



THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 719

**SEMI-ANNUAL GROUNDWATER QUALITY REPORT
(YEAR FOUR, SECOND HALF)
GROUNDWATER INTERIM REMEDIAL ACTION**

DUNN FIELD

MEMPHIS DEFENSE DEPOT, TENNESSEE

PREPARED FOR



MOBILE DISTRICT CORPS OF ENGINEERS

CONTRACT NO. DACA01-99-D-0040

BY

JACOBS FEDERAL PROGRAMS

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1.0 INTRODUCTION

This report summarizes the results of Year Four, Second Half (Y4S2) monitoring of the Groundwater Interim Remedial Action (IRA) system at the Dunn Field area of the Memphis Defense Depot, Memphis, Tennessee (DDMT)

1.1 Scope of Work

This report summarizes a sampling event of October 2002 and presents the groundwater surface data through October. System monitoring was performed in accordance with "Groundwater Interim Remedial Action, Defense Depot Memphis, Tennessee, Operations and Maintenance Plan," Amendment 3 (August 28, 2001) prepared by CH2MHill. This plan contains an overview of the recovery system and its functions. Start-up, operation, and shutdown procedures are detailed in this plan. Requirements for sampling, monitoring and reporting are also specified.

1.2 Site Description and Background

DDMT covers 642 acres in Shelby County, Tennessee (Figure 1). The facility is approximately four miles southeast of the central business district and one mile northwest of Memphis International Airport. Operations began in 1942 with the mission to inventory and supply materials for the United States Army. In 1964, its mission was expanded to serve as one of the principal distribution centers for a complete range of military commodities. Past activities at DDMT included a wide range of storage, distribution, and maintenance practices. DDMT has been closed since 1997 and is maintained by the Memphis Depot Caretaker Division, under the control of the Defense Depot, Susquehanna, Pennsylvania/Defense Logistics Agency (DLA). DDMT is currently undergoing Base Realignment and Closure (BRAC) activities.

Dunn Field, also called OU-1, consists of 68 acres of land located north of the main installation, across Dunn Road (Figure 1). The northwestern quadrant of Dunn Field was used as a landfill area. The southwestern and southeastern quadrants were used as a storage area for mineral stockpiles. The northeastern portion was used as a pistol range and later as a pesticide storage area. Until 1970, Army supplies, including hazardous and non-hazardous materials were burned or buried primarily in the northwest portion of Dunn Field. These materials potentially included oil and grease, paint, paint thinner, methyl bromide, pesticides, herbicides, and food supplies. Disposal operations at Dunn Field have created a plume of contaminated groundwater, in the shallow fluvial aquifer, along the western and northern portion of Dunn Field. Groundwater monitoring performed during the 1989 and 1990 remedial investigation/feasibility study (RI/FS) identified concentrations of dissolved volatile organic compounds (VOCs) and heavy metals above regulatory limits. Identified VOCs included, but were not limited to tetrachloroethene, trichloroethene, dichloroethene, carbon tetrachloride, chloroform and 1,1,2,2 - trichloroethane.

The DDMT facility is classified as a Superfund Site under the Comprehensive Environmental Response, Compensation, and Liability Act of 1990 (CERCLA) Section 120 (Federal Facilities)

1.3 Hydrogeology

DDMT is underlain by a layer of wind blown deposits (loess) about 20 to 30 feet thick. Underlying the loess, to a depth of generally 70 to 95 feet below land surface (bls), is a series of terrace deposits consisting primarily of silty to gravelly sands with some thin clay interbeds. The lower saturated portion of the terrace deposits is referred to as a fluvial aquifer, which is the uppermost aquifer beneath DDMT. The Jackson Formation, Upper Claiborne Group, which generally consists of high plasticity clay of variable thickness (5 to 75 feet), composes the base of the fluvial aquifer. The saturated thickness of the fluvial aquifer varies from 2 to 20 feet and is controlled, in part, by the topography of the Jackson Formation, Upper Claiborne Group.

Beneath the Jackson Formation, Upper Claiborne Group lies the Memphis Sand Aquifer, which is the primary source of drinking water for the City of Memphis. The Jackson Formation, Upper Claiborne Group clays serve as both the confining unit for the Memphis Sand Aquifer and the base of the fluvial aquifer.

1.4 Remedial Objectives

The DDMT facility, including Dunn Field, was placed on the National Priority List (NPL) in 1992 primarily because of the EPA's final Hazard Ranking System (HRS) Scoring Package of 58.06. In August 1995, CH2M-Hill submitted a Record of Decision (ROD) for a Groundwater IRA at Dunn Field to the regulatory agencies for approval. The ROD provided the basis of design for the components associated with the IRA for Dunn Field. The following remedial objectives were identified in the ROD and O&M Plan.

- Install recovery wells along the leading edge of the groundwater plume.
- Operate the system of recovery wells until contaminant concentrations are reduced to acceptable levels or until the final remedy is in place.
- Perform chemical analysis to monitor the quality of the discharge in accordance with city discharge permit requirements.
- Create a hydraulic barrier to prevent any further migration of contaminated groundwater offsite.

1.5 System Description

Seven groundwater extraction wells, one pre-cast concrete building, an underground conveyance system, a flow measurement and control system, and associated components were installed at Dunn Field in 1997. Equipment, process controls, operational requirements, recovery well sizes and depths, pumping rates, and construction drawings

are defined in the Technical Specifications prepared by CH2M-Hill. The system location and layout is shown in Figure 1.

Four additional wells (RW-1, RW-1A, RW-1B, and RW-2) were completed in the first half of 2001. Startup of these wells occurred the first week in March 2001. These additional recovery wells are located in a line to the south (along the perimeter of Dunn Field) of RW-3.

2.0 SYSTEM MONITORING METHODOLOGY

2.1 Groundwater Level Measurements

Water level measurements were recorded twice a month during this operational period from a select number of monitoring wells located both on and off Dunn Field. Continuously monitoring transducers are located in six wells (MW-04, 13, 45, 55, 84, 95). These transducers are downloaded monthly. Representative water levels from these transducers are included in Appendix A. Complete transducer data files are submitted monthly with the operation and maintenance report.

The monitoring scheme is shown below. Monitoring wells requiring bi-weekly measurement are in plain type. Wells requiring monthly measurement are in bold type.

MW-3	MW-30	MW-56	MW-87*
MW-4 ^T	MW-31	MW-57	MW-89*
MW-5	MW-32	MW-58	MW-90*
MW-6	MW-33	MW-59	MW-91*
MW-7	MW-34	MW-60	MW-95* ^T
MW-8	MW-35	MW-61	MW-126**
MW-9	MW-36	MW-65	MW-127**
MW-10	MW-37	MW-68	PZ-02
MW-11	MW-38	MW-69	RW-01
MW-12	MW-41	MW-70	RW-01A
MW-13 ^T	MW-42	MW-71	RW-01B
MW-14	MW-43	MW-73*	RW-02
MW-15	MW-45 ^T	MW-74*	RW-03
MW-18	MW-46	MW-75*	RW-04
MW-19	MW-49	MW-76*	RW-05
MW-27	MW-51	MW-77*	RW-06
MW-28	MW-53	MW-78*	RW-07
MW-29	MW-54	MW-79*	RW-08
	MW-55 ^T	MW-80*	RW-09
		MW-84* ^T	

*New wells installed in October through December 2000

^T Wells with transducers installed

**New wells installed in July 2002

All wells requiring water level measurements were monitored in accordance with the requirements of Exhibit 5-1 of the Amendment #1 to the Groundwater Interim Remedial Action, Defense Depot Memphis, Tennessee Updated Operation and Maintenance Plan dated September 1999 (Updated O&M). Figure 2 shows the locations of all monitored wells. Previous measurement data for past sampling events were submitted to the USACE, DLA, TDEC and USEPA separately with their respective groundwater quality reports. A complete set of the Y4S2 measurement data is given in Appendix A. Flow rates and water levels in the recovery wells have been collected during site visits, with this information summarized in the monthly Operation and Maintenance Reports.

2.2 Groundwater Sample Collection and Analyses

Groundwater samples were collected in October, 2002. The sampling method was diffusion bags suspended in the screened interval. Using diffusion bags, discrete depth intervals can be sampled in each well. Bags were filled with distilled water and placed in the well so that there was a two-foot diffusion bag sampler for each five feet of screened interval in the wells. Diffusion samplers were placed in the wells on 03 September and retrieved on 01 October 2002. Two new wells (MW-126 and MW-127) were added since the last sample event. The sample collected at PZ-02 was the exception to the diffusion bag sampling method. This sample was collected by purging the peizometer with a micro-bailer. Samples were collected from 30 monitoring wells, and 10 recovery wells as shown below:

Well Type	Well No.	Analyses/Method at Each Well	Date Performed
Down-Gradient Groundwater Monitoring Wells	MW-30	Semi-Annual: Volatile Organics/SW8260B	01 October 02
	MW-31		
	MW-32		
	MW-33		
	MW-34		
	MW-37		
	MW-40		
	MW-42		
	MW-43		
	MW-44		
	MW-51		
	MW-54		
	MW-56		
	MW-57		
	MW-58		
	MW-65		
	MW-67		
	MW-68		
	MW-69		
	MW-70		
	MW-71		
	MW-76		
	MW-77		
	MW-78		
	MW-79		
	MW-80		
	MW-95		
	MW-126		
	MW-127		
	PZ-02		
Recovery Wells	*RW-01	Semi-Annual: Volatile Organics/SW8260B *RW-01 was non-operational at the time of sampling	01 October 02
	RW-1A		
	RW-1B		
	RW-02		
	RW-03		
	RW-04		
	RW-05		
	RW-06		
	RW-07		
	RW-08		
	RW-09		

Cumulative analytical results for sampled monitoring wells presented in Table 1 include the current sampling episode plus the previous three sets of data. Cumulative analytical results for the sampled recovery wells presented in Table 2 also include the current set of data and the three previous data sets. Laboratory analytical reports are provided in Appendix B. A discussion of the results is presented in Section 3.0 of this report.

2.3 System Discharge Sample Collection and Analyses

Per agreement with the City of Memphis, effluent samples, which had been collected monthly, are now collected quarterly, with results reported to the City semi-annually. All effluent samples are collected from the groundwater extraction system at a location approximately 200 feet upstream from the final discharge point. The discharge point is a manhole located on Kyle Street at the north property line of the Depot.

The samples were analyzed in accordance with Section F.1 of the Industrial Wastewater Discharge Agreement for Volatile Organic Compounds (VOCs) in each quarter. Semi-Volatile Organic Compounds (SVOCs) and Metals shall also be analyzed on a semi-annual basis.

Analysis of the samples was performed to evaluate compliance with the City of Memphis Industrial Wastewater Discharge Agreement and subsequent revisions. A copy of this agreement was provided in the Year One Operations and Maintenance Report.

Analytical results for each effluent sample are presented in Table 3. Laboratory analytical reports are provided in Appendix C. A discussion of the results is presented in Section 3.0 of this report.

2.4 Field and Laboratory Quality Assurance/Quality Control Samples

As part of the Quality Assurance/Quality Control (QA/QC) Program, a variety of field and laboratory QA/QC samples were collected and analyzed during each sampling event. Groundwater was the only matrix analyzed; however, samples were collected from three different sources: groundwater monitoring wells, groundwater extraction recovery wells, and groundwater extraction effluent. A discussion of data validation and quality control issues is included in Appendix D.

QA/QC samples collected in the field during this semi-annual sampling event included 4 equipment blanks, 8 double blind duplicates, temperature blanks, and trip blanks. A trip blank and temperature blank was typically included in every cooler delivered to the laboratory. One double blind duplicate was collected for approximately every ten samples while one equipment blank was collected for approximately every 20 samples. Laboratory QA/QC included surrogate spikes to show control of organic analyses, a method blank and laboratory control sample, and matrix spike and matrix spike duplicate (MS/MSD) samples.

2.5 Sample Packaging and Handling

Upon collection, samples and associated field QA/QC samples were immediately placed on ice in a cooler. Stored samples were checked periodically and ice was replaced as needed to maintain a 4 degree Celsius temperature. Samples were segregated by sealed plastic bubble-wrap bags and placed in a cooler with the chain-of-custody forms. Samples were typically hand delivered the same day of collection to the laboratory, Environmental Testing and Consulting, Inc. (ETC) in Memphis, TN.

3.0 MONITORING RESULTS

This section discusses results of the Y4S2 remedial action groundwater monitoring at DDMT in October 2002. Figure 2 shows the locations of monitoring and recovery wells at the site

3.1 Groundwater Elevation and Hydraulic Gradient

Groundwater level measurements at the site have been collected approximately twice a month at monitoring wells locations discussed in Section 2.0 since system start-up in November 1998. A new monitoring scheme as shown in Section 2.0 was put into place in February, 2001. Groundwater elevation data for Y4S2 that was collected for the Dunn Field area on October 2, 2002 was used as the basis for this report. The ground water interpolation data was prepared by the Jacobs Engineering hydrogeology staff. A detailed description of the interpolation technique and tables of groundwater elevations are included in Appendix E. The groundwater contour map generated from the data is shown in Figure 3.

The groundwater flow direction during the Y4S2 groundwater measurement event was generally to the west. In general, the baseline calculated hydraulic gradient varied from 0.01 ft/ft in the northern part of Dunn Field to 0.006 ft/ft across the southernmost section of Dunn Field. Groundwater level measurements of monitoring wells that are sampled are provided in Table 4. Groundwater measurement data from all monitored wells is provided in Appendix A.

3.2 Groundwater Analytical Results

This section discusses analytical results of effluent samples of water discharged to the Publicly Owned Treatment Works (POTW) as well as groundwater samples collected from recovery wells and select monitoring wells. A copy of the laboratory analytical reports for Y4S2 monitoring/recovery wells, including chain-of-custody documentation, is provided in Appendix B. A copy of the laboratory analytical reports and chain-of-custody documentation for the monthly effluent samples is provided in Appendix C. Figure 4 shows analytical data for seven chemicals of concern on the site map.

Chemicals chosen for display include Tetrachloroethene (PCE), Trichloroethene (TCE), and breakdown products including 1,1,2,2 - PCA (1,1,2,2-PCA), Cis 1,2-Dichloroethene (Cis 1,2-DCE), 1,1-Dichloroethene (1,1-DCE) and Chloroform. Carbon Tetrachloride was also chosen to be shown.

3.2.1 Effluent Analytical Results Summary

During the Y4S2 monitoring period, an effluent discharge sample was collected in February, April, May, and November 2002 from the groundwater recovery system. The samples were analyzed for TCL Volatile Organics (Method 8260B) and added TCL Semi-Volatile Organics (Method 8270C) and Metals (EPA 200 series) in April and November. Effluent analytical reports are provided in Appendix C.

Since the submission of the previous report (Y4S1), The Memphis Depot has asked for and received variances to the City of Memphis discharge permit for chloroform and for Cis 1,2-DCE. The new discharge limits are:

- Chloroform 100 ug/L max monthly average/200 ug/L one-time maximum
- Cis 1,2-DCE 80 ug/L max monthly average/100 ug/L one-time maximum

3.2.2 Recovery Well Analytical Results Summary

Y4S2 groundwater samples were collected from ten of eleven recovery wells on October 1, 2002. The groundwater samples were analyzed for TCL Volatile Organics (Method 8260B). Results are provided in Tables 2. Y4S2 recovery well laboratory analytical results are provided in Appendix B

Only compounds that have been detected are reported. Trichloroethene (TCE) has consistently exceeded MCLs in all of the recovery wells, and exceeded the MCL this monitoring period in all of the recovery wells. Carbon Tetrachloride has been consistently detected at concentrations exceeding MCLs in the four new recovery wells (RW-1, 1A, 1B, and 2) and in RW-3. All of these wells are located from the western mid-section of Dunn Field southward.

As in previous sample periods, Cis 1,2-Dichloroethene (Cis 1,2-DCF) has been consistently detected above MCLs in Recovery Well RW-8. This compound also exceeded MCLs in well RW-02 for the first time. Tetrachloroethene (PCE) was detected above MCLs in RW-1A, RW-4, RW-6, RW-8, and RW-9. The compound 1,1 Dichloroethene (1,1 – DCE) was detected above MCLs in RW-8 and RW-9, and has seen a steady increase in concentration at RW-8 for the last three sampling periods. Observations for individual wells are given below:

RW-01 The pump and motor at RW-1 has malfunctioned. This well was not sampled this monitoring period

RW-01A Three compounds (Carbon Tetrachloride, PCE and TCE) exceeded the MCLs during the Y4S2 sample event. Carbon Tetrachloride and TCE showed an increase from the previous sample (44.5 to 65.3 ug/L and 289 to 294 ug/L respectively) PCE decreased slightly from 13.3 to 12.3 ug/L

Two other compounds which do not have established MCL limits (chloroform and 1,1,2,2 – PCA) were detected at high concentrations (1120 and 187 ug/L respectively).

RW-01B Two compounds (Carbon Tetrachloride and TCE) exceeded the MCLs during the Y4S2 sample event. Carbon Tetrachloride exhibited a slight increase from the last sample (22.5 to 27.9 ug/L). TCE decreased slightly from 34.8 to 24.1 ug/L.

RW-2 Three compounds (Carbon Tetrachloride, Cis 1,2-DCE and TCE) exceeded the MCLs during the Y4S2 sample event. Carbon Tetrachloride increased from the last

sample (13 to 21.6 ug/L). TCE increased slightly from 63.9 to 64.6 ug/L. Cis 1,2 -DCE exceeded MCLs in this well for the first time and showed an increase in concentration from 65.9 to 88.1 ug/L.

RW-03 Two compounds (Carbon Tetrachloride and TCE) exceeded the MCLs during the Y4S2 sample event. Carbon Tetrachloride increased from the last sample (9.75 to 15.2 ug/L). TCE decreased slightly from 87.2 to 70.4 ug/L.

RW-04 Three compounds (PCE, 1,1,2 - Trichloroethane, and TCE) were detected at concentrations exceeding MCLs during Y4S2. TCE has exceeded MCLs during each of the sampling events. During Y4S2 TCE increased from 665 to 1050 ug/L. PCE exceeded the MCL for the third consecutive time, decreasing slightly from 6.21 to 5.75 ug/L. 1,1,2 Trichloroethane exceeded MCLs for this first time with a concentration of 5.25 ug/L.

RW-05 Only TCE exceeded MCLs during this sample event. TCE was detected at 142 ug/L (a decrease from 400 ug/L last sampling period, and the second consecutive period showing a decrease).

RW-06 PCE and TCE exceeded the MCL during this sample event. PCE was detected at 32.6 ug/L and TCE was found at 27.2 ug/L increasing from 5.42 ug/L the previous sampling event. Both constituents have consistently exceeded the MCL in previous events.

RW-07 TCE exceeded MCLs during this sample event with TCE decreasing from 74.1 to 55.3 ug/L. PCE remained below the MCL for the second consecutive event.

RW-08 Four compounds (1,1 - DCE, Cis 1,2 - DCE, PCE, and TCE) exceeded the MCL concentration during the Y4S2 sampling event. TCE has consistently exceeded MCLs in each of the previous events. TCE decreased from 288 to 189 ug/L. PCE decreased slightly from 10.4 to 8.35 ug/L. Cis 1,2-DCE has consistently exceeded MCLs and exhibited an increase from 130 to 166 ug/L this period. 1,1 - DCE exceeded the MCL at this location for the third consecutive time with a concentration of 36.8 ug/L. This constituent has shown a steadily increasing trend. 1,1,2,2 - PCA was also detected at a concentration of 312 ug/L, a significant increase from the previous three events.

RW-09 Three compounds (1,1-DCE, PCE, and TCE) exceeded the MCL this period. 1,1-DCE increased slightly from 32.4 to 42 ug/L. PCE decreased from 42.9 to 30.4 ug/L. TCE also decreased from 42.2 to 35 ug/L.

3.2.3 Monitoring Well Analytical Results Summary

Y4S2 groundwater samples were collected from select monitoring wells at the site. The samples were analyzed for TCL Volatile Organics (Method (8260B)). Y4S2 monitoring well laboratory analytical reports are contained in Appendix B.

Table 1 presents TCL Volatile Organics analytical results from all monitoring wells sampled during the Y4S2 event. Only compounds detected during any sampling event have been reported in the tables. Diffusion bag samplers were used to collect all samples except for PZ-02. This sample was collected by using a disposable bailer. Diffusion bag samplers allow determination of stratification of contaminants in the well. One diffusion bag sampler was used for each five foot section of well screen, so multiple samples were collected from many of the wells depending on the screen length and water table elevation.

A plot of concentration vs time has been prepared for each of the monitoring wells which exhibited contaminant concentrations exceeding MCLs. These plots graphically show potential increasing or decreasing trends and are discussed in the monitoring well summary section below.

MW-30 No VOCs have been detected at concentrations exceeding MCLs for this and all previous sampling events.

MW-31 Two compounds (1,1 – DCE and TCE) were detected above MCLs. TCE has exceeded MCLs in all previous sampling events. TCE concentration increased from a maximum of 33.1 to 87.5 ug/L since the previous sample period. 1,1-DCE increased slightly from 39.5 to 55.4 ug/L.

There is some vertical stratification noted at this location, particularly in TCE where the upper five feet of well screen showed a concentration of 87.5, approximately 6 times higher than the lower screen section.

Figure 5 shows the concentration of 1,1 – DCE, TCE and PCE over time. Each of these constituents have exceeded the MCLs at some time. 1,1 – DCE and TCE indicate a slightly increasing trend over the last 5 sample events. PCE shows little change over the range of the historical data.

MW-32 Two compounds (Carbon Tetrachloride and TCE) were detected at concentrations exceeding the MCLs. Both Carbon Tetrachloride and TCE have been detected at concentrations exceeding MCLs in each of the prior sampling events. Carbon Tetrachloride showed little change from the previous sample (12.3 ug/L). TCE decreased slightly from 37.9 to 34.8 ug/L. As noted in the summary, the Carbon Tetrachloride plume is confined to the central southwest and southwest area of Dunn Field. Migration has occurred in a west northwest direction.

Two additional chemicals of concern (chloroform and 1,1,2,2-PCA) have been detected at this location. Chloroform has decreased for the second consecutive time (going from 102 to 91.5 ug/L). 1,1,2,2-PCA has also decreased for the third consecutive time (24 to 14 ug/L).

Figure 6 shows concentrations of Carbon Tetrachloride, TCE and chloroform over the range of the historical sampling data. The three constituents showed a steady increase in concentration from 1999 through 2001, with a sharp spike in October of 2001. Since that time, concentrations have decreased significantly and appear to be on a decreasing trend.

MW-33 No compounds have been detected at concentrations exceeding MCLs during this and all prior sampling events.

MW-34 No compounds have been detected at concentrations exceeding MCLs during this and all prior sampling events. Chloroform concentrations which had been increasing, have shown a decrease this sampling period.

MW-37 No constituents were detected which exceeded the MCLs.

MW-40 No compounds have been detected at concentrations exceeding MCLs during this and all previous sampling events.

MW-42 No constituents were detected which exceeded the MCLs.

MW-43 No constituents were detected which exceeded the MCLs.

MW-44 No constituents were detected which exceeded the MCLs during this sample event. Carbon Tetrachloride slightly exceeded the MCL during the Y3S2 event (October 2001), but did not exceed MCLs for the second consecutive sample event.

Figure 7 shows concentrations of Carbon Tetrachloride, chloroform, and TCE since the beginning of the sampling program (February 1999). All three constituents have appeared at the well since November 2000 and have generally increased slightly, although only Carbon Tetrachloride has yet exceeded MCLs (October 2001).

MW-51 Two compounds (1,1 - DCE and TCE) were detected at concentrations exceeding the MCLs during Y4S2. TCE had fallen below the MCL the previous sample period, but has now increased back above the limit to 7.11 ug/L. 1,1 - DCE concentrations have exceeded MCLs in each event except for Y2Q1 and showed an increase from 26.4 to 57 ug/L. There was no apparent vertical stratification of contaminants in the well, with detected concentrations matching closely between the upper and lower five ft of screen length.

A plot of historical data is given in Figure 8. 1,1-DCE and TCE were plotted over time. TCE concentration have remained relatively constant over the sampling period. 1,1-DCE has shown a definite increasing trend since the commencement of the sampling program.

MW-54 Three VOC compounds (Carbon Tetrachloride, Cis 1,2-DCE and TCE) were detected at concentrations exceeding MCLs during the Y4S2 sampling event. Carbon Tetrachloride was detected at 14.4 ug/L showing little change from the previous sample. TCE showed a fourth consecutive significant increase rising from a maximum of 723 ug/L during Y4S1 to 920 ug/L this period. TCE has exceeded MCLs in each of the previous sampling events. Cis 1,2-DCE was detected at a maximum concentration of 85.9 ug/L and exceeded the MCLs for the first time since the sampling program has begun.

Some stratification is occurring in this well with both Carbon Tetrachloride and TCE showing an increase with screen depth. TCE especially showed a significant increase with depth.

Chloroform has been detected in this well at near stable concentrations of 5 to 20 ug/L over the past sampling events. 1,1,2,2-Tetrachloroethane had been consistently less than 20 ug/L, but exhibited a notable increase to 60.1 ug/L during this sample event.

Figure 9 shows the concentration of Carbon Tetrachloride, Chloroform, Cis 1,2-DCE, and TCE over time. Carbon Tetrachloride and chloroform have shown little change during the range of the sampling events. TCE and Cis 1,2-DCE on the other hand have shown a definite increasing trend beginning with the Y3S2 event (October 2001) and continuing to the present time.

MW-56 No compounds have been detected at concentrations exceeding MCLs during this and all previous sampling events. Chloroform has been detected in this well during several previous events. It has been on an increasing trend since Y3S1 (February 2001). The concentration of chloroform is now at 49.3 ug/L.

MW-57 Three compounds (Carbon Tetrachloride, PCE, and TCE) were detected at concentrations exceeding MCLs. Carbon Tetrachloride increased slightly from 42.8 to 43 ug/L. TCE increased from 66.4 to 111 ug/L. Each of these compounds has exceeded MCLs in each of the prior four sampling events. PCE increased slightly from 6.08 to 8.14 ug/L. Additionally, chloroform was detected at a concentration of 29.7 ug/L.

As opposed to the previous sample event, some vertical stratification is apparent, with concentration of all three MCL-exceeding constituents increasing in the lower five feet of screen length.

Figure 10 shows concentrations of Carbon Tetrachloride, Chloroform, PCE, and TCE over time. TCE has shown a definite increasing trend over time. Chloroform also shows a slightly increasing trend. The other two constituents appear to be changing very little.

MW-58 No VOCs have been detected at concentrations exceeding MCLs during this and all previous sampling events.

MW-65 This was the second time this well had been sampled. No VOCs were detected either time.

MW-67 No contaminants were found which exceeded the MCLs.

MW-68 Only one constituent (1,1 – DCE) was detected at a concentration exceeding the MCLs. This is significant however, as this is the first time this constituent has been detected at this location. 1,1-DCE was detected at 9.01 ug/L.

