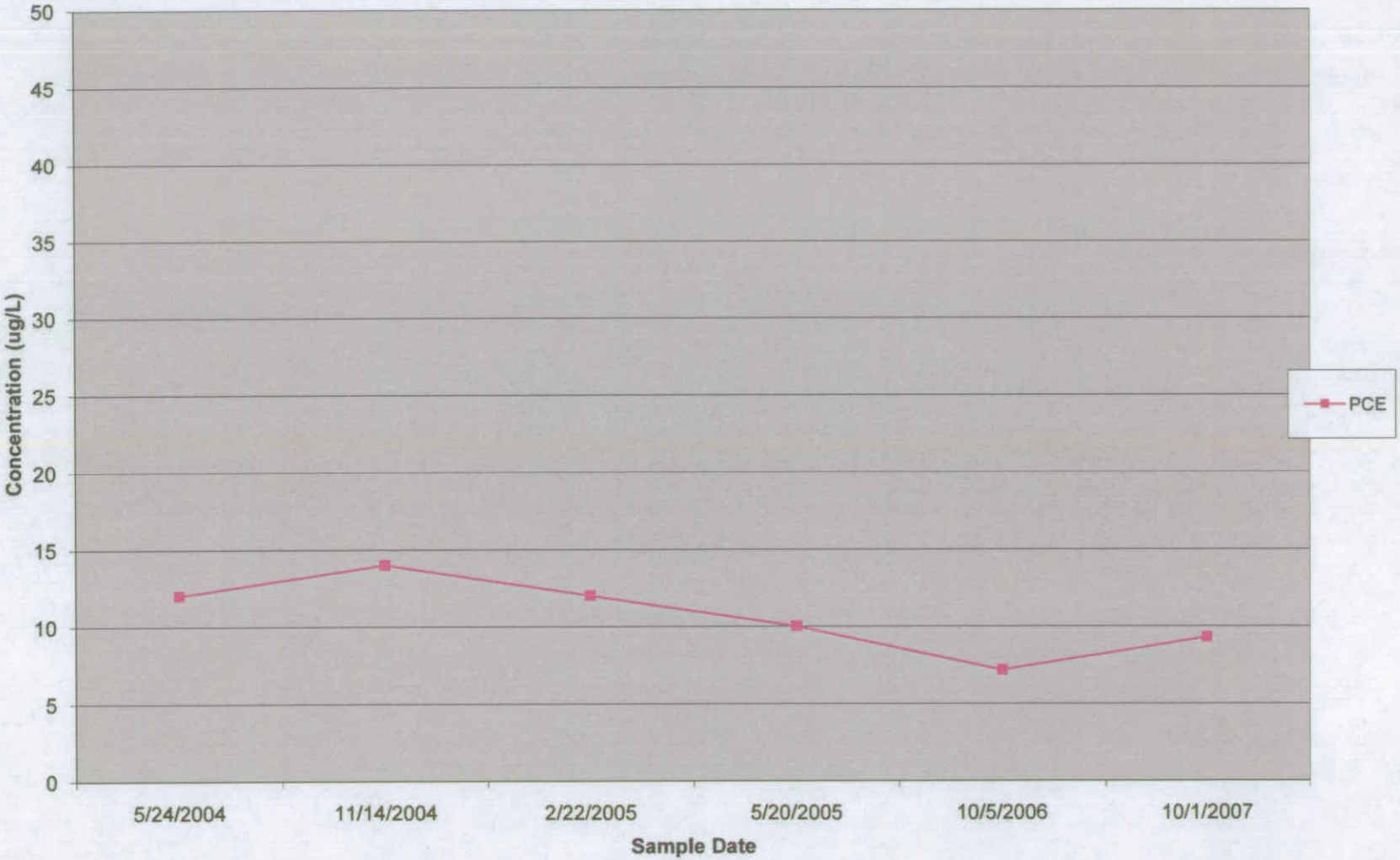
DR2-3
TTA-2



1015623

1015624

DR2-4
TTA-2



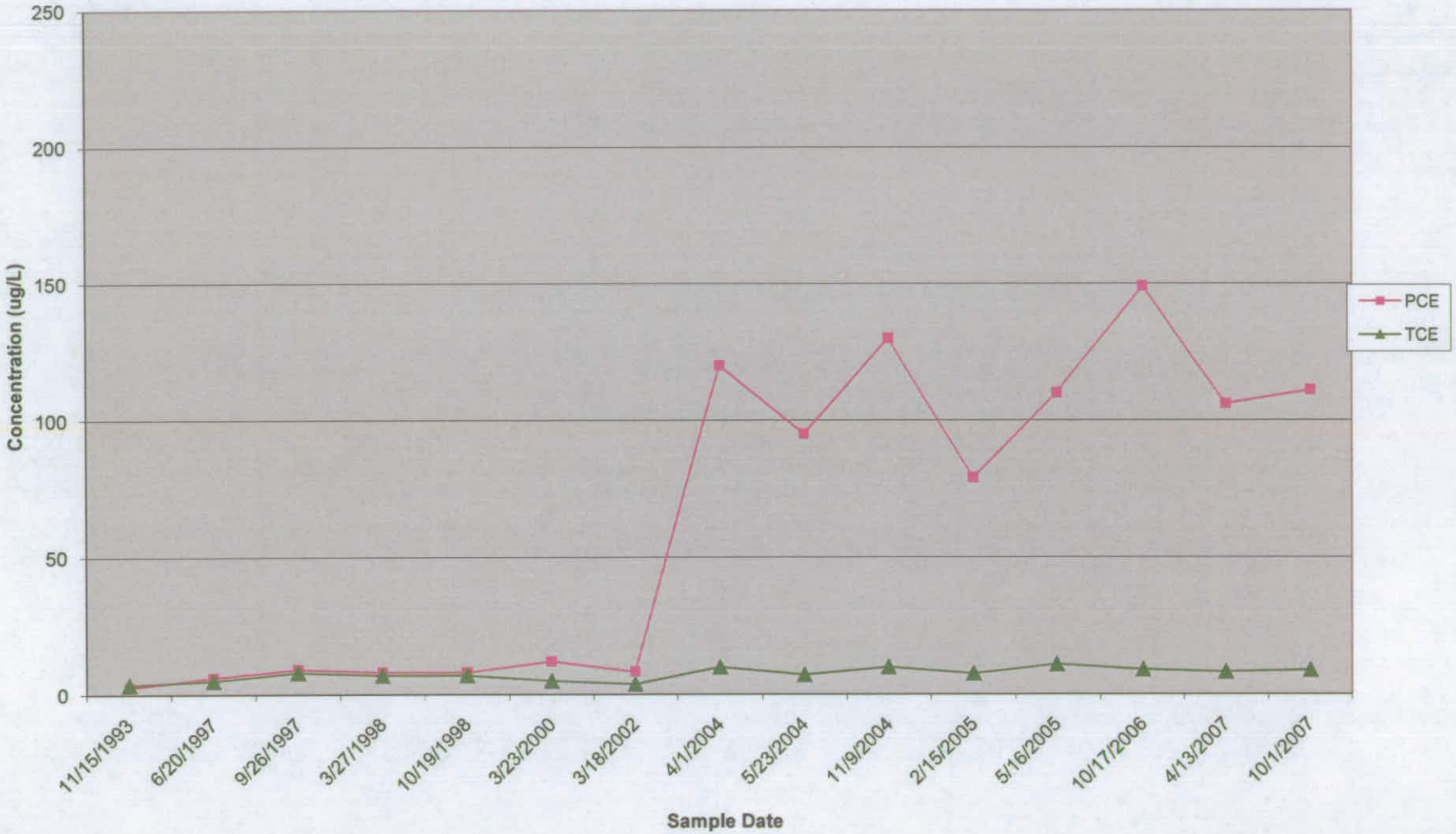
DR2-6
TTA-2



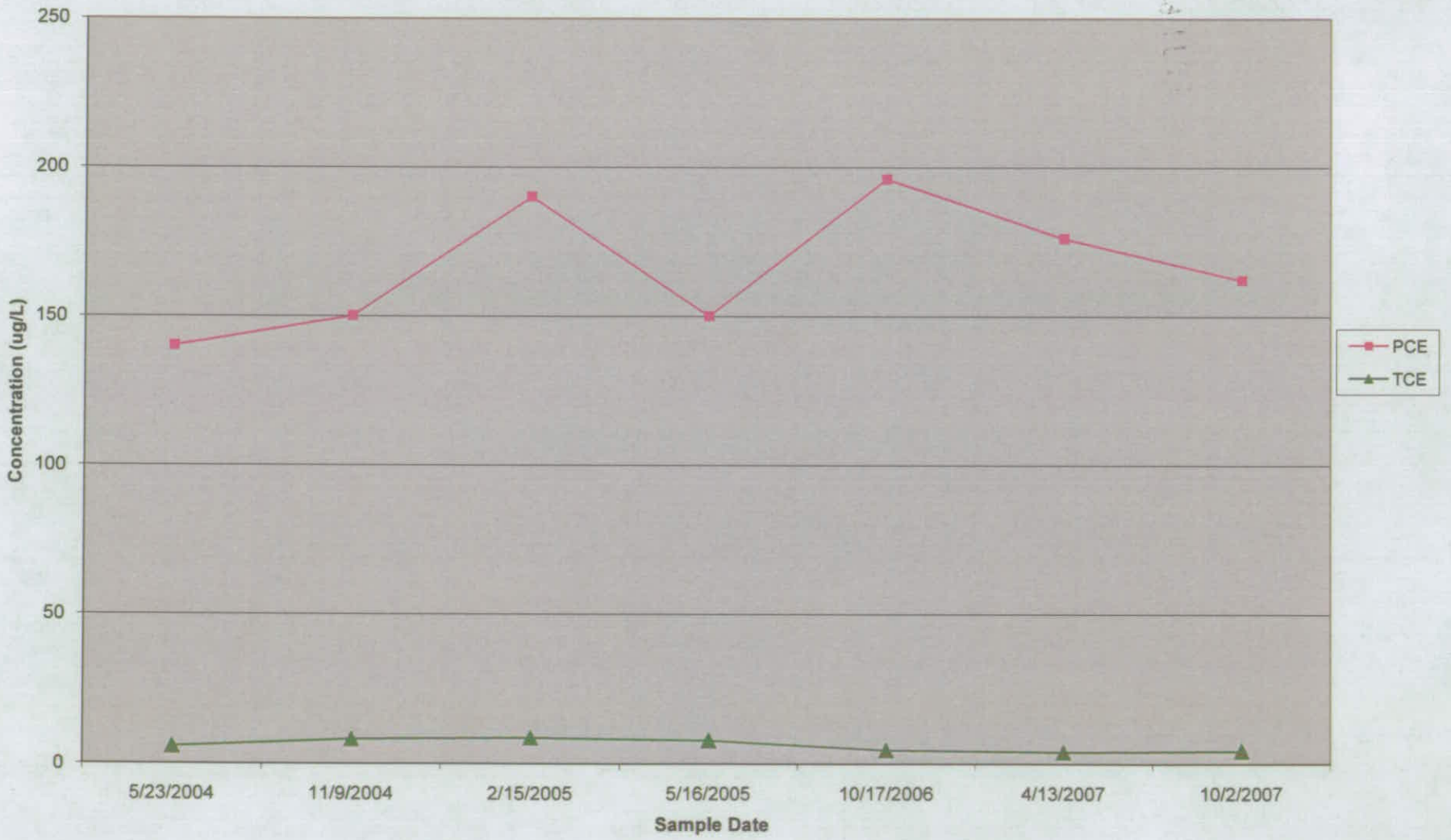
10015625

1015626

MW-39
WEST - CENTRAL MI



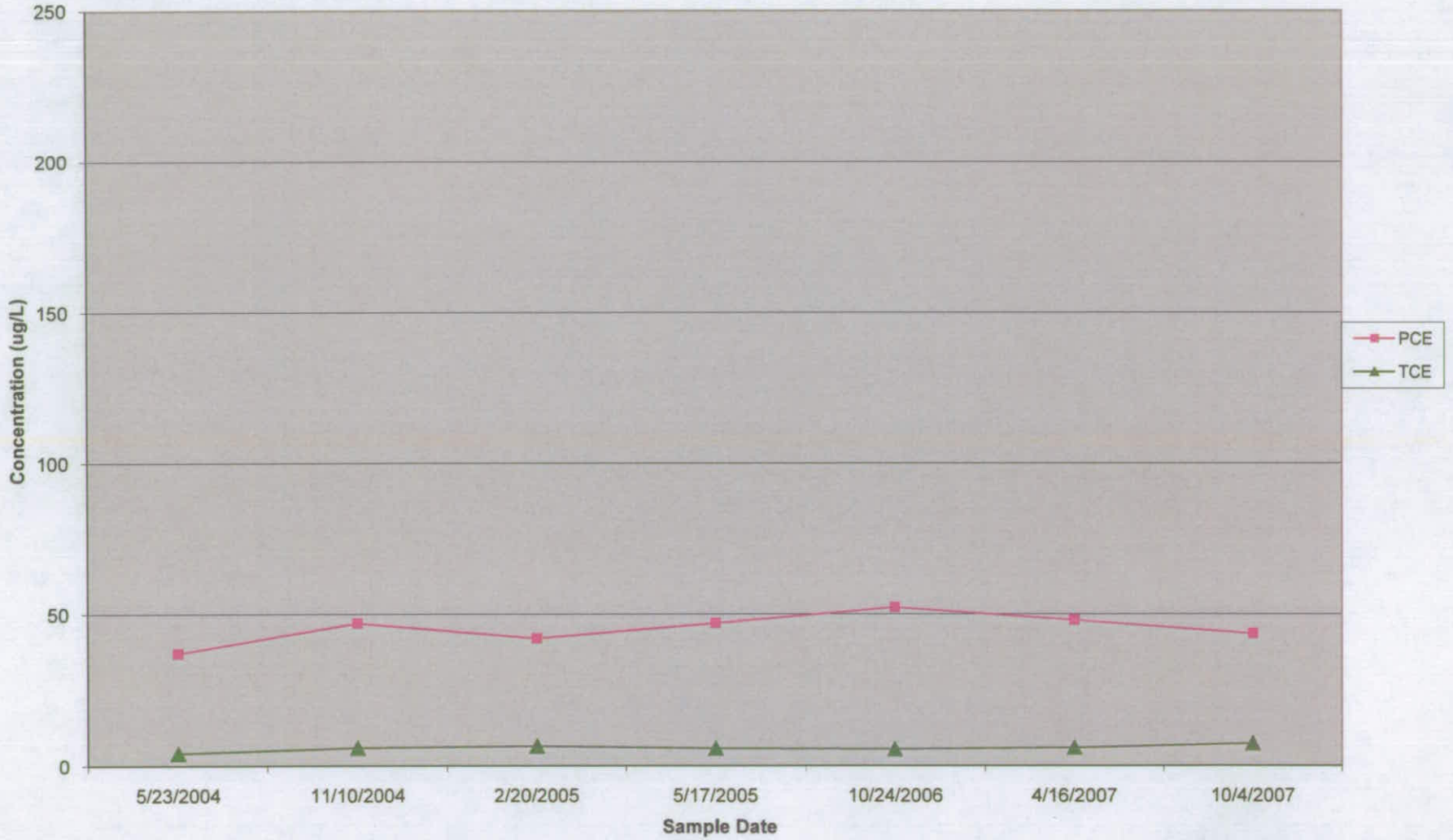
MW-39A
WEST - CENTRAL MI



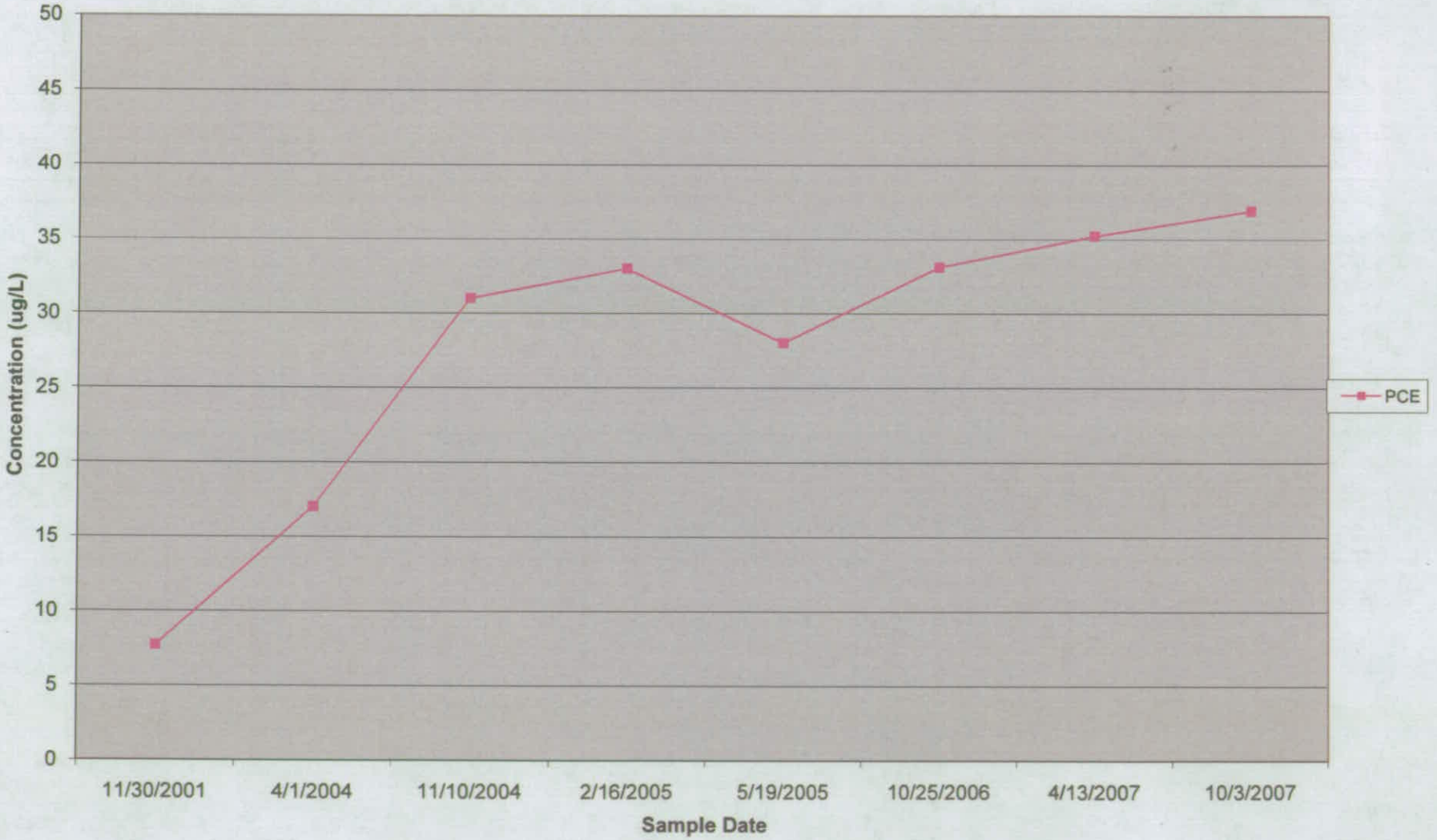
1015627

1015628

MW-94A
WEST - CENTRAL MI