A plot of TCE, PCE, and 1,1-DCE vs time for MW-68 (Figure 11) shows no clear trend in TCE and PCE concentrations.

MW-69 TCE was the only compound detected this sampling event that exceeded the MCL (8.12 ug/L). Overall, this well has shown a decreasing trend in TCE concentration over time (Figure 12)

MW-70 Only two constituents were detected which exceeded MCLs this sampling period (down from five in the Y4S1 period). Cis 1,2-DCE and TCE exceeded MCLs with Cis 1,2-DCE decreasing from 114 to 72.4 ug/L and TCE decreasing from a maximum of 2940 ug/L to 1980 ug/L in Y4S2.

As before, 1,1,2,2 – PCA has also appeared in high concentrations in this well, with the current concentration at 12,400 ug/L.

A plot of historical data is given in Figures 13A and 13B for MW-70. 1,1,2,2-PCA and TCE are shown on Figure 13A. 1,1,2,2-PCA has been increasing for the last four sample events, while TCE is showing a slight downward trend.

Cis 1,2-DCE, PCE, and 1,1,2-Trichloroethane are shown on Figure 13B and all seem to indicate a decreasing trend

MW-71 Two VOC compounds (Carbon Tetrachloride and TCE) were detected at concentrations exceeding MCLs during Y4S2. Carbon Tetrachloride and TCE have exceeded the MCLs in each of the prior sampling events in which this well was sampled. Carbon Tetrachloride decreased from 20.3 to 11.2 ug/L. TCE also decreased from 184 to 27 ug/L. In a situation opposite from the previous sample event, the higher VOC concentrations were seen in the lower five-foot of screened interval.

Two additional compounds for which there is no established MCL were also detected. Chloroform was found at a concentration of 73.1 ug/L and 1,1,2,2 – PCA was detected at a concentration of 26.7 ug/L.

Plots of historical constituent concentrations for MW-71 are given in Figures 14A and 14B. Carbon Tetrachloride and PCE are shown on Figure 14A and both indicate a decreasing trend. Chloroform, 1,1,2,2-PCA, and TCE are shown on Figure 14B and also indicate an overall decreasing trend.

MW-76 As in the previous three sample rounds, one compound (TCE) was detected at a concentration exceeding the MCL. TCE decreased in concentration from 142 to 37.2 ug/L. The higher concentration of TCE was detected in the higher screened interval (just reverse from Y4S1).

Additionally, 1,1,2,2- PCA (for which there is no MCL) was detected at a relatively high concentration of 54.7 ug/L.

Figure 15 shows the plot of concentrations of 1,1,2,2-PCA and TCE over time. Both show a definite decreasing trend. However it should be noted that well is directly downgradient of MW-77 which as summarized below shows a definite increasing trend. It could be expected that concentrations of these two constituents will begin to increase in the future.

MW-77 This is the third time this well has been sampled. Two compounds were detected exceeding the MCLs, down from four the previous event. Cis 1,2 - DCE has increased in concentration from 176 to 237 ug/L. TCE concentrations increased significantly for the third consecutive time going from 3170 to 5040 ug/L.

1,1,2,2-PCA was also detected at a high concentration and increased significantly from the previous event, going from 4330 to 18,200 ug/L.

Figures 16A and 16B show the concentration of constituents vs time for MW-77. Figure 16A shows 1,1,2,2-PCA and TCE concentrations and indicates an increasing trend over the three sample periods. Figure 16B shows the concentration of Cis 1,2-DCE and Trans 1,2-DCE. These two constituents also show an increasing trend. PCE and 1,1,2 Trichloroethane are not shown on the figures, because they have only been detected one time (Y4S1 event).

MW-78 As in the previous sampling event, no constituents were detected which exceeded the MCLs.

MW-79 Two compounds (1,1-DCE and TCE) were detected at concentrations exceeding the MCLs. 1,1-DCE showed a slight increase from 18.8 to 23.8 ug/L. TCE increased from 6.87 to 68.4 ug/L. This well has 20 ft of saturated screen, and each of the four five-ft screened intervals was monitored. There was no significant change in concentration with depth.

Figure 17 shows the concentration of 1,1-DCE, PCE, and TCE over time for well MW-79. A general decreasing trend is evident through the first three sampling periods with

the exception of TCE. TCE had shown a decreasing trend until the current sampling event, but has now increased.

MW-80 No constituents were detected which exceeded the MCLs.

MW-95 No constituents were detected which exceeded the MCLs.

MW-126 This was the first time this well had been sampled. No constituents were detected which exceeded the MCLs

MW-127 This was the first time this well had been sampled. No constituents were detected which exceeded the MCLs.

PZ-02 This monitoring point was added to the sampling scheme beginning with the Y4S1 event. Two constituents were detected during the Y4S1 period which exceeded MCLs, but both had fallen below MCLs for this sample period. This is the second time this well has been sampled.

3.3 QA/QC Results

The data validation process indicated that the data is useable and is of good quality. A complete discussion of the QA/QC validation process is given in Appendix D of this report

4.0 CONCLUSIONS

Conclusions to this quarterly groundwater quality report have been developed from the review of groundwater monitoring and recovery results. The two major system monitoring methods included chemical analysis of samples and groundwater level measurements

4.1 Summary of Monitoring Results

- A 1,1-DCE plume has been moving from northeast of Dunn Field, across the northern edge of the groundwater extraction system, and then off to the west. This plume appears to originate from somewhere up-gradient of Depot property. The plume has moved across RW-9 and is now moving across the vicinity of RW-8. The concentration of 1,1-DCE has risen from ND to greater than MCL in RW-8 over the last three sampling periods. We could expect to see an increase in concentration of this constituent down-gradient from RW-8 in the near future. Concentrations have already been detected in down-gradient well MW-68 and could appear in MW-54 in the near future.
- Carbon Tetrachloride originates primarily from the southwest area of Dunn Field, with the highest concentration near MW-58. Carbon Tetrachloride has migrated in a west-northwest direction toward wells MW-32 and MW-54 and as far west as MW-44. Carbon Tetrachloride has shown a decreasing trend in MW-32 (Figure 6) and has shown a steady concentration level in MW-54 (Figure 9).
- Chloroform is widespread at low concentrations, but higher concentrations are found primarily in two areas. In the west southwest section of Dunn Field, near RW-1A and MW-71, the highest concentrations of chloroform are found. Chloroform appears to have migrated west-northwest with high concentrations also noted in MW-32 and MW-54. The deeper nested well MW-37 adjacent to MW-32 shows no sign of contamination. A second localized concentration of chloroform is found in the vicinity of RW-8 and RW-9.
- TCE concentrations have generally decreased in wells immediately down-gradient from the recovery system, including MW-68, MW-69, MW-70, and MW-71. This could be indicative of capture of source contaminants by the recovery well system. Wells showing an increase of TCE concentrations were generally further down-gradient from the recovery well system (MW-31, MW-79, MW-54, MW-44).
- An overall decreasing trend in contaminants can be seen in wells MW-32 and MW-71 (see Figures 6, 14A and 14B). This could be an indicator that capture of contaminants is succeeding in the up-gradient extraction wells (RW-3 and RW-4).
- MW-44 has shown a slowly increasing trend of contaminant concentration (Figure 7). As water from the vicinity of MW-32 and MW-71 moves westward, we could expect

to see this trend continue. At this time no chemical concentration exceeded the MCLs in this well.

- Well MW-77 has shown marked increases in contaminant concentration since sampling commenced one year ago. At the same time MW-70 which is up-gradient has shown a decreasing contaminant trend. This could indicate that the highest contaminant concentrations have passed MW-70 and are now moving westward toward MW-77 and other down-gradient wells. This could be an indicator that the groundwater extraction system is capturing contaminants and reducing concentrations in the RW-5/RW-6 vicinity (immediately up-gradient of MW-70). We could expect to see further increases in contaminants in down-gradient wells MW-76 and MW-54 as the plume continues to move westward.
- Vertical stratification of contamination in wells has been minimal. In some cases, the stratification appears to be reversed from the previous sample event.
- The groundwater flow during this quarter is generally to the west. Since system startup, the flow direction has remained generally to the west and southwest, with a west-northwest component from the southern end of Dunn Field. The hydraulic gradient was seen to vary across the site from 0.01 ft/ft in the north to 0.006 ft/ft in the south.
- Since the recovery well system has become fully operational, it is exerting significant influence on the groundwater flow on the west edge of Dunn Field.

TABLES

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analysis	DL	Units	Sample Identification Number		MW 30-Y204		MW 30-Y3S1		MW 30-Y3S2		MW 30-Y4S1		MW 30-Y4S2		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs Tap Water (October 7, 1999)
			Laboratory ID No	Date Sample Collected	0011218-08	07 Nov-00	0102408-01	13 Feb-01	0110129-19	0110129-20	0204273-01	0204273-02	0210053-1	0210053-2		
				Sample Depth Interval	NA	NA	NA	48.2 51.2	54.2 56.2	50.8 52.8	53.8 57.8	50.8 52.8	55.8 57.8			
TCL Volatile Organics (Method 8260B)																
Acetone	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	ND	6.47	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.15
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1-Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2-Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1,1-Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans-1,2-Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	120
Cis-1,2-Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	61
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2-Tetrachloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.1
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4-Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1-Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2-Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.19
Trichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.6
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = R-3a Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value

J' = confirmed but less than the reported DL

J'' = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval				MW 31 Y3S1		MW 31 Y3S2		MW 31 Y4S1		MW 31 Y4S2		Minimum Contaminant Level (MCL) Primary Drinking Water Standard	USEPA Region III RBC's Tap Water (October 7 1998)	
				01/02/08-02 14 Feb-01	01/10/26-21 03-Oct-01	01/10/26-21 03-Oct-01	02/04/27-03 10-Apr-02	02/04/27-03 10-Apr-02	02/04/27-03 10-Apr-02	02/04/27-03 10-Apr-02	02/04/27-03 10-Apr-02			
				NA	72.2 74.2	72.2 74.2	72.2 74.2	72.2 74.2	72.2 74.2	72.2 74.2	72.2 74.2			
Laboratory Analyses				DL	Units									
TCL Volatile Organics (Method 8260B)														
Acetone	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	6100	
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32	
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17	
Carbon Disulfide	1	ug/L	8.97	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000	
Carbon Tetrachloride	1	ug/L	2.76	1.25	ND	ND	ND	ND	ND	0.88 J	ND	5	0.16	
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	1.06	ND	100	110	
Chloroform	1	ug/L	25.1	1.61	ND	ND	ND	ND	ND	1.06	ND	NS	0.15	
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6	
1,1 Dichloroethane	1	ug/L	ND	ND	ND	0.54 J	0.66 J	ND	ND	ND	ND	NS	800	
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12	
1,1,1 Trichloroethane	1	ug/L	7.98	20.6	31.2	20.6	39.5	39.5	39.3	55.4	55.4	7	0.044	
Trans 1,2 Dichloroethene	1	ug/L	49.3	34.4	4.83	5.34	2.5	2.5	11.3	0.73 J	0.73 J	100	120	
Cis 1,2 Dichloroethene	1	ug/L	148	44.2	5.53	6.78	2.66	2.66	17	1.24	1.24	70	61	
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1	
1,1,2,2 Tetrachloroethane	1	ug/L	14.8	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053	
Tetrachloroethene	1	ug/L	5.02	2.1	4.18	1	1.24	1.32	1.32	1.1	1.1	5	1.1	
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	750	
1,2,4-Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	190	
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	0.50 J	0.82 J	0.82 J	0.83 J	0.83 J	200	540	
1,1,2 Trichloroethane	1	ug/L	1.2	ND	ND	ND	ND	ND	ND	ND	ND	5	0.19	
Trichloroethene	1	ug/L	233	227	38.1	33.1	21.5	21.5	87.5	15.8	15.8	5	1.6	
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	0.018	

Only compounds detected are listed
 ug/L = micrograms per liter
 DL = Detection Limit
 TCL = Target Compound List
 BDL = Below Detection Limit
 MCL = Maximum Contaminant Level
 Water Standards
 RBC's = Risk Based Contaminants
 NS = no standard NP = not performed
 NA = not available

B = Analyte detected in subsampled method and/or equipment blank
 J = Estimated value presence of the compound was confirmed but less than the reported DL
 J* = estimated value quality control recoveries outside acceptance ranges
 E = Concentration exceeds the established method calibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analytes	DL	Units	Sample Identification Number		MW 32 Y3S1		MW 32 Y3S2		MW 32 Y4S1		MW 32 Y4S2		Maximum Contaminant Level (MCL) Primary Drinking Water Standard	USEPA Region III RBCs Tap Water (October 7 1999)
			Laboratory & Lab Sample ID No	Date Sample Collected	0102556-11	010130-08	0204273-06	0210063-06	01 Oct-02	01 Oct-02	04 5-06 5	04 5-06 5		
			Sample Depth Interval		20-Feb-01	00-Oct-01	10-Apr-02	01 Oct-02						
					NA	64 5-06 5	64 3-65 3	64 5-06 5						
TCL Volatile Organics (Method 8210B)														
Acetone	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	NS	6100	
Benzene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	5	0.32	
Bromochloromethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	NS	0.17	
Carbon Disulfide	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	NS	1000	
Carbon Tetrachloride	1	ug/L	19.7	42.7	12.1	12.3	12.3	12.3	12.3	12.3	12.3	5	0.16	
Chlorobenzene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	100	110	
Chloroform	1	ug/L	4.34	8.28	102	91.5	102	91.5	102	91.5	102	NS	0.15	
Chloromethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	NS	3.6	
1,1-Dichloroethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	NS	800	
1,2-Dichloroethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	5	0.12	
1,1-Dichloroethene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	7	0.044	
Trans 1,2-Dichloroethene	1	ug/L	2.42	5.82 J	1.28	0.72 J	1.28	0.72 J	1.28	0.72 J	1.28	100	120	
Cis 1,2-Dichloroethene	1	ug/L	8.44	12.6 J	4.21	3.48	4.21	3.48	4.21	3.48	4.21	70	61	
Methylene Chloride	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	NS	4.1	
1,1,2,2-Tetrachloroethane	1	ug/L	86.2	216	24	14	24	14	24	14	24	NS	0.053	
Tetrachloroethene	1	ug/L	3.74	NO	NO	NO	0.82 J	1.41	1.41	1.41	1.41	5	1.1	
Toluene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	1000	750	
1,2,4-Trichlorobenzene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	70	190	
1,1,1-Trichloroethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	200	540	
1,1,2-Trichloroethane	1	ug/L	NO	NO	NO	NO	0.59 J	NO	NO	NO	NO	5	0.19	
Trichloroethene	1	ug/L	60.4	238	37.9	34.8	37.9	34.8	37.9	34.8	37.9	5	1.6	
Vinyl Chloride	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NO	2	0.019	

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BCL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard MP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J' = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses	Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval	DL	Units	MW 33-Y3S1 01/04/11 15-Feb-01 NA	MW 33-Y3S2 01/01/00-27 03-Oct-01 58-80	MW 33-Y4S1 02/04/23-08 10-Apr-02 58-180-1	MW 33-Y4S2 02/00/03-08 02-Oct-02 58-80	Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1998)
TCL Volatile Organics (Method 8260B)									
Acetone	1	1	ug/L	ND	ND	ND	ND	NS	8100
Benzene	1	1	ug/L	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	1	ug/L	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	1	ug/L	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	1	ug/L	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	1	ug/L	ND	ND	ND	ND	110	110
Chloroform	1	1	ug/L	ND	ND	ND	ND	NS	0.15
Chloromethane	1	1	ug/L	ND	ND	ND	ND	NS	3.6
1,1-Dichloroethane	1	1	ug/L	ND	ND	ND	ND	NS	800
1,2-Dichloroethane	1	1	ug/L	ND	ND	ND	ND	5	0.12
1,1-Dichloroethene	1	1	ug/L	ND	ND	ND	ND	7	0.044
Trans 1,2-Dichloroethene	1	1	ug/L	ND	ND	ND	ND	100	120
Cis 1,2-Dichloroethene	1	1	ug/L	ND	ND	ND	ND	70	61
Methylene Chloride	1	1	ug/L	ND	ND	ND	ND	NS	4.1
1,1,2,2-Tetrachloroethane	1	1	ug/L	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	1	ug/L	ND	ND	ND	ND	5	1.1
Toluene	1	1	ug/L	ND	ND	ND	ND	1000	750
1,2,4-Trichlorobenzene	1	1	ug/L	ND	ND	ND	ND	70	190
1,1,1-Trichloroethane	1	1	ug/L	ND	ND	ND	ND	200	540
1,1,2-Trichloroethane	1	1	ug/L	ND	ND	ND	ND	5	0.19
Trichloroethene	1	1	ug/L	ND	ND	ND	ND	5	1.6
Vinyl Chloride	1	1	ug/L	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Primary Drinking

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not analyzed

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value

confirmed but less than the reported DL

J* = estimated value

quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analysis	DL	Units	MW 34 Y3S1		MW 34 Y3S2		MW 34 Y4S1		MW 34 Y4S2	Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1999)
			01/10/20-18 02/02/56-09 20-Feb-01 NA	01/10/20-18 03/02-01 148-148	01/10/20-17 03/02-01 148-148	01/10/20-18 03/02-01 148-148	02/04/23-07 10-Apr-02 145-147	02/04/23-08 10-Apr-02 150-152	02/10/03-07 01-Oct-02 148-148	02/10/03-08 01-Oct-02 148-148	02/10/03-09 01-Oct-02 155-157
TCL Volatile Organics (Method 8260B)											
Acetone	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	6100
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	0.32
Bromochloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	0.17
Carbon Disulfide	1	ug/L	12	ND	ND	ND	ND	ND	ND	ND	1000
Carbon Tetrachloride	1	ug/L	0.82 J	0.99 J	0.99 J	0.99 J	0.99 J	0.99 J	0.99 J	0.99 J	0.16
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	110
Chloroform	1	ug/L	4.24	1.46	ND	ND	ND	ND	ND	ND	0.15
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	3.8
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	800
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	0.12
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	0.044
Trans 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	120
Cis 1,2 Dichloroethene	1	ug/L	2.91	ND	ND	ND	ND	ND	ND	ND	61
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	4.1
1,1,2,2 Tetrachloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS
Tetrachloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	0.053
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	1.1
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	750
1,1,1 Trichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	190
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	540
Trichloroethene	1	ug/L	1.82	ND	1.48	2	1.18	0.97 J	ND	ND	0.19
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	0.97 J	ND	ND	1.6
											0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses	Sample Identification Number		MW 37 Y352		MW 37 Y451		MW 37 Y452		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1999)		
	DL	Units	Laboratory & Lab Sample ID No		Date Sample Collected		Sample Depth Interval					
			0110130-07	0110130-08	0204273-10	0204273-12	0204273-13	0210053-11			0210053-12	0210053-13
TCL Volatile Organics (Method 8260B)			172.5-174.5	177.5-179.5	182.5-184.5	172.3-174.3	177.3-179.3	182.3-184.3				
Acetone	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	6100	
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	0.32	
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	0.17	
Carbon Disulfide	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	1000	
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	0.16	
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	100	110	
Chloroform	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	0.15	
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	3.6	
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	800	
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	0.12	
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	7	0.044	
Trans 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	100	120	
Cis 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	70	81	
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	4.1	
1,1,2,2 Tetrachloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	0.053	
Trichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	1.1	
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	1000	750	
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	70	190	
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	200	540	
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	0.19	
Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	1.6	
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	2	0.019	

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BCL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or equipment blank

J = Estimated value

presence of the compound was

confirmed but less than the reported DL

J* = estimated value - quality control requirements outside

acceptance ranges

E = Concentration exceeds the established method calibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No			MW-40-Y3S1 010240604		MW-40-Y3S2 0101029-30		MW-40-Y4S1 0204273-14		MW-40-Y4S2 0210053-14		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region II RBCs-Tap Water (October 7, 1999)
Date Sample Collected Sample Depth Interval			14-Feb-01		03-Oct-01		10-Apr-02		01-Oct-02			
			NA		91-5-93 5		91-6-93 8		91-5-93 5			
Laboratory Analyses			DL	Units								
TCL Volatile Organics (Method 8260B)												
Aroclor	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NS	8100
Benzene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	5	0.32
Bromo-chloromethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NS	0.17
Carbon Disulfide	1	ug/L	4.73	NO	NO	NO	NO	NO	NO	NO	NS	1000
Carbon Tetrachloride	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	5	0.16
Chlorobenzene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	100	110
Chloroform	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NS	0.15
Chloromethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NS	3.6
1,1 Dichloroethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NS	800
1,2 Dichloroethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	5	0.12
1,1 Dichloroethene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	100	120
Cis 1,2 Dichloroethene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	70	61
Methylene Chloride	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	NS	0.053
1,1,2,2 Tetrachloroethene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	5	1.1
Trichloroethene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	1000	750
Toluene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	70	180
1,2,4 Trichlorobenzene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	200	540
1,1,1 Trichloroethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	5	0.19
1,1,2 Trichloroethane	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	5	1.6
Trichloroethene	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO	2	0.019
Vinyl Chloride	1	ug/L	NO	NO	NO	NO	NO	NO	NO	NO		

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J' = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No			MW-42 Y3S1 0102558.03 19-Feb-01		MW-42 Y3S2 0110128-01 02-Oct-01		MW-42 Y4S1 0204273-15 10-Apr-02		MW-42 Y4S2 0210053-15 01-Oct-02		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1999)
Date Sample Collected Sample Depth Interval			NA		57.5-58.5		57.58		57.58			
Laboratory Analyses	DL	Units										
TCL Volatile Organics (Method 8260B)												
Acetone	1	ug/L	61.8	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	NT	ND	ND	ND	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.15
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	100	120
Cis 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	70	61
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	1.1
Toluene	1	ug/L	38.8	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4-Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.19
Trichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	1.6
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	2	0.018

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard; NP = not performed

NA = not available

R = Analyte detected in standardized method and/or

equipment blank

J = Estimated value

presence of the compound was

confirmed but less than the reported DL

J* = estimated value

quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval			MW-43-Y3S1 0102559-04 18-Feb-01 NA										MW-43-Y3S2 0110130-04 03-Oct-01 183 5-185 5				MW-43-Y4S1 0204273-18 10-Apr-02 183 5-185 8				MW-43-Y4S2 0210053-18 01-Oct-02 183 5-185 3				Maximum Contaminant Level (MCL)-Primary Drinking Water Standard		USEPA Region III RBCs-Tap Water (October 7, 1999)
Laboratory Analyses			DL		Units																						
TCO, Volatile Organics (Method 8260B)																											
Acetone	1	ug/L	6080	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	6100					
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32					
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17					
Carbon Disulfide	1	ug/L	8.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000					
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.16					
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	110					
Chloroform	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.15					
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6					
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	800					
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12					
1,1 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	0.044					
Trans 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	120					
Cis 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	61					
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1					
* 1,1,2 Trichloroethane	1	ug/L	9.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053					
Tetrachloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.1					
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	750					
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	190					
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	540					
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.19					
Trichloroethane	1	ug/L	1.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.8					
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	0.019					

Only compounds detected are listed
ug/L = micrograms per liter
DL = Detection Limit
TCL = Target Compound Use
BDL = Below Detection Limit
MCL = Maximum Contaminant Level
Water Standards
RBCs = Risk Based Contaminants
NS = no standard NP = not performed
NA = not available

B = Analyte detected in associated method and/or equipment blank
J = Estimated value presence of the compound was confirmed but less than the reported DL
J* = estimated value quality control recoveries outside acceptance ranges
E = Concentration exceeds the established method calibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses	Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval	DL	Units	MW 44 Y3S1				MW 44 Y3S2				MW 44 Y4S1				MW 44 Y4S2				Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7 1990)
				01/01/2006	03/01/01	05/02	07/02	01/01/2006	03/01/01	05/02	07/02	02/04/2006	04/01/02	06/02/02	08/04/04	10/04/02	01/01/02	03/01/02	05/01/02		
TCL Volatile Organics (Method 8260B)																					
Acetone	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	1	ug/L	94.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.15
Chloromethane	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1 Dichloroethane	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1,1 Trichloroethane	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	120
Cis 1,2 Dichloroethene	1	1	ug/L	0.40 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	61
Methylene Chloride	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2 Tetrachloroethane	1	1	ug/L	12.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Trichloroethene	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.1
Toluene	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4 Trichlorobenzene	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1 Trichloroethene	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.19
Trichloroethene	1	1	ug/L	3.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.8
Vinyl Chloride	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	0.018

Only compounds detected are listed
ug/L = micrograms per liter
DL = Detection Limit
TCL = Target Compound List
RDL = Below Detection Limit
MCL = Maximum Contaminant Level Primary Drinking Water Standards
RBCs = Risk Based Contaminants
NS = no standard NP = not performed
NA = not available

D = Analyte detected in associated method and/or equipment blank
J = Estimated value presence of the compound was confirmed but less than the reported DL
J* = estimated value quality control techniques outside acceptance ranges
E = Concentration exceeds the established method calibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses	Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval	DL	Units	MW S1 Y3S1		MW S1 Y3S2		MW S1 Y4S1		MW S1 Y4S2		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1999)
				010256-08 20-F-00-01 NA	03-Oct-01 58 S-40 S	0110130-12 03-Oct-01 58 S-40 S	0110130-13 03-Oct-01 58 S-40 S	0204273-21 10-Apr-02 58-60	0204273-24 10-Apr-02 63-65	0210053-21 01-Oct-02 58 S-40 S	0210053-24 01-Oct-02 63 S-65 S		
TCL Volatile Organics (Method 8260B)													
Acetone	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	110	0.15
Chloroform	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	NS	0.15
Chloromethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1 Dichloroethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1,1 Trichloroethane	1	ug/L		15.8	31.4	26.9	26.9	26.4	18.2	57	53.7	7	0.044
Trans 1,2 Dichloroethene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	100	120
Cis 1,2 Dichloroethene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	70	61
Methylene Chloride	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L		1.86	2.13	1	1	ND	ND	0.74 J	ND	5	1.1
Toluene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4-Trichlorobenzene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1 Trichloroethane	1	ug/L		ND	0.71 J	0.74 J	0.74 J	ND	ND	1.06	1	200	540
1,1,2 Trichloroethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	5	0.18
Trichloroethene	1	ug/L		6.09	9.88	10.7	10.7	1.9	1.72	7.11	7.04	5	1.6
Vinyl Chloride	1	ug/L		ND	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BOL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard / not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J' = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method call

broken range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analysis	Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval	MW 54 Y351		MW 54 Y352		MW 54 Y451		MW 54 Y452		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1999)
		01/10/29/23 03-Oct-01 81 B-83 B	01/10/29/24 03-Oct-01 84-86	01/10/29/25 03-Oct-01 91-93	02/04/27-01 10-Apr-02 82 1 B-4 1	02/04/27-02 10-Apr-02 85 6-87 B	02/04/27-03 10-Apr-02 90 6-92 B	02/08/3-25 01-Oct-02 87 1 B-4 1	02/08/3-26 01-Oct-02 85 6-87 B		
DL	Units										
Acetone	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	8100
Benzene	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1 ug/L	249	ND	ND	ND	ND	ND	ND	ND	NS	1000
Chloroform	1 ug/L	11.2	7.7	19.7	2.98	14.2	14.4	5.58 J	14.4	5	0.16
Chlorobenzene	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroethane	1 ug/L	14.2	9.87	11.9	5.54	8.84	8.15	11.5	11.6	NS	0.15
1,1-Dichloroethane	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,2-Dichloroethane	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	800
Trans 1,2-Dichloroethene	1 ug/L	179	113	4.15	5.11	9.06	9.17	12.1	15.2	7	0.044
Cis 1,2-Dichloroethene	1 ug/L	21.1	11.3	27.6	24.2	41.7	41.7	66	85.9	70	61
Methylene Chloride	1 ug/L	ND	ND	ND	ND	ND	ND	ND	51.7	NS	4.1
1,1,2,2-Tetrachloroethane	1 ug/L	37	3.93	8.87	9.06	18.1	17.5	40	80.1	NS	0.053
Tetrachloroethene	1 ug/L	0.80 J	ND	1.89	ND	1.82	2.08	ND	ND	5	1.1
Toluene	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4-Trichlorobenzene	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1-Trichloroethane	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2-Trichloroethane	1 ug/L	ND	ND	ND	ND	1.18	1.1	ND	ND	5	0.19
Trichloroethene	1 ug/L	28.3	20.2	105	127	618	723	333	632	5	1.6
Vinyl Chloride	1 ug/L	ND	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = microgram per liter

DL = Detection Limit

TCL = Target Compound List

BCL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard ug/L = not performed

NA = not available

R = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance range

E = Concentration exceeds the established method call

bracket range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses			DL	Units	MW 56-Y3S1	MW 56-Y3S2	MW 56-Y4S1	MW 56-Y4S2	Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1999)
TCL Volatile Organics (Method 8260B)										
Acetone	1	ug/L			NO	NO	NO	NO	NS	6100
Benzene	1	ug/L			NO	NO	NO	NO	5	0.32
Bromochloromethane	1	ug/L			NO	NO	NO	NO	NS	0.17
Carbon Disulfide	1	ug/L			NO	NO	NO	NO	NS	1000
Carbon Tetrachloride	1	ug/L			0.71 J	NO	NO	NO	5	0.16
Chlorobenzene	1	ug/L			NO	NO	NO	NO	100	110
Chloroform	1	ug/L			NO	27.8	31.6	49.3	NS	0.15
Chloromethane	1	ug/L			NO	NO	NO	NO	NS	3.6
1,1-Dichloroethane	1	ug/L			NO	NO	NO	NO	NS	800
1,2-Dichloroethane	1	ug/L			NO	NO	NO	NO	5	0.12
1,1-Dichloroethene	1	ug/L			NO	NO	NO	NO	7	0.044
Trans 1,2-Dichloroethene	1	ug/L			NO	NO	NO	NO	100	120
Cis 1,2-Dichloroethene	1	ug/L			NO	NO	NO	NO	70	61
Methylene Chloride	1	ug/L			NO	NO	NO	NO	NS	4.1
1,1,2,2-Tetrachloroethane	1	ug/L			NO	NO	NO	NO	NS	0.053
Tetrachloroethene	1	ug/L			0.71 J	NO	NO	NO	5	1.1
Toluene	1	ug/L			NO	NO	NO	NO	1000	750
1,2,4-Trichlorobenzene	1	ug/L			NO	NO	NO	NO	70	190
1,1,1-Trichloroethane	1	ug/L			NO	NO	NO	NO	200	540
1,1,2-Trichloroethane	1	ug/L			NO	NO	NO	NO	5	0.19
Trichloroethene	1	ug/L			1.96	1.18	1.27	1.95	5	1.6
Vinyl Chloride	1	ug/L			NO	NO	NO	NO	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BQL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analysis detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J' = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cali-

bration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number			MW 57 Y3S1		MW 57 Y3S2		MW 57 Y4S1		MW 57 Y4S2		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs Tap Water (October 7, 1999)
Laboratory & Lab Sample ID No	Date Sample Collected	Sample Depth Interval	0102451.18 15-Feb-01	0101026.12 03-Oct-01 65-67	0101026.13 03-Oct-01 67.5-69.5	0204274.05 10-Apr-02 64.5-65.5	0204274.06 10-Apr-02 67-69	0210053.29 01-Oct-02 64.5-65.5	0210053.30 01-Oct-02 67-69			
Laboratory Analyses	DL	Units										
TCL Volatile Organics (Method 8260B)												
Acetone	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	44.4	37.1	37.5	38.5	42.8	19.6	43	43	5	0.16
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	11.8	25.9	28	13.4	15.1	12.6	29.7	29.7	NS	0.15
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1-Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2-Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1,1-Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2-Dichloroethene	1	ug/L	1.42	1.73	1.66	1.63	1.88	1.1	2.27	1.13	100	120
Cis 1,2-Dichloroethene	1	ug/L	0.44 J	0.86 J	0.97 J	0.51 J	0.55 J	0.54 J	1.13	1.13	70	61
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2-Tetrachloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Toluene	1	ug/L	5.01	5.24	4.58	6.08	5.02	3.64	8.14	8.14	5	1.1
1,2,4-Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,1,1-Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,2-Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2-Trichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.19
Trichloroethene	1	ug/L	28.3	73.4	77.4	58.8	66.4	54.1	111	111	5	1.6
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or equipment blank

J = Estimated value presence of the compound was confirmed but less than the reported DL

J* = estimated value quality control recoveries outside acceptance range

E = Concentration exceeds the established method calibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No		MW S8-Y3S1 0102558-05	MW S8-Y3S2 0110128-14	MW S8-Y4S1 0204274-07	MW S8-Y4S2 0210053-31	Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs Tap Water (October 7 1999)
Date Sample Collected		19-Feb-01	03-Oct-01	10-Apr-02	01-Oct-02		
Sample Depth Interval		NA	65-97	64-96.9	64-96.9		
Laboratory Analyses							
TCL Volatile Organics (Method 8260B)		DL	Units				
Acetone	1	up/L		ND	ND	NS	6100
Benzene	1	up/L		ND	ND	5	0.32
Bromochloromethane	1	up/L		ND	ND	NS	0.17
Carbon Disulfide	1	up/L		ND	ND	NS	1000
Carbon Tetrachloride	1	up/L		0.43 J	ND	5	0.18
Chlorobenzene	1	up/L		ND	ND	100	110
Chloroform	1	up/L		2.06	1.85	NS	0.15
Chloromethane	1	up/L		ND	ND	NS	3.6
1,1-Dichloroethane	1	up/L		ND	ND	NS	800
1,2-Dichloroethane	1	up/L		ND	ND	5	0.12
1,1-Dichloroethene	1	up/L		ND	ND	7	0.044
Trans 1,2-Dichloroethene	1	up/L		ND	ND	100	120
Cis 1,2-Dichloroethene	1	up/L		ND	ND	70	61
Methylene Chloride	1	up/L		ND	ND	NS	4.1
1,1,2,2-Tetrachloroethane	1	up/L		ND	ND	NS	0.053
Tetrachloroethene	1	up/L		0.40 J	ND	5	1.1
Toluene	1	up/L		ND	ND	1000	750
1,2,4-Trichlorobenzene	1	up/L		ND	ND	70	190
1,1,1-Trichloroethane	1	up/L		ND	ND	200	540
1,1,2-Trichloroethane	1	up/L		ND	ND	5	0.19
Trichloroethene	1	up/L		2.47	1.78	5	1.6
Vinyl Chloride	1	up/L		ND	ND	2	0.019

Only compounds detected are listed

up/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BOL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration is below the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analysis		DL	Units	MW 05-Y4S1 0204274.08 10-Apr-02		MW 05-Y4S2 0210053.32 1 Oct-02		0210053.33 1 Oct-02		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs- Tap Water (October 7, 1990)
TCL Volatile Organics (Method 8260B)											
Acetone	1	ug/L		ND	ND	ND	ND	ND	NS	6100	
Benzene	1	ug/L		ND	ND	ND	ND	ND	5	0.32	
Bromochloromethane	1	ug/L		ND	ND	ND	ND	ND	NS	0.17	
Carbon Disulfide	1	ug/L		ND	ND	ND	ND	ND	NS	1000	
Carbon Tetrachloride	1	ug/L		ND	ND	ND	ND	ND	5	0.16	
Chlorobenzene	1	ug/L		ND	ND	ND	ND	ND	100	110	
Chloroform	1	ug/L		ND	ND	ND	ND	ND	NS	0.15	
Chloromethane	1	ug/L		ND	ND	ND	ND	ND	NS	3.6	
1,1 Dichloroethane	1	ug/L		ND	ND	ND	ND	ND	NS	800	
1,2 Dichloroethane	1	ug/L		ND	ND	ND	ND	ND	5	0.12	
1,1,1 Trichloroethane	1	ug/L		ND	ND	ND	ND	ND	7	0.044	
Trans 1,2 Dichloroethene	1	ug/L		ND	ND	ND	ND	ND	100	120	
Cis 1,2 Dichloroethene	1	ug/L		ND	ND	ND	ND	ND	70	61	
Methylene Chloride	1	ug/L		ND	ND	ND	ND	ND	NS	4.1	
1,1,2,2 Tetrachloroethane	1	ug/L		ND	ND	ND	ND	ND	NS	0.053	
Tetrachloroethene	1	ug/L		ND	ND	ND	ND	ND	5	1.1	
Toluene	1	ug/L		ND	ND	ND	ND	ND	1000	750	
1,2,4 Trichlorobenzene	1	ug/L		ND	ND	ND	ND	ND	70	190	
1,1,1 Trichloroethane	1	ug/L		ND	ND	ND	ND	ND	200	540	
1,1,2 Trichloroethane	1	ug/L		ND	ND	ND	ND	ND	5	0.19	
Trichloroethene	1	ug/L		ND	ND	ND	ND	ND	5	1.6	
Vinyl Chloride	1	ug/L		ND	ND	ND	ND	ND	2	0.019	

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard MP = not performed

NA = not available

R = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analytes TCL Volatile Organics (Method 8260)	DL	Units	MW 87 Y3S1		MW 87 Y3S2		MW 87 Y4S1		MW 87 Y4S2		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1998)
			0110129-31 3-Oct-01 281.5 283.5	0110129-32 3-Oct-01 288.5-288.8	0110129-33 3-Oct-01 271.273	0204274-11 10-Apr-02 281.283	0204274-12 10-Apr-02 288.268	0204274-13 10-Apr-02 271.273	0210053-35 1-Oct-02 281.283	0210053-36 1-Oct-02 288.268		
Acetone	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	NP	ND	5.25	ND	ND	ND	3.33	ND	NS	1000
Carbon Tetrachloride	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	5	0.18
Chlorobenzene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	NS	0.15
Chloromethane	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	NS	3.8
1,1-Dichloroethane	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2-Dichloroethane	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1-Dichloroethene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2-Dichloroethene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	100	120
Cis 1,2-Dichloroethene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	70	61
Methylene Chloride	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2-Tetrachloroethane	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	5	1.1
Toluene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4-Trichlorobenzene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1-Trichloroethane	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2-Trichloroethane	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	5	0.18
Trichloroethene	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	5	1.6
Vinyl Chloride	1	ug/L	NP	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level Primary Drinking

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval			DL	Units	MW 08-Y351 0102406-06 14 Feb 01 NA	MW 08-Y352 0110130-17 03-Oct-01 74.5-78.5	MW 08-Y352 0110130-18 03-Oct-01 79.5-81.5	MW 08-Y451 0204274.14 10-Apr-02 74.1-76.1	MW 08-Y452 0210053-18 01-Oct-02 74.1-76.1	03-Oct-01 79.1-81.1	Maximum Contaminant Level (MCL) Primary Drinking Water Standard	USEPA Region III RBCs Tap Water (October 7, 1999)
Laboratory Analyses												
*GL Volatile Organics (Method 8260B)												
Acetone	1	ug/L		789	ND	ND	ND	ND	ND	ND	NS	8100
Benzene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromodichloromethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L		173	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L		ND	ND	ND	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L		ND	ND	3.5	ND	ND	7.68	1.43	NS	0.15
Chloromethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1 Dichloromethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloromethane	1	ug/L		ND	ND	ND	ND	ND	ND	5	0.12	0
1,1 Dichloroethene	1	ug/L		ND	ND	ND	ND	ND	ND	9.01	7	0.044
Trans 1,2 Dichloroethene	1	ug/L		4.14	ND	0.78 J	ND	ND	ND	ND	100	120
Cis 1,2 Dichloroethene	1	ug/L		4.38	ND	3.12	ND	ND	ND	ND	70	61
Methylene Chloride	1	ug/L		ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L		ND	ND	4.15	1.01	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L		0.92 J	ND	1.6	ND	ND	ND	4.3	5	1.1
Toluene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4 Trichlorobenzene	1	ug/L		ND	ND	ND	ND	ND	ND	ND	70	180
1,1,1 Trichloroethane	1	ug/L		ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2 Trichloroethene	1	ug/L		ND	ND	ND	ND	ND	ND	5	0.19	0
Trichloroethane	1	ug/L		9.67	0.50 J	6.56	ND	ND	0.94 J	3.85	5	1.6
Vinyl Chloride	1	ug/L		ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cali-

bration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analytes	DL	Units	Sample Identification Number		MW-05-Y351		MW-05-Y352		MW-05-Y451		MW-05-Y452		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region II RBCs-Tap Water (October 7, 1999)
			Laboratory & Lab Sample ID No.	Date Sample Collected	0102451.15	0110130-18	0110130-19	0110130-20	0204274.16	0204274.17	0210053-40	0210053-41		
			Sample Depth Interval		14 Feb-01	03 Oct-01	03 Oct-01	03 Oct-01	10-Apr-02	10-Apr-02	02-Oct-02	02-Oct-02		
					NA	05 S-87.5	05 S-87.5	05 S-87.5	06 S-88.4	06 S-88.4	06 S-88.4	06 S-88.4		
TCL Volatile Organics (Method 8200B)														
Acetone	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromodichloromethane	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L			ND	ND	ND	ND	1.52	ND	ND	ND	NS	0.15
Chloromethane	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1-Dichloroethane	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2-Dichloroethane	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1-Dichloroethene	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2-Dichloroethene	1	ug/L			ND	ND	ND	ND	4.14	ND	ND	ND	100	120
Cis 1,2-Dichloroethene	1	ug/L			3.11	ND	ND	ND	7.92	ND	ND	ND	70	61
Methylene Chloride	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2-Tetrachloroethane	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L			0.95 J	ND	ND	ND	1.84	ND	ND	ND	5	1.1
Toluene	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4-Trichlorobenzene	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1-Trichloroethane	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2-Trichloroethane	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	5	0.19
Trichloroethene	1	ug/L			42.2	1.01	ND	ND	128	ND	ND	ND	5	1.8
Vinyl Chloride	1	ug/L			ND	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

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NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses	DL	Units	MW 70-Y3S1		MW 70-Y3S2		MW 70-Y4S1		MW 70-Y4S2		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1990)
			01/03/01	03/05/01	01/03/02	03/05/02	02/04/02	10-Apr-02	02-Oct-02	07-Oct-02		
Sample Identification Number			0102451-13		0110130-02	0110130-03	0204274-19	0204274-18	0210053-42	0210053-43		
Laboratory & Lab Sample ID No			15-Feb-01		03-Oct-01	03-Oct-01	10-Apr-02	10-Apr-02	02-Oct-02	07-Oct-02		
Date Sample Collected			NA		85-87	80-82	84-86-3	84-86-3	84-86-3	86-3-91-3		
Sample Depth Interval												
1	1	ug/L	50.4	NO	NO	NO	NO	NO	NO	NO	NS	8100
Acetone			NO	NO	NO	NO	NO	NO	NO	NO	5	0.32
Benzene			NO	NO	NO	NO	NO	NO	NO	NO	NS	0.17
Bromochloromethane			NO	NO	NO	NO	NO	NO	NO	NO	NS	1000
Carbon Disulfide			NO	NO	NO	NO	NO	NO	NO	NO	NS	0.16
Carbon Tetrachloride			0.45 J	NO	NO	NO	NO	NO	NO	NO	5	110
Chlorobenzene			NO	NO	NO	NO	NO	NO	NO	NO	100	0.15
Chloroform			1.47	NO	NO	NO	NO	NO	NO	NO	NS	3.8
Chloromethane			NO	NO	NO	NO	NO	NO	NO	NO	NS	800
1,1-Dichloroethane			NO	NO	NO	NO	NO	NO	NO	NO	NS	0.12
1,2-Dichloroethane			NO	NO	NO	NO	NO	NO	NO	NO	5	0.044
1,1,1-Trichloroethane			7.65	NO	NO	NO	NO	NO	NO	NO	7	120
Trans 1,2-Dichloroethane			34.3	92.8 J	55.9 J	11.4	96.2	72.4	42.5 J	61	NS	4.1
Cis 1,2-Dichloroethane			NO	NO	NO	NO	NO	NO	NO	NO	NS	0.053
Methylene Chloride			482	1320	766	2540	1580	12400	7680	7680	NS	1.1
1,1,2,2-Tetrachloroethane			5.73	NO	NO	13.5	3.27	NO	NO	NO	5	750
Tetrachloroethene			NO	NO	NO	NO	1.17	NO	NO	NO	1000	190
Toluene			NO	NO	NO	NO	NO	NO	NO	NO	70	540
1,2,4-Trichlorobenzene			NO	NO	NO	NO	NO	NO	NO	NO	200	0.19
1,1,1-Trichloroethane			1.99	NO	NO	NO	NO	NO	NO	NO	5	1.6
1,1,2-Trichloroethane			544	2340	1170	7.35	5.2	1490	1980	1340	5	0.019
Trichloroethene			0.93 J	NO	NO	NO	17	NO	NO	NO	2	
Vinyl Chloride												

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard / not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value - presence of the compound was

confirmed but less than the reported DL

J* = estimated value - quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No			MW 71 Y3S1		MW 71 Y3S2		MW 71 Y4S1		MW 71 Y4S2		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7, 1999)
Date Sample Collected Sample Depth Interval			01/24/51 12 15-Feb-01	01/10/30-10 03-Oct-01	01/10/30-10 03-Oct-01	02/04/24-20 10-Apr-02	02/04/24-20 10-Apr-02	02/10/53-44 71-3-72-3	02/10/53-45 73-6-75-8			
Laboratory Analyses			DL	Units								
TCL Volatile Organics (Method 8260B)												
Acetone	1	ug/L										
Benzene	1	ug/L										
Bromochloromethane	1	ug/L										
Carbon Disulfide	1	ug/L										
Carbon Tetrachloride	1	ug/L										
Chlorobenzene	1	ug/L										
Chloroform	1	ug/L										
Chloromethane	1	ug/L										
1,1 Dichloroethane	1	ug/L										
1,2 Dichloroethane	1	ug/L										
1,1 Dichloroethene	1	ug/L										
Trans 1,2 Dichloroethene	1	ug/L										
Cis 1,2 Dichloroethene	1	ug/L										
Methylene Chloride	1	ug/L										
1,1,2,2 Tetrachloroethane	1	ug/L										
Tetrachloroethene	1	ug/L										
Toluene	1	ug/L										
1,2,4 Trichlorobenzene	1	ug/L										
1,1,1 Trichloroethane	1	ug/L										
1,1,2 Trichloroethane	1	ug/L										
Trichloroethene	1	ug/L										
Vinyl Chloride	1	ug/L										

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

SDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

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equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

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acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval			MW 76-Y351 01/02/00-06/08 14-Feb-01 NA	MW 76-Y352 01/01/00-21 03-Oct-01 06-5:00-5	MW 76-Y4S1 02/04/24-24 10-Apr-02 06-08	MW 76-Y4S2 02/00/03-17 01-Oct-02 06-08	Maximum Contaminant Level (MCL) Primary Drinking Water Standard	USEPA Region III RBCs Tap Water (October 7, 1999)
Laboratory Analytes	DL	Units						
TCL Volatile Organics (Method 8260B)								
Acetone	1	ug/L	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	0.77 J	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	ug/L	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	ND	ND	ND	ND	NS	0.15
Chloroethane	1	ug/L	ND	ND	ND	ND	NS	3.6
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	5	0.12
1,1 Dichloroethene	1	ug/L	ND	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	6.84	1.91 J	7.71	1.17	100	120
Cis 1,2 Dichloroethene	1	ug/L	17.6	4.87 J	13.5	2.94	70	61
Methylene Chloride	1	ug/L	ND	ND	ND	ND	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L	694	108	13.5	54.7	NS	0.053
Tetrachloroethene	1	ug/L	3.98	ND	1.81	ND	5	1.1
Toluene	1	ug/L	ND	ND	1.23	ND	1000	750
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	ND	ND	70	190
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	5	0.19
Trichloroethene	1	ug/L	258	72.2	142	37.2	5	1.6
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard. NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value. presence of the compound was

confirmed but less than the reported DL

J* = Estimated value. quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analytes	DL	Units	Sample Identification Number				USEPA Region III RBCs-Tap Water (October 7 1999)	
			Laboratory & Lab Sample ID No		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard			
			Date Sample Collected	Sample Depth Interval	MW 77 V352	MW 77 V451	MW 77 V452	
TCL Volatile Organics (Method 8260B)								
Acetone	1	ug/L	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	ND	ND	5	0.32
Bromodichloromethane	1	ug/L	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	ug/L	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	ND	ND	5.36	ND	NS	0.15
Chloromethane	1	ug/L	ND	ND	ND	ND	NS	3.6
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	5	0.12
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	20.1 J	42.2	42.9 J	42.9 J	100	120
Cis 1,2 Dichloroethene	1	ug/L	76.4 J	176	237	237	70	61
Methylene Chloride	1	ug/L	ND	4330	18200	18200	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L	1820	7.18	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L	ND	ND	ND	ND	5	1.1
Toluene	1	ug/L	ND	ND	ND	ND	1000	750
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	ND	ND	70	190
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	ug/L	ND	9.46	ND	ND	5	0.19
Trichloroethene	1	ug/L	1620	3170	5040	5040	5	1.8
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BOL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

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bration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses TCL Volatile Organics (Method 8260B)	DL	Units	MW 7B-Y3S1		MW 7B-Y3S2		MW 7B-Y4S1		MW 7B-Y4S2		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region III RBCs-Tap Water (October 7 1999)
			01/01/00-05 03-Oct 01 53-55	01/01/00-14 03-Oct 01 53-55	01/01/00-15 03-Oct 01 58-60	02/04/01-03 10-Apr 02 52 ± 1/4 4	02/04/01-04 10-Apr 02 57 ± 1/4 4	02/04/01-05 10-Apr 02 82 ± 1/4 4	02/04/01-05 10-Apr 02 52 ± 1/4 4	02/04/01-05 10-Apr 02 57 ± 1/4 4		
Acetone	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.16
Chloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.15
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	100	120
Cis 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	81	81
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	1.1
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	0.18
Trichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	5	1.6
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

RCL = Below Detection Limit

MCL = Maximum Contaminant Level Primary Drinking

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value

presence of the compound was

confirmed but less than the reported DL

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quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses	Sample Identification Number Laboratory & Lab Sample ID No Date Sample Collected Sample Depth Interval	DL	Units	MW 7B-Y3S1				MW 7B-Y3S2				MW 7B-Y4S1				MW 7B-Y4S2				Maximum Contaminant Level (MCL) Primary Drinking Water Standard	USEPA Region III RBCs Tap Water (October 7, 1999)
				0110126-28 05-Oct-01 85-87	0110126-27 05-Oct-01 90-92	0110126-26 03-Oct-01 95-97	0110126-25 03-Oct-01 100-102	0204275-08 10-Apr-02 84-5-06.5	0204275-07 10-Apr-02 89-5-91.5	0204275-06 10-Apr-02 94-5-06.5	0204275-05 10-Apr-02 99-5-101.5	0210053-07 01-Oct-02 84-5-06.5	0210054-08 01-Oct-02 89-5-91.5	0210054-09 01-Oct-02 94-5-06.5	0210054-10 01-Oct-02 99-5-101.5	0210054-11 01-Oct-02 99-5-101.5	0210054-12 01-Oct-02 99-5-101.5	0210054-13 01-Oct-02 99-5-101.5	0210054-14 01-Oct-02 99-5-101.5		
TCL Volatile Organics (Method 8260B)																					
Acetone	97.9	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	13.2	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.16
Chlorobenzene	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.15
Chloromethane	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.8
1,1 Dichloroethane	1.02	1	ug/L	0.41 J	0.43 J	0.40 J	1.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
Trans 1,2 Dichloroethene	30.1	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	0.044
Cis 1,2 Dichloroethene	ND	1	ug/L	0.75 J	0.86 J	0.59 J	37.6	17.4	16.4	18.8	18.5	19.8	22.6	23.5	23.8	23.8	23.8	23.8	23.8	100	120
Methylene Chloride	2.52	1	ug/L	0.82 J	0.86 J	0.57 J	ND	0.88 J	ND	ND	ND	5.34 J	8.87 J	10.7	7.02 J	7.02 J	7.02 J	7.02 J	7.02 J	70	61
1,1,2,2-Tetrachloroethane	3.34	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,2,2,2-Tetrachloroethane	14	1	ug/L	6.28	6.85	6.53	16.6	3.38	3.58	6.96	6.64	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Toluene	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.1
1,2,4-Trichlorobenzene	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,1,1-Trichloroethane	ND	1	ug/L	0.35 J	0.36 J	0.35 J	0.60 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,2-Trichloroethane	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	540
Trichloroethene	9.6	1	ug/L	8.8	10.8	8.27	11.9	9	6.05	6.87	5.79	37.8	67.6	68.4	56.6	56.6	56.6	56.6	56.6	5	0.19
Vinyl Chloride	ND	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BOL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard yet = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