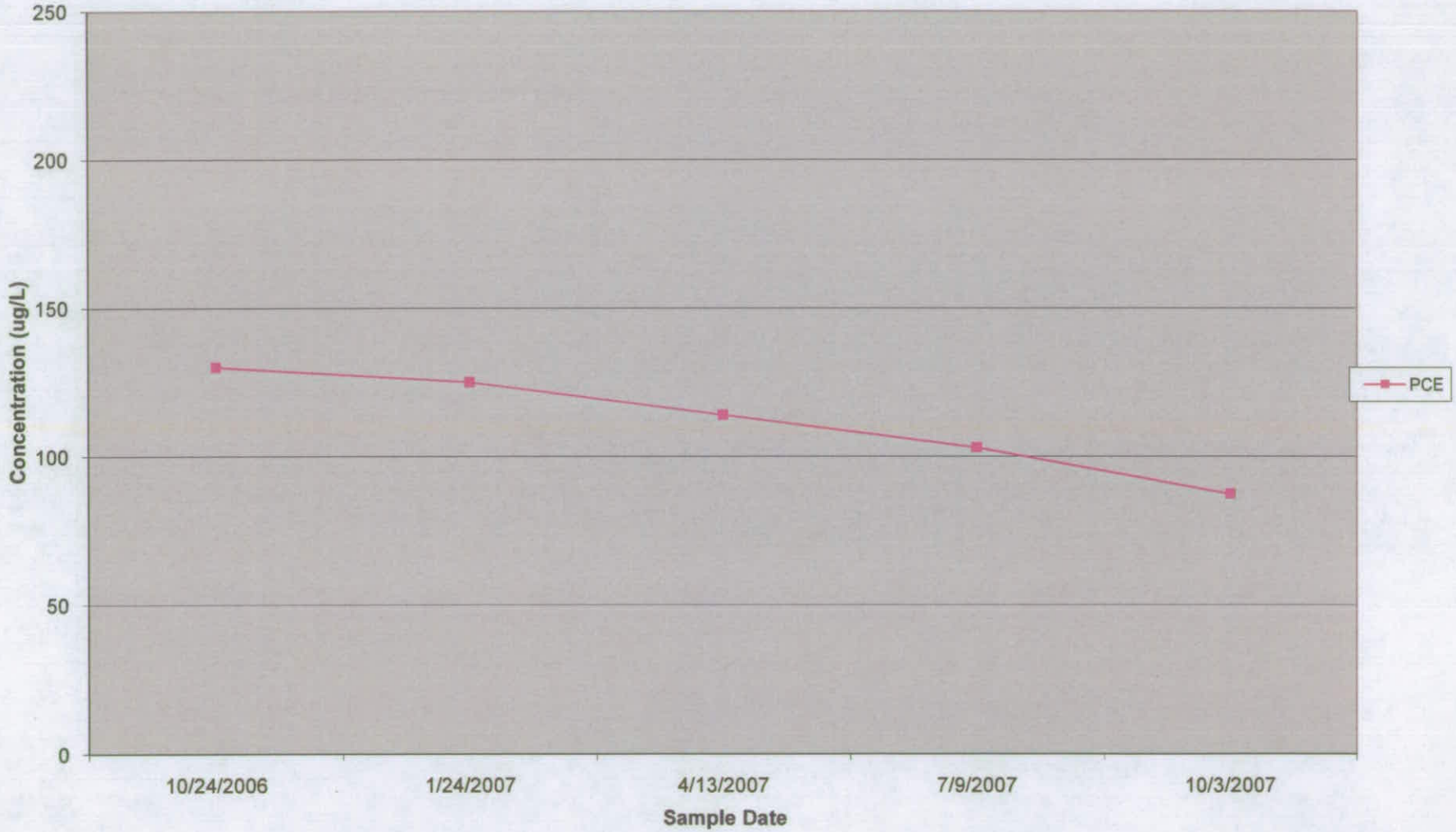
MW-98
WEST - CENTRAL MI



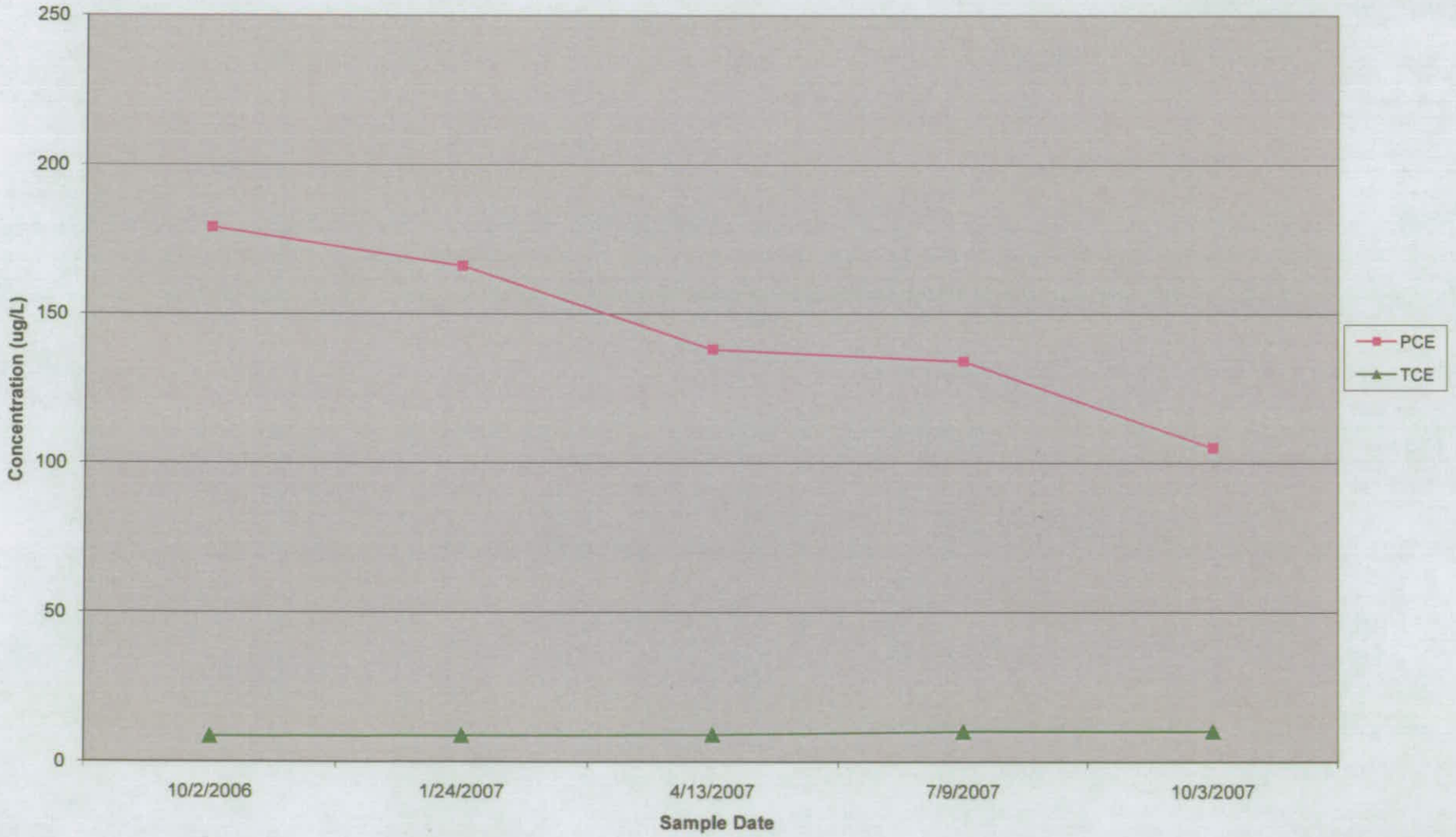
10015629

10015630

MW-197A
WEST - CENTRAL MI



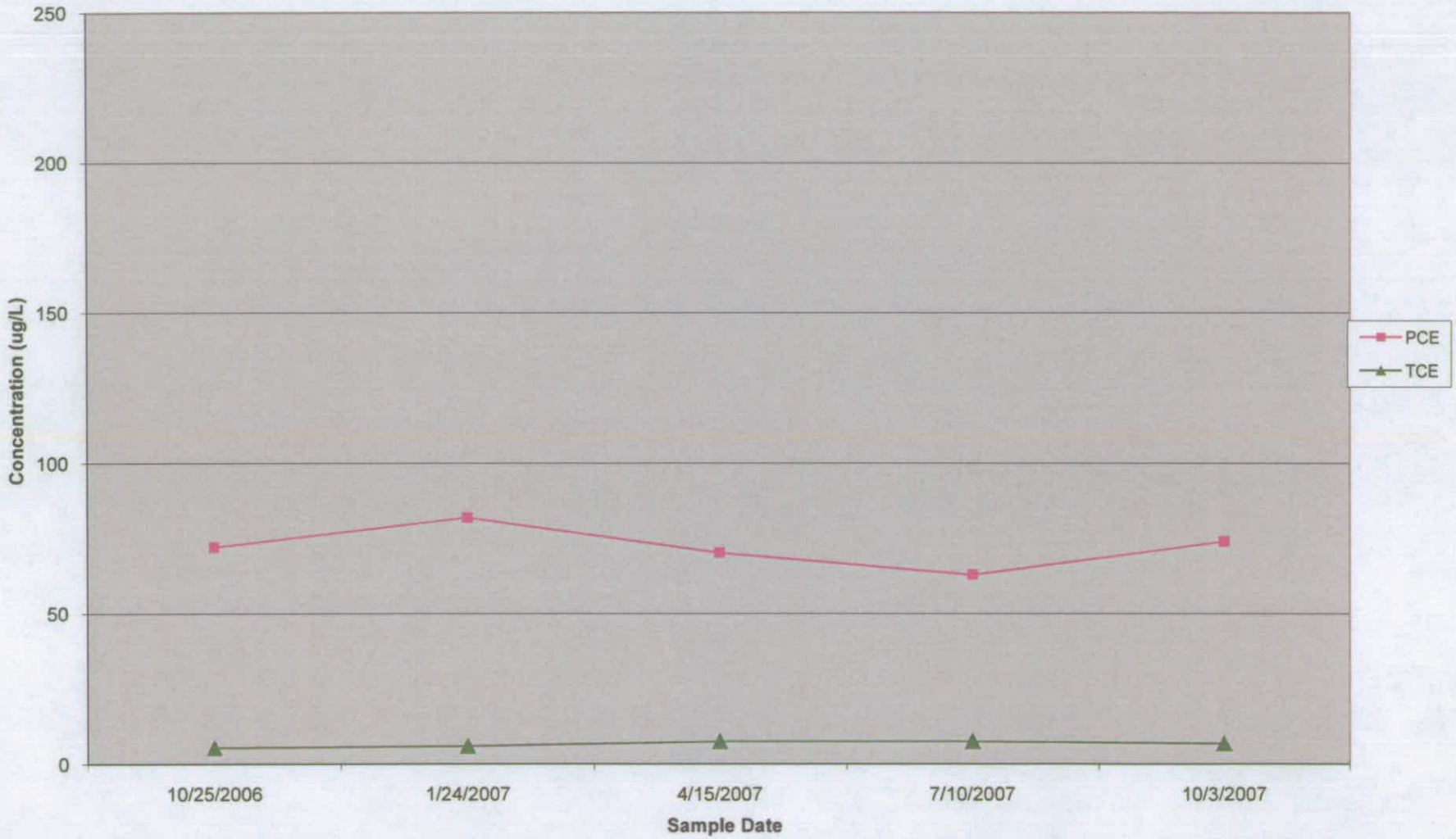
MW-197B
WEST - CENTRAL MI



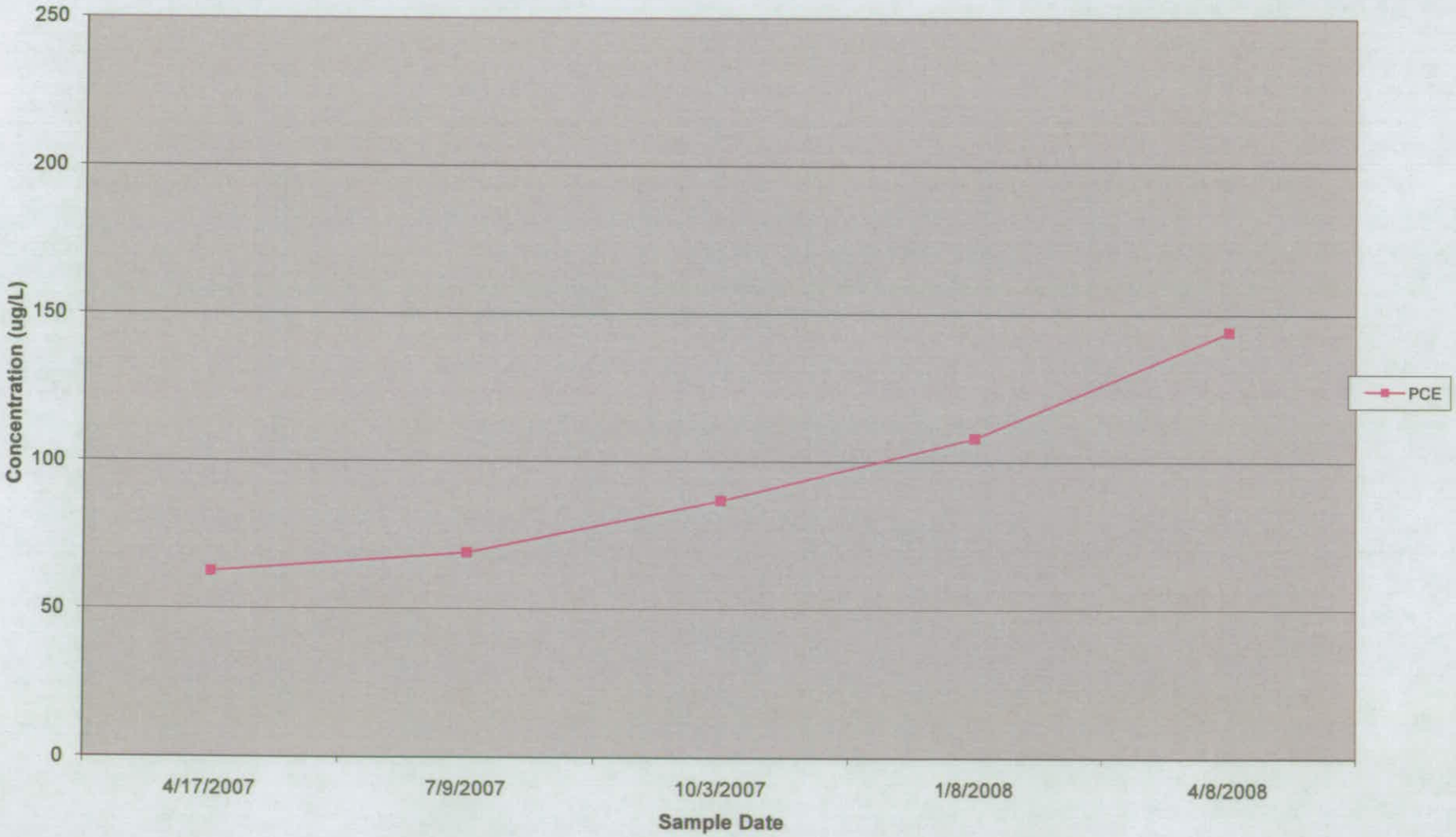
1015631

1015632

MW-200
WEST - CENTRAL MI



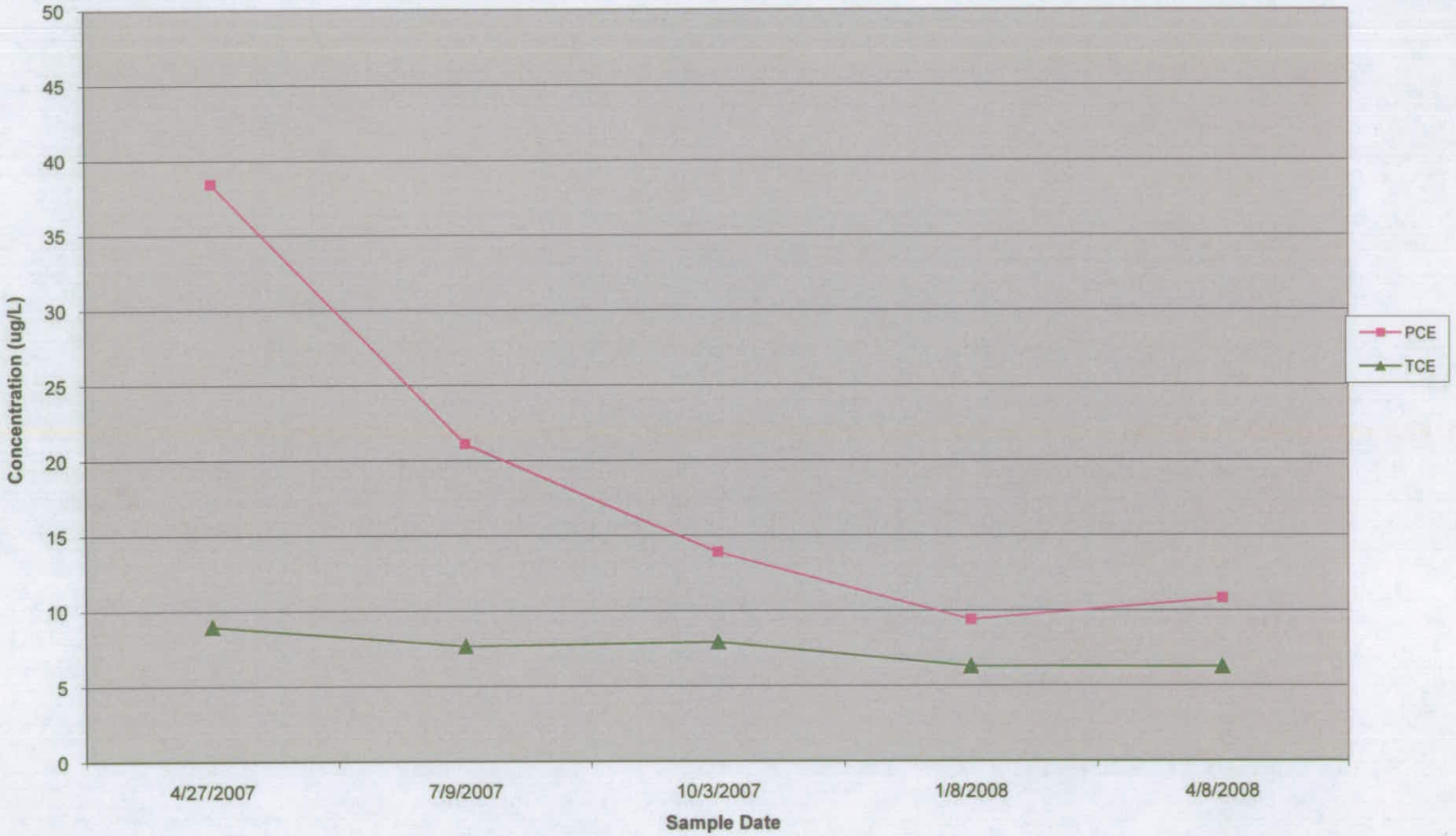
MW-203A
WEST - CENTRAL MI