C = Concentration exceeds the established method call

bracket range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number			MW 80-Y3S1	MW 80-Y3S2		MW 80-Y4S1		MW 80-Y4S2		Maximum	USEPA Region III
Laboratory & Lab Sample ID No			0102558-02	0110129-02	0110129-03	0204275-11	0204275-12	0210054-83	0210054-84	Contaminant Level	RBCs-Tap Water
Date Sample Collected			18-Feb-01	03-Oct-01	03-Oct-01	10-Apr-02	10-Apr-02	01-Oct-02	01-Oct-02	(MCL)-Primary	(October 7, 1999)
Sample Depth Interval			NA	61.2-83.2	85.2-87.2	81.3-83.3	84.8-86.8	81.3-83.3	84.8-86.8	Drinking Water	
										Standard	
Laboratory Analyses			DL	Units							
TCL Volatile Organics (Method 8260B)											
Aroclor	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	ND	ND	ND	ND	ND	ND	1.13	NS	1000
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	0.18
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	ND	1.07	ND	ND	ND	ND	1.07	NS	0.15
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	100	120
Cis 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	70	61
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	1.1
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	0.19
Trichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	5	1.6
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BCL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equivalent blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method ca-

bration range but is within instrument working range

TABLE 1
Semi Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number			MW 95-Y3S1		MW 95-Y3S2		MW 95-Y4S1		MW 95-Y4S2		Maximum Contaminant Level (MCL)-Primary Drinking Water Standard	USEPA Region II: RBCs-Tap Water (October 7, 1999)			
Laboratory & Lab Sample ID No			0102404-03	0110129-09	0110129-10	0110129-11	020427S-14	020427S-15	020427S-16	020427S-17	0210054-65	0210054-66	0210054-67	0210054-68	
Date Sample Collected			14 Feb-01	03-Oct-01	03-Oct-01	03-Oct-01	10-Apr-02	10-Apr-02	10-Apr-02	10-Apr-02	01-Oct-02	01-Oct-02	01-Oct-02	01-Oct-02	
Sample Depth Interval			NA	46 5-48.5	51 5-53.5	57 5-59.5	41 3-43.3	46 3-48.3	51 3-53.3	56 3-58.3	41 3-43.3	46 3-48.3	51 3-53.3	56 3-58.3	
Laboratory Analyses			DL	Units											
TCL Volatile Organics (Method 8260B)															
Acetone	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.32
Bromochloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.16
Chlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	110
Chloroform	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.15
Chloromethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	3.6
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	120
Cis 1,2 Dichloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	61
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	4.1
1,1,2,2 Tetra chloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.053
Tetrachloroethene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.1
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	750
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	70	190
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	0.19
Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	1.6
Vinyl Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	0.019

Only compounds detected are listed
ug/L = micrograms per liter
DL = Detection Limit
TCL = Target Compound List
BDL = Below Detection Limit
MCL = Maximum Contaminant Level
Water Standards
RBCs = Risk Based Contaminants
NS = no standard NP = not performed
NA = not available

B = Analyte detected in associated method and/or equipment blank
J = Estimated value presence of the compound was confirmed but less than the reported DL
J' = estimated value quality control recoveries outside acceptance ranges
E = Concentration exceeds the established method calibration range but is within instrument working range

TABLE 1
Semi Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No		MW 128 Y452 0213054-69		USEPA Region III RBCs Tap Water	
Date Sample Collected		01 Oct-02		Maximum (MCL)-Primary Drinking Water Standard	
Sample Depth Interval					
Laboratory Analyses	DL	Units			
TCL Volatile Organics (Method 8260B)					
Acetone	1	ug/L	ND	NS	6100
Benzene	1	ug/L	ND	5	0.32
Bromochloromethane	1	ug/L	ND	NS	0.17
Carbon Disulfide	1	ug/L	0.84 J	NS	1000
Carbon Tetrachloride	1	ug/L	ND	5	0.16
Chlorobenzene	1	ug/L	ND	100	110
Chloroform	1	ug/L	ND	NS	0.15
Chloromethane	1	ug/L	ND	NS	3.6
1,1 Dichloroethane	1	ug/L	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	5	0.12
1,1,1 Trichloroethane	1	ug/L	ND	7	0.044
Trans 1,2 Dichloroethane	1	ug/L	ND	100	120
Cis 1,2 Dichloroethane	1	ug/L	ND	70	61
Methylene Chloride	1	ug/L	7.10 B	NS	4.1
1,1,2,2 Tetrachloroethane	1	ug/L	ND	NS	0.053
Tetrachloroethane	1	ug/L	ND	5	1.1
Toluene	1	ug/L	ND	1000	750
1,2,4 Trichlorobenzene	1	ug/L	ND	70	190
1,1,1 Trichloroethane	1	ug/L	ND	200	540
1,1,2 Trichloroethane	1	ug/L	ND	5	0.19
Trichloroethane	1	ug/L	ND	5	1.6
Vinyl Chloride	1	ug/L	ND	2	0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BCL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard; NP = not performed

NA = not available

B = Analyte detected in associated method and/or equipment blank

J = Estimated value

confirmed but less than the reported DL

J' = estimated value quality control recoveries outside acceptance ranges

E = Concentration exceeds the established method calibration range but is within instrument working range

TABLE 1
Semi-Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Laboratory Analyses	DL	Units	MW 127 Y4S2		Maximum Contaminant Level (MCL) Primary Drinking Water Standard	USEPA Region III RBCs Tap Water (October 7 1999)
			02/00/94 70	02/00/94 71		
Sample Identification Number						
Laboratory & Lab Sample ID No						
Date Sample Collected			01-Oct-02	01-Oct-02		
Sample Depth Interval						
TCL Volatile Organics (Method 8260B)						
Acetone	1	ug/L	ND	ND	NS	6100
Benzene	1	ug/L	ND	ND	5	0.32
Bromochloromethane	1	ug/L	ND	ND	NS	0.17
Carbon Disulfide	1	ug/L	1.36	ND	NS	1000
Carbon Tetrachloride	1	ug/L	ND	ND	5	0.16
Chlorobenzene	1	ug/L	ND	ND	100	110
Chloroform	1	ug/L	ND	ND	NS	0.15
Chloromethane	1	ug/L	ND	ND	NS	3.6
1,1 Dichloroethane	1	ug/L	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	5	0.12
1,1 Dichloroethene	1	ug/L	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	ND	ND	100	120
Cis 1,2 Dichloroethene	1	ug/L	ND	ND	70	61
Methylene Chloride	1	ug/L	ND	8.6 B	NS	4.1
1,1,2 Trichloroethane	1	ug/L	ND	ND	NS	0.053
Tetrachloroethane	1	ug/L	ND	ND	5	1.1
Toluene	1	ug/L	ND	ND	1000	750
1,2,4 Trichlorobenzene	1	ug/L	ND	ND	70	190
1,1,1 Trichloroethene	1	ug/L	ND	ND	200	540
1,1,2 Trichloroethene	1	ug/L	ND	ND	5	0.19
Trichloroethene	1	ug/L	ND	ND	5	1.6
Vinyl Chloride	1	ug/L	ND	ND	2	0.019

Only compounds detected are listed
 ug/L = micrograms per liter
 DL = Detection Limit
 TCL = Target Compound List
 BDL = Below Detection Limit
 MCL = Maximum Contaminant Level
 WQS = Water Quality Standards
 RBCs = Risk Based Contaminants
 NS = no standard *P = not performed
 NA = not available

B = Analyte detected in associated method and/or equipment blank
 J = Estimated value presence of the compound was confirmed but less than the reported DL
 J* = estimated value quality control recoveries outside acceptance ranges
 E = Concentration exceeds the established method calibration range but is within instrument working range

TABLE 1
Semi Annual Analytical Results for TCL Volatile Organics
on Sampled Monitoring Wells

Sample Identification Number Laboratory & Lab Sample ID No		P2-02 Y4S1 0204275-18 10-Apr-02	P2-02 Y4S2 0210054-73 02-Oct-02	Maximum Contaminant Level (MCL) Primary Drinking Water Standard	USEPA Region II RBCs Tap Water (October 7, 1999)
Data Sample Collected Sample Depth Interval		NA	NA		
Laboratory Analyses	DL	Units			
TCL Volatile Organics (Method 8260B)					
Acetone	1	ug/L	27.9	NO	NS
Benzene	1	ug/L	NO	NO	5
Bromochloromethane	1	ug/L	NO	NO	NS
Carbon Disulfide	1	ug/L	NO	NO	NS
Carbon Tetrachloride	1	ug/L	NO	NO	5
Chlorobenzene	1	ug/L	NO	NO	100
Chloroform	1	ug/L	NO	NO	NS
Chloroethane	1	ug/L	NO	NO	3.6
1,1 Dichloroethane	1	ug/L	2.74	NO	NS
1,2 Dichloroethane	1	ug/L	1	NO	5
1,1 Dichloroethene	1	ug/L	112	1.71	7
Trans 1,2 Dichloroethene	1	ug/L	NO	NO	100
Cis 1,2 Dichloroethene	1	ug/L	NO	NO	70
Methylene Chloride	1	ug/L	NO	NO	NS
1,1,2,2 Tetrachloroethane	1	ug/L	NO	NO	NS
1,1,2,2 Tetrachloroethene	1	ug/L	NO	NO	0.053
Toluene	1	ug/L	NO	NO	1.1
1,2,4 Trichlorobenzene	1	ug/L	NO	NO	1000
1,1,1 Trichloroethane	1	ug/L	1.27	NO	70
1,1,2 Trichloroethane	1	ug/L	NO	NO	200
Trichloroethene	1	ug/L	24.4	NO	5
Vinyl Chloride	1	ug/L	NO	NO	5
					0.019

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method cal-

ibration range but is within instrument working range

TABLE 2
Semi-Annual Analytical Results for TCL Volatile Organics
on System Recovery Wells

Sample Identification Number Laboratory & Lab Sample ID No		RW 1A Y3S1	RW 1A Y3S2	RW 1A Y4S1	RW 1A Y4S2	RW 1B Y3S1	RW 1B Y3S2	RW 1B Y4S1	RW 1B Y4S2	Maximum Contaminant Level (MCL)-Primary		USEPA Region III RBCs Tap Water
Date Sample Collected												
Laboratory Analyses												
DL												
TCL Volatile Organics (Method 8260B)												
Acetone	20	NP	ND	ND	ND	NP	ND	ND	ND	NS	NS	6100
2 Butanone (MEK)	20	NP	ND	ND	ND	NP	ND	ND	ND	NS	NS	1900
Carbon Disulfide	10	NP	88.80	ND	ND	NP	ND	ND	ND	NS	NS	1000
Carbon Tetrachloride	1	NP	43.80	44.50	65.30	NP	18.50	22.50	27.90	5	5	0.16
Chloroform	1	NP	889.00	700.00	1120.00	NP	29.80	26.40	20.80	NS	NS	0.15
1,1 Dichloroethane	1	NP	ND	ND	ND	NP	ND	ND	ND	NS	NS	800
1,2 Dichloroethane	1	NP	ND	1.23	ND	NP	ND	ND	ND	5	5	0.12
1,1,1 Trichloroethane	1	NP	ND	ND	ND	NP	ND	ND	ND	7	7	0.044
Trans 1,2 Dichloroethene	1	NP	4.80 J	5.41	6.35 J	NP	1.76	2.48	2.45	100	100	120
Methylene Chloride	1	NP	ND	ND	71.2.8	NP	ND	ND	6.94.8	NS	NS	4.1
Cis 1,2 Dichloroethene	1	NP	12.6 J	12.10	17.60	NP	9.46	10.70	12.40	70	70	51
1,1,2 Trichloroethane	1	NP	226.00	156.00	187.00	NP	1.30	ND	1.43	NS	NS	0.053
Tetrachloroethene	1	NP	11.50	13.30	12.30	NP	2.01	2.99	2.05	5	5	1.1
1,1,1 Trichloroethane	1	NP	ND	ND	ND	NP	ND	ND	ND	200	200	540
1,1,2 Trichloroethane	1	NP	5.05 J	3.41	3.32 J	NP	0.43 J	ND	0.66 J	5	5	0.19
Trichloroethene	1	NP	265.00	289.00	294.00	NP	25.60	34.80	24.10	5	5	1.8

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level Primary Drinking

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value - presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method

calibration range but is within the working range of the

instrument

TABLE 2
Semi-Annual Analytical Results for TCL Volatile Organics
on System Recovery Wells

Laboratory Analyses	Sample Identification Number		Date Sample Collected		DL		Units		RW-01 Y3S1	RW 01 Y3S2	RW-01 Y4S1	RW 01 Y4S2	RW-02 Y3S1	RW 02 Y3S2	RW 02 Y4S1	RW 02 Y4S2	Maximum Contaminant Level (MCL)-Primary	USEPA Region III RBCs Tap Water
	Laboratory & Lab Sample ID No																	
TCL Volatile Organics (Method 8260B)																		
Acetone	20	ug/L																6100
2 Butanone (MEK)	20	ug/L																1900
Carbon Disulfide	10	ug/L																1000
Carbon Tetrachloride	1	ug/L																0.16
Chloroform	1	ug/L																0.15
1,1 Dichloroethane	1	ug/L																800
1,2 Dichloroethane	1	ug/L																0.12
1,1 Dichloroethene	1	ug/L																0.044
Trans 1,2 Dichloroethene	1	ug/L																120
Methylene Chloride	1	ug/L																4.1
Cis 1,2 Dichloroethene	1	ug/L																81
1,1,2 Trichloroethene	1	ug/L																0.053
Tetrachloroethene	1	ug/L																1.1
1,1,1 Trichloroethane	1	ug/L																540
1,1,2 Trichloroethane	1	ug/L																0.19
Trichloroethene	1	ug/L																1.6

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level Primary Drinking

Water Standards

RBCs = Risk Based Contaminant's

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value - presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method

calibration range but is within the working range of the

instrument

TABLE 2
Semi-Annual Analytical Results for TCL Volatile Organics
on System Recovery Wells

Sample Identification Number Laboratory & Lab Sample ID No		Date Sample Collected		DL		Units		RW 03-Y3S1	RW 03-Y3S2	RW 03-Y4S1	RW 03-Y4S2	RW 04-Y3S1	RW 04-Y3S2	RW 04-Y3S1	RW 04-Y3S2	Maximum Contaminant Level (MCL)-Primary	USEPA Region III RBCs Tap Water
Laboratory Analyses		Date Sample Collected		DL		Units		RW 03-Y3S1	RW 03-Y3S2	RW 03-Y4S1	RW 03-Y4S2	RW 04-Y3S1	RW 04-Y3S2	RW 04-Y3S1	RW 04-Y3S2	Maximum Contaminant Level (MCL)-Primary	USEPA Region III RBCs Tap Water
TCL Volatile Organics (Method 8260B)																	
Acetone	20	ug/L						NP	ND	ND	ND	ND	ND	ND	ND	NS	6100
2 Butanone (MEK)	20	ug/L						NP	ND	ND	ND	ND	ND	ND	ND	NS	1900
Carbon Disulfide	10	ug/L						NP	ND	ND	ND	ND	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L						NP	10.40	9.75	15.20	8.19	3.12 J	1.70	1.77	5	0.16
Chloroform	1	ug/L						NP	3.19	2.43	3.97	3.60	ND	2.23	3.33	NS	0.15
1,1 Dichloroethane	1	ug/L						NP	ND	ND	ND	ND	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L						NP	ND	ND	ND	ND	ND	ND	ND	5	0.12
1,1-Dichlorobenzene	1	ug/L						NP	ND	ND	ND	ND	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L						NP	2.09	2.47	2.56	5.90	7.44 J	7.01	8.11	100	120
Methylene Chloride	1	ug/L						NP	ND	ND	8.68 B	ND	ND	ND	0.24 B	NS	4.1
Cis 1,2 Dichloroethene	1	ug/L						NP	18.50	15.40	16.90	29.60	29.00	26.80	18.80	70	61
1,1,2 Trichloroethane	1	ug/L						NP	22.10	4.35	3.61	20.60	ND	37.50	669.00	NS	0.053
Tetrachloroethene	1	ug/L						NP	1.09	1.30	0.92 J	4.96	7.67	6.21	5.73	5	1.1
1,1,1 Trichloroethane	1	ug/L						NP	ND	ND	ND	ND	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	ug/L						NP	0.90 J	ND	ND	ND	ND	3.33	5.25	5	0.19
Trichloroethene	1	ug/L						NP	75.80	87.20	70.40	337.00	717.00	665.00	1050.00	5	1.6

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BOL = Below Detection Limit

MCL = Maximum Contaminant Level Primary Drinking

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value - quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method

calibration range but is within the working range of the

instrument

TABLE 2
Semi-Annual Analytical Results for TCL Volatile Organics
on System Recovery Wells

Sample Identification Number Laboratory & Lab Sample ID No		Date Sample Collected		DL		Units		RW-05-Y3S1 0102451-02 15-Feb-01	RW-05-Y3S2 0110528-07 18-Oct-01	RW-05-Y4S1 0204276-01 10-Apr-02	RW-05-Y4S2 0210054-80 1-Oct-02	RW-06-Y3S1 NP	RW-06-Y3S2 0110528-09 18-Oct-01	RW-06-Y4S1 0204323-01 11-Apr-02	RW-06-Y4S2 0210054-81 1-Oct-02	Maximum Contaminant Level (MCL)-Primary	USEPA Region III RBCs Tap Water
Laboratory Analyses																	
TCL Volatile Organics (Method 8260B)																	
Acetone	20	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	ND	NS	6100
2 Butanone (MEK)	20	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	45.60	ND	NS	1900
Carbon Disulfide	10	ug/L	ND	186.00	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	ND	5	0.16
Chloroform	1	ug/L	1.00	ND	1.24	ND	ND	ND	ND	ND	ND	NP	293.00	1.37	3.15	NS	0.15
1,1 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	ND	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	ND	5	0.12
1,1,1 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	ND	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	10.10	9.28 J	5.08	2.30	ND	ND	ND	ND	ND	NP	2.63	0.76 J	3.98	100	120
Methylene Chloride	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	6.76 B	NS	4.1
Cis 1,2 Dichloroethene	1	ug/L	36.10	32.80	15.80	12.80	ND	ND	ND	ND	ND	NP	6.64	1.39	10.00	70	61
1,1,2,2 Tetrachloroethane	1	ug/L	381.00	1710.00	196.00	47.80	ND	ND	ND	ND	ND	NP	ND	ND	2.00	NS	0.053
Tetrachloroethene	1	ug/L	6.19	6.88 J	5.89	4.36	ND	ND	ND	ND	ND	NP	20.40	28.70	32.60	5	1.1
1,1,1-Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	ND	200	540
1,1,2 Trichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	NP	ND	ND	ND	5	0.19
Trichloroethene	1	ug/L	407.00	757.00	400.00	142.00	ND	ND	ND	ND	ND	NP	34.50	5.42	27.20	5	1.6

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level Primary Drinking

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in a associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method

calibration range but is within the working range of the

instrument

TABLE 2
Semi-Annual Analytical Results for TCL Volatile Organics
on System Recovery Wells

Sample Identification Number Laboratory & Lab Sample ID No	RW-07-Y3S1	RW-07-Y3S2	RW-07-Y4S1	RW-07-Y4S2	RW-07-Y4S2	RW-08-Y3S1	RW-08-Y3S2	RW-08-Y4S1	RW-08-Y4S2	Maximum Contaminant Level (MCL) Primary	USEPA Region III RBCs Tap Water
	NP	NP	NP	NP	NP	NP	NP	NP	NP		
Laboratory Analyses	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL	DL
TCL Volatile Organics (Method 8260B)											
Acetone	20	20	20	20	20	20	20	20	20	NS	6100
2 Butanone (MEK)	20	20	20	20	20	20	20	20	20	NS	1900
Carbon Disulfide	10	10	10	10	10	10	10	10	10	NS	1000
Carbon Tetrachloride	1	1	1	1	1	1	1	1	1	5	0.16
Chloroform	1	1	1	1	1	1	1	1	1	NS	0.15
1,1 Dichloroethane	1	1	1	1	1	1	1	1	1	NS	800
1,2 Dichloroethane	1	1	1	1	1	1	1	1	1	5	0.12
1,1,1-Trichloroethane	1	1	1	1	1	1	1	1	1	7	0.044
Trans 1,2 Dichloroethene	1	1	1	1	1	1	1	1	1	100	120
Methylene Chloride	1	1	1	1	1	1	1	1	1	NS	4.1
Cis 1,2 Dichloroethene	1	1	1	1	1	1	1	1	1	70	61
1,1,2,2-Tetrachloroethane	1	1	1	1	1	1	1	1	1	NS	0.053
Tetrachloroethene	1	1	1	1	1	1	1	1	1	5	1.1
1,1,1-Trichloroethane	1	1	1	1	1	1	1	1	1	200	540
1,1,2-Trichloroethane	1	1	1	1	1	1	1	1	1	5	0.19
Trichloroethene	1	1	1	1	1	1	1	1	1	5	1.6

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BDL = Below Detection Limit

MCL = Maximum Contaminant Level Primary Drinking

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or equipment blank

J = Estimated value - presence of the compound was confirmed but less than the reported DL

J* = estimated value - quality control recoveries outside acceptance ranges

E = Concentration exceeds the established method calibration range but is within the working range of the instrument

TABLE 2
Semi-Annual Analytical Results for TCL Volatile Organics
on System Recovery Wells

Sample Identification Number Laboratory & Lab Sample ID No	RW-09-Y3S1 0102451-04 15-Feb-01	RW-09-Y3S2 0110528-12 18-Oct-01	RW-09-Y4S1 0204276-04 10-Apr-02	RW-09-Y4S2 0210054-04 1-Oct-02	Maximum Contaminant Level (MCL)-Primary	USEPA Region III RBCs Tap Water
Laboratory Analyses	DL	Units				
TCL Volatile Organics (Method 8260B)						
Acetone	20	ug/L	ND	ND	NS	6100
2-Butanone (MEK)	20	ug/L	ND	ND	NS	1900
Carbon Disulfide	10	ug/L	ND	ND	NS	1000
Carbon Tetrachloride	1	ug/L	1.00	1.23	5	0.16
Chloroform	1	ug/L	13.70	12.10	NS	0.15
1,1 Dichloroethane	1	ug/L	1.49	1.21	NS	800
1,2 Dichloroethane	1	ug/L	ND	ND	5	0.12
1,1 Dichloroethene	1	ug/L	46.10	32.40	7	0.044
Trans 1,2 Dichloroethene	1	ug/L	1.42	2.41	100	120
Methylene Chloride	1	ug/L	ND	ND	NS	4.1
Cis 1,2 Dichloroethene	1	ug/L	4.74	7.23	70	61
1,1,2,2 Tetrachloroethane	1	ug/L	3.01	5.07	NS	0.053
Tetrachloroethene	1	ug/L	38.60	42.90	5	1.1
1,1,1 Trichloroethane	1	ug/L	1.39	1.28	200	540
1,1,2 Trichloroethane	1	ug/L	ND	ND	5	0.19
Trichloroethene	1	ug/L	22.40	42.20	5	1.8

Only compounds detected are listed

ug/L = micrograms per liter

DL = Detection Limit

TCL = Target Compound List

BOL = Below Detection Limit

MCL = Maximum Contaminant Level Primary Drinking

Water Standards

RBCs = Risk Based Contaminants

NS = no standard NP = not performed

NA = not available

B = Analyte detected in associated method and/or

equipment blank

J = Estimated value presence of the compound was

confirmed but less than the reported DL

J* = estimated value - quality control recoveries outside

acceptance ranges

E = Concentration exceeds the established method

calibration range but is within the working range of the

instrument

TABLE 3
Summary of Analytical Results for Total Effluent (through November 2002) of the Groundwater Recovery System
Dunn Field, Memphis Depot, Tennessee

Sample Identification Number	ST EFF-01	ST EFF-02*	ST EFF-03	ST EFF-04	ST EFF-04A (Duplicate)	ST EFF-05	ST EFF-06	City of Memphis Industrial Wastewater Discharge Max. Levels
Laboratory ID No	9810617-01	9810619-01	9811293-01	9811478-01	9811478-04	9811705-01	9812045-01	
Total System Effluent Sample Description	Week 1 of System Startup Testing	Week 2 of System Startup Testing	Week 1 of System Operation (O&M)	Week 2 of System Operation (O&M)	Week 2 of System Operation (O&M)	Week 3 of System Operation (O&M)	Week 4 of System Operation (O&M)	
Data Effluent Sample Collected	19-Oct-98	26-Oct-98	9-Nov-98	16-Nov-98	23-Nov-98	30-Nov-98		
Instantaneous Flow Rate	230 GPM/331,200 GPD	155 GPM/233,230 GPD	198 GPM/286,560 GPD	168 GPM/244,512 GPD	158 GPM/228,872 GPD	145 GPM/208,800 GPD		56,000 GPD
Totalized Flow	1,382,400 GAL	3,408,480 GAL	5,976,549 GAL	7,748,690 GAL	9,343,370 GAL	10,969,840 GAL		
LABORATORY ANALYSES								Monthly Ave./One City Max
pH (Method 150.1)	5.6	5.9	5.8	5.6	5.9	5.6	5.8	5.5 to 10.0
Aluminum (EPA 200 Series)								mg/L
Aluminum (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	1/2
Arsenic (Method 208.2)	ND	ND	ND	ND	ND	ND	ND	0.04/0.1
Barium (Method 200.7)	0.104	0.107	0.109	0.118	0.117	0.112	0.124	NS
Cadmium (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	0.01/0.02
Calcium (Method 200.7)	23	21.6	24.7	25.3	25	24.8	26.5	NS
Chromium (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	0.2/0.4
Copper (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	0.2/0.4
Iron (Method 200.7)	0.07	0.048	0.022	0.019	0.019	0.036	0.01	0.2/0.4
Lead (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	0.15/0.3
Magnesium (Method 200.7)	11.7	11.3	12.6	13	12.8	12.5	13	NS
Manganese (Method 200.7)	ND	ND	ND	0.015	0.015	0.014	0.048	NS
Mercury (Method 245.1)	ND	ND	ND	ND	ND	ND	ND	0.001/0.002
Nickel (Method 200.7)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.1/0.3
Potassium (Method 200.7)	0.910	0.781	0.883	0.975	1.15	0.9	0.703	NS
Sodium (Method 200.7)	27.8	28.3	27.7	27.9	28.7	26.6	29.1	NS
Zinc (Method 200.7)	0.047	0.129	0.085	0.088	0.095	0.063	0.062	0.3/1.0
TCL Volatile Organics (Method 8260B)								ug/L
Carbon Tetrachloride	2.9	4.3	3.06	3.27	3.38	4.07	3.22	20/40
Chloroform	13.6	12.9	14.9	18.1	20.9	20.6	16.4	20/40
1,1 Dichloroethane	ND	ND	ND	ND	ND	ND	ND	NS
1,1 Dichloroethene	11.6	5.42	9.99	13.9	15.6	20.3	14.6	50/100
Cis 1,2 Dichloroethene	29.2	41.8	30	33.3	36.8	37.3	32.8	50/100
Trans 1,2 Dichloroethene	5.96	9.27	6.88	7.47	7.92	8.42	7.47	50/100
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	10/20
1,1,2,2 Tetrachloroethane	87.1	159	234	234	257	272	178	500/1000
Tetrachloroethene	25.7	22.8	28.9	30	29.7	34.4	25.6	60/120
Toluene	ND	ND	ND	ND	ND	ND	ND	20/40
1,1,1 Trichloroethane	ND	ND	ND	ND	ND	1	ND	10/20
1,1,2 Trichloroethane	1.81	2.82	1.59	1.48	1.5	1.3	1.1	50/100
Trichloroethene	108	228	195	225	220	217	180	400/800
TCL Semi-Volatile Organics (Method 8210C)								ug/L
Bis(2 ethylhexylphthalate)	ND	23.88	ND	ND	ND	28.8	ND	10/20
D-n butyl Phthalate	91.2	2.51	ND	ND	ND	ND	ND	30/60
Naphthalene	ND	ND	ND	ND	ND	ND	ND	10/20
Phenol	ND	ND	ND	ND	ND	ND	ND	10/20