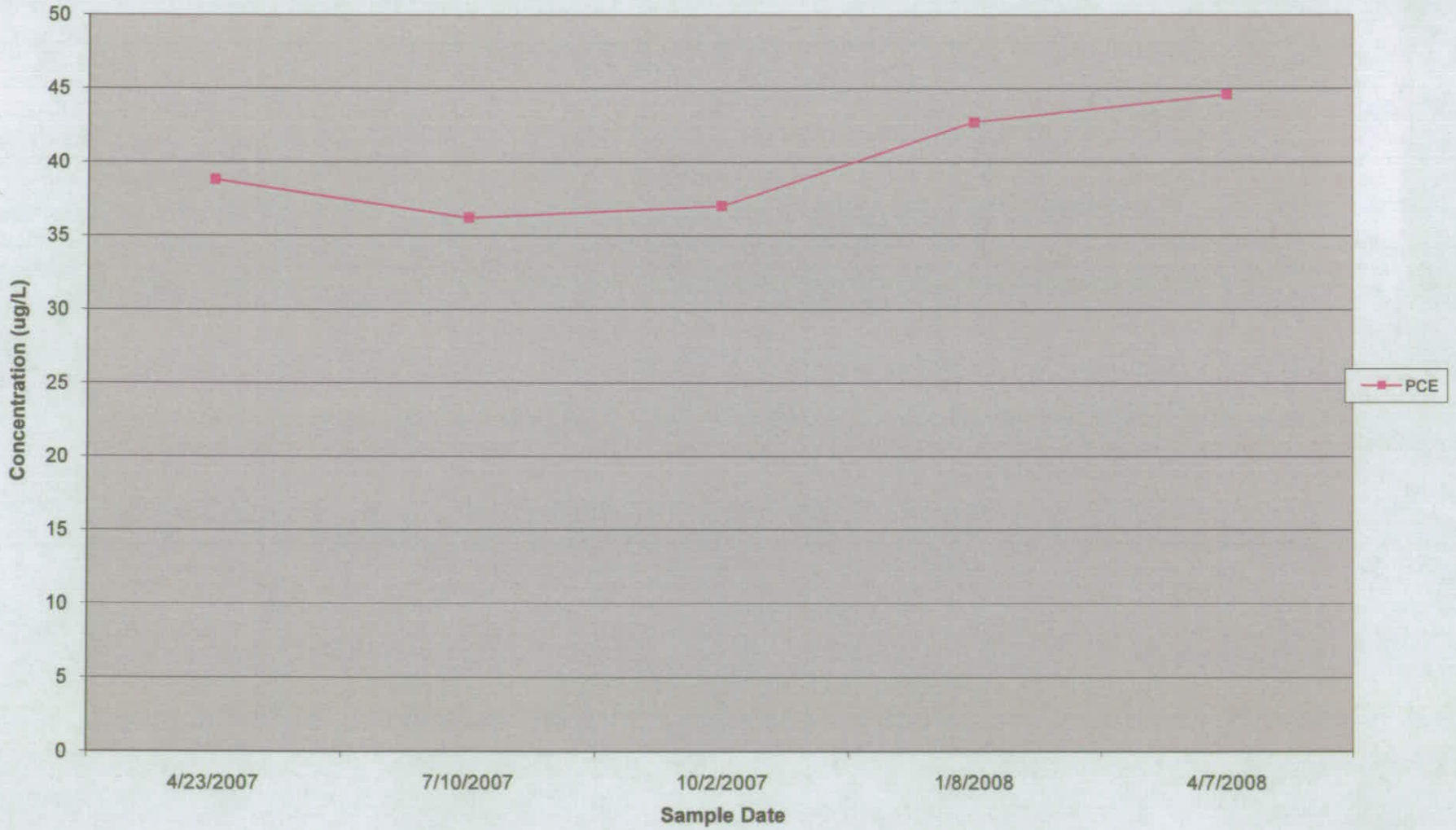
1015633

1015634

MW-203B
WEST - CENTRAL MI



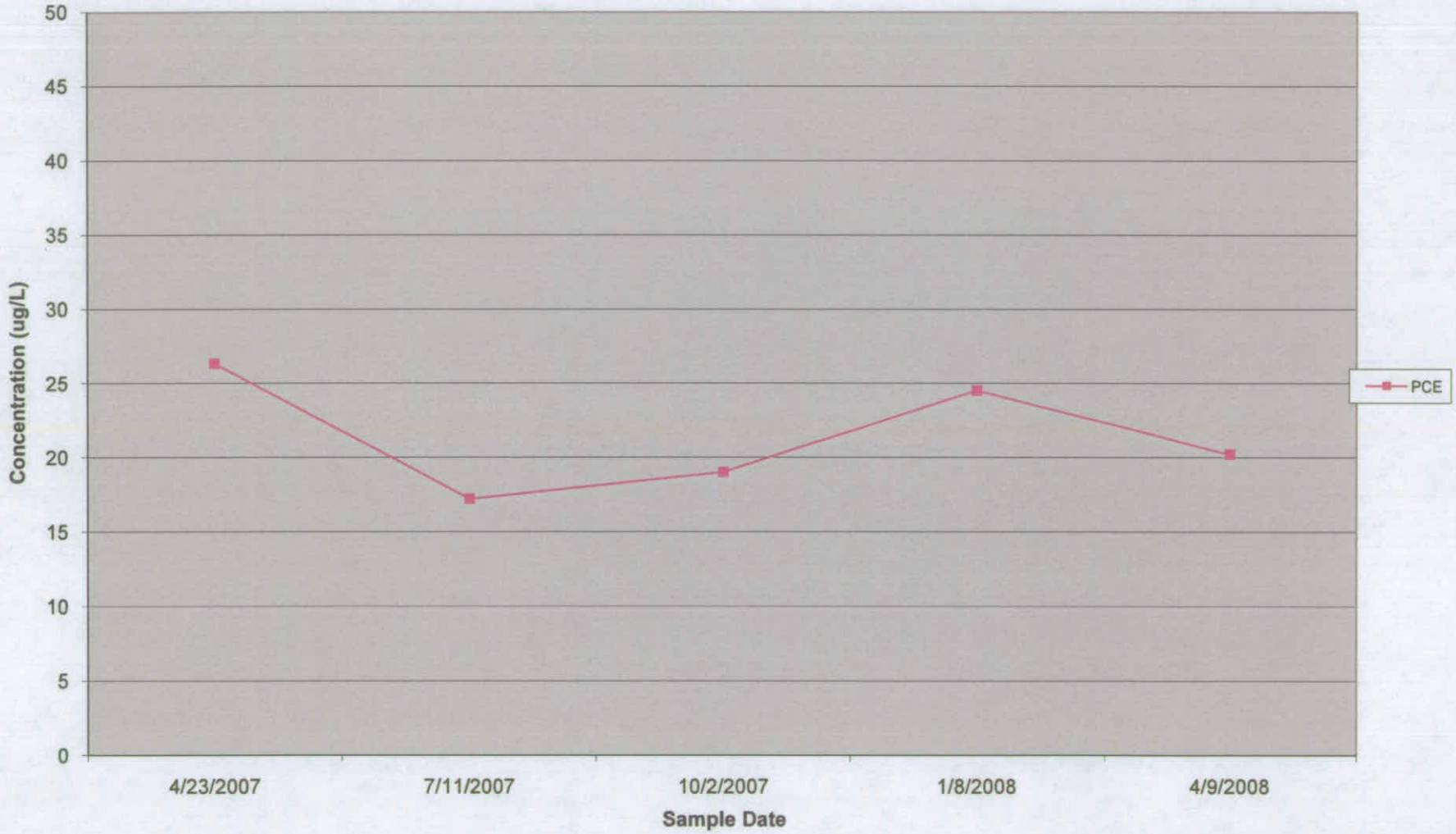
MW-204A
WEST - CENTRAL MI



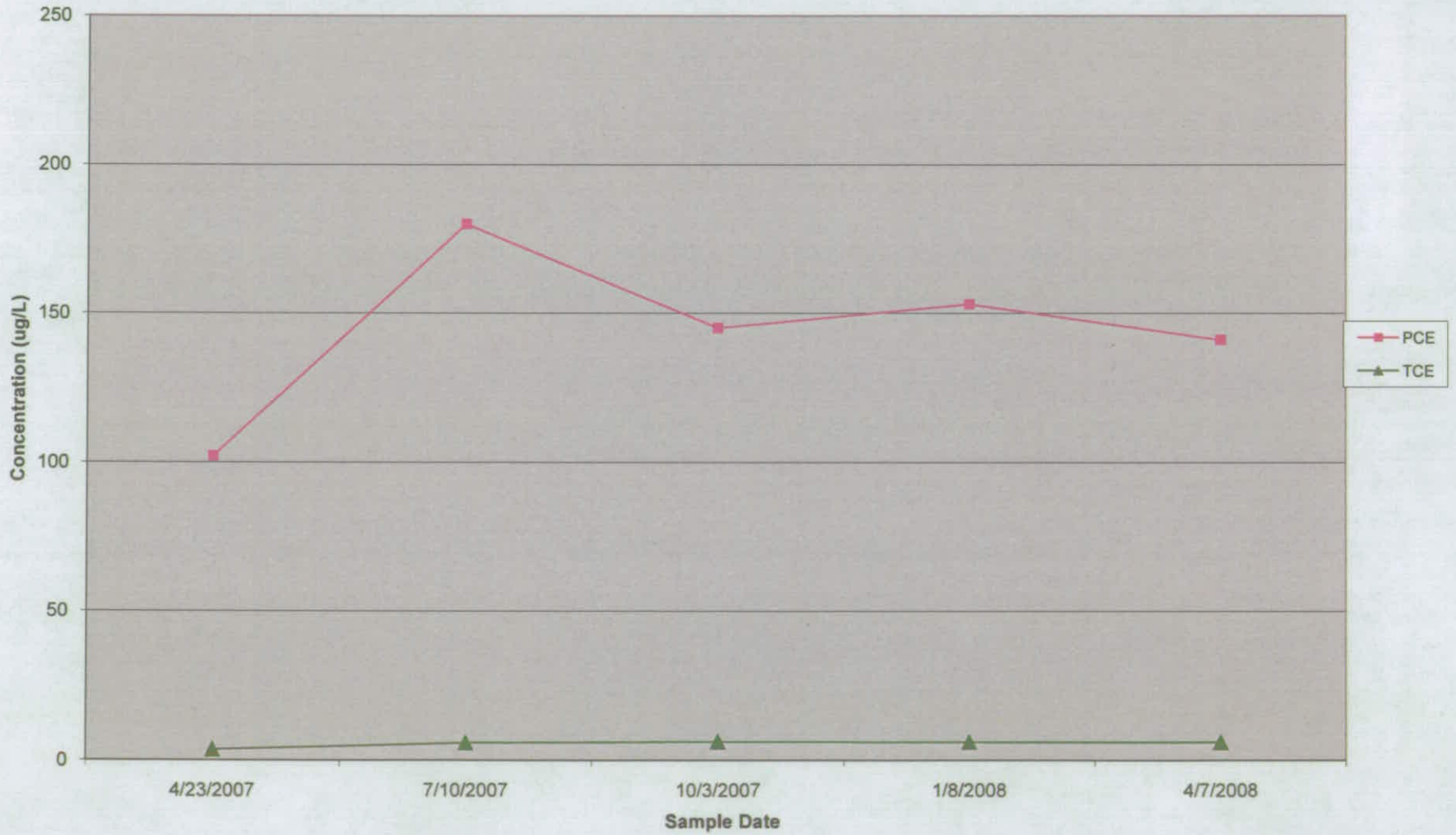
1015635

10156636

MW-204B
WEST - CENTRAL MI



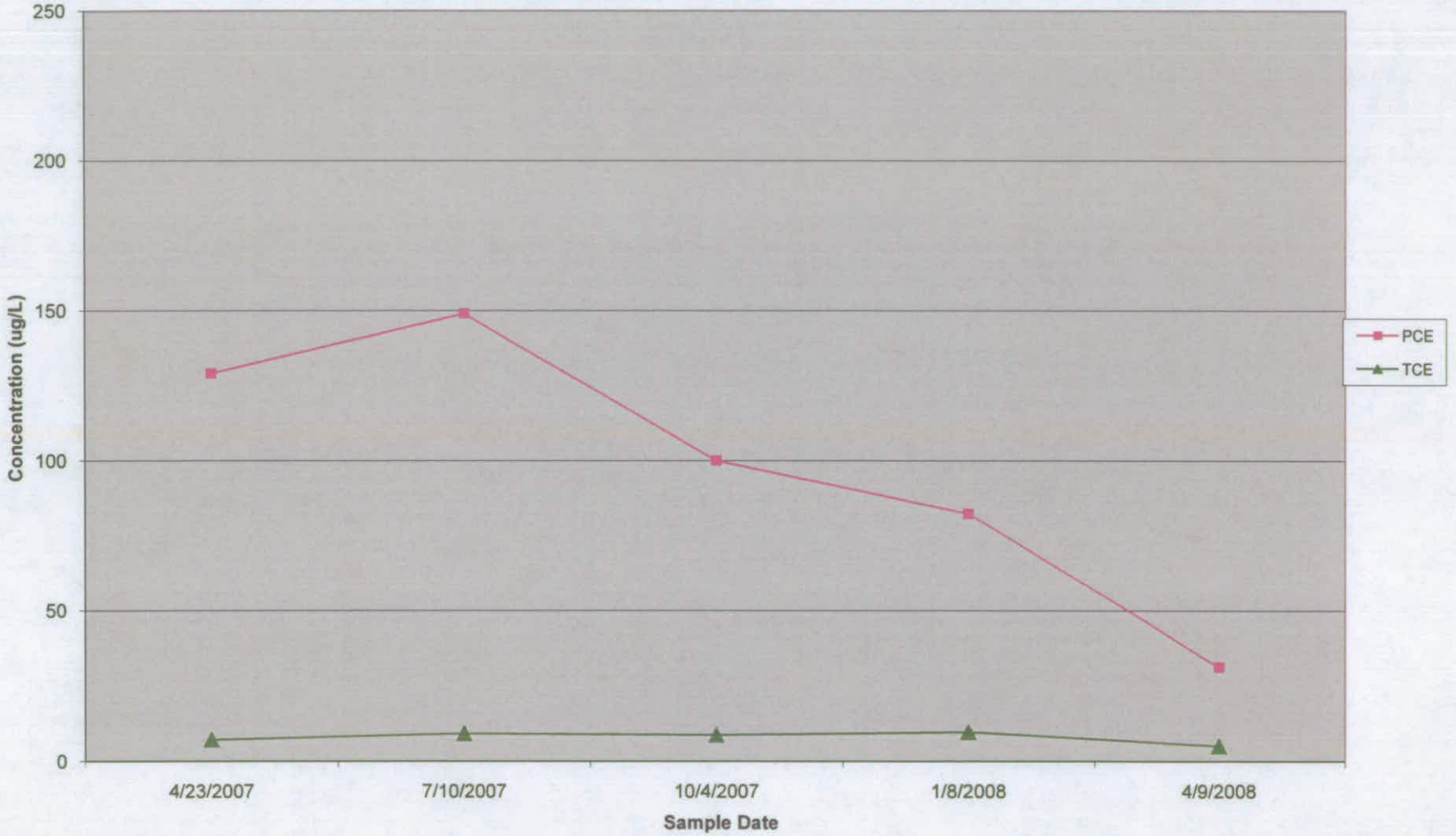
MW-205A
WEST - CENTRAL MI



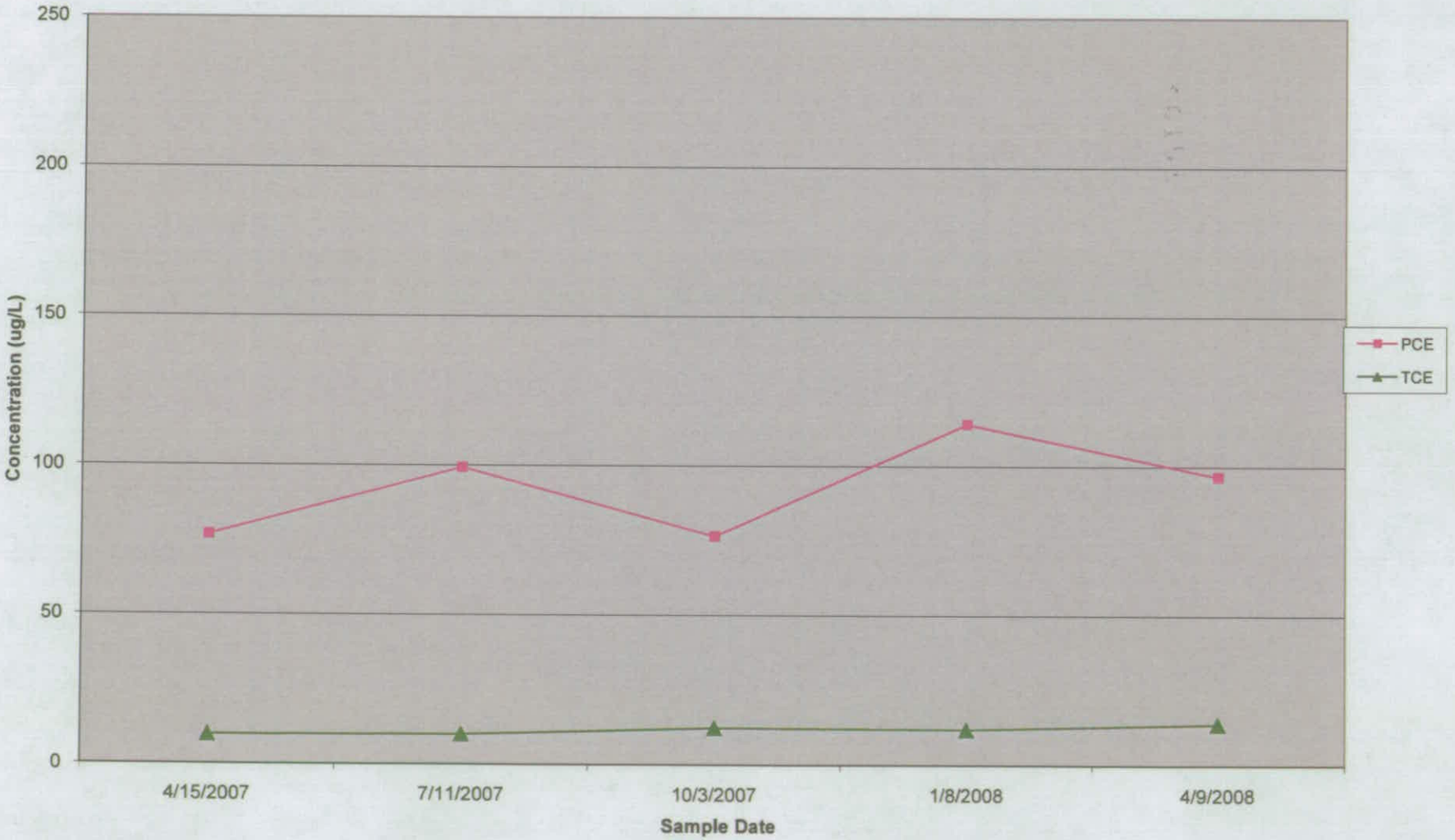
1015637

1015638

MW-205B