NOT: Compounds included in the table are those listed in Section C.3 and detected as per the analytical methods conducted per Section F.1 of Industrial Wastewater Discharge Agreement

All analyses performed by Environmental Testing & Consulting, Inc., Memphis, TN

* = Recovery well RW-08 was not in operation at the time of sample collection

** = Recovery well RW-08 was not in operation at the time of sample collection

*** = Recovery well RW-03 was not in operation at the time of sample collection

NS = no standard listed in the Industrial Wastewater Discharge Agreement

J = estimated value - presence of the compound was confirmed but less than the reported DL

J = estimated value - quality control/recovery outside acceptance range

ND = not detected

mg/L = milligram per liter

DL = detection limit

GPD = gallons per day

AT Flow: meter period out 03 Nov-98

91.2 = bold number indicates that value exceeds Discharge Limit Levels

B = analyte detected in uncollected method and/or equipment blank

ug/L = microgram per liter

GPD/L = gallons per minute

91.2 = bold number indicates that value exceeds Discharge Limit Levels

TABLE 3
Summary of Analytical Results for Total Effluent (through November 2002) of the Groundwater Recovery System
Dunn Field, Memphis Depot, Tennessee

Sample Identification Number	ST EFF-07*	ST EFF-07A* (Duplicate)	ST EFF-08	ST EFF-09	ST EFF HG-09A	ST EFF HG-09B	ST EFF HG-09C	City of Memphis Industrial Wastewater Discharge Max. Levels
Laboratory ID No.	8812784 01	9812784 02	8901689 01	9902864 01	9902752 01	9902754 01	9902775 01	
Total System Effluent Sample Description	Week 7 of System Operation (Q&M)							
Date Effluent Sample Collected	18-Dec-98	18-Dec-98	28-Jan-99	22-Feb-99	23-Feb-99	24-Feb-99	25-Feb-99	
Instantaneous Flow Rate	96.4' GPM/141.5' GPD	1.8' GPM/168.0' GPD	1.8' GPM/168.0' GPD	108.1' GPM/155.6' GPD	85.7' GPM/118.2' GPD	79.2' GPM/114.3' GPD	134.2' GPM/150.0' GPD	
Totalized Flow	14,448 100 GAL	20,527 972 GAL	24,668 250 GAL	24,668 250 GAL	24,817 070 GAL	24,924 750 GAL	25,017 630 GAL	
LABORATORY ANALYSES	Week 17 of System Operation (Q&M)							
pH Method 150.1)	5.8	5.8	6.5	6.1	-	-	-	mg/L 5.5 to 10.0
TAL Metals (EPA 200 Series)								
Aluminum (Method 200.7)	ND	ND	ND	ND	-	-	-	1/2
Arsenic (Method 206.2)	ND	ND	ND	ND	-	-	-	0.04 / 0.1
Barium (Method 200.7)	0.114	0.118	0.119	0.109	-	-	-	NS
Cadmium (Method 200.7)	ND	ND	ND	ND	-	-	-	0.01 / 0.02
Calcium (Method 200.7)	25.2	26.3	27.1	23.1	-	-	-	0.2 / 0.4
Chromium (Method 200.7)	ND	ND	ND	ND	-	-	-	0.2 / 0.4
Copper (Method 200.7)	ND	ND	ND	ND	-	-	-	0.2 / 0.4
Iron (Method 200.7)	0.020	0.014	0.044	0.151	-	-	-	10 / 20
Lead (Method 200.7)	ND	ND	ND	ND	-	-	-	0.15 / 0.3
Magnesium (Method 200.7)	11.9	12.4	12.5	11.3	-	-	-	NS
Manganese (Method 200.7)	0.097	0.101	0.175	0.049	-	-	-	NS
Mercury (Method 245.1)	ND	ND	ND	ND	ND	ND	ND	0.001 / 0.002
Nickel (Method 200.7)	ND	ND	ND	ND	-	-	-	0.1 / 0.3
Potassium (Method 206.7)	0.808	0.816	0.927	0.951	-	-	-	NS
Sodium (Method 200.7)	25.3	26.8	28.5	24.1	-	-	-	NS
Zinc (Method 200.7)	0.115	0.081	0.048	0.065	-	-	-	0.3 / 1.0
TCL Volatile Organics (Method 8260B)								
Carbon Tetrachloride	4.50	4.72	2.32	2.53	-	-	-	ug/L
Chloroform	10.1	10.1	9.95	6.64	-	-	-	20 / 40
1,1 Dichloroethane	ND	ND	ND	ND	-	-	-	NS
1,1 Dichloroethene	4.8	5.36	13.3	19.5	-	-	-	50 / 100
Cis 1,2 Dichloroethene	43.4	46.7	34	36.2	-	-	-	50 / 100
Trans 1,2 Dichloroethene	9.78	10.4	7.85	11	-	-	-	50 / 100
Methylene Chloride	ND	ND	ND	ND	-	-	-	500 / 1000
1,1,2 Trichloroethane	175	188	60.1	48.8	-	-	-	60 / 120
1,1,2 Trichloroethene	11.8	13.4	17.9	16.5	-	-	-	20 / 40
Toluene	ND	ND	ND	ND	-	-	-	10 / 20
1,1,1 Trichloroethane	ND	ND	ND	ND	-	-	-	50 / 100
1,1,2 Trichloroethane	ND	ND	ND	ND	-	-	-	400 / 800
Trichloroethene	183	196	116	144	-	-	-	ug/L
TCL Semi-Volatile Organics (Method 8270C)								
Bis(2-ethylhexyl)phthalate	11.8	11.8	ND	ND	-	-	-	10 / 20
Di-n-butyl Phthalate	ND	ND	ND	ND	-	-	-	30 / 60
Naphthalene	ND	ND	ND	ND	-	-	-	10 / 20
Phenol	ND	ND	ND	ND	-	-	-	10 / 20

NOTE: Compounds included in the table are those listed in Section D.3 and detected as part of the analytical methods conducted per Section 7.1 of Industrial Wastewater Discharge Agreement.

All analyses performed by Environmental Testing & Consulting, Inc., Memphis, TN.

* Recovery well RW-08 was not in operation at the time of sample collection.

** Recovery well RW-08 was not in operation at the time of sample collection.

*** Recovery well RW-03 was not in operation at the time of sample collection.

NS = no estimate listed in the Industrial Wastewater Discharge Agreement.

J = estimated value - presence of the compound was confirmed but less than the reported DL.

J = estimated value - quality control recoveries outside acceptance range.

ND = not detected.

mg/L = milligrams per liter.

DL = detection limit.

GPD = gallons per day.

A = Effluent meter started out 03 Nov 99.

B = analyte detected in unanalyzed method and/or equipment blank.

ug/L = micrograms per liter.

GPM = gallons per minute.

81.2 = bold number indicates that value exceeds Discharge Max. Levels.

TABLE 3
Summary of Analytical Results for Total Effluent (through November 2002) of the Groundwater Recovery System
Dunn Field, Memphis Depot, Tennessee

Sample Identification Number	ST EFF-10	ST EFF-11	ST INF-11 (Duplicate)	ST EFF-12	ST EFF-13	ST EFF-14	ST INF-14 (Duplicate)	City of Memphis
Laboratory ID No	9904750-01	9904750-01	9904750-02	9905635-01	9907002-01	9907535-01	9907535-02	Industrial Wastewater
Total System Effluent Sample Description	Week 21 of System Operation (O&M) 20-Mar-99	Week 28 of System Operation (O&M) 27-Apr-99	Week 30 of System Operation (O&M) 24-May-99	Week 30 of System Operation (O&M) 24-May-99	Week 35 of System Operation (O&M) 30-Jun-99	Week 38 of System Operation (O&M) 21-Jul-99		Discharge Max. Levels
Date Effluent Sample Collected	84.3 GPM/135,792 GPD	106.2 GPM/151,632 GPD	87.9 GPM/128,578 GPD	81.3 GPM/117,072 GPD	80.9 GPM/116,496 GPD			56,600 GPD
Instantaneous Flow Rate	28,964,822 GAL	32,187,280 GAL	36,220,116 GAL	40,550,602 GAL	42,647,212 GAL			
Totalized Flow								
LABORATORY ANALYSES	OL	Units						Monthly Avg. One Day Max
pH (Method 150.1)	5.7		8.2	6.0	5.9	5.8	5.9	mg/L
TAL Metals (EPA 200 Series)								1/2
Aluminum (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	0.04/0.1
Arsenic (Method 206.2)	ND	ND	ND	ND	ND	ND	ND	NS
Barium (Method 200.7)	0.106	0.108	0.114	0.11	0.107	0.101	0.099	NS
Cadmium (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	0.01/0.02
Calcium (Method 200.7)	22.7	23	22.8	21.1	21.4	21	21.2	NS
Chromium (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	0.2/0.4
Copper (Method 200.7)	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.2/0.4
Iron (Method 200.7)	0.034	0.025	0.034	0.012	0.018	0.016	0.011	10/20
Lead (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	0.15/0.3
Magnesium (Method 200.7)	11.3	11.6	11.7	10.6	10.5	10.6	10.8	NS
Manganese (Method 200.7)	0.04	0.029	0.03	0.031	0.027	0.014	0.029	NS
Mercury (Method 245.1)	ND	ND	ND	ND	ND	ND	ND	0.001/0.002
Nickel (Method 200.7)	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.1/0.3
Potassium (Method 200.7)	0.861	0.728	0.859	0.844	0.767	0.835	0.606	NS
Sodium (Method 200.7)	23.8	22.9	24.1	24.1	23.8	22.8	22.4	NS
Zinc (Method 200.7)	0.069	0.04	0.045	0.047	0.026	0.028	0.03	0.3/1.0
TCL Volatile Organics (Method 8270C)								ug/L
Carbon Tetrachloride	2.17	1.47	1.61	2.25	2.29	1.46	1.29	20/40
Chloroform	5.59	6.63	7.15	4.54	9.1	8.46	7.93	20/40
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	NS
1,1,1-Trichloroethane	13.9	11.8	11.8	16.2	17.8	14.2	13.4	50/100
Cis-1,2-Dichloroethane	37	37	37.2	42.6	48.3	34.1	32.5	50/100
Trans-1,2-Dichloroethane	10.8	9.77	9.7	12.0	13.7	10.1	9.66	50/100
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	10/20
1,1,2,2-Tetrachloroethane	29.3	38.9	39.2	56.1	76.4	65.1	59.6	500/1000
1,1,2,2-Tetrachloroethane	18.7	12.9	13.6	16.1	17	14.6	13.1	60/120
Toluene	ND	ND	ND	ND	1.58	1	1	20/40
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	10/20
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	50/100
Trichloroethene	118	116	117	150	163	117	110	400/800
TCL Semi-Volatile Organics (Method 8270C)								ug/L
Bis(2-ethylhexyl)phthalate	24.48	ND	14.18	13.88	ND	ND	ND	10/20
Di-n-butyl phthalate	ND	ND	ND	ND	ND	ND	ND	30/60
Naphthalene	ND	ND	ND	ND	ND	ND	ND	10/20
Phenol	ND	ND	ND	ND	ND	ND	ND	10/20

NOTE: Compounds included in this table are those listed in Section D.3 and detected as part of the analytical methods conducted per Section F.1 of Industrial Wastewater Discharge Agreement.

All analyses performed by Environmental Testing & Consulting, Inc., Memphis, TN.

** Recovery well RW-08 was not in operation at the time of sample collection.

* Recovery well RW-08 was not in operation at the time of sample collection.

* Recovery well RW-03 was not in operation at the time of sample collection.

NS = no standard listed in the Industrial Wastewater Discharge Agreement.

J = estimated value. Presence of the compound was confirmed but less than the reported OL.

J = estimated value. Quality control recovery outside acceptance ranges.

ND = not detected.

mg/L = milligrams per liter.

OL = detection limit.

GPD = gallons per day.

A = Effluent meter turned out 03-Nov-99.

B = analyte detected in associated method and/or equipment blank.
 ug/L = micrograms per liter
 GPM = gallons per minute
 91.2 = bold number indicates that value exceeds Discharge Max. Levels

TABLE 3
Summary of Analytical Results for Total Effluent (through November 2002) of the Groundwater Recovery System
Dunn Field, Memphis Depot, Tennessee

Sample Identification Number	ST EFF 15	ST INF 15 (Duplicate)	ST EFF 16	ST EFF 17	ST EFF-018	ST EFF-116 (Duplicate)	ST EFF-019	ST EFF 117 (Duplicate)	City of Memphis
Laboratory ID No	9908393-02	9908393-01	9908393-01	9910519-01	9911431-01	9911431-02	9912495-01	9912495-02	Industrial Wastewater
Total System Effluent Sample Description	Week 43 of System Operation (O&M)								
Date Effluent Sample Collected	23-Aug-99								
Instantaneous Flow Rate	74.7 GPM / 107,576 GPD								
Totalized Flow	46,332,590 GAL								
LABORATORY ANALYSES	Q1	Units	5.7	5.7	6.0	5.7	5.9	5.7	mg/L
pH (Method 150.7)									
Aluminum (Method 200.7)	0.06	mg/L	ND	ND	ND	ND	ND	ND	11.2
Arsenic (Method 208.2)	0.003	mg/L	ND	ND	ND	ND	ND	ND	0.04 / 0.1
Barium (Method 200.7)	0.003	mg/L	0.098	0.098	0.098	0.1	0.098	0.097	NS
Cadmium (Method 200.7)	0.005	mg/L	ND	ND	ND	ND	ND	ND	0.01 / 0.02
Calcium (Method 200.7)	0.015	mg/L	21.1	20.6	20.6	21.1	20.1	19.8	NS
Chromium (Method 200.7)	0.009	mg/L	ND	ND	ND	ND	ND	ND	0.2 / 0.4
Copper (Method 200.7)	0.008	mg/L	ND	ND	ND	0.011	ND	ND	0.2 / 0.4
Iron (Method 200.7)	0.009	mg/L	0.1	0.093	0.088	0.025	0.019	0.015	10 / 20
Lead (Method 200.7)	0.06	mg/L	ND	ND	ND	ND	ND	ND	0.15 / 0.3
Magnesium (Method 200.7)	0.04	mg/L	10.6	10.6	10.3	10.5	10.3	10.2	NS
Manganese (Method 200.7)	0.003	mg/L	0.028	0.028	0.018	0.022	0.007	0.007	0.001 / 0.002
Mercury (Method 245.1)	0.0002	mg/L	ND	ND	ND	ND	ND	ND	0.1 / 0.3
Molal (Method 200.7)	0.02	mg/L	ND	ND	ND	0.065	ND	ND	NS
Potassium (Method 200.7)	0.25	mg/L	0.798	0.79	0.852	1.16	0.84	0.764	NS
Sodium (Method 200.7)	0.05	mg/L	24.6	25.3	22.2	22.8	23.1	21.8	NS
Zinc (Method 200.7)	0.01	mg/L	0.033	ND	0.043	0.07	0.047	0.045	0.3 / 1.0
TCL Volatile Organics (Method 8280S)									
Carbon Tetrachloride	1	ug/L	1.21	1.18	2.05	1.77	1.18	0.18J	20 / 40
Chloroform	1	ug/L	9.38	9.78	9.68	7.41	8.81	6.4	20 / 40
1,1-Dichloroethane	1	ug/L	ND	ND	ND	ND	ND	ND	NS
1,1-Dichloroethene	1	ug/L	17	18	19.3	16.6	15.7	10.2	50 / 100
Ca 1,2-Dichloroethene	1	ug/L	50.2	47.1	49.6	48.9	47	32.5	50 / 100
Trans 1,2-Dichloroethene	1	ug/L	14.6	14.9	14.5	12.7	12.8	8.4	50 / 100
Methylene Chloride	5	ug/L	11.9	12.8	ND	ND	ND	ND	10 / 20
1,1,2,2-Tetrachloroethane	1/50/100	ug/L	137	131	148	120	137	144	500 / 1000
Tetrachloroethene	1	ug/L	19.8	19.8	21.8	17.9	19.1	14.2	60 / 120
Toluene	1	ug/L	ND	ND	ND	ND	ND	ND	20 / 40
1,1,1-Trichloroethane	1	ug/L	ND	ND	ND	ND	0.61J	0.43J	10 / 20
1,1,2-Trichloroethane	1	ug/L	ND	ND	ND	ND	0.88J	ND	50 / 100
Trichloroethene	1/50/100	ug/L	207	216	214	177	174	134	400 / 800
TCL Semi-Volatile Organics (Method 8279C)									
Bis(2-ethylhexyl)phthalate	10	ug/L	ND	ND	10.6B	ND	ND	13.7B	ug/L
Di-n-butyl Phthalate	5	ug/L	ND	ND	ND	ND	ND	ND	30 / 60
Naphthalene	2	ug/L	ND	ND	ND	ND	ND	ND	10 / 20
Phenol	5	ug/L	ND	ND	ND	ND	ND	ND	10 / 20

NOTE: Compounds included in this table are those listed in Section D.3 and detected as part of the analytical methods conducted per Section 7.1 of Industrial Wastewater Discharge Agreement.

All analyses performed by Environmental Testing & Consulting, Inc., Memphis, TN.

ND = Not Detected

NS = Recovery well RW-08 was not in operation at the time of sample collection

NS = Recovery well RW-08 was not in operation at the time of sample collection

NS = Recovery well RW-03 was not in operation at the time of sample collection

NS = no standard listed in the Industrial Wastewater Discharge Agreement

J = estimated value; presence of the compound was confirmed but less than the reported DL

J = estimated value; quality control measures outside acceptance ranges

ND = not detected

mg/L = milligrams per liter

DL = detection limit

GPD = gallons per day

A/C = acetone carrier added on 03-Nov-99

B = analysis detected in associated method and/or equipment blank

ug/L = micrograms per liter

GPM = gallons per minute

91.2 = bold number indicates that value exceeds Discharge Max. Levels

TABLE 3
Summary of Analytical Results for Total Effluent (through November 2002) of the Groundwater Recovery System
Dunn Field, Memphis Depot, Tennessee

Sample Identification Number	ST EFF 020	ST EFF 021	ST EFF 121 (Duplicate)	ST EFF 022	ST INF-022 (Duplicate)	ST EFF-023	ST EFF-024	EOB-024	City of Memphis
Laboratory ID No	0001188-01	0002422-01	0002422-02	0003418-01	0003418-02	0004396-01	0004400-01	0005400-02	Industrial Wastewater
Total System Effluent Sample Description	Week 83 of System Operation (O&M)	Week 88 of System Operation (O&M)	Week 88 of System Operation (O&M)	Week 72 of System Operation (O&M)	Week 72 of System Operation (O&M)	Week 76 of System Operation (O&M)	Week 80 of System Operation (O&M)	Week 80 of System Operation (O&M)	
Date Effluent Sample Collected	10-Jan-00	15-Feb-00	15-Feb-00	15-Mar-00	15-Mar-00	14-Apr-00	16-May-00	16-May-00	
Instantaneous Flow Rate	59.940 GPM/3.456 GPD	70.8 GPM/101.864 GPD	82.928 GPM/124.392 GPD	65.303 GPM/97.954 GPD	65.303 GPM/97.954 GPD	57.1 GPM/85.652 GPD	52.1 GPM/78.152 GPD	52.1 GPM/78.152 GPD	561,600 GPD
Totalized Flow	59.940 GPM/101.864 GPD	82.928 GPM/124.392 GPD	82.928 GPM/124.392 GPD	65.303 GPM/97.954 GPD	65.303 GPM/97.954 GPD	57.1 GPM/85.652 GPD	52.1 GPM/78.152 GPD	52.1 GPM/78.152 GPD	561,600 GPD
LABORATORY ANALYSES	DL	Units	DL	Units	DL	Units	DL	Units	Monthly Ave One Day Max
PH (Method 150.1)	7.0	6.1	5.4	6.1	5.8	6.1	5.9	6.0	5.5 to 10.0
ALUMINUM (EPA 200 Series)	ND	ND	ND	ND	ND	ND	ND	ND	mg/L
ARSENIC (Method 206.2)	ND	ND	ND	ND	ND	ND	ND	ND	1/2
BARIUM (Method 200.7)	0.090	0.106	0.106	0.106	0.104	0.111	ND	ND	0.04/0.1
CADMIUM (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	ND	NS
CALCIUM (Method 200.7)	19.9	21.0	21.6	21.98	21.88	21.18	21.4	20.8	0.01/0.02
CHROMIUM (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	ND	NS
COPPER (Method 200.7)	0.021	0.114	0.098	0.153J	0.029J	0.048	ND	ND	0.2/0.4
IRON (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	ND	0.2/0.4
LEAD (Method 200.7)	10.6	10.8	11.3	11.2	11	10.9	11.4	11	0.15/0.3
MAGNESIUM (Method 200.7)	ND	0.025	0.025	0.015	0.015	0.019	ND	ND	NS
MANGANESE (Method 200.7)	ND	ND	ND	ND	ND	ND	ND	ND	NS
MERCURY (Method 245.1)	ND	ND	ND	ND	ND	ND	ND	ND	0.001/0.002
NICKEL (Method 200.7)	0.752	0.816	0.874	0.852	0.809	0.826	ND	ND	0.1/0.3
POTASSIUM (Method 200.7)	22.8	22.7	23.5	24.6	23.5	22.9	23.3	22.3	NS
SODIUM (Method 200.7)	0.038	0.305	0.053	0.04	0.043	0.052	0.045	0.038	0.3/1.0
ZINC (Method 200.7)	1.14	1.71	1.67	1.56	1.5	1.63	0.87	ND	ug/L
Carbon Tetrachloride	8.34	6.51	6.56	7.76	8.36	7.80	7.59	7.76	20/40
1,1 Dichloroethane	ND	ND	ND	ND	ND	0.47J	ND	ND	20/40
1,1 Dichloroethene	ND	13.8	14.1	12.8	13.5	ND	14.8	15.6	NS
Cis 1,2 Dichloroethene	46	43.8	43.7	42.6	43.1	51.5	50.9	52.4	50/100
Trans 1,2 Dichloroethene	13.4	12.3	12.0	13.2	13.4	14.9	15.8	16.3	50/100
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	50/100
1,1,2,2 Tetrachloroethane	218	177	189	172	186	54.7	51.3	51.3	10/20
1,1,2,2 Tetrachloroethene	17.7	14.9	15.3	17.2	15.7	18	15.2	15.9	500/1000
Toluene	ND	ND	ND	ND	1.53J	ND	ND	ND	60/120
1,1,1 Trichloroethane	ND	0.48J	0.48J	0.52J	ND	ND	ND	ND	20/40
1,1,2 Trichloroethane	ND	0.80J	0.75J	0.86J	0.97J	0.96J	ND	0.78	10/20
Trichloroethene 1/50/100	189	177	179	115	121	189	124	129	50/100
TCL Semi-Volatile Organics (Method 8270C)	447.02	447.02	447.02	447.02	447.02	337.33	337.33	337.33	400/800
Bis(2-ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ug/L
D-n-butyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	10/20
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	30/60
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	10/20

NOTE: Compounds included in this table are included in Section 0.3 and detected as part of the analytical methods conducted per Section 7.1 of Industrial Wastewater Discharge Agreement.

All analyses performed by Environmental Testing & Consulting, Inc. Memphis, TN

* Recovery well RW-09 was not in operation at the time of sample collection

** Recovery well RW-08 was not in operation at the time of sample collection

*** Recovery well RW-03 was not in operation at the time of sample collection

NS = no standard listed in the Industrial Wastewater Discharge Agreement

J = estimated value. Presence of the compound was confirmed but was less than the reported DL

J* = estimated value. Quality control recoveries outside acceptance ranges

ND = not detected

mg/L = milligrams per liter

DL = detection limit

GPD = gallons per day

A = Effluent meter around and 03-Nov-99

B = analyte detected in associated method and/or equipment blank

ug/L = micrograms per liter

GPM = gallons per minute

81.2 = total number indicates that value exceeds Discharge Limit

TABLE 3
Summary of Analytical Results for Total Effluent (through November 2002) of the Groundwater Recovery System
Dunn Field, Memphis Depot, Tennessee

Sample Identification Number	ST EFF 030	ST EFF 031	EOB 031	EOB 032	ST EFF 033	ST EFF 131 (Dup)	EFF 9-14-01	EFF 12-21-01	City of Memphis Industrial Wastewater
Total System Effluent Sample Description	Week 105 of System Operation (O&M)	Week 106 of System Operation (O&M)	Week 109 of System Operation (O&M)	Week 112 of System Operation (O&M)	Week 120 of System Operation (O&M)	Week 126 of System Operation (O&M)	O&M	O&M	
Date Effluent Sample Collected	21 Nov-00	20 Dec-00	20 Dec-00	18 Jan-01	1 May-01	1 May-01	14 Sep-01	21 Dec-01	
Instantaneous Flow Rate	83 150 GPM/15 998 GPD	18 27 GPM/23 435 GPD	18 27 GPM/23 435 GPD	25 45 GPM/38 848 GPD	42 39 GPM/61 042 GPD	42 39 GPM/61 042 GPD	48 8 GPM/89 884 GPD	49 8 GPM/71 772 GPD	
Totalized Flow	83 150 760 GALLONS	83 877 244 GALLONS	83 877 244 GALLONS	85 023 474 GALLONS	85 023 474 GALLONS	85 023 474 GALLONS	101 568 586 GALLONS	105 815 578 GALLONS	
LABORATORY ANALYSES									Monthly Ave./One Day Max
pH (Method 150.1)	5.8	6.5	7.3	5.8	Not Tested	Not Tested	Not Tested	Not Tested	mg/L 5.3 to 10.0
TAL Metals (EPA 200 Series)									
Aluminum (Method 200.7)	ND	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	mg/L 1/2
Arsenic (Method 200.2)	ND	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	0.04/0.1
Barium (Method 200.7)	ND	0.117	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	NS
Cadmium (Method 200.7)	ND	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	0.01/0.02
Calcium (Method 200.7)	20.1	23.4	ND	22.5	Not Tested	Not Tested	Not Tested	Not Tested	NS
Chromium (Method 200.7)	ND	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	0.2/0.4
Copper (Method 200.7)	ND	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	0.2/0.4
Iron (Method 200.7)	0.053	0.211	0.012	0.322	Not Tested	Not Tested	Not Tested	Not Tested	0.2/0.4
Lead (Method 200.7)	ND	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	0.2/0.4
Magnesium (Method 200.7)	9.87	11.5	ND	11.8	Not Tested	Not Tested	Not Tested	Not Tested	10/20
Manganese (Method 200.7)	ND	0.009	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	0.15/0.3
Mercury (Method 245.1)	ND	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	NS
Nickel (Method 200.7)	0.026	0.078	ND	0.038	Not Tested	Not Tested	Not Tested	Not Tested	0.001/0.002
Potassium (Method 200.7)	0.839	23.1	0.978	23.1	Not Tested	Not Tested	Not Tested	Not Tested	0.1/0.3
Sodium (Method 200.7)	23.1	21.8	0.072	23.1	Not Tested	Not Tested	Not Tested	Not Tested	NS
Zinc (Method 200.7)	0.059	0.043	ND	0.121	Not Tested	Not Tested	Not Tested	Not Tested	NS
TCL Volatile Organics (Method 8260B)									0.3/1.0
Carbon Tetrachloride	1.82	ND	ND	1.42	4.73	4.82	3.39	6.11	ug/L 20/40
Chloroform	7.86	7.15	ND	14.20	23.60	26.30	34.20	52.10	20/40
1,1-Dichloroethane	ND	0.51J	ND	ND	ND	ND	ND	0.53 J	NS
1,1-Dichloroethene	16.7	14.6	ND	18.7	10.7	10.7	11.00	16.40	50/100
Cis 1,2-Dichloroethene	54.6	16.2	ND	58.2	44.7	41.1	38.80	53.60	50/100
Trans 1,2-Dichloroethene	ND	ND	ND	15.3	10.3	11.4	9.09	13.20	50/100
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	10/20
1,1,2,2-Tetrachloroethane	29.7	ND	ND	178	59.3	57.7	102.00	174.00	500/1000
Trichloroethene	18.3	20.7	ND	26	13.1	12.6	13.50	21.60	60/120
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	20/40
1,1,1-Trichloroethane	ND	0.52 J	ND	ND	ND	ND	0.32	0.65 J	10/20
1,1,2-Trichloroethane	1.05	ND	ND	2.19	1.14	0.97 J	0.96	1.32	50/100
Trichloroethene	99.3	57.6	ND	89	130	136	107.00	173.00	400/800
TCL Semivolatile Organics (Method 8260C)									ug/L
Bis(2-ethylhexyl)phthalate	10	ND	ND	ND	404.01	297.57	320.28	511.33	10/20
Di-n-butyl Phthalate	5	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	30/60
Naphthalene	2	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	10/20
Phenol	5	ND	ND	ND	Not Tested	Not Tested	Not Tested	Not Tested	10/20

NOTE: Compounds included in this table are those listed in Section D.3 and detected as part of the analytical methods conducted per Section F.1 of Industrial Wastewater Discharge Agreement.