WEST - CENTRAL MI



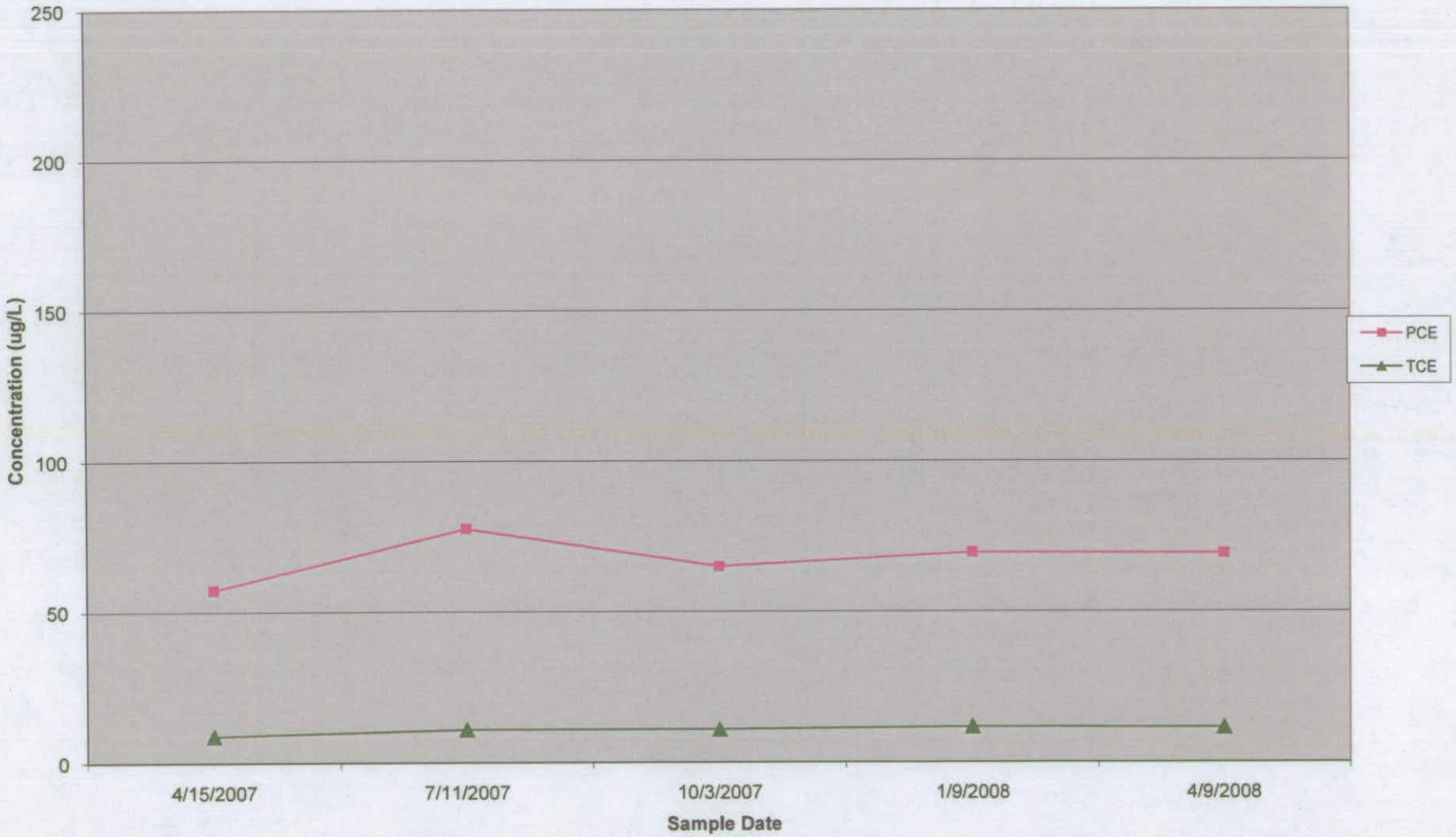
MW-206A
WEST - CENTRAL MI



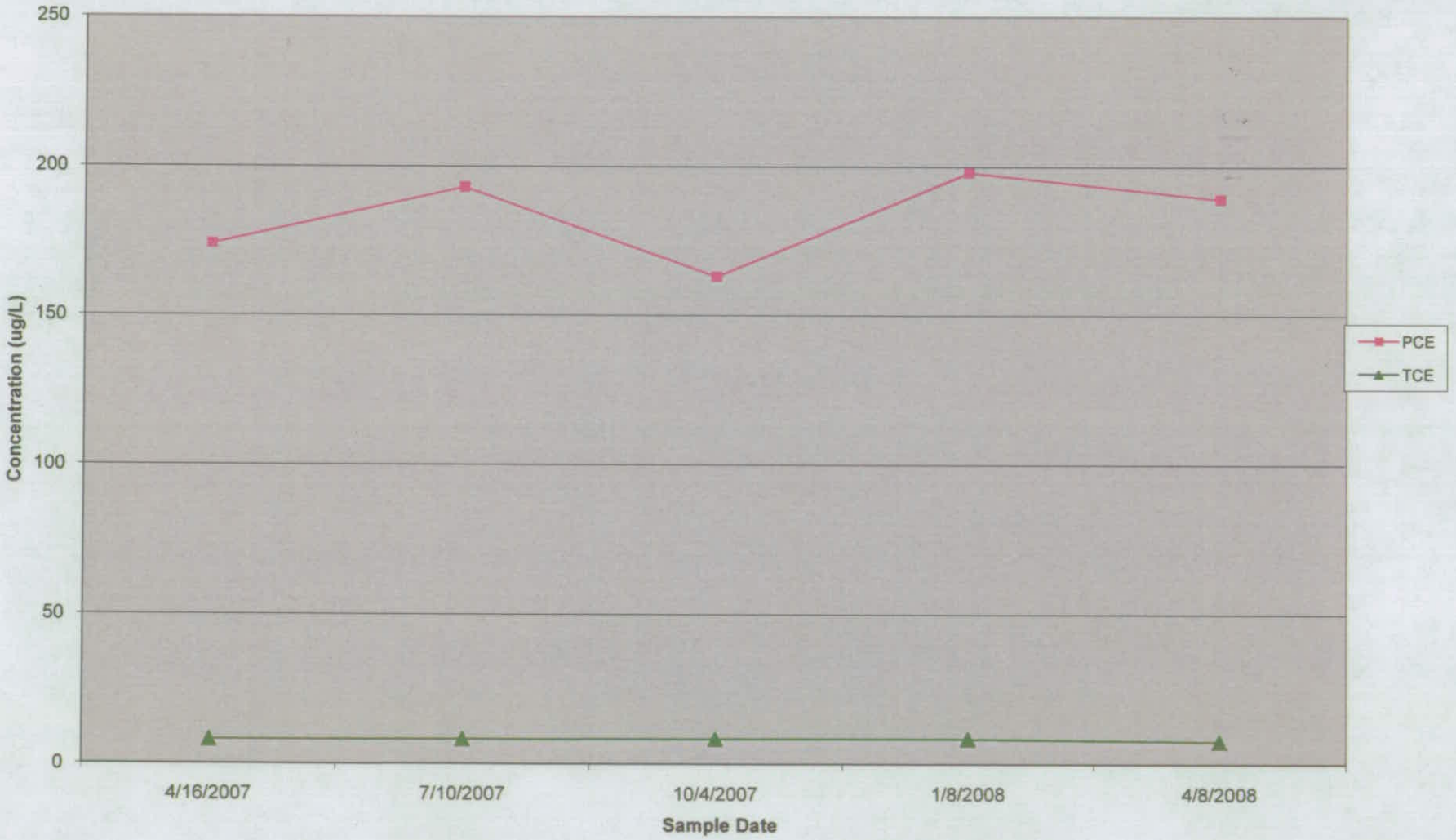
2101563

1015640

MW-206B
WEST - CENTRAL MI

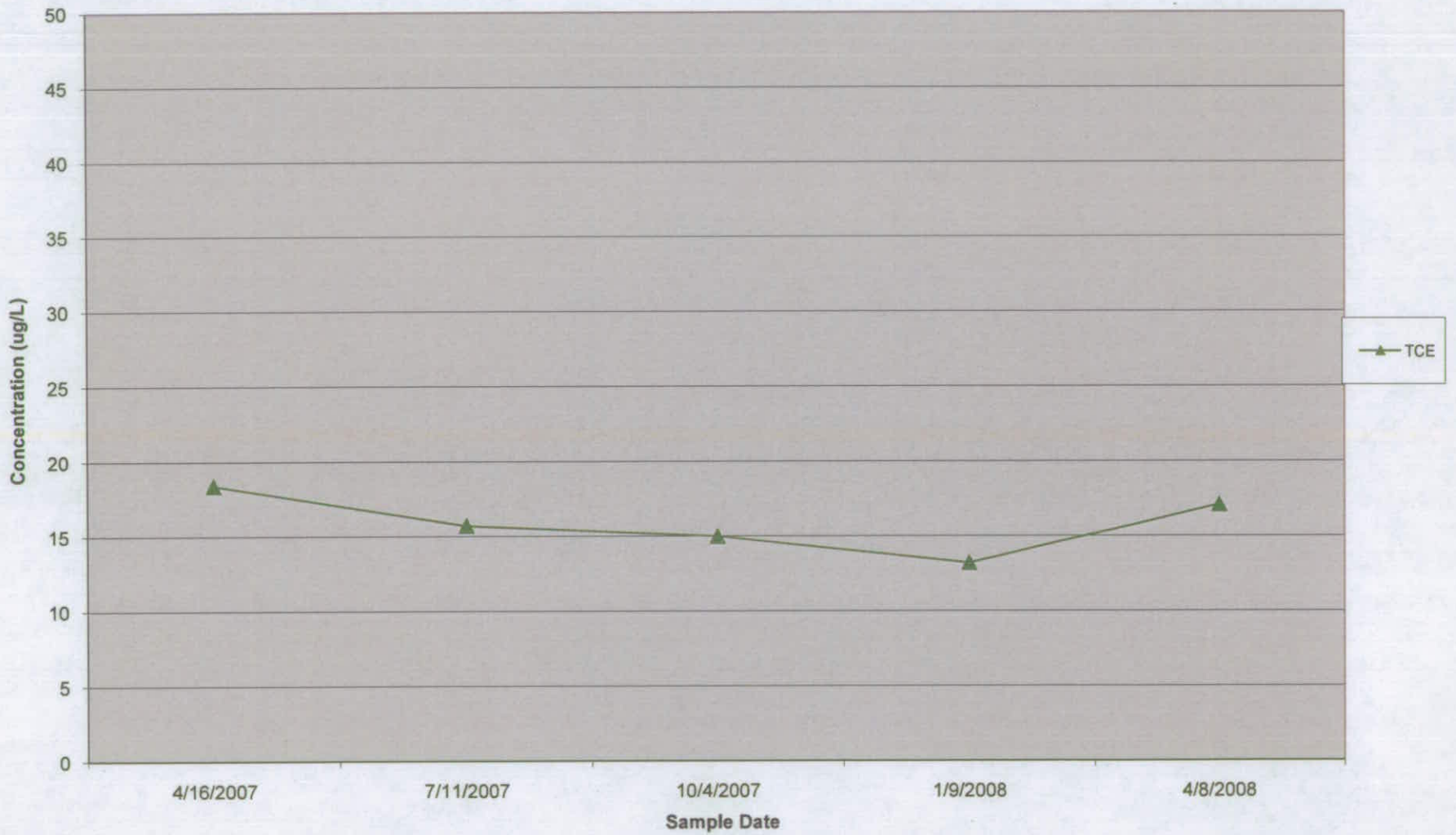


MW-208A
WEST - CENTRAL MI



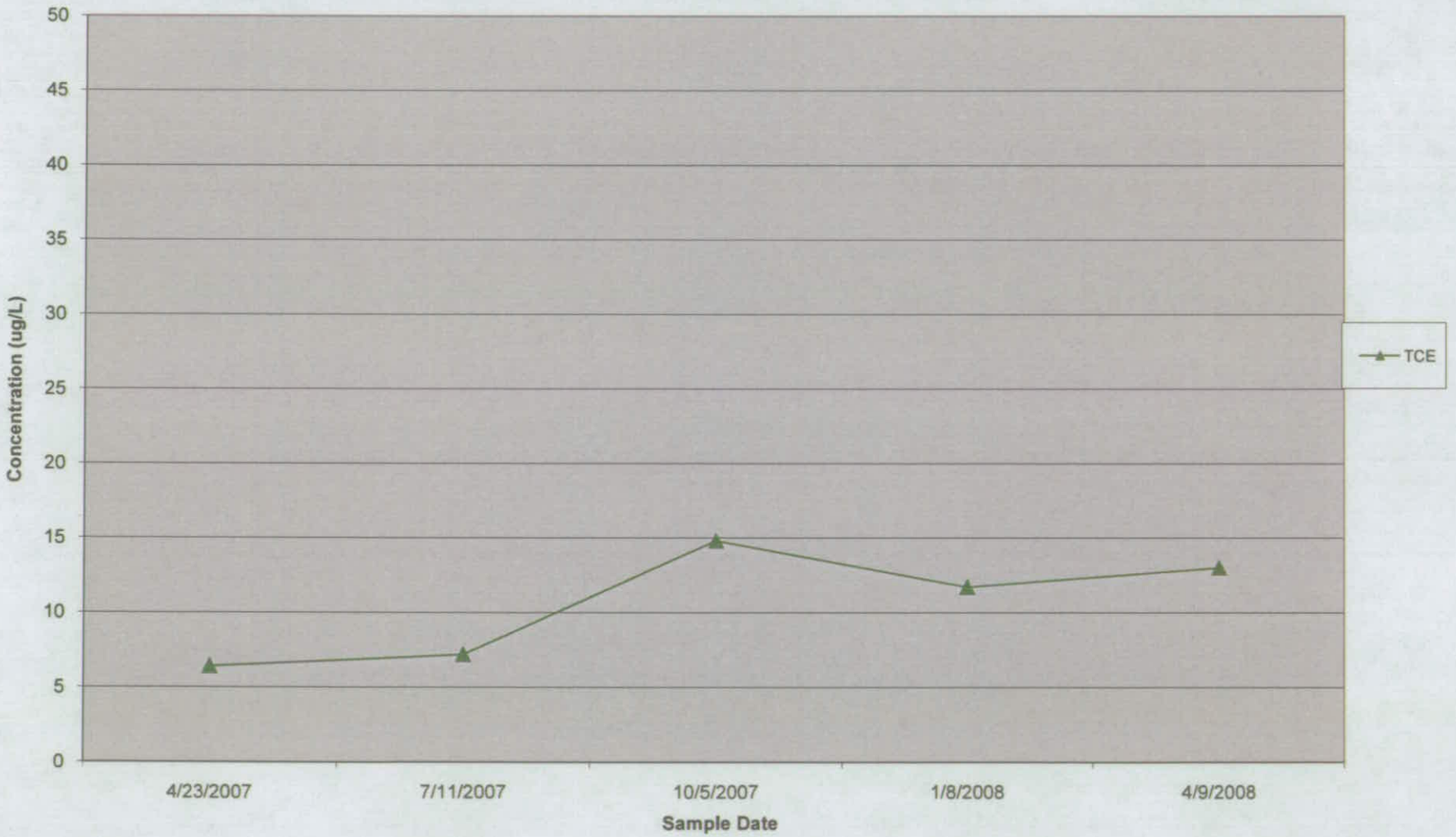
10156411

MW-208B
WEST - CENTRAL MI



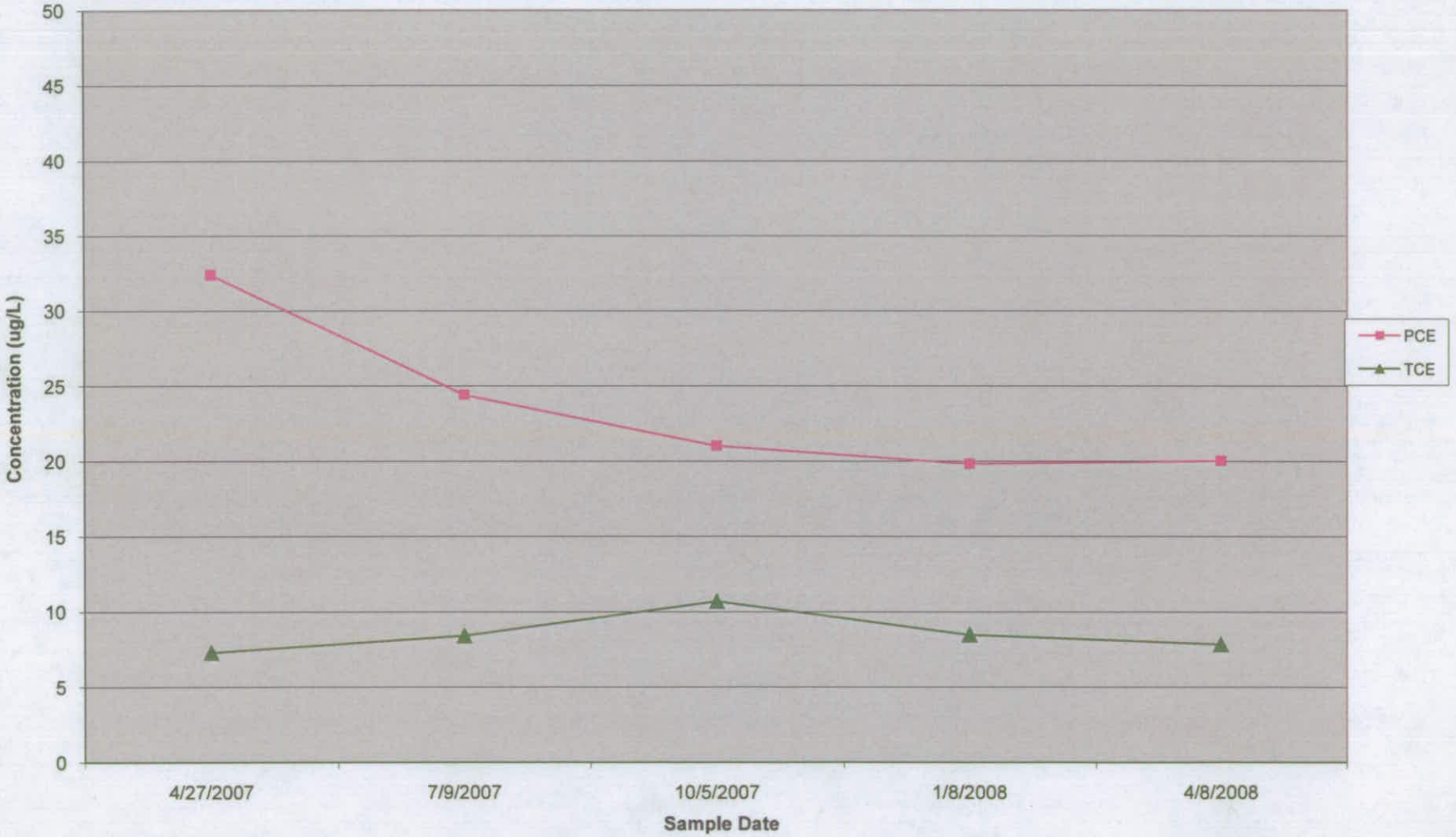
4015642

MW-209B
WEST - CENTRAL MI



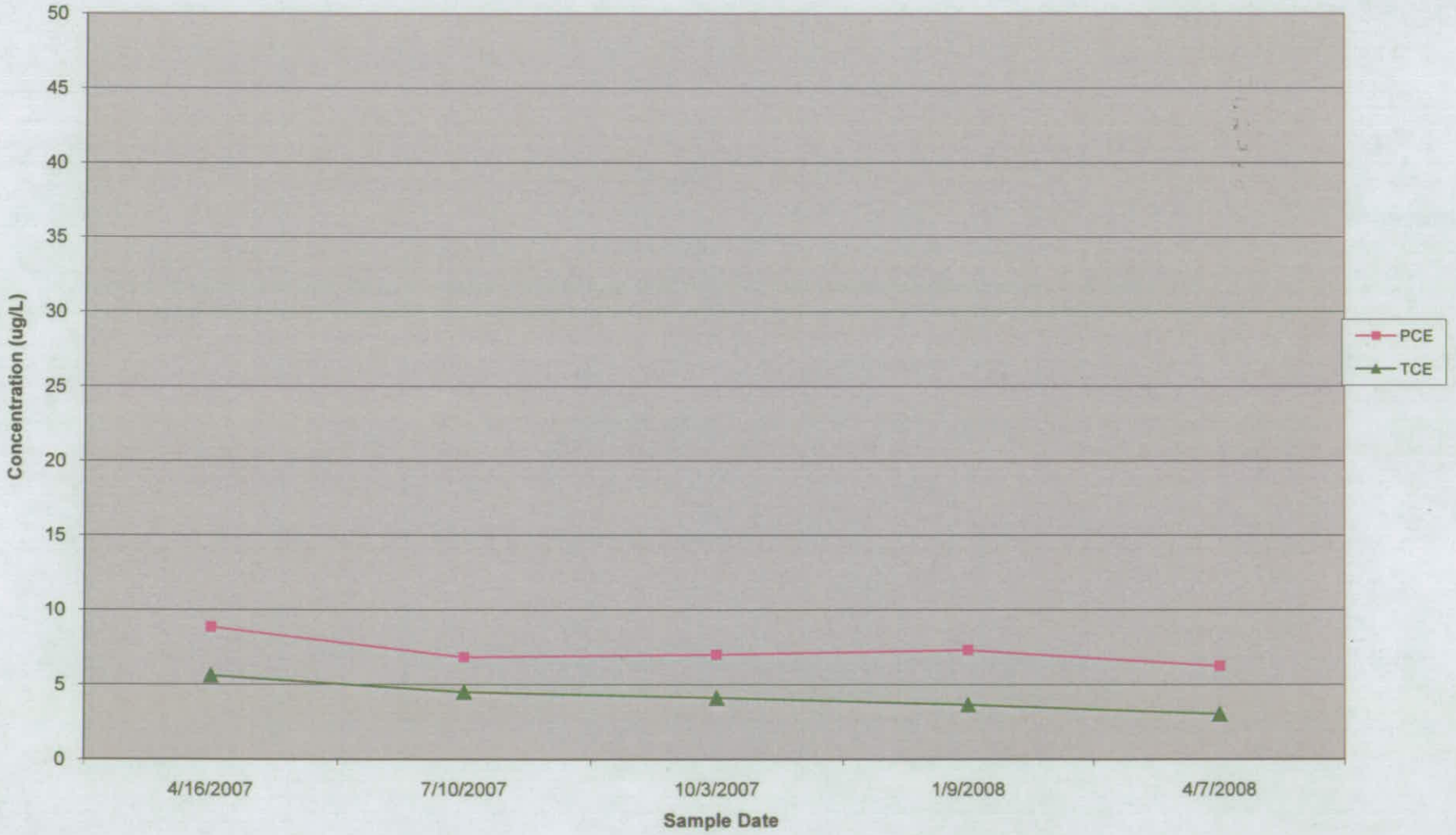
10156443

MW-210B
WEST - CENTRAL MI



1015644

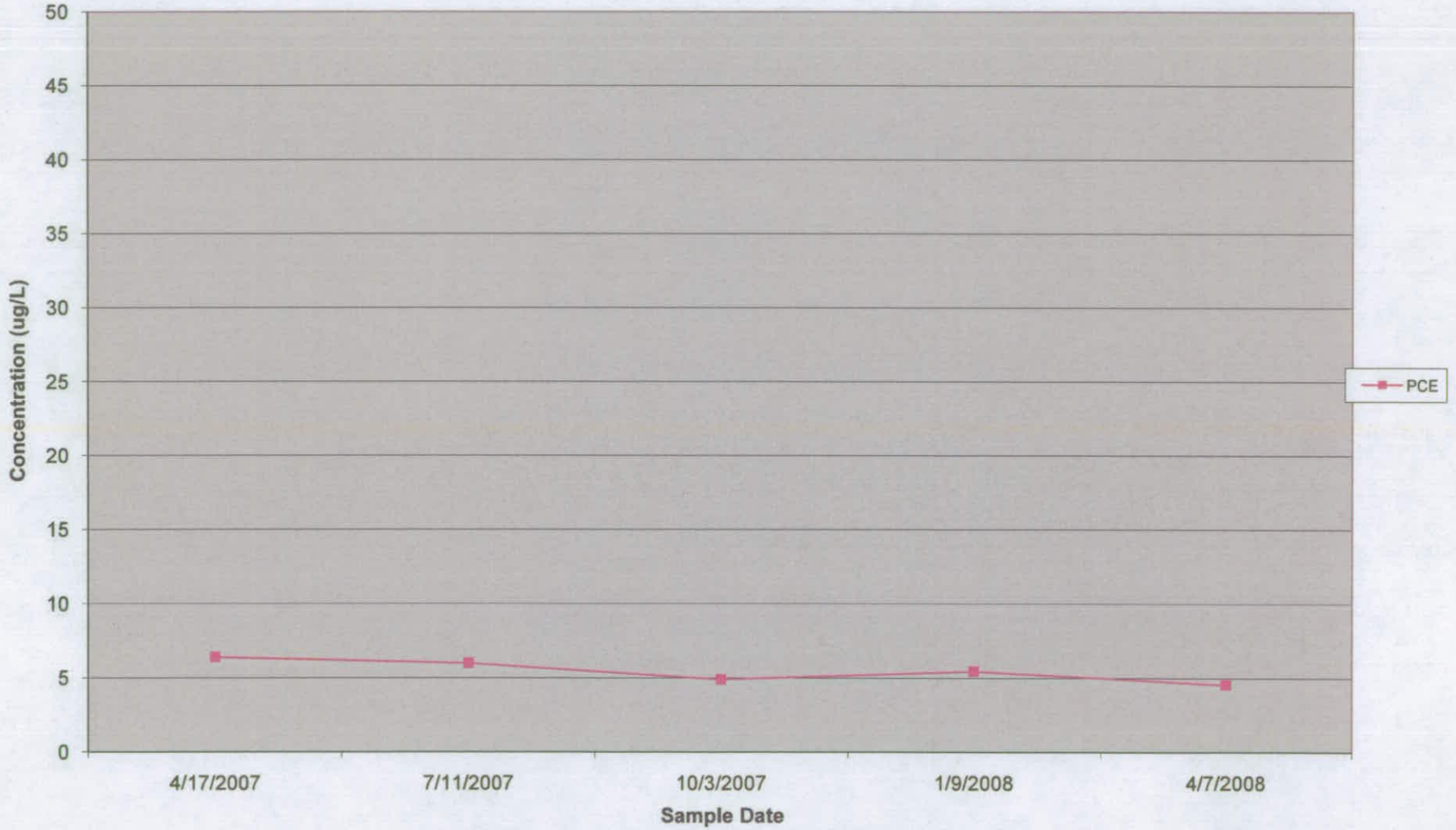
MW-214A
WEST - CENTRAL MI



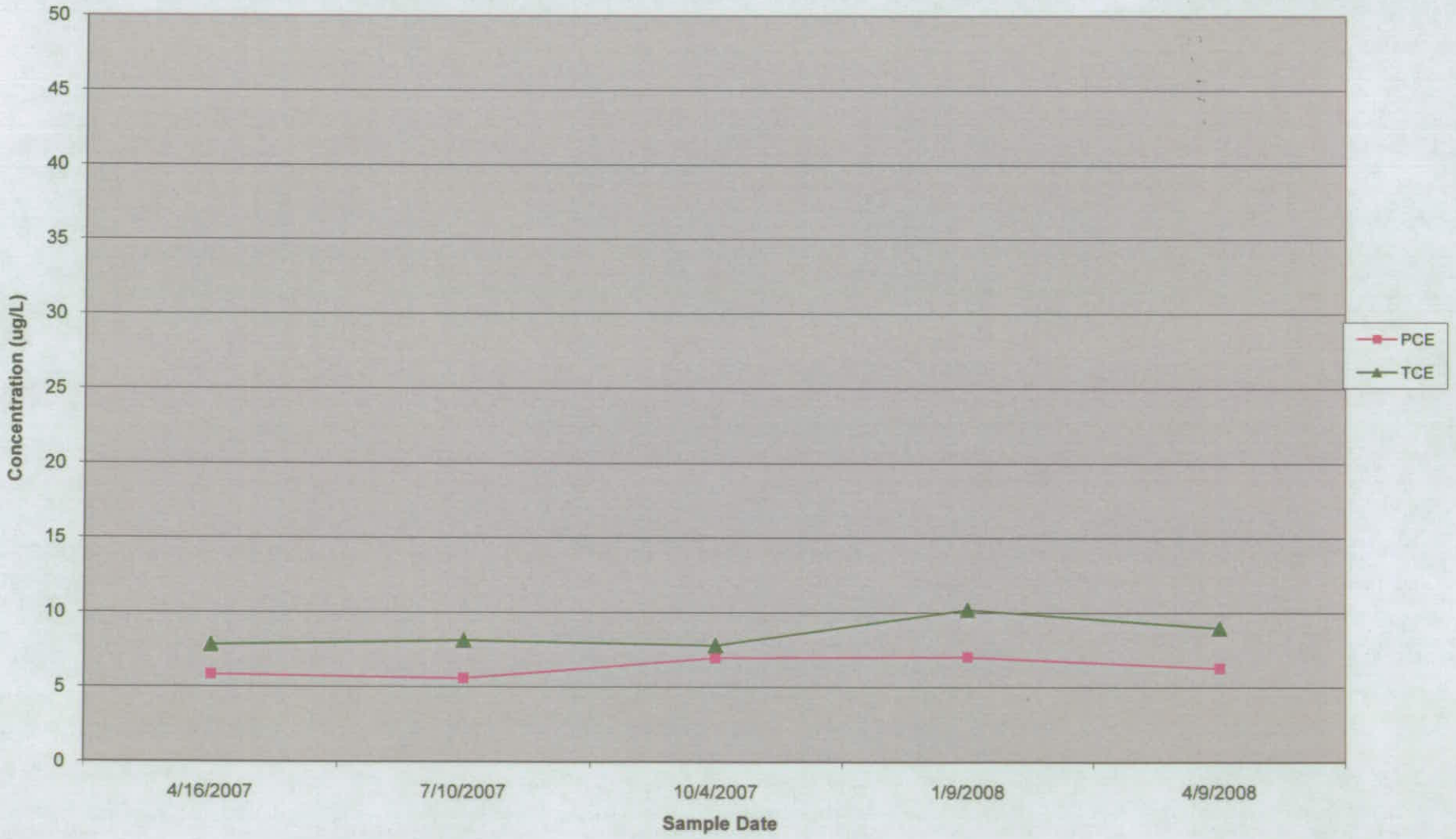
1015645

MW-214B
WEST - CENTRAL MI

1015646



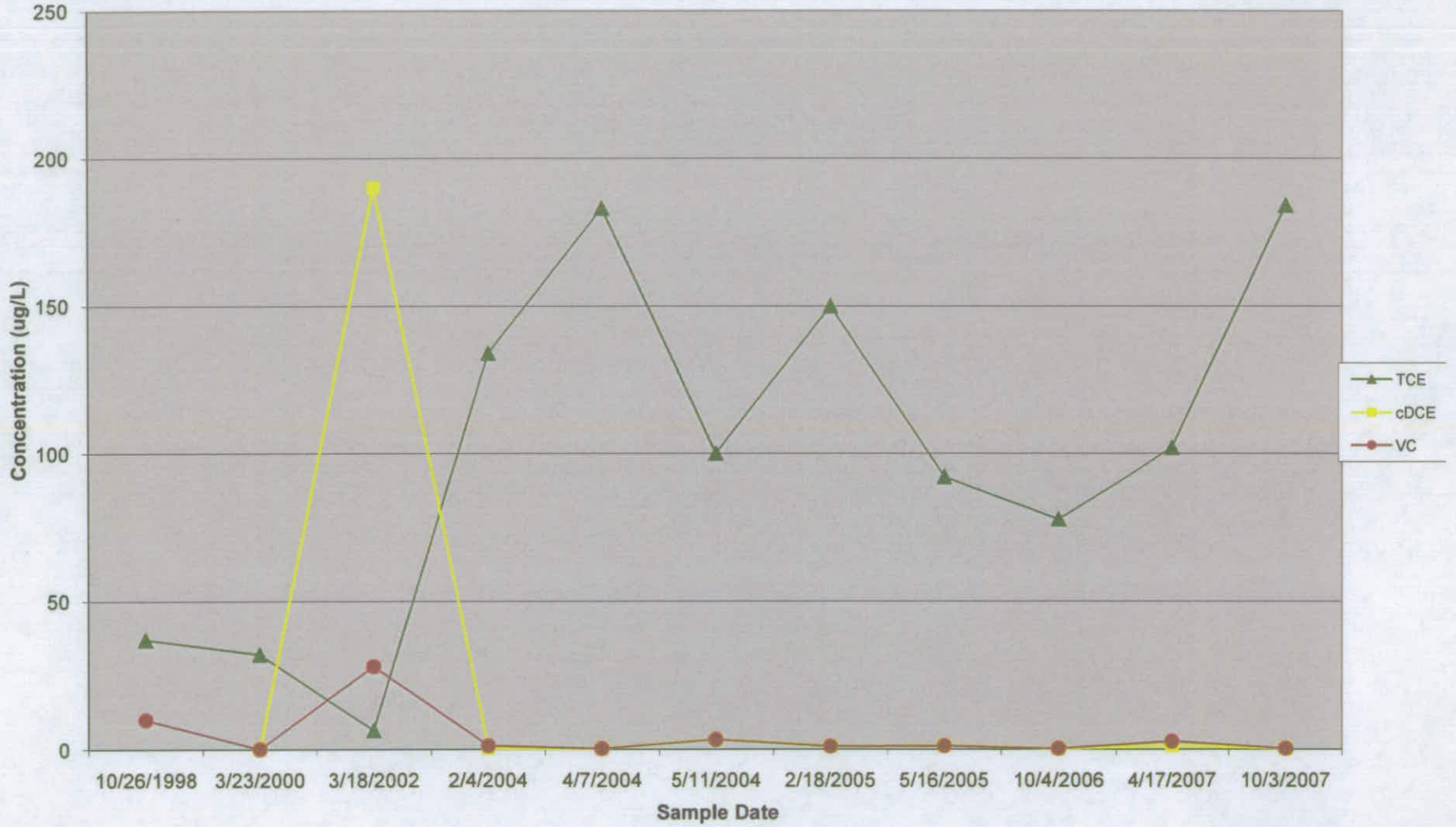
MW-215A
WEST - CENTRAL MI



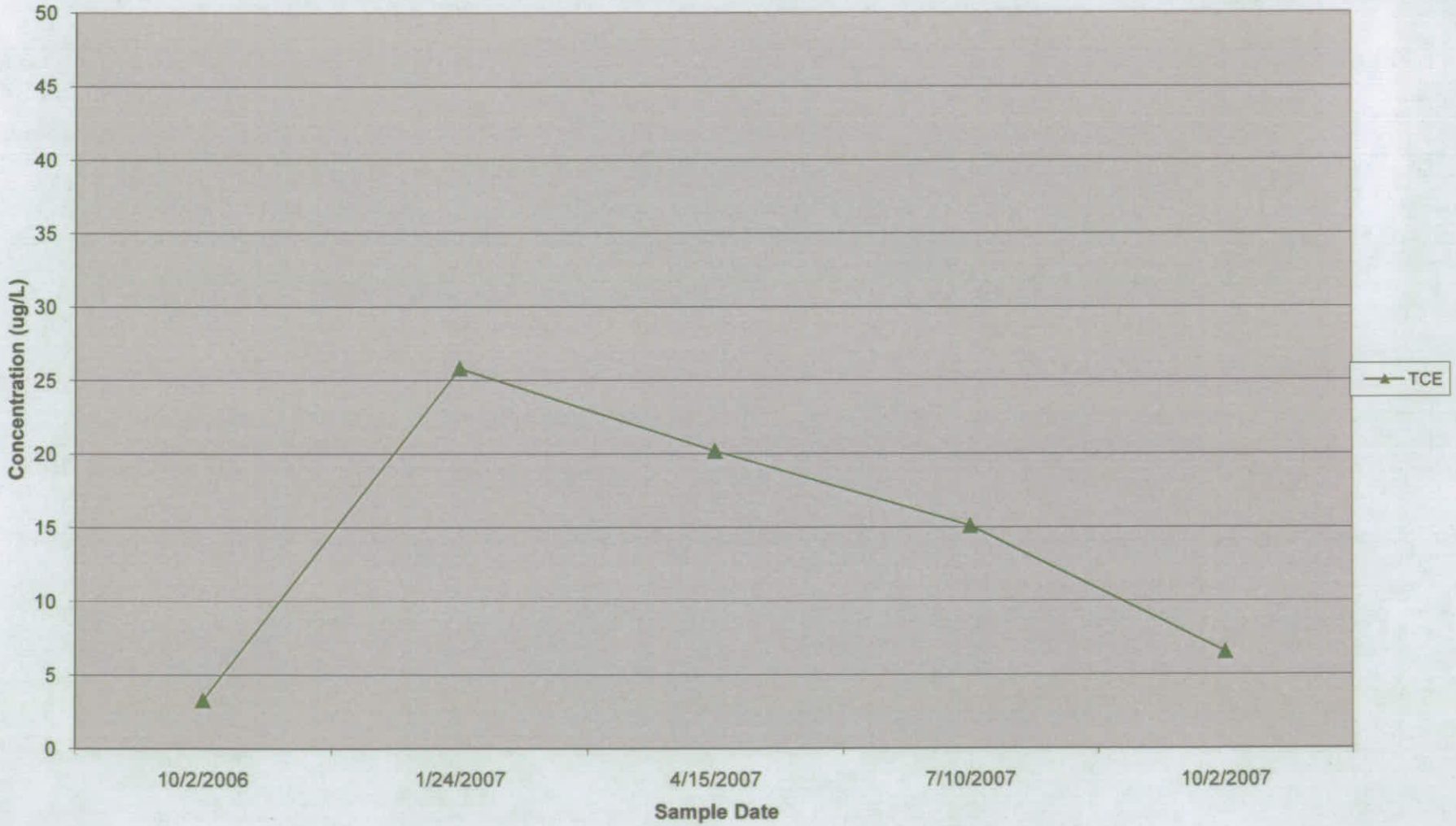