All analyses performed by Environmental Testing & Consulting, Inc. Memphis, TN.

* Recovery and RW-08 was not in operation at the time of sample collection.

* Recovery and RW-08 was not in operation at the time of sample collection.

* Recovery and RW-03 was not in operation at the time of sample collection.

* Recovery and RW-03 was not in operation at the time of sample collection.

NS = no standard listed in the Industrial Wastewater Discharge Agreement.

J = estimated value - presence of the compound was confirmed but less than the reported DL.

DL = estimated value - quality control techniques outside acceptance range.

ND = not detected.

DL = detection limit.

mg/L = milligrams per liter.

GPM = gallons per minute.

GPD = gallons per day.

A-C Effluent meter started on 03-Nov-99.

81.2 = field number indicates that value exceeds Discharge Limit Levels.

TABLE 3
Summary of Analytical Results for Total Effluent (through November 2002) of the Groundwater Recovery System
Dunn Field, Memphis Depot, Tennessee

Sample Identification Number		EFF 2-11-02	EFF 4 10-02	EFF 4-10B-02	E-001	11 20-02/12 10-0	City of Memphis
Laboratory ID No		0202275-02	0204276-06	0204276-10	0235147-01	0211497 10/21/2002-01	Industrial Wastewater
Total System Effluent Sample Description		QAM	QAM	QAM	QAM	QAM	
Date Effluent Sample Collected		11 Feb-02	10 Apr 02	10 Apr 02	7 May-02	11/20/02 & 12/10/02	
Instantaneous Flow Rate		49.8 GPM/71.772 GPD	54.2 GPM/78.014 GPD	54.2 GPM/78.014 GPD	59 GPM/84.960 GPD	57.8 GPM/83.227 GPD	
Totalized Flow		105.815.578 GALLONS	116.800.632 GALLONS	116.800.632 GALLONS	117.495.351 GALLONS	133.775.559 GALLONS	
LABORATORY ANALYSES		DL	Units				Monthly Avg / One Day Max
pH (Method 150.1)		-	SU	Not Tested	Not Tested	Not Tested	5.5 to 10.0
TAL Metals (EPA 306 Series)			mg/L	Not Tested	Not Tested	Not Tested	mg/L
Aluminum (Method 200.7)	0.06	Not Tested	ND	ND	Not Tested	ND	1/2
Arsenic (Method 200.2)	0.003	Not Tested	ND	ND	Not Tested	ND	0.04/0.1
Barium (Method 200.7)	0.003	Not Tested	0.104	0.104	Not Tested	ND	NS
Cadmium (Method 200.7)	0.005	Not Tested	ND	ND	Not Tested	ND	0.01/0.02
Calcium (Method 200.7)	0.015	Not Tested	23.5	23.5	Not Tested	24.8	NS
Chromium (Method 200.7)	0.009	Not Tested	ND	ND	Not Tested	0.001	0.2/0.4
Copper (Method 200.7)	0.008	Not Tested	0.022	0.01	Not Tested	0.006	0.2/0.4
Iron (Method 200.7)	0.008	Not Tested	0.206	0.076	Not Tested	0.221	10/20
Lead (Method 200.7)	0.06	Not Tested	ND	ND	Not Tested	ND	0.15/0.3
Magnesium (Method 200.7)	0.04	Not Tested	11.5	11.5	Not Tested	12	NS
Manganese (Method 200.7)	0.003	Not Tested	0.025	0.025	Not Tested	0.045	NS
Mercury (Method 245.1)	0.0002	Not Tested	ND	ND	Not Tested	ND	0.001/0.002
Nickel (Method 200.7)	0.02	Not Tested	0.003	ND	Not Tested	ND	0.1/0.3
Potassium (Method 200.7)	0.25	Not Tested	0.029	0.823	Not Tested	0.814	NS
Sodium (Method 200.7)	0.05	Not Tested	21.5	21.9	Not Tested	21.7	NS
Zinc (Method 200.7)	0.01	Not Tested	0.292	0.036	Not Tested	0.036	0.3/1.0
TCL Volatile Organics (Method 8240B)			ug/L				ug/L
Carbon Tetrachloride	1	5.53	5.52	5.52	5.59	5.41	20/40
Chloroform	1	51.00	52.00	52.40	51.00	51.60	100/200*
1,1 Dichloroethane	1	0.42	ND	ND	ND	ND	NS
1,1 Dichloroethene	1	14.30	15.20	15.10	12.50	10.00	50/100
Cis 1,2 Dichloroethene	1	60.00	55.80	56.80	50.80	34.90	80/100*
Trans 1,2 Dichloroethene	1	14.60	14.70	14.60	10.20	7.28	50/100
Methylene Chloride	5	ND	ND	ND	ND	ND	10/20
1,1,2 Trichloroethane	1/50/100	124.00	104.00	95.60	73.20	69.60	500/1000
Tetrachloroethene	1	17.00	15.80	15.80	15.40	17.00	60/120
Toluene	1	ND	ND	ND	ND	ND	20/40
1,1,1 Trichloroethane	1	ND	ND	ND	ND	ND	10/20
1,1,2 Trichloroethene	1	1.48	1.73	1.56	1.29	1.32	50/100
Trichloroethene	1/50/100	179.00	156.00	155.00	133.00	109.00	400/800
TCL Semi-Volatile Organics (Method 8216C)			ug/L				ug/L
Bis(2-ethylhexyl)phthalate	10	ND	ND	ND	352.98	306.11	10/20
Di-n-butyl Phthalate	5	ND	ND	ND	Not Tested	Not Tested	30/60
Naphthalene	2	ND	ND	ND	Not Tested	Not Tested	10/20
Phenol	5	ND	ND	ND	Not Tested	Not Tested	10/20

*New limits effective 3rd quarter of 2002

TABLE 4
Groundwater Levels Corresponding
to Semi-Annually Sampled Wells

Sampled Date	MW-30 GWELEV	MW-31 GWELEV	MW-32 GWELEV	MW-33 GWELEV	MW-34 GWELEV	MW-37 GWELEV	MW-40 GWELEV	MW-42 GWELEV	MW-43 GWELEV	MW-44 GWELEV	MW-51 GWELEV	MW-54 GWELEV
3-Feb-99	228.85	221.80	223.90	227.48	163.51	NA	184.32	NA	NA	217.62	235.32	219.23
25-May-99	228.36	220.48	222.25	226.52	163.14	NA	183.52	NA	NA	216.89	235.47	217.55
27-Aug-99	227.66	217.17	222.54	226.17	154.33	NA	178.75	NA	NA	216.16	234.17	216.91
3-Nov-99	227.07	219.37	222.44	218.16	154.47	NA	175.93	NA	NA	215.45	233.18	216.20
7-Feb-00	226.42	218.92	222.04	225.60	160.39	NA	177.98	NA	NA	214.77	232.38	215.46
16-May-00	226.06	218.54	221.67	225.48	160.50	NA	178.53	NA	NA	214.17	230.48	214.81
22-Aug-00	225.89	218.22	221.38	225.20	152.61	NA	172.80	NA	NA	213.62	232.02	214.36
7-Nov-00	225.54	218.02	221.97	224.81	160.98	NA	170.35	NA	NA	213.10	231.44	213.70
13-Feb-01	225.69	218.66	221.88	225.00	158.87	154.21	172.50	216.42	155.48	213.02	231.72	213.71
11-Sep-01*	226.03	218.11	220.88	224.08	154.82	148.81	171.25	217.61	151.02	212.96	232.30	213.57
19-Mar-02*	228.32	218.89	220.00	215.68	160.83	157.10	174.66	219.31	157.99	213.46	236.61	213.96
2-Oct-02	227.87	219.60	221.22	224.25	157.12	151.87	174.85	218.37	153.47	214.12	234.39	214.78

Notes

Groundwater elevations are in feet above mean sea level (msl)

Table contains data corresponding to quarterly sampled groundwater wells only

NA = not available.

* - Diffusion Bags were installed on this date

TABLE 4
Groundwater Levels Corresponding
to Semi-Annually Sampled Wells

Sampled Date	MW-56 GWELEV	MW-57 GWELEV	MW-58 GWELEV	MW-65 GWELEV	MW-67 GWELEV	MW-68 GWELEV	MW-69 GWELEV	MW-70 GWELEV	MW-71 GWELEV	MW-76 GWELEV	MW-77 GWELEV	MW-78 GWELEV
3-Feb-99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
25-May-99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
27-Aug-99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nov-99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7-Feb-00	226.45	224.25	227.08	NA	NA	NA	222.83	223.94	225.49	NA	NA	NA
16-May-00	226.24	227.19	226.87	NA	151.22	NA	222.82	223.71	225.24	NA	NA	NA
22-Aug-00	225.98	227.02	226.72	NA	NA	221.46	222.51	223.11	225.01	NA	NA	NA
7-Nov-00	225.75	226.60	226.52	NA	NA	222.45	223.03	223.58	225.74	NA	NA	NA
13-Feb-01	225.72	226.64	226.52	NA	153.11	222.68	223.73	224.25	225.14	217.66	222.50	224.75
11-Sep-01*	225.53	226.04	226.23	NA	153.11	221.78	222.45	223.10	223.51	217.10	221.42	224.86
19-Mar-02*	225.92	226.58	226.59	261.92	157.99	222.58	223.36	223.55	223.49	222.49	221.84	226.63
2-Oct-02	225.97	226.56	226.72	256.25	150.88	222.81	223.23	223.74	223.79	218.25	222.13	226.67

Notes:

Groundwater elevations are in feet above mean sea level (msl)

Table contains data corresponding to quarterly sampled groundwater wells only.

NA = not available.

* - Diffusion Bags were installed on this date

TABLE 4
Groundwater Levels Corresponding
to Semi-Annually Sampled Wells

Sampled Date	MW-79 GWELEV	MW-80 GWELEV	MW-95 GWELEV	MW-126 GWELEV	MW-127 GWELEV	PZ-02 GWELEV
3-Feb-99	NA	NA	NA	NA	NA	NA
25-May-99	NA	NA	NA	NA	NA	NA
27-Aug-99	NA	NA	NA	NA	NA	NA
3-Nov-99	NA	NA	NA	NA	NA	NA
7-Feb-00	NA	NA	NA	NA	NA	NA
16-May-00	NA	NA	NA	NA	NA	NA
22-Aug-00	NA	NA	NA	NA	NA	NA
7-Nov-00	NA	NA	NA	NA	NA	NA
13-Feb-01	212.70	212.59	227.52	NA	NA	NA
11-Sep-01*	212.57	212.63	228.68	NA	NA	NA
19-Mar-02*	213.03	213.15	232.36	NA	NA	247.41
2-Oct-02	213.73	213.91	230.92	232.87	209.18	244.29

Notes:

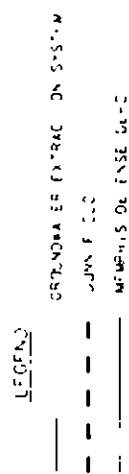
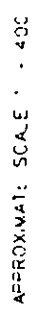
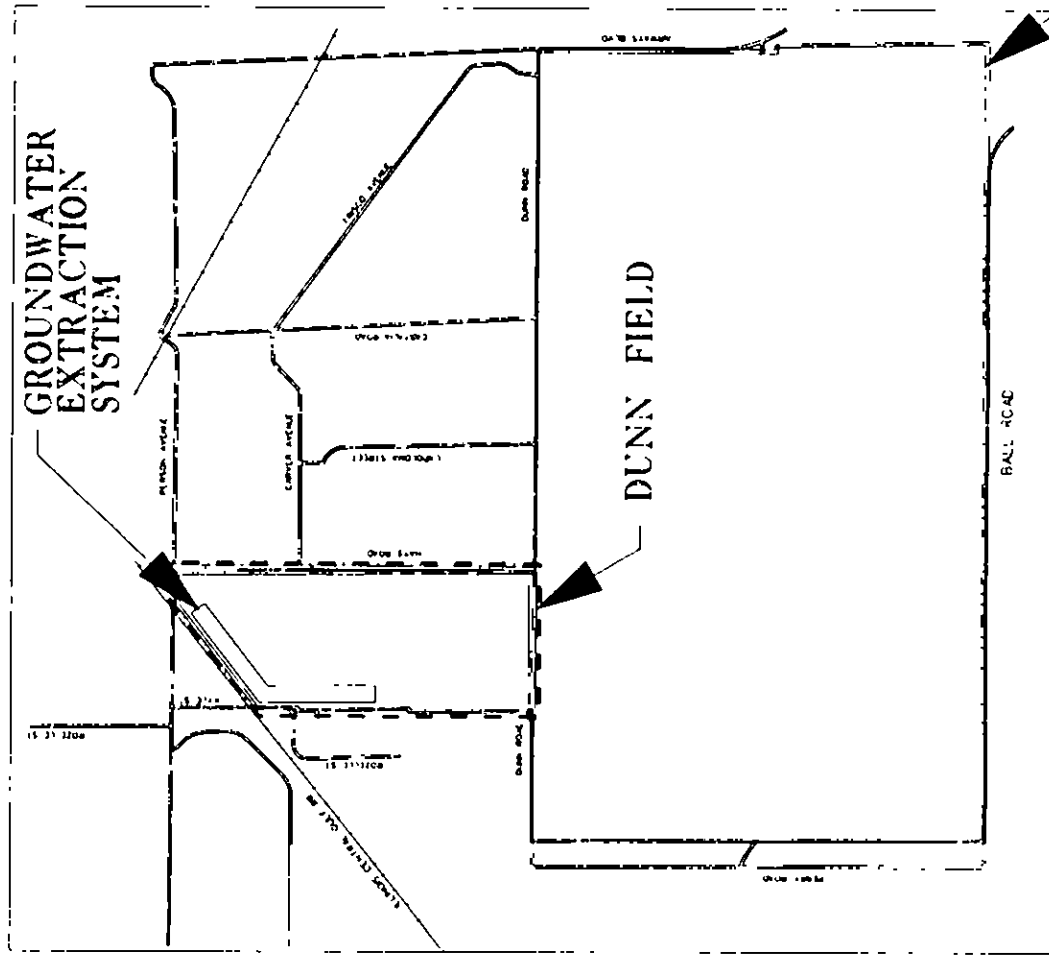
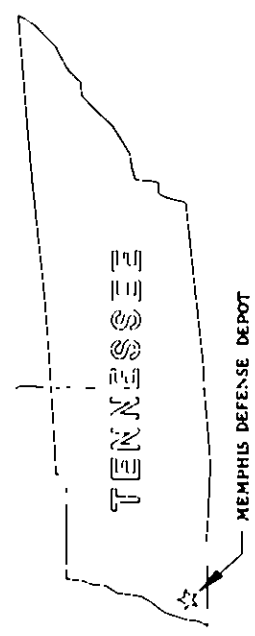
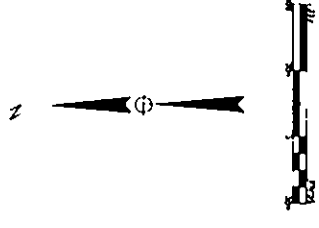
Groundwater elevations are in feet above mean sea level (msl)

Table contains data corresponding to quarterly sampled groundwater wells only.

NA = not available.

* - Diffusion Bags were installed on this date

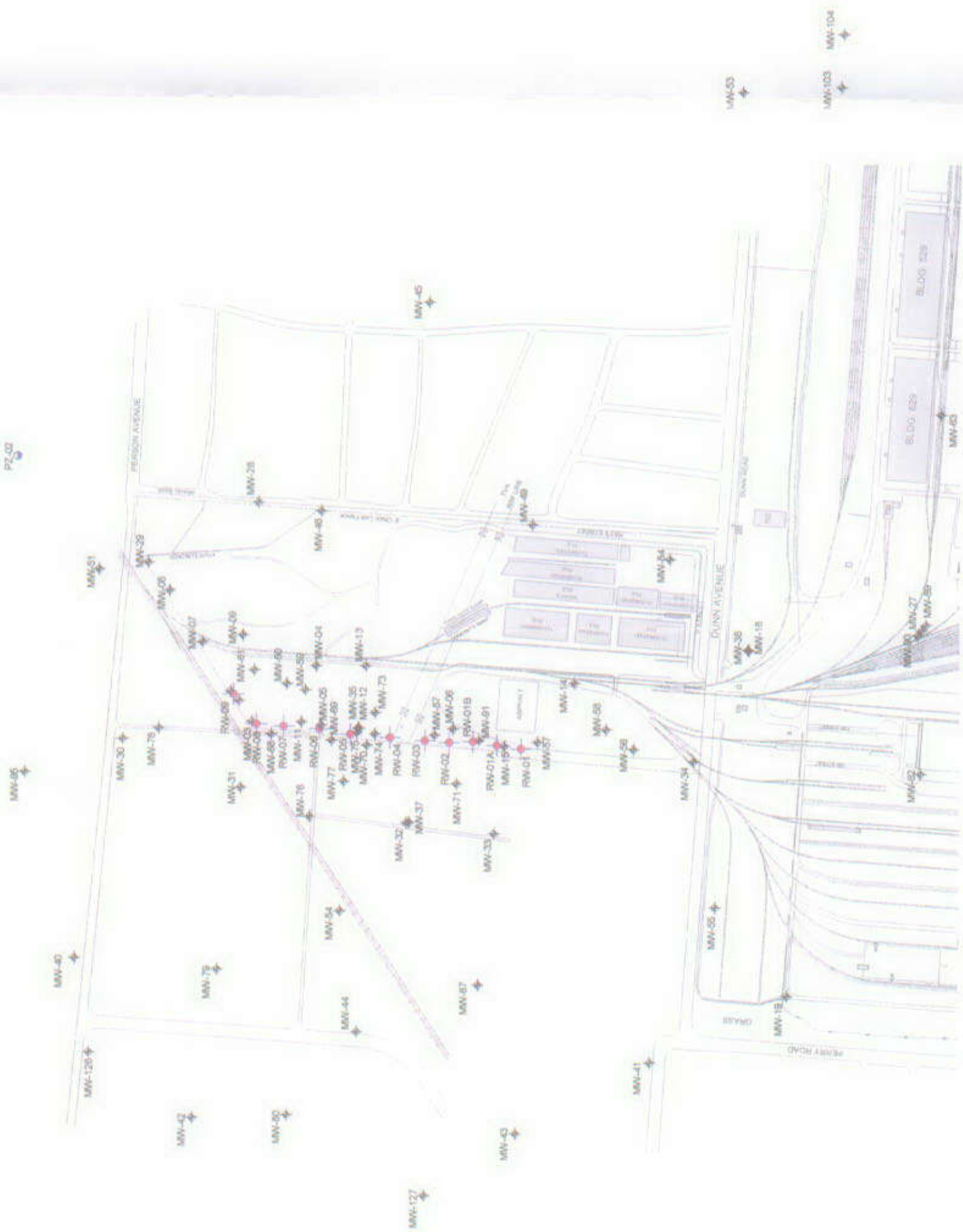
FIGURES

[illegible]

DUNN FIELD
GROUNDWATER EXTRACTION SYSTEM
MEMPHIS DEFENSE DEPOT TANKFILL

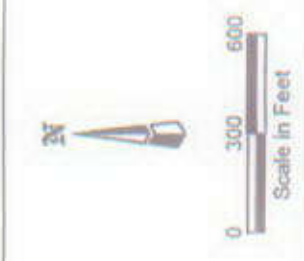
MEMPHIS DEFENSE DEPOT
DUNN FIELD AND THE
POLYMER EXTRACTION SYSTEM

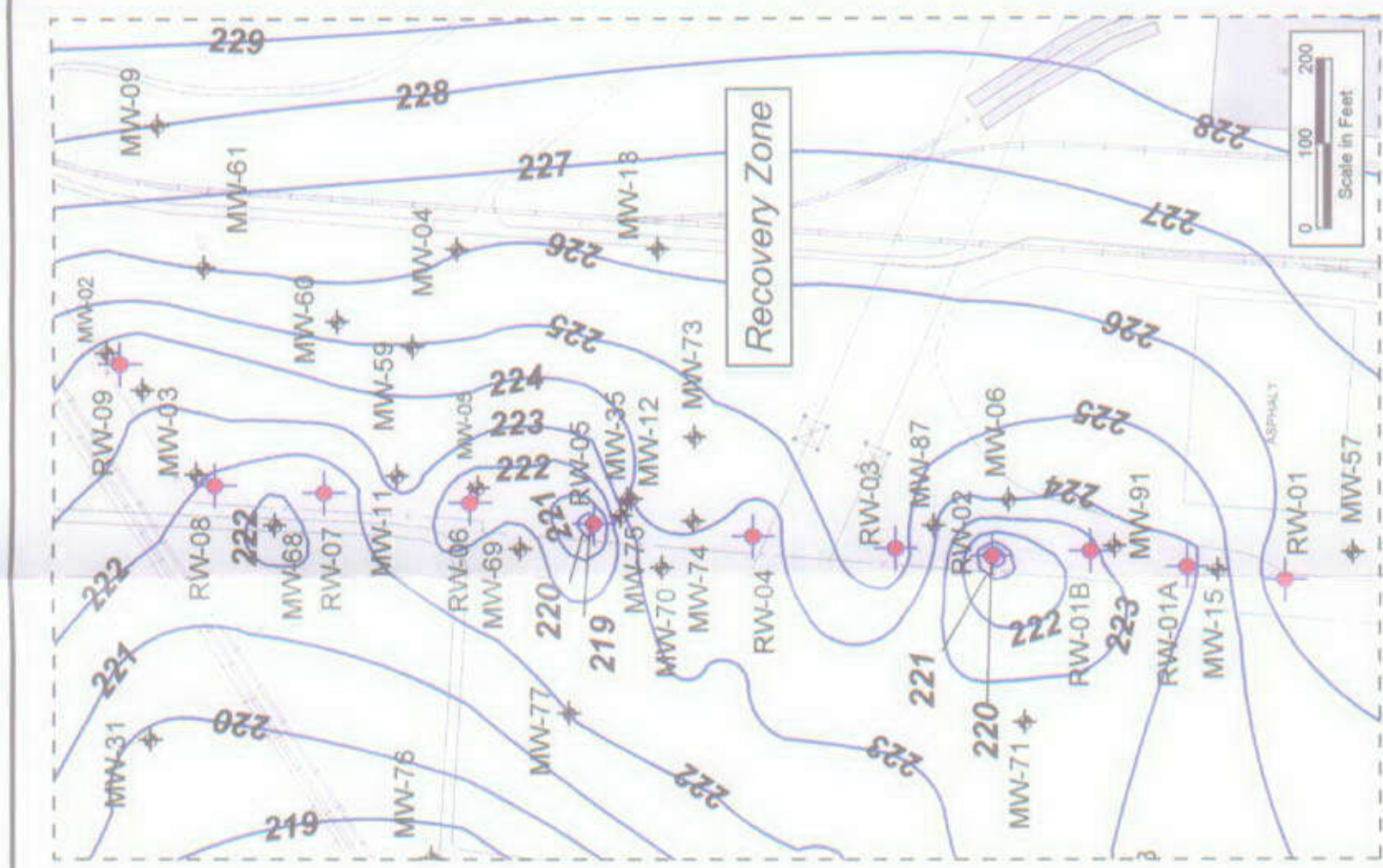
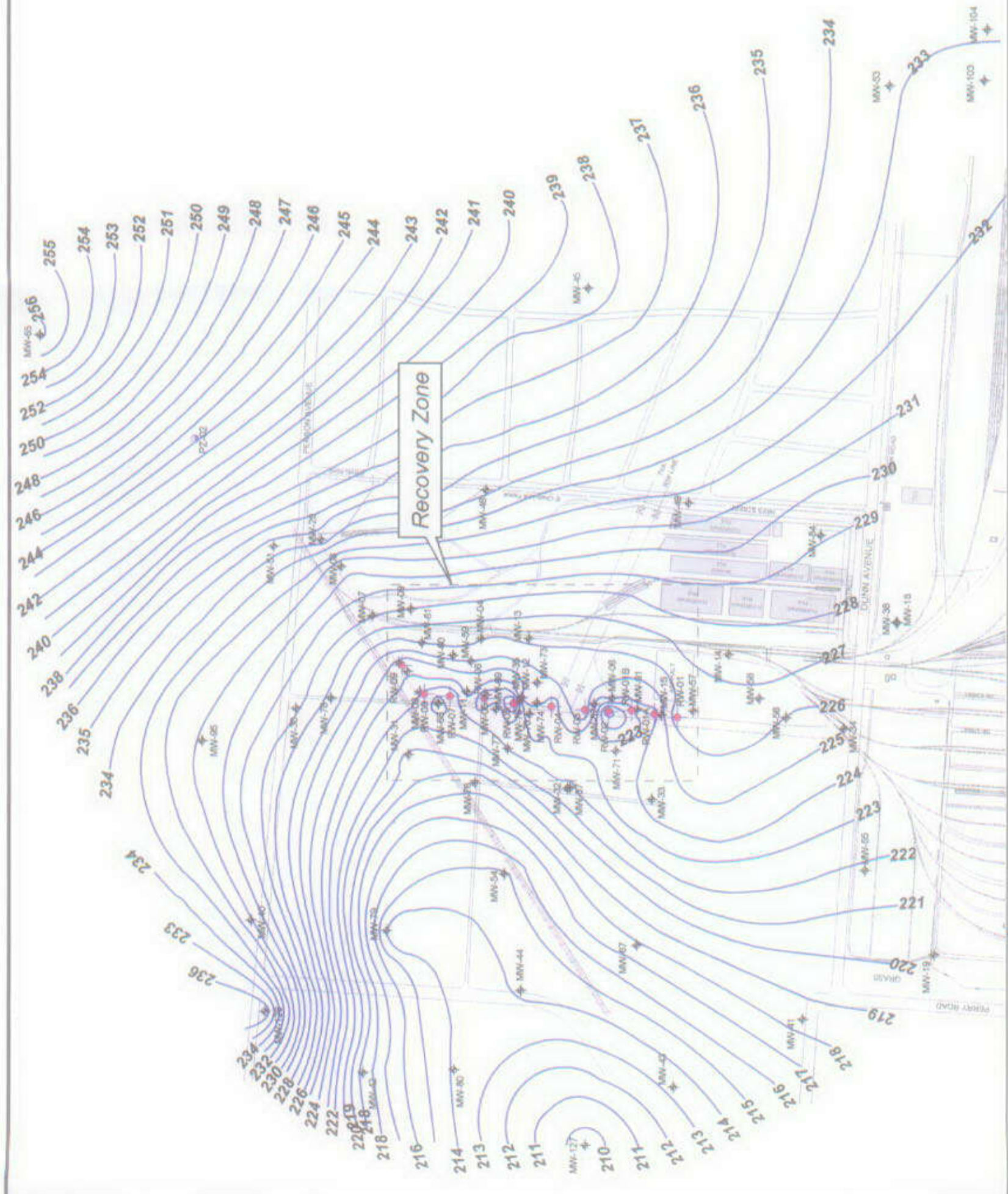
1.