1015647

1015648

MW-62
BLDG 835



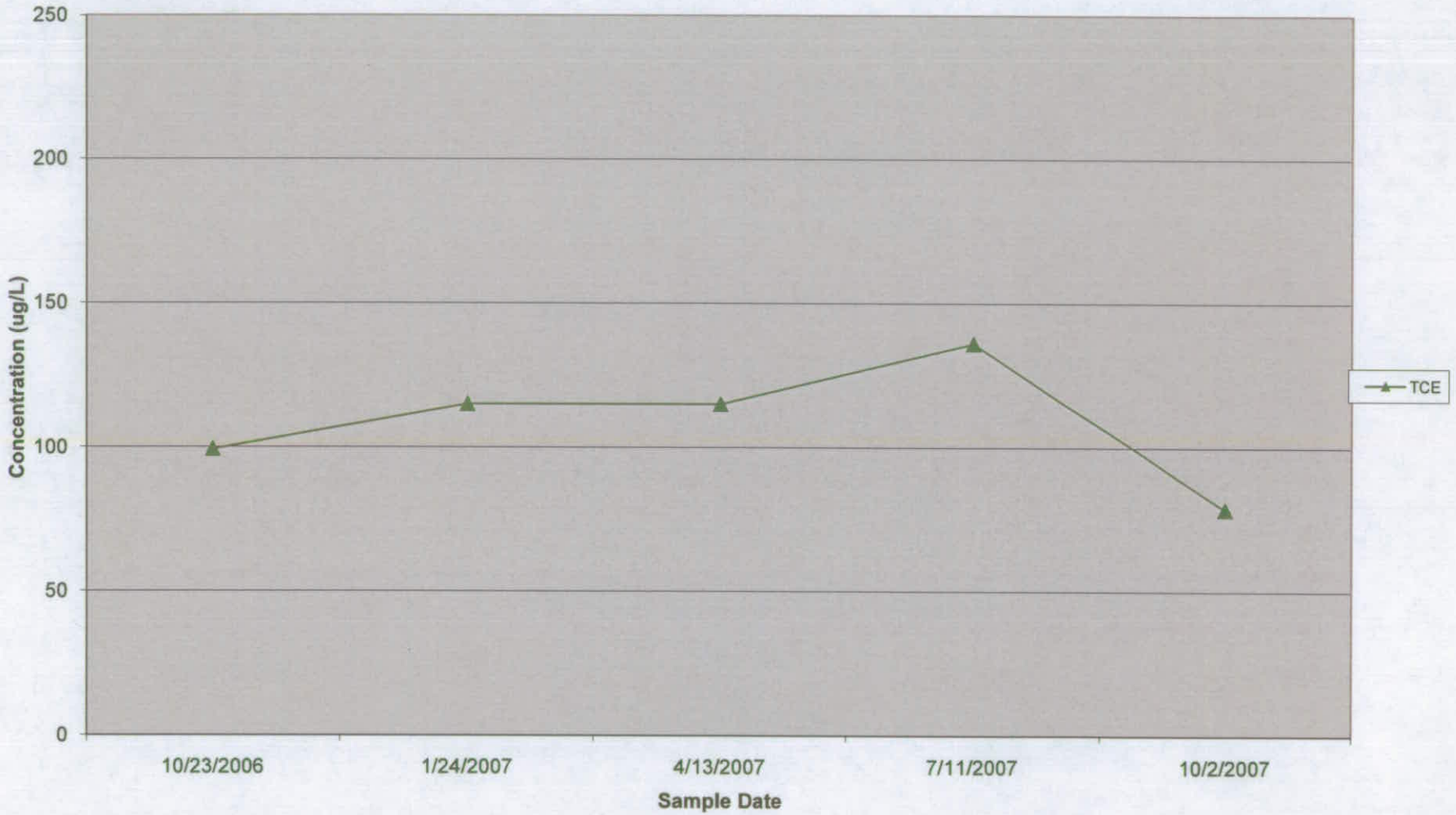
MW-198
BLDG 835



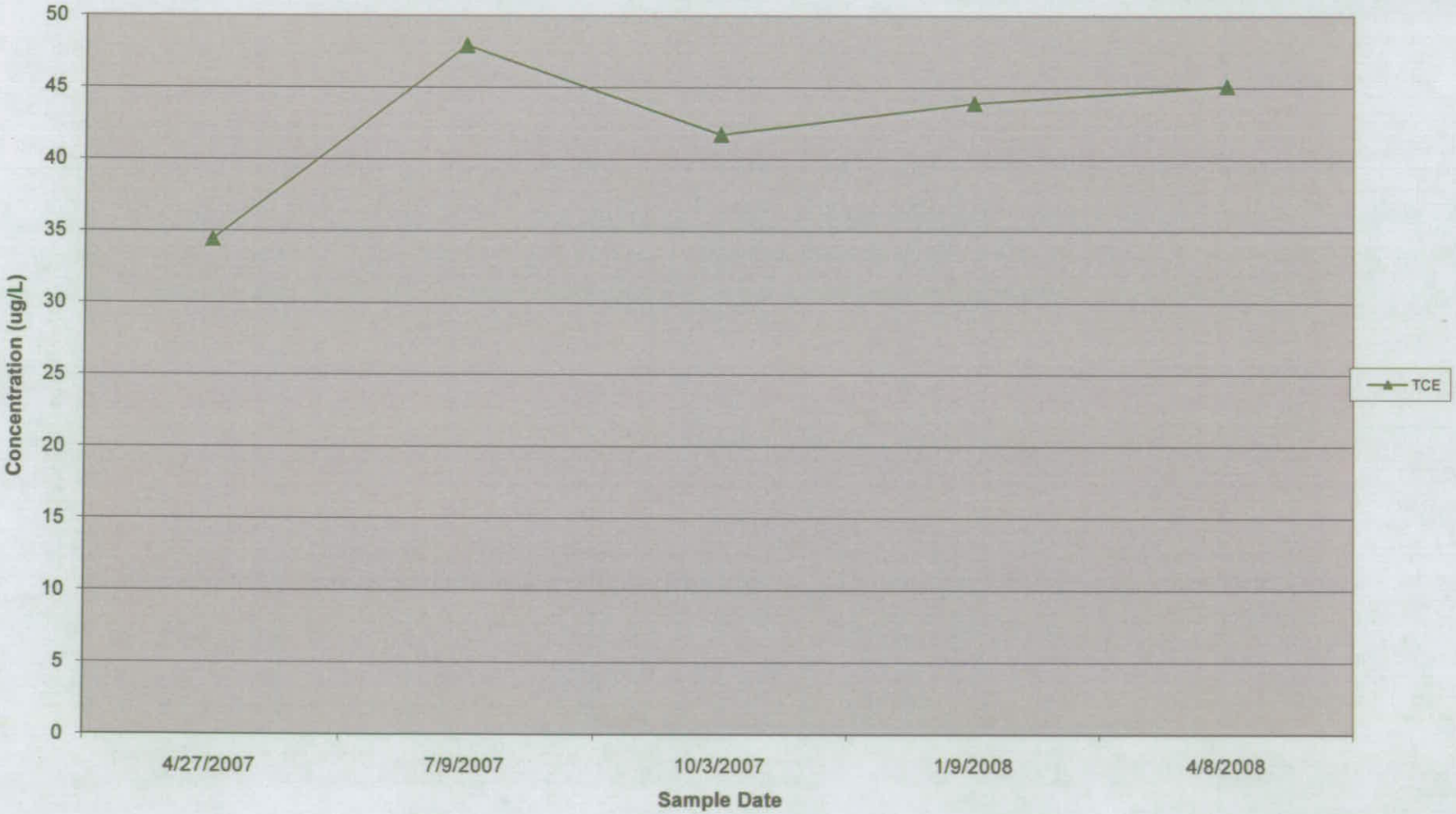
1015649

10156650

MW-199B
BLDG 835



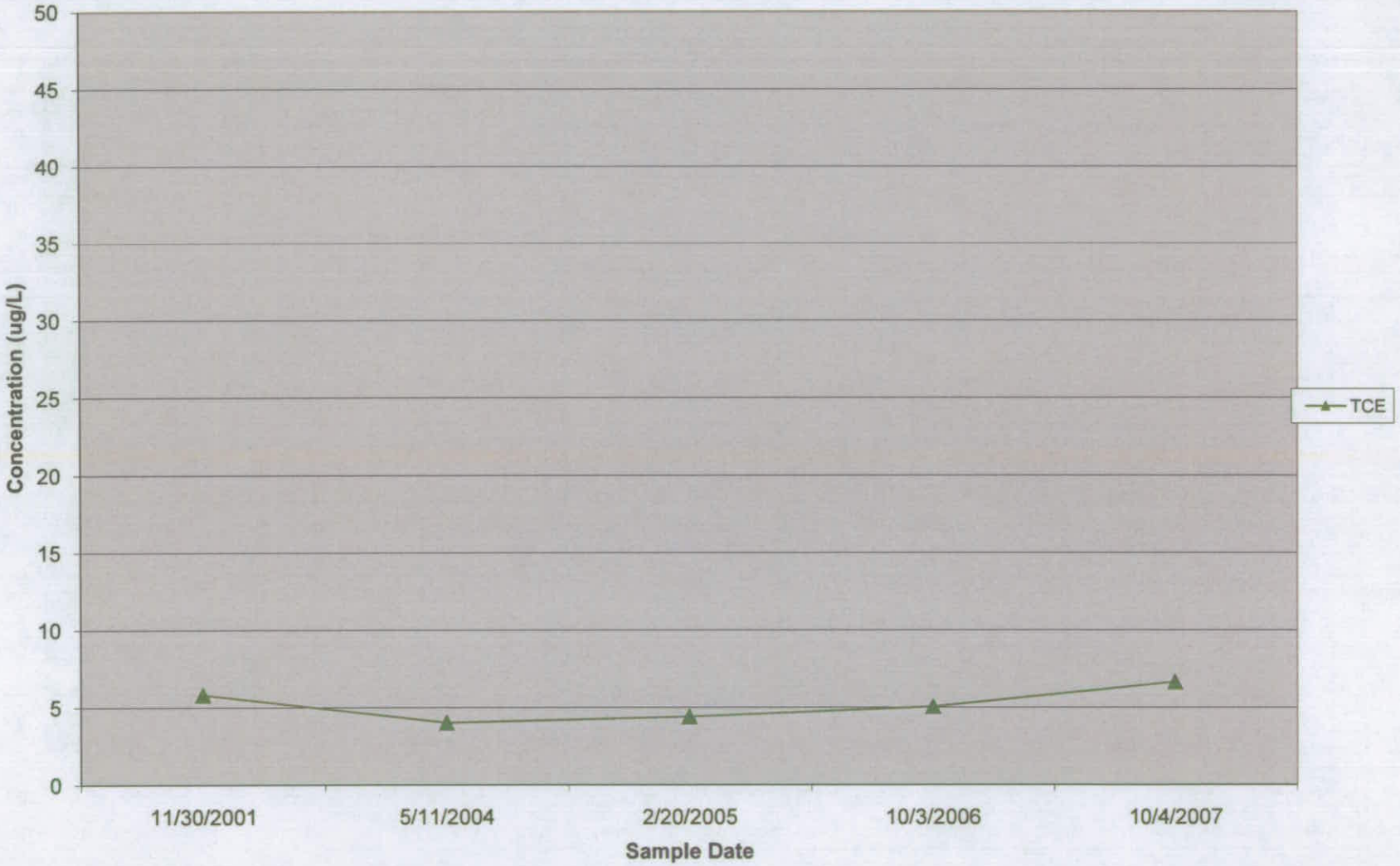
MW-212
BLDG 835



10156651

1015652

MW-103
NORTH CENTRAL MI



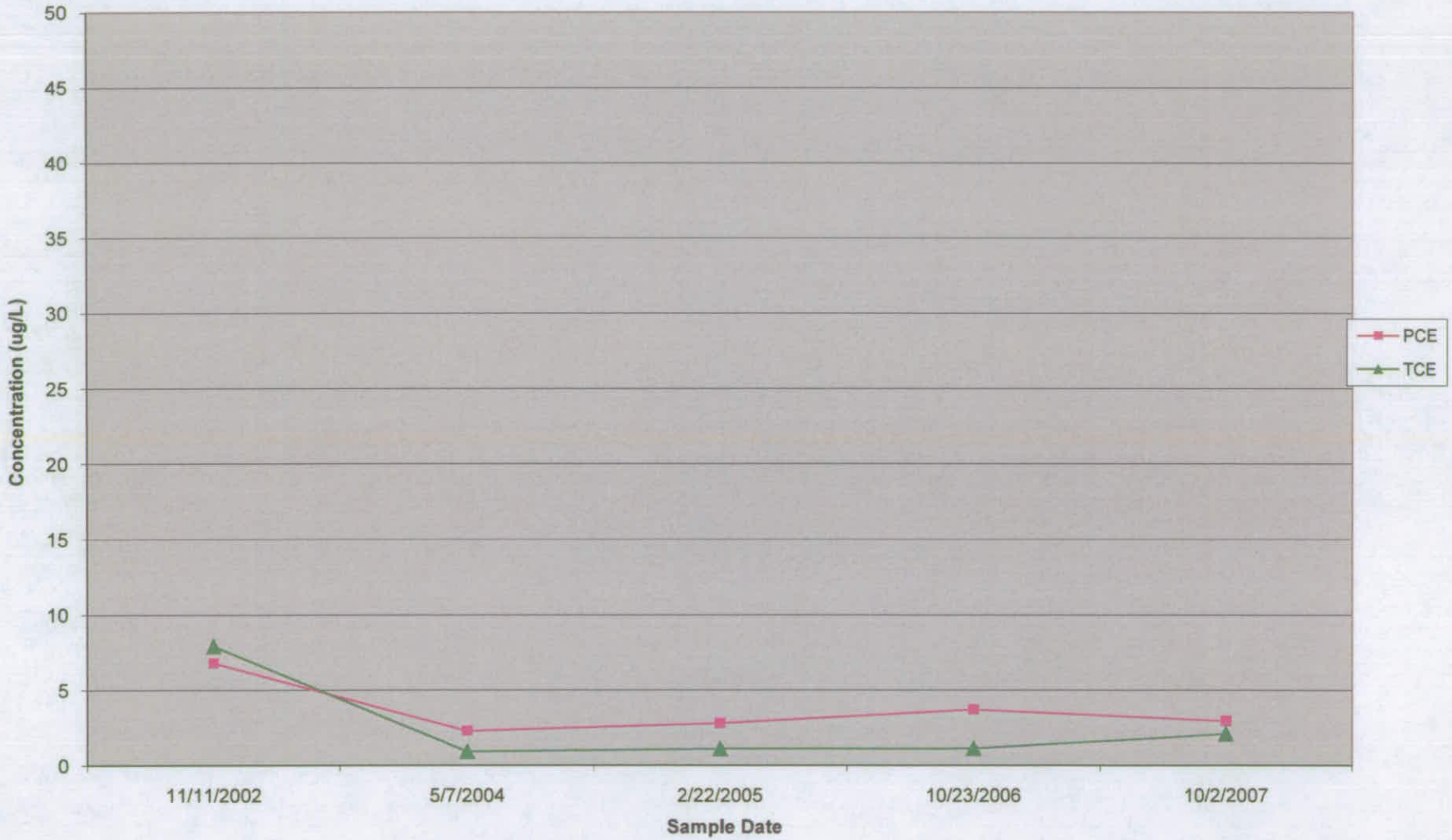
MW-104
NORTH CENTRAL MI



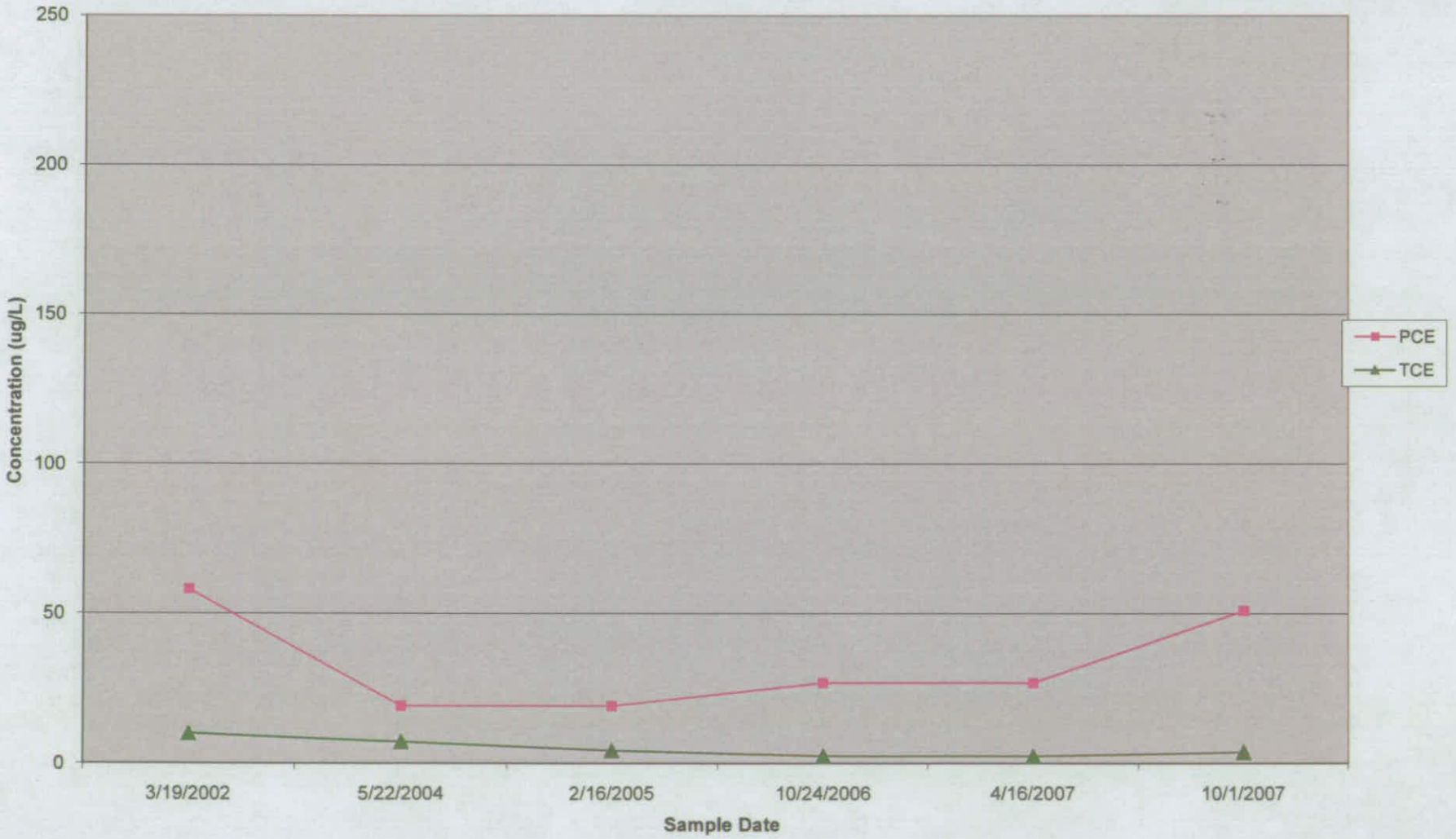