SCALE: 1:7200
DESIGNED: N. ZEHMS
DRAWN: N. ZEHMS
CHECKED: K. SMITH
APPROVED: N. ZEHMS
DATE: NOVEMBER 26, 2002

Legend
MW-71 Monitoring Well
PZ-02 Piezometer
RW-05 Recovery Well





Legend

SCALE: 1:7200

DESIGNED: N. ZEHMS

DRAWN: N. ZEHMS

CHECKED: K. SMITH

APPROVED: N. ZEHMS

DATE: NOVEMBER 26, 2002

Groundwater Elevation, 1-ft contour (ft msl)

MW-71 Monitoring Well

PZ-02 Piezometer

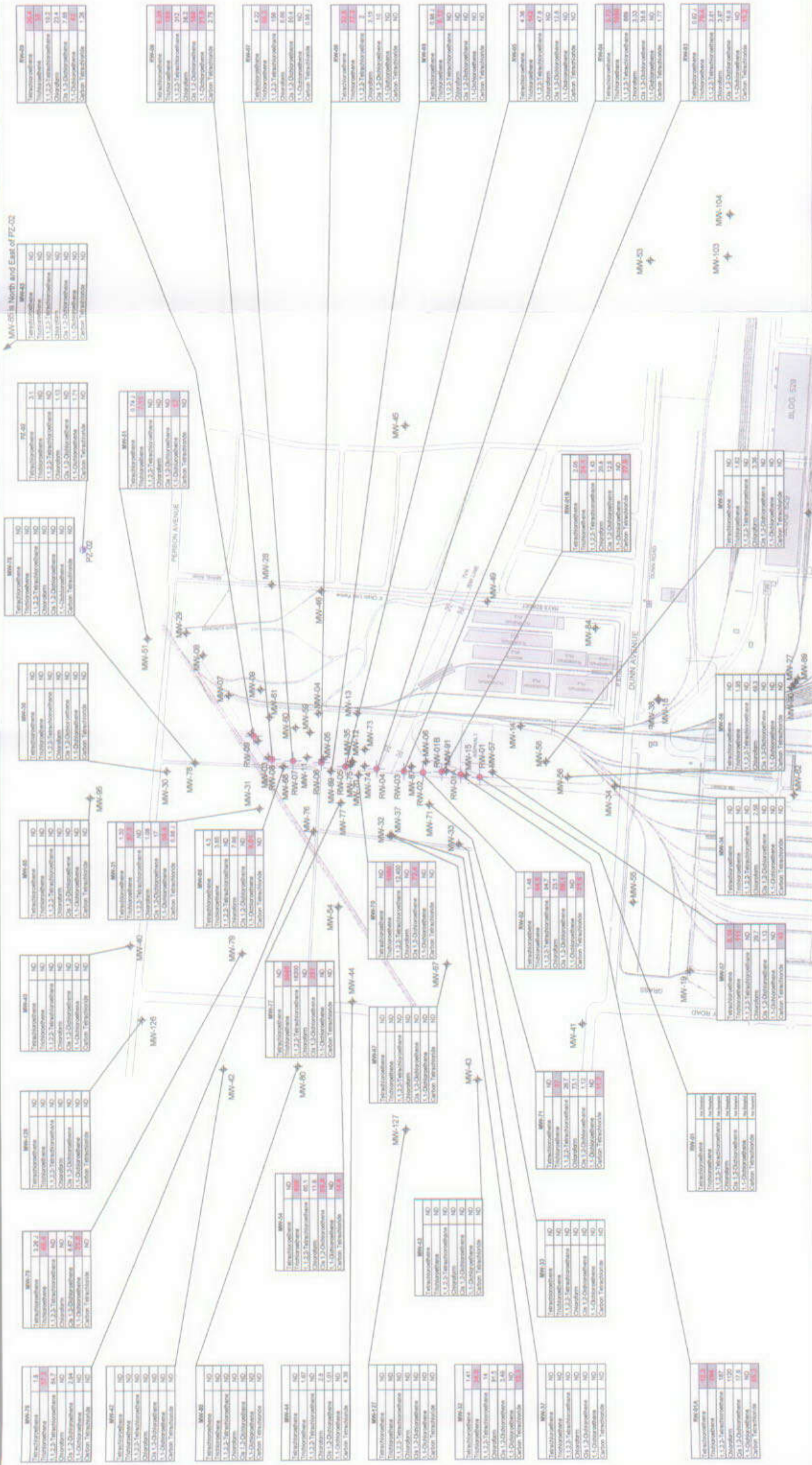
RW-05 Recovery Well

JE JACOBS

Potentiometric Surface Map
Y4S2 (October 2, 2002)
of Shallow Aquifer
Memphis DDMT
Memphis, Tennessee

11/26/02 NZ GISMemphisProjects
Report_11_2002\Figure3.mxd

Figure 3



Legend

SCALE: 1" = 200'

DESIGNED: N. ZEHRMS

DRAWN: N. ZEHRMS

CHECKED: K. SMITH

APPROVED: N. ZEHRMS

DATE: NOVEMBER 28, 2002

Legend

MW-71: Monitoring Well

PZ-02: Piezometer

RW-06: Recovery Well

Organic Compound

Compound	Lab Result	Exceeding MCL
Tetrachloroethene	1.48	NO
Trichloroethene	64.8	NO
1,1,2,2-Tetrachloroethane	34.7	NO
Chloroform	31.1	NO
Dichloromethane	64.8	NO
1,1-Dichloroethene	1.48	NO
1,2-Dichloroethane	1.48	NO
Carbon Tetrachloride	1.48	NO
Benzene	1.48	NO

JE JACOBS

Selected Volatile Organic Compound Concentrations in Groundwater

Y4S2 Sampling Event, October 2002

Memphis DDMT

Memphis, Tennessee

11/26/02 N2 GISMemphisProjects
Report_11_2002Figure4.mxd

Figure 4

Figure 5
Contaminant Concentration vs Time
for Well MW-31

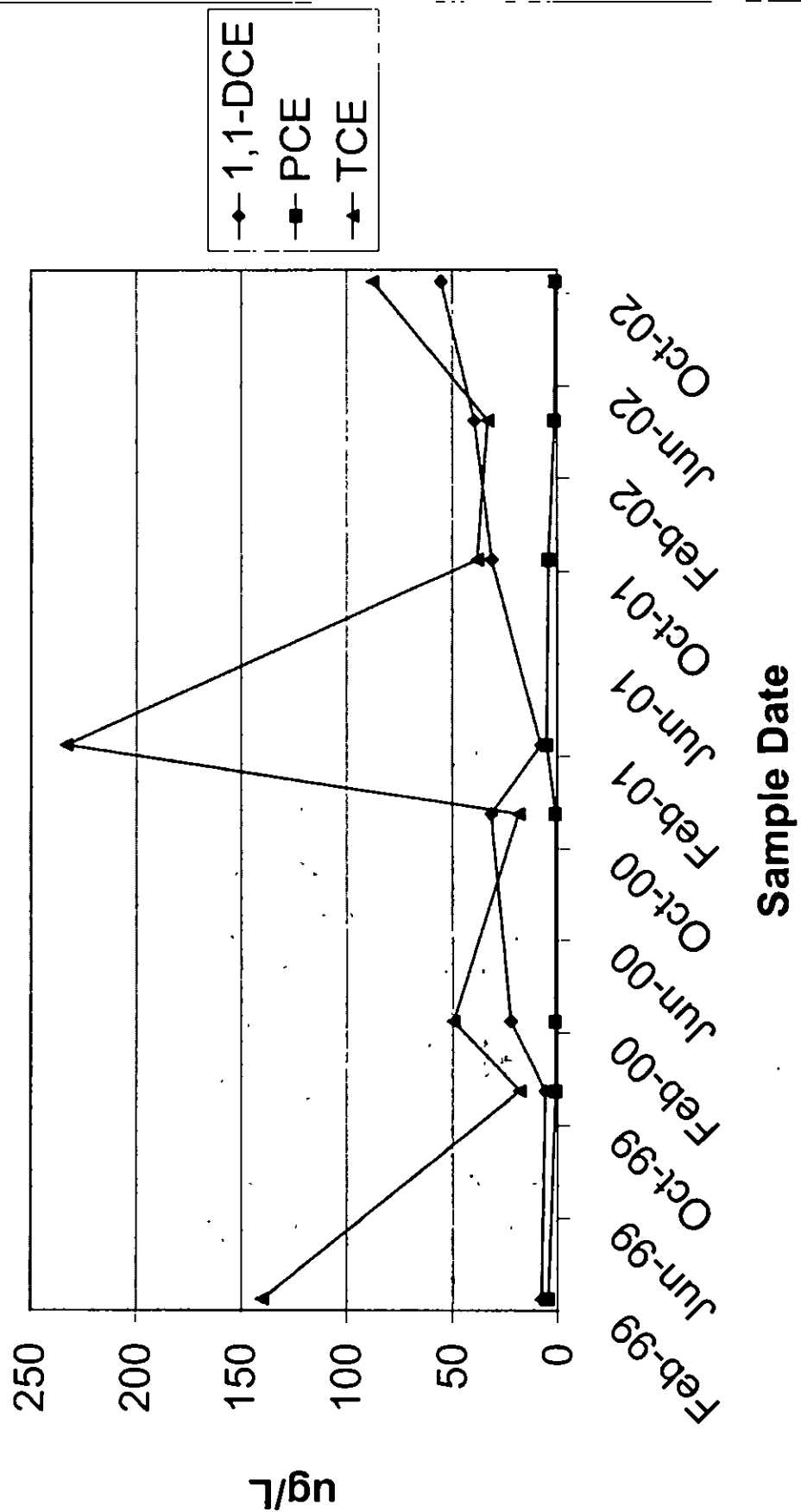


Figure 6
Contaminant Concentration vs Time
for Well MW-32

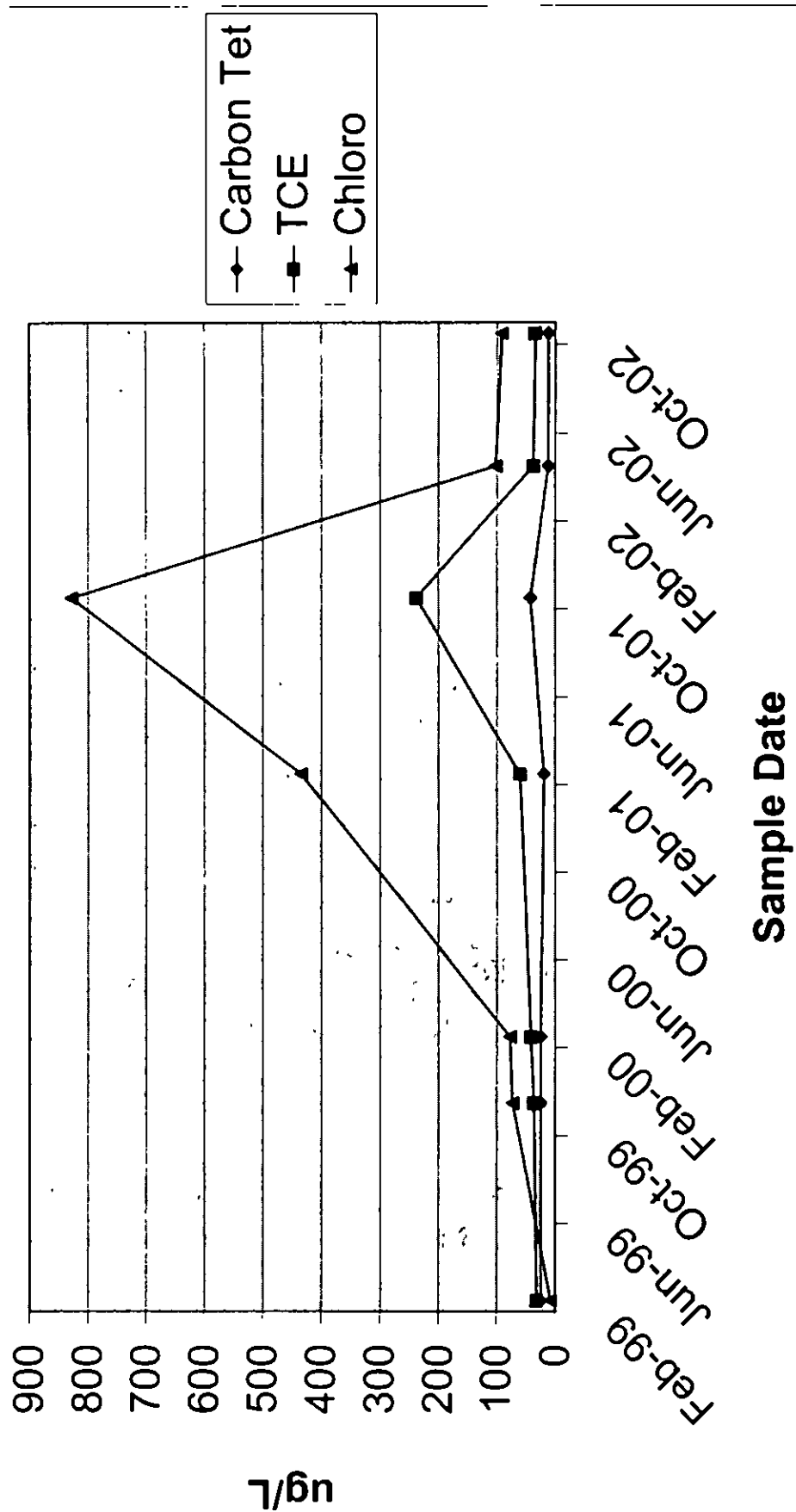


Figure 7
Contaminant Concentration vs Time
for Well MW-44

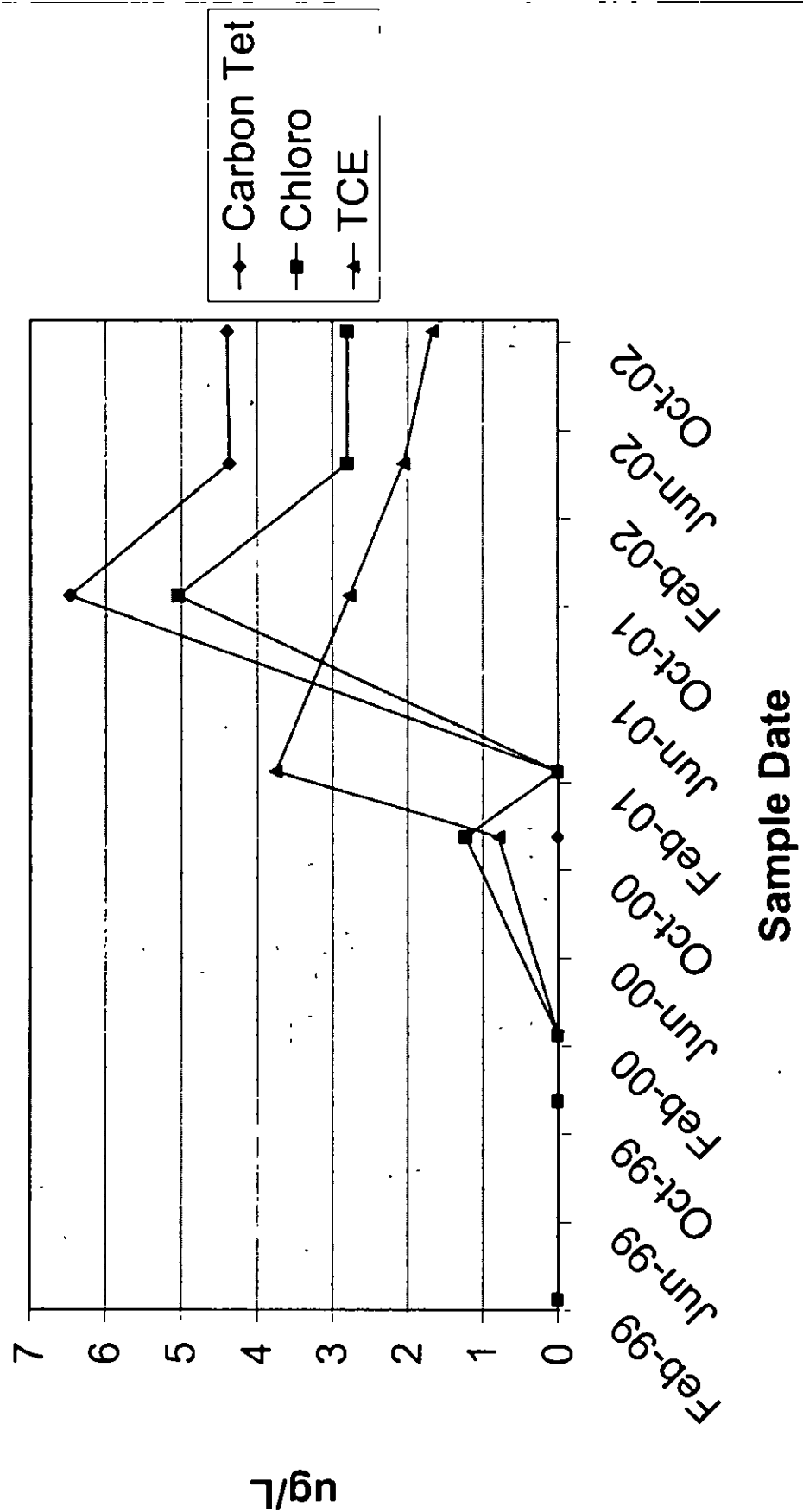


Figure 8
Contaminant Concentration vs Time
for Well MW-51

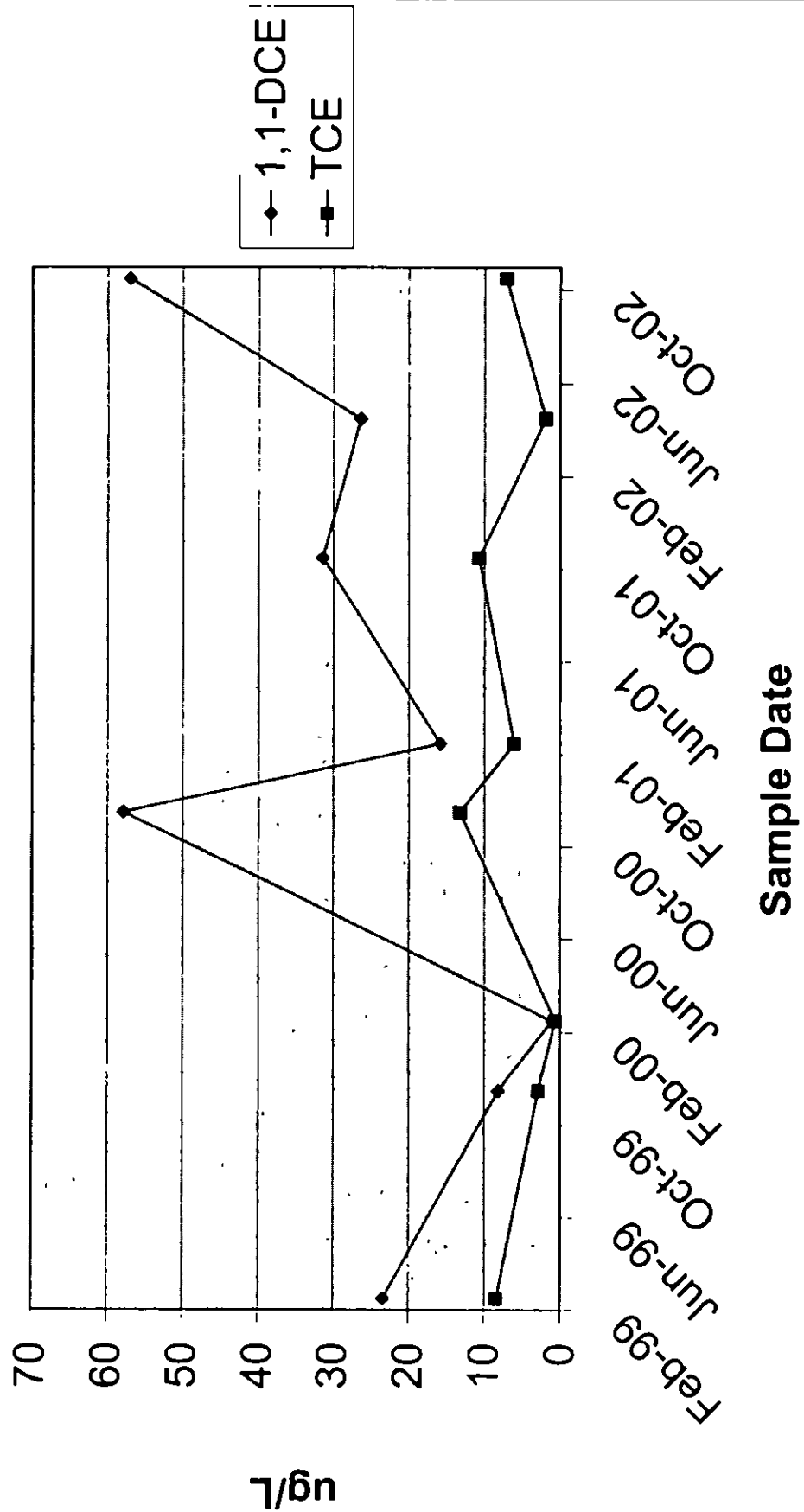


Figure 9
Contaminant Concentration vs Time
for Well MW-54

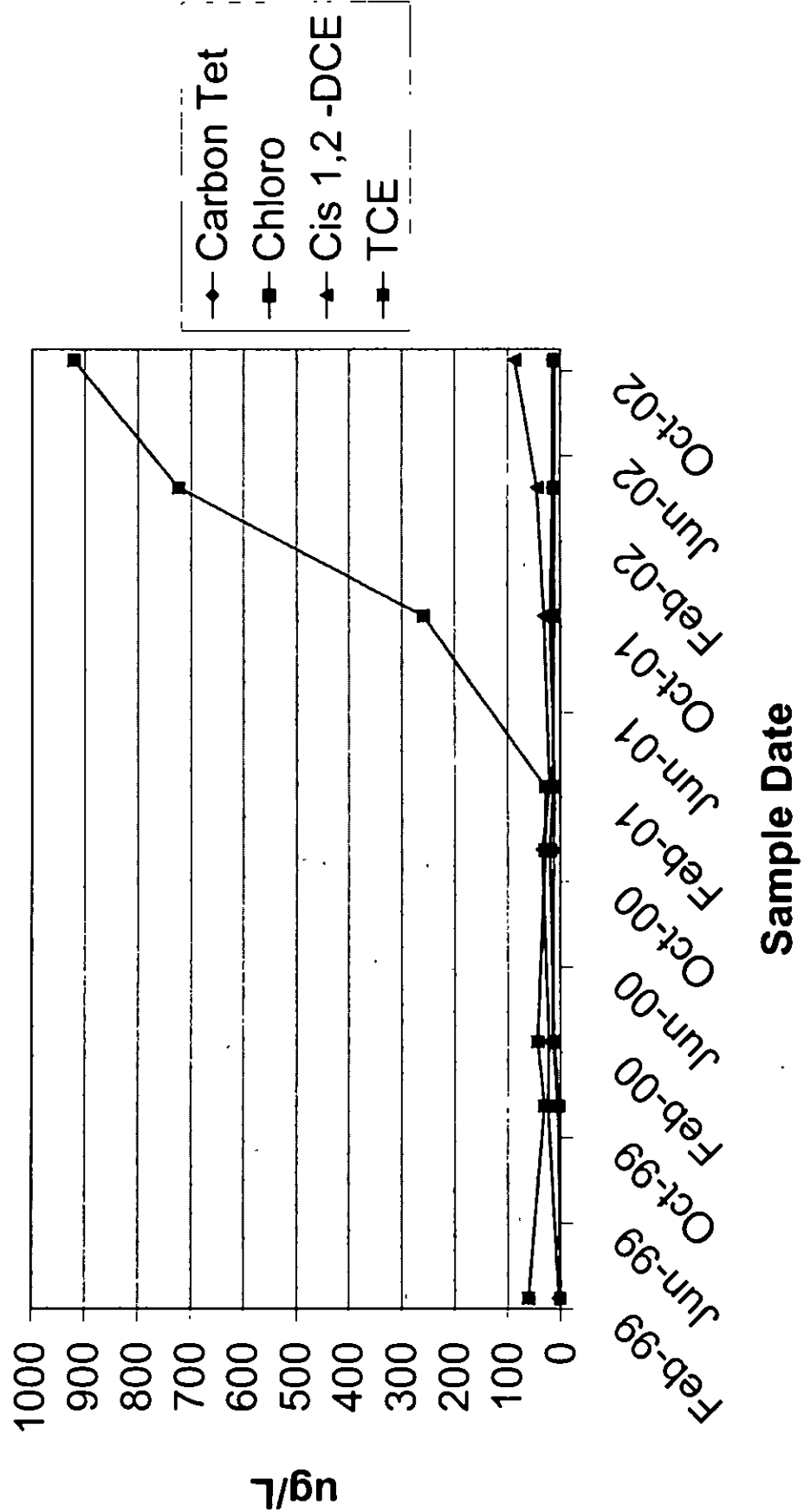


Figure 10
Contaminant Concentration vs Time
for Well MW-57

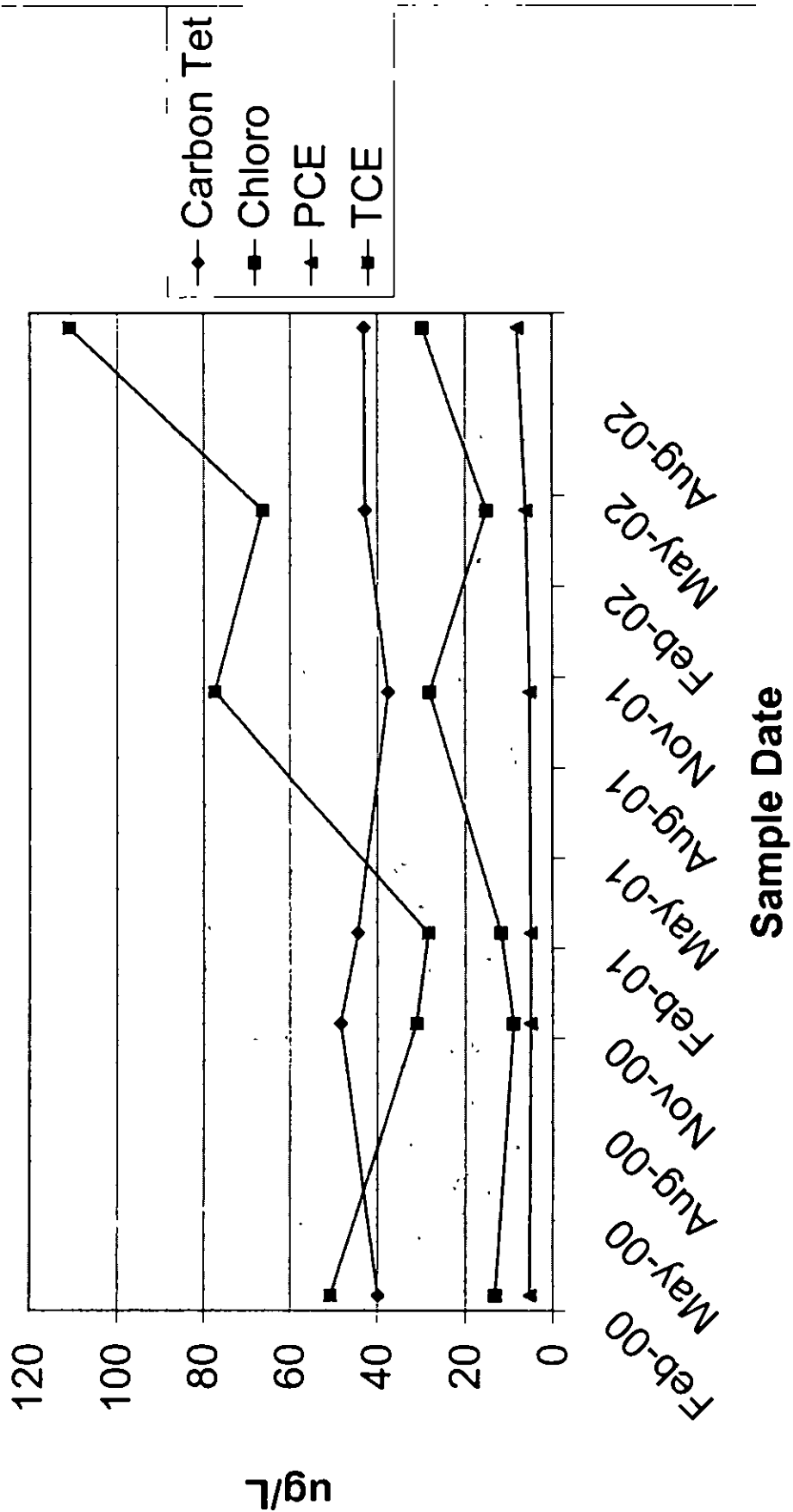


Figure 11
Contaminant Concentration vs Time
for Well MW-68

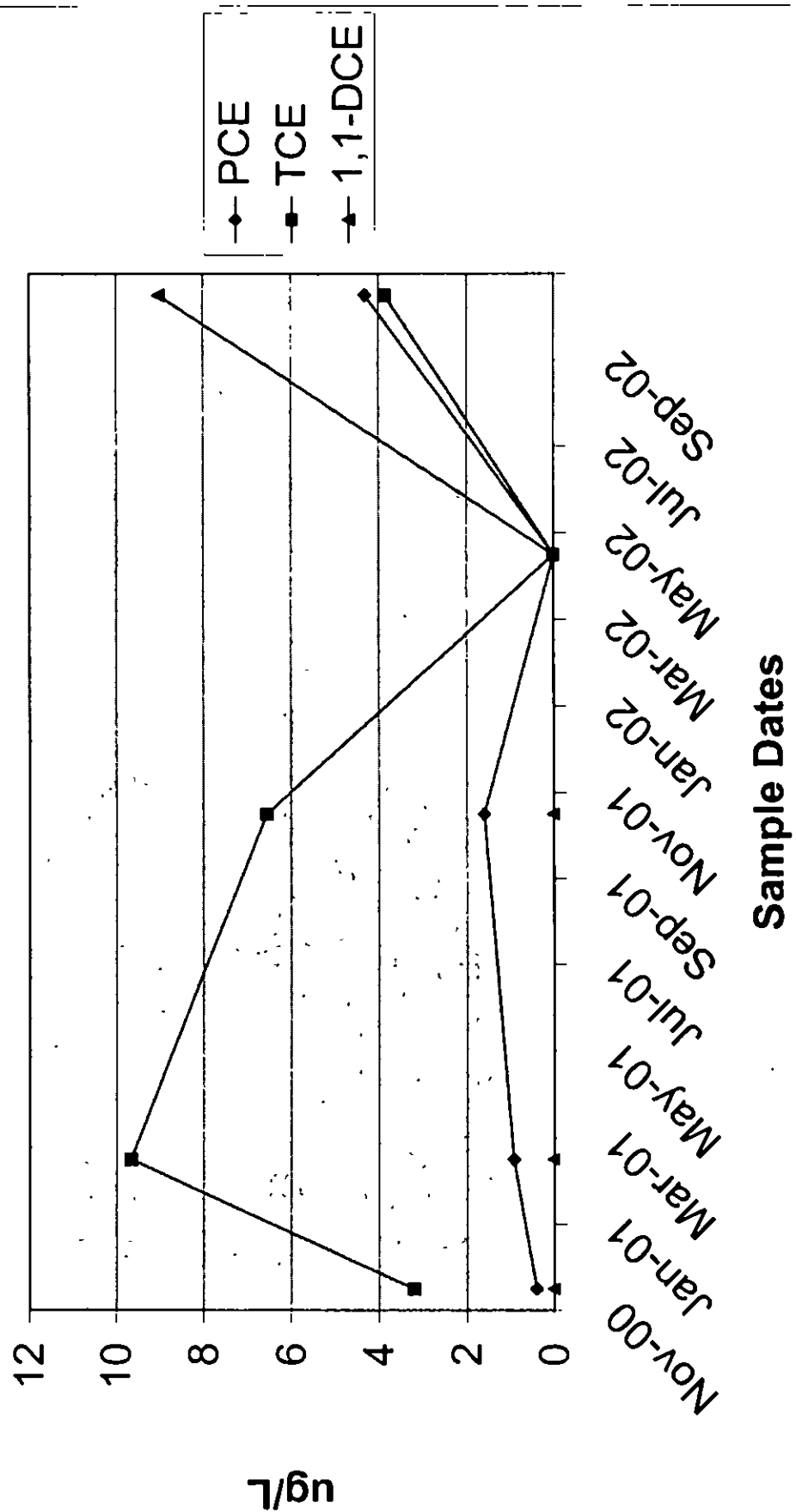


Figure 12
Contaminant Concentration vs Time
for Well MW-69

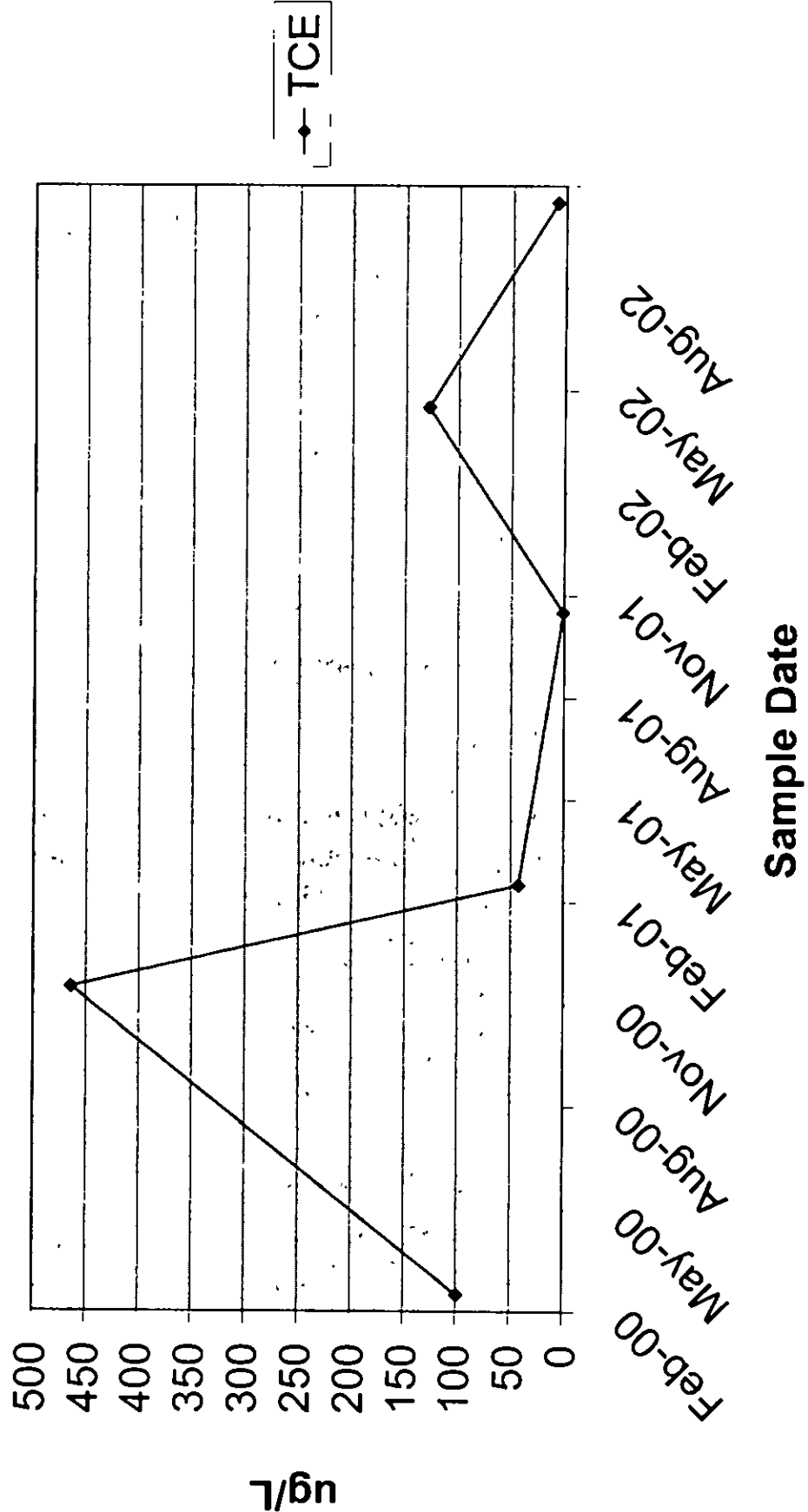


Figure 13A
Contaminant Concentration vs Time
for Well MW-70

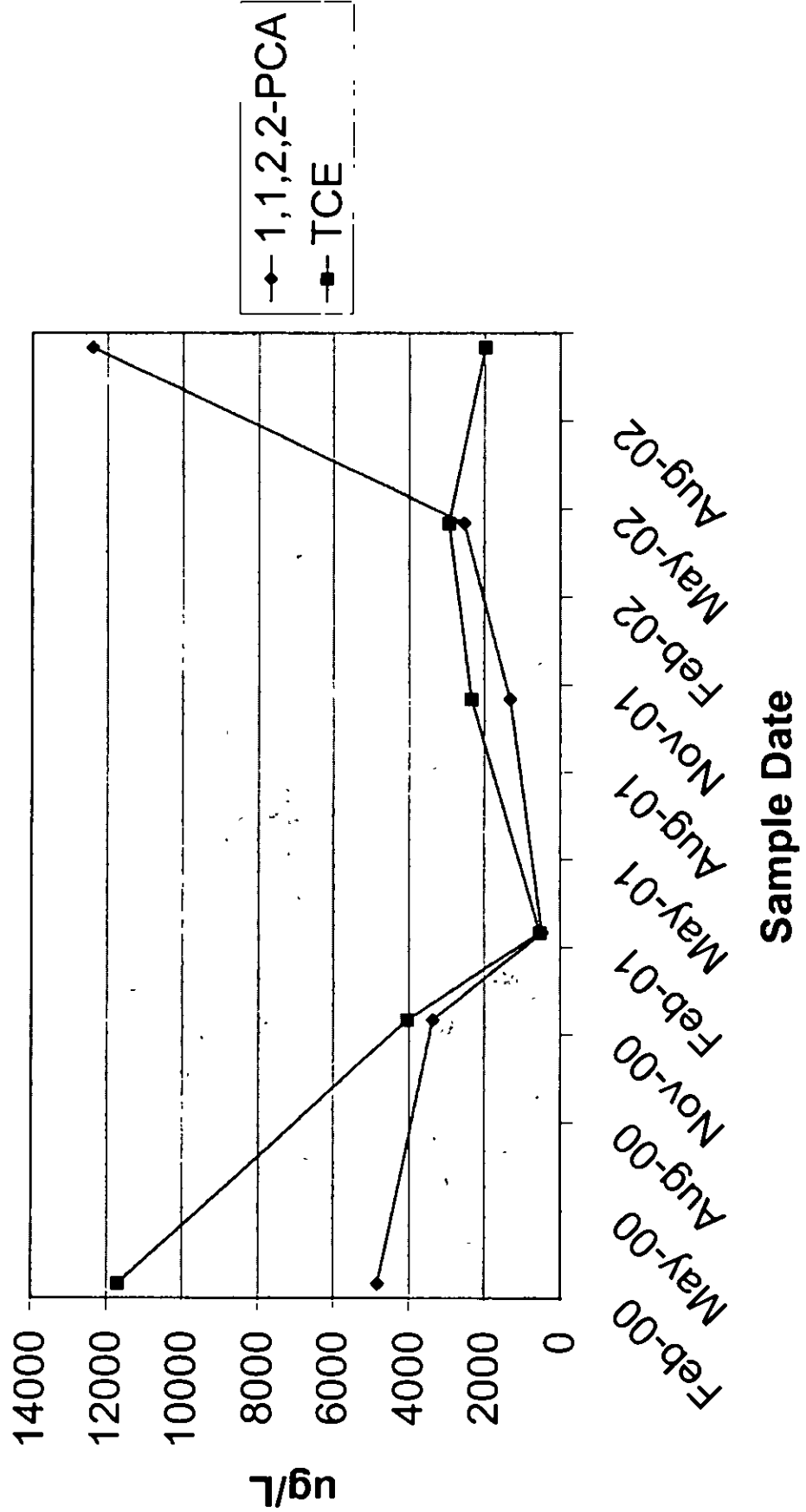


Figure 13B
Contaminant Concentration vs Time
for Well MW-70

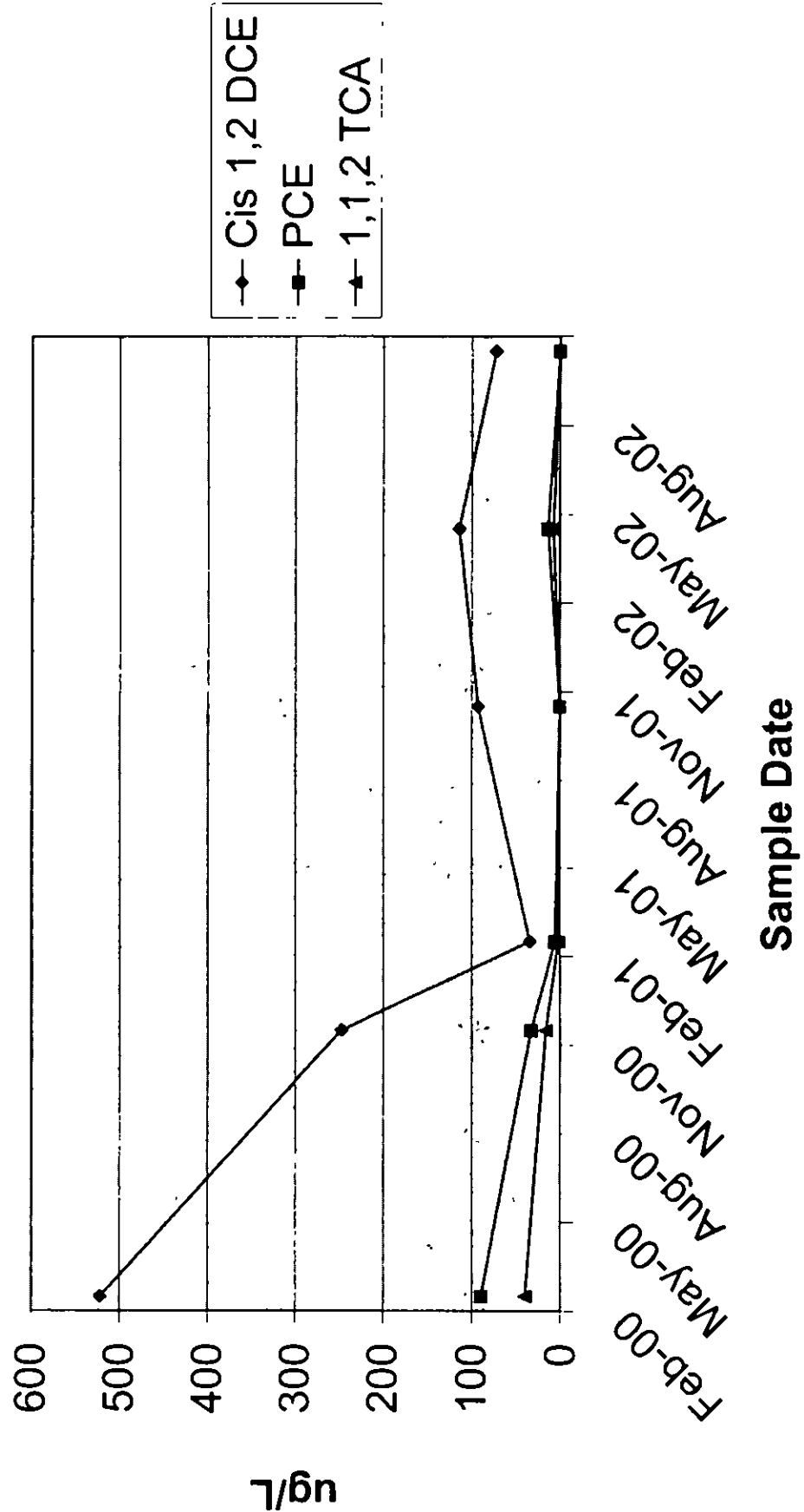


Figure 14A
Contaminant Concentration vs Time
for Well MW-71

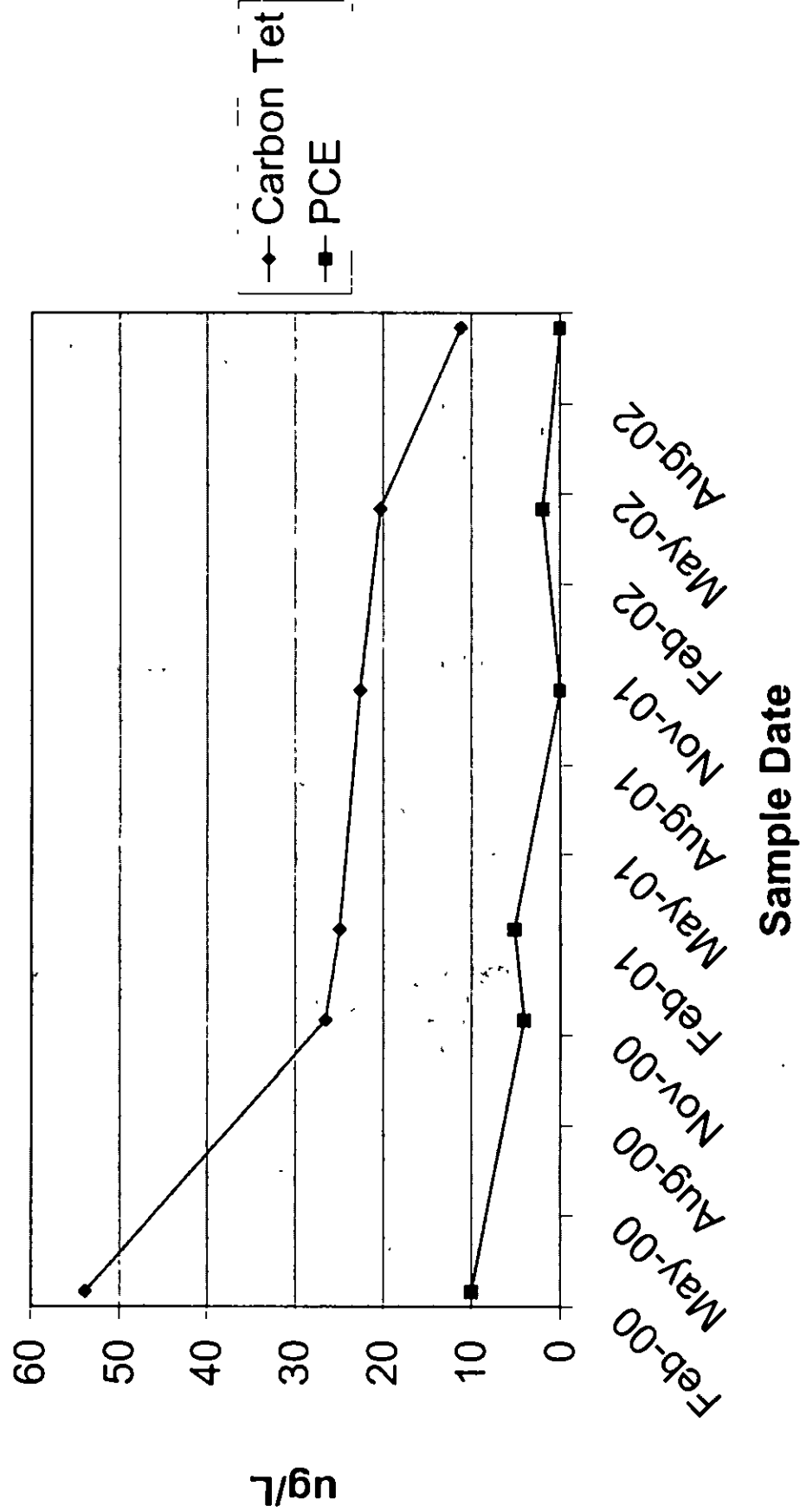


Figure 14B
Contaminant Concentration vs Time
for Well MW-71

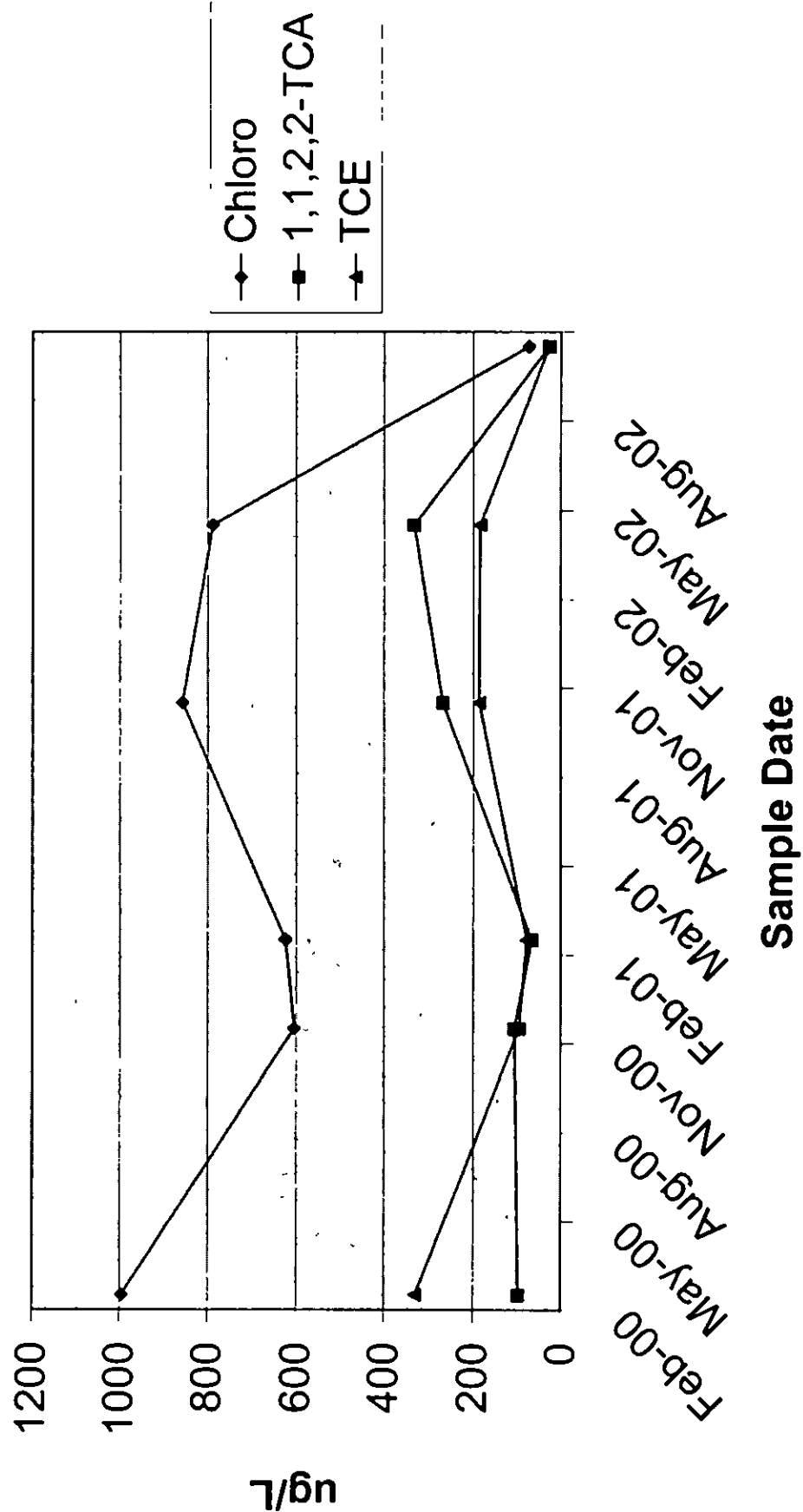


Figure 15
Contaminant Concentration vs Time
for Well MW-76