1015653

10156654

MW-63B
SENTINEL



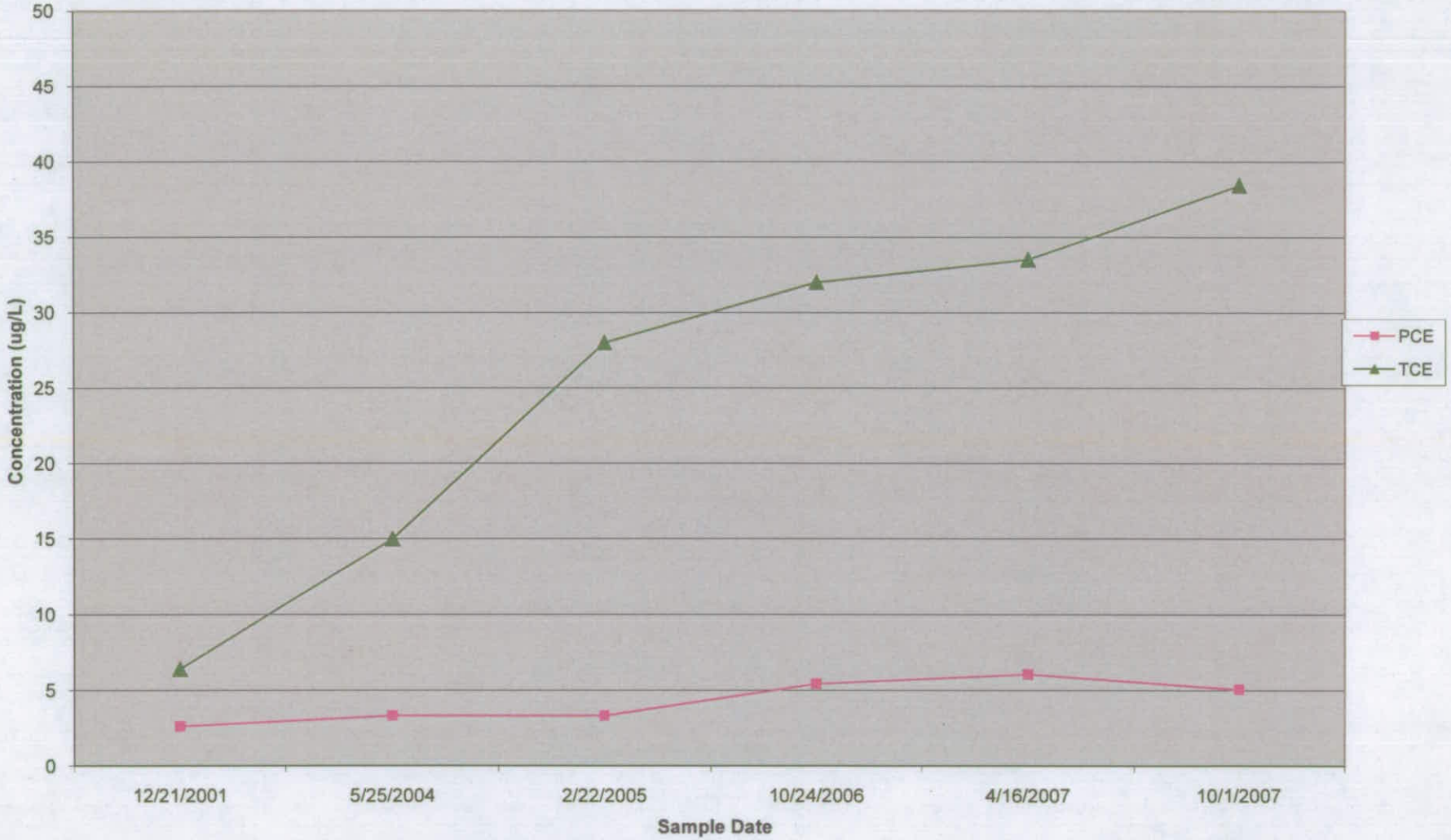
MW-90
SENTINEL



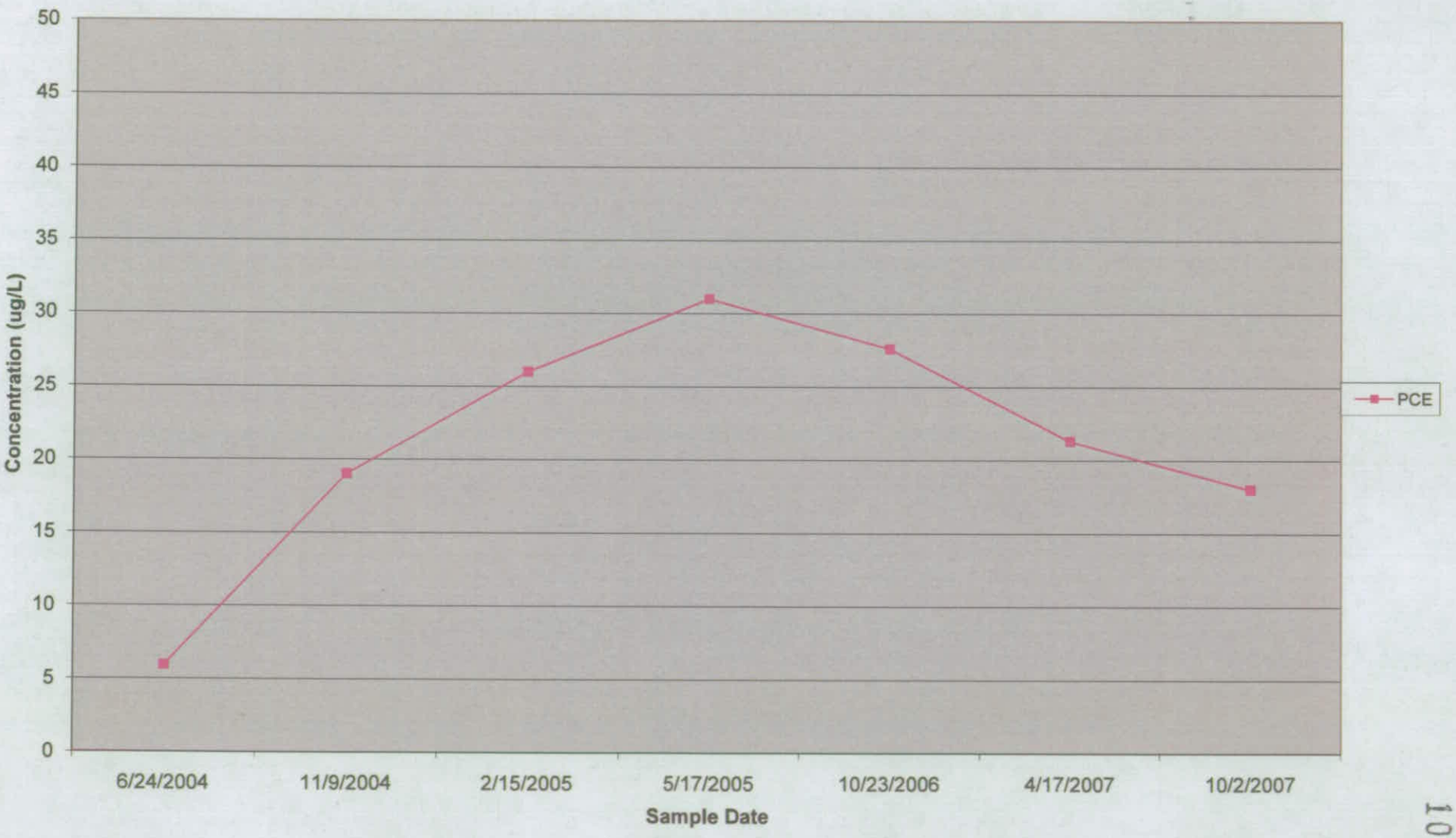
1015655

10156556

MW-108
SENTINEL



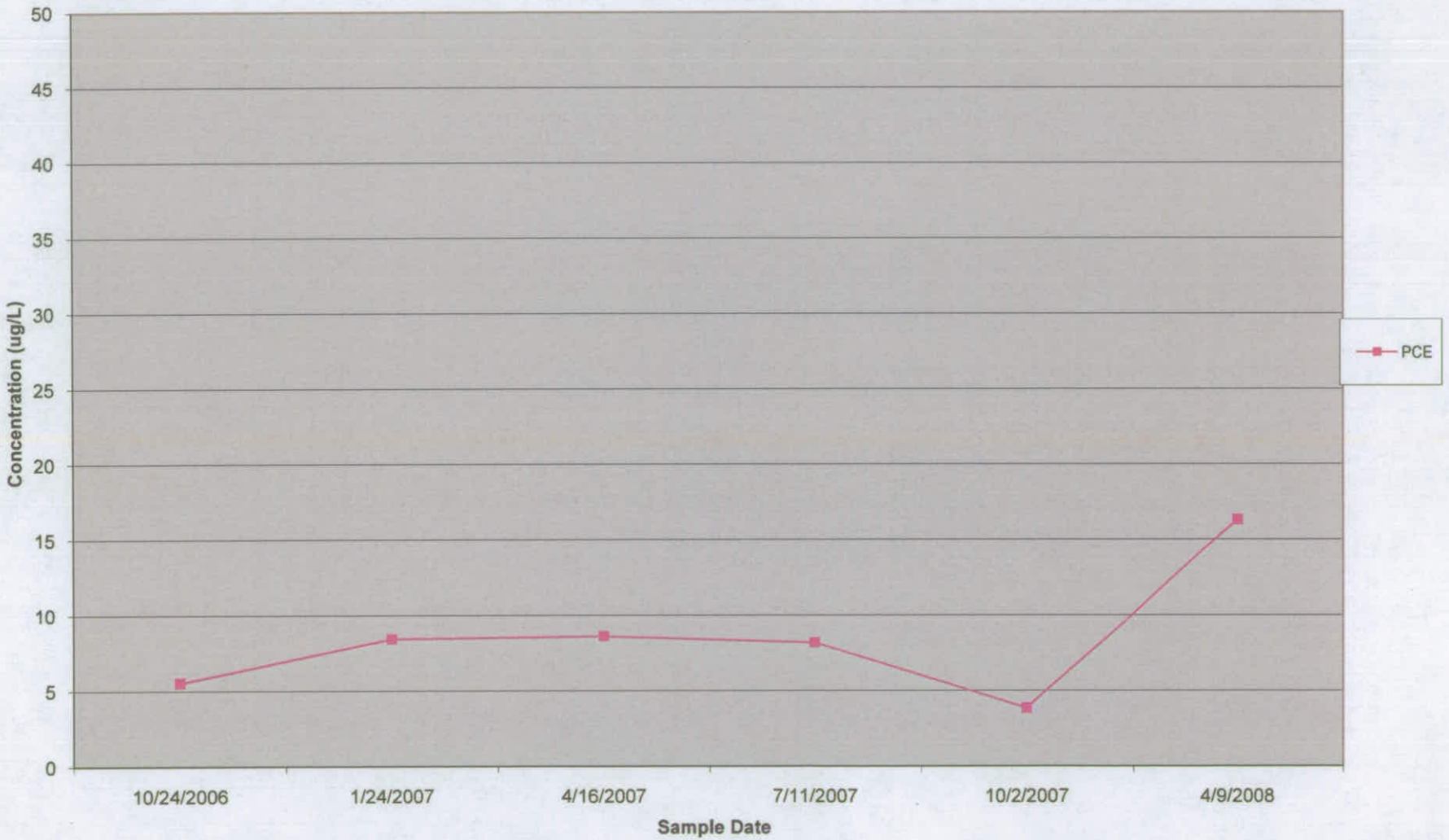
MW-141
SENTINEL



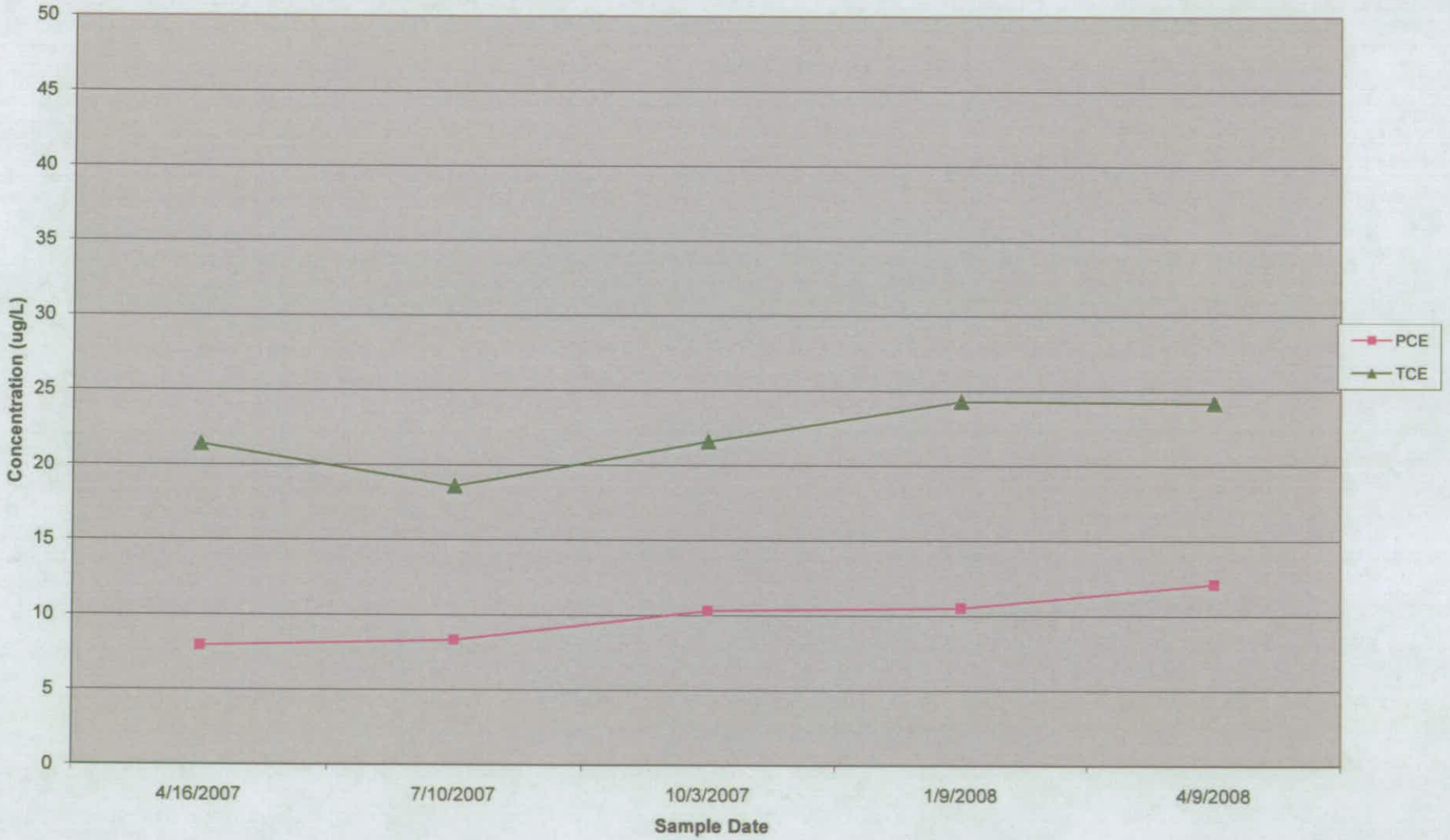
1015657

10156658

MW-202B
SENTINEL



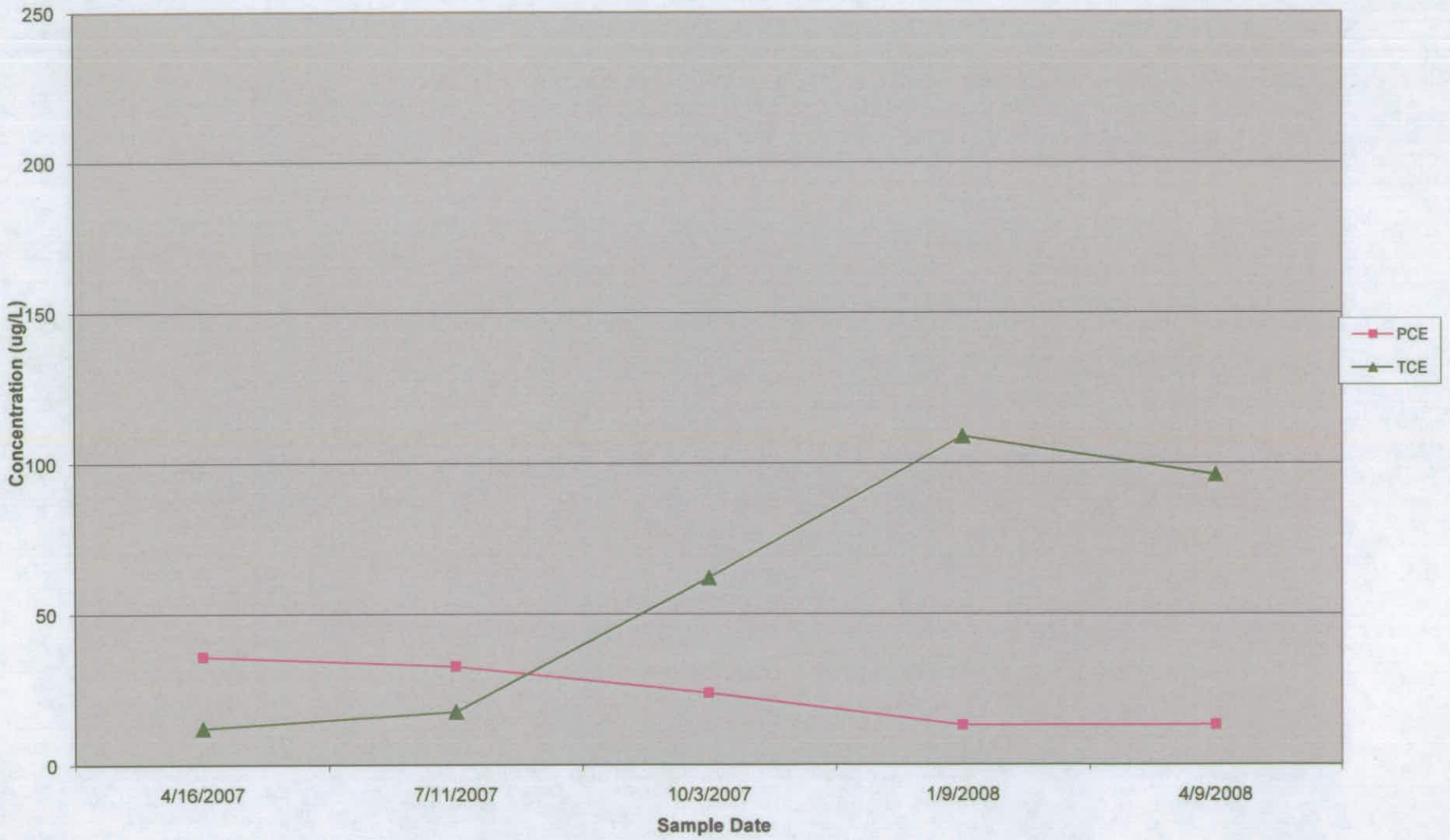
MW-207A
SENTINEL



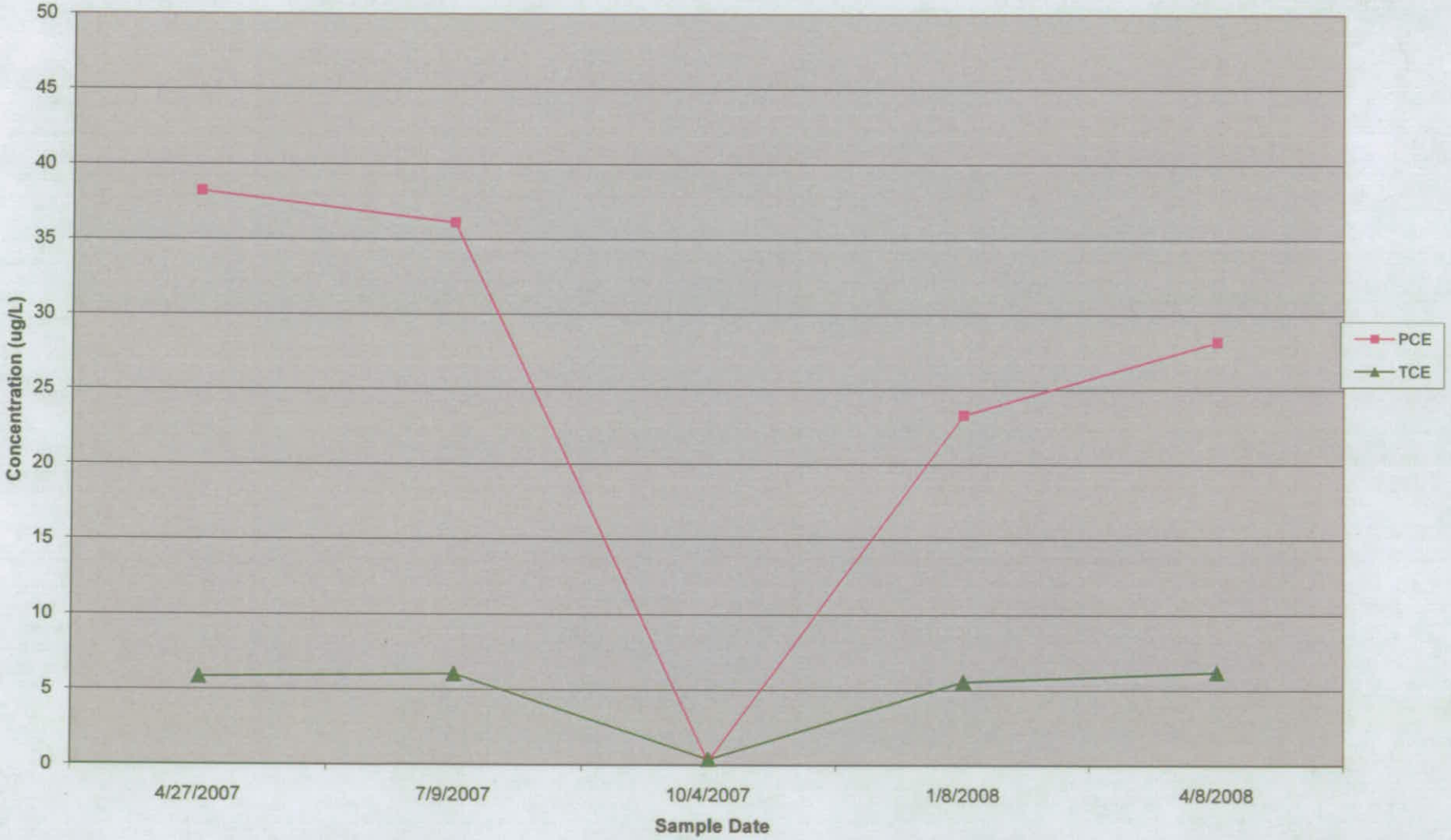
10156659

10156660

MW-207B
SENTINEL



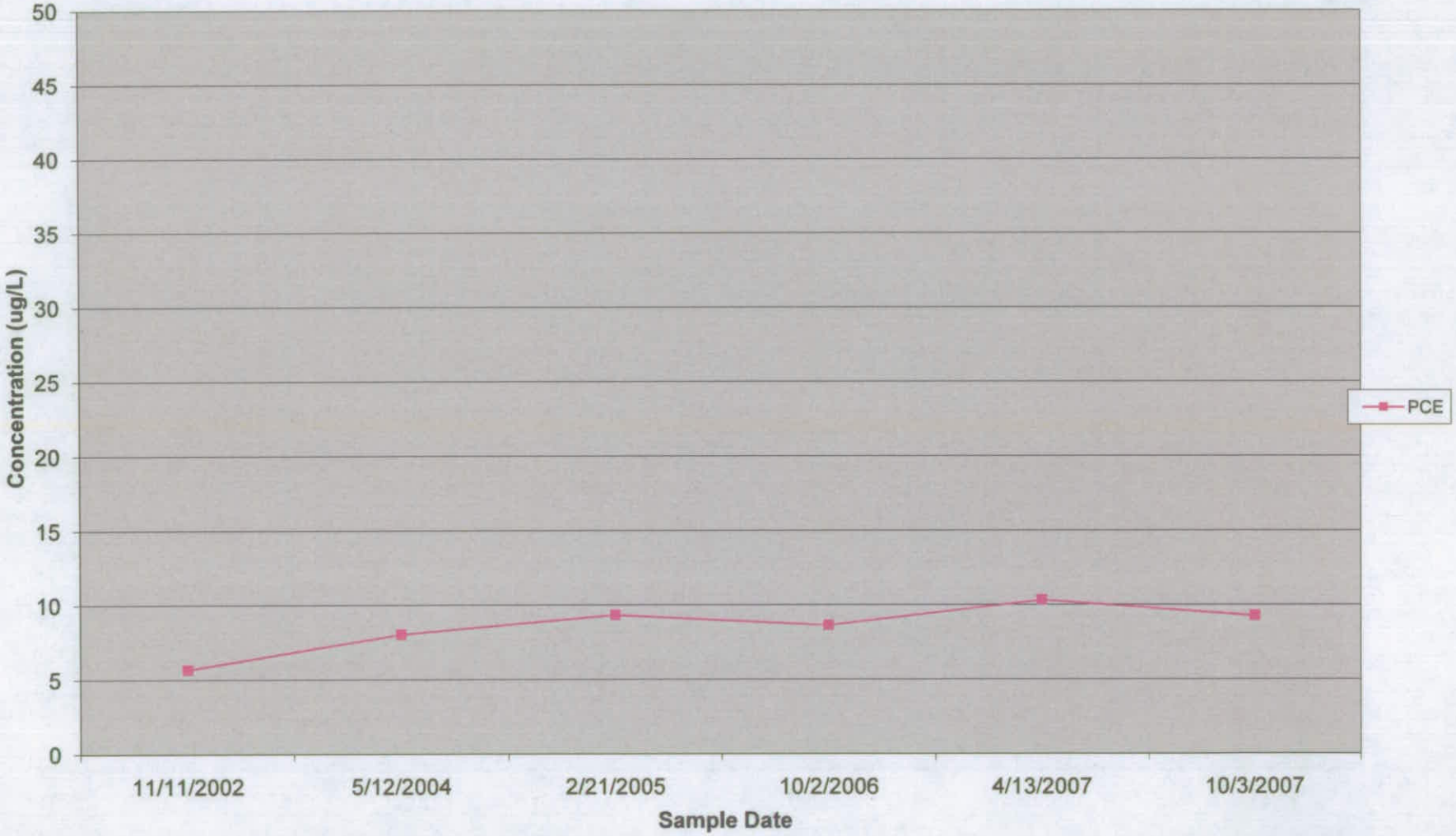
MW-210A
SENTINEL



10015661

10156662

MW-25A
SINGLE WELL - SOUTHEAST MI



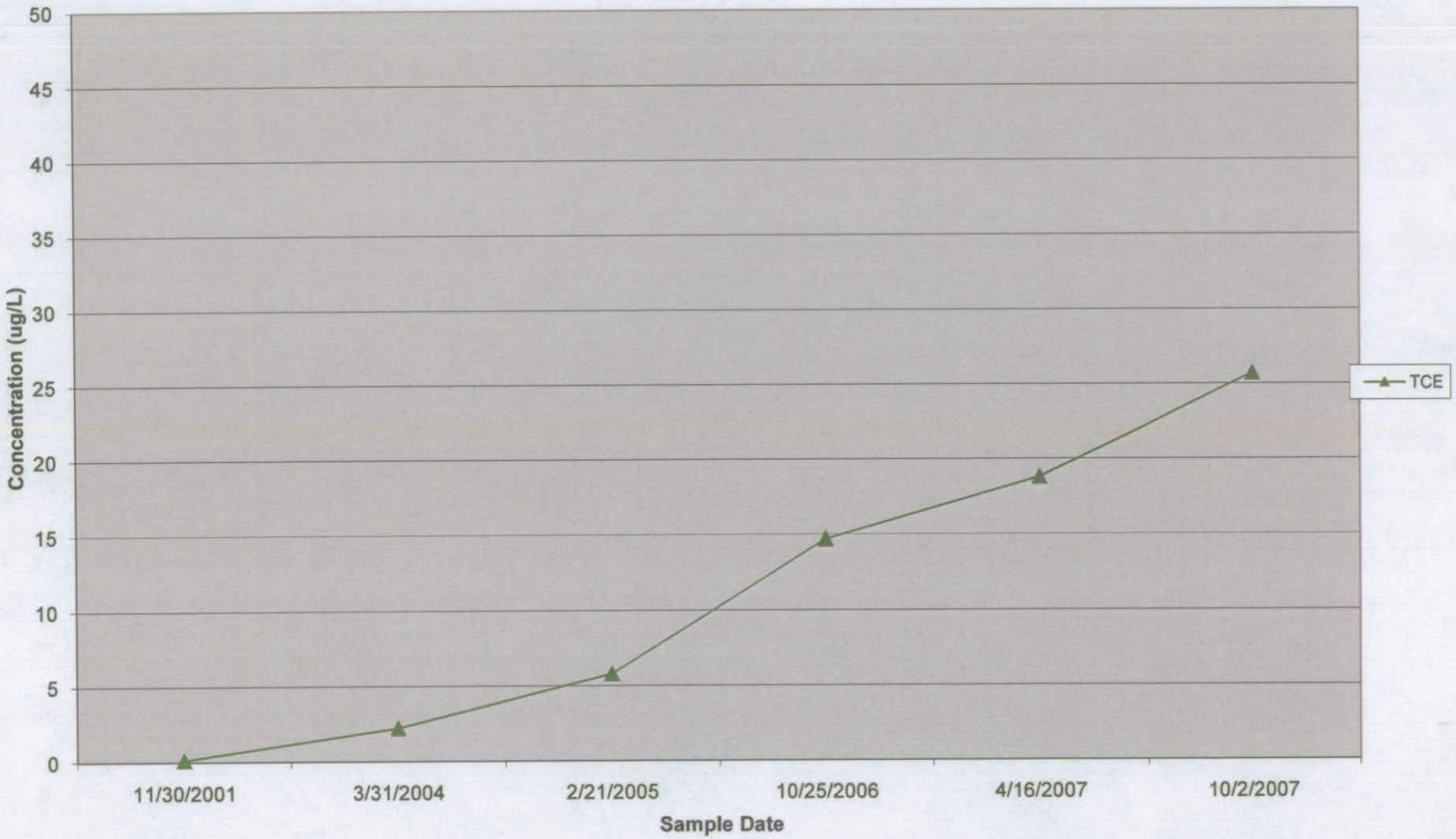
MW-52
SINGLE WELL - SOUTHEAST MI



1015663

10156664

MW-97
SINGLE WELL - SOUTHWEST MI



FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE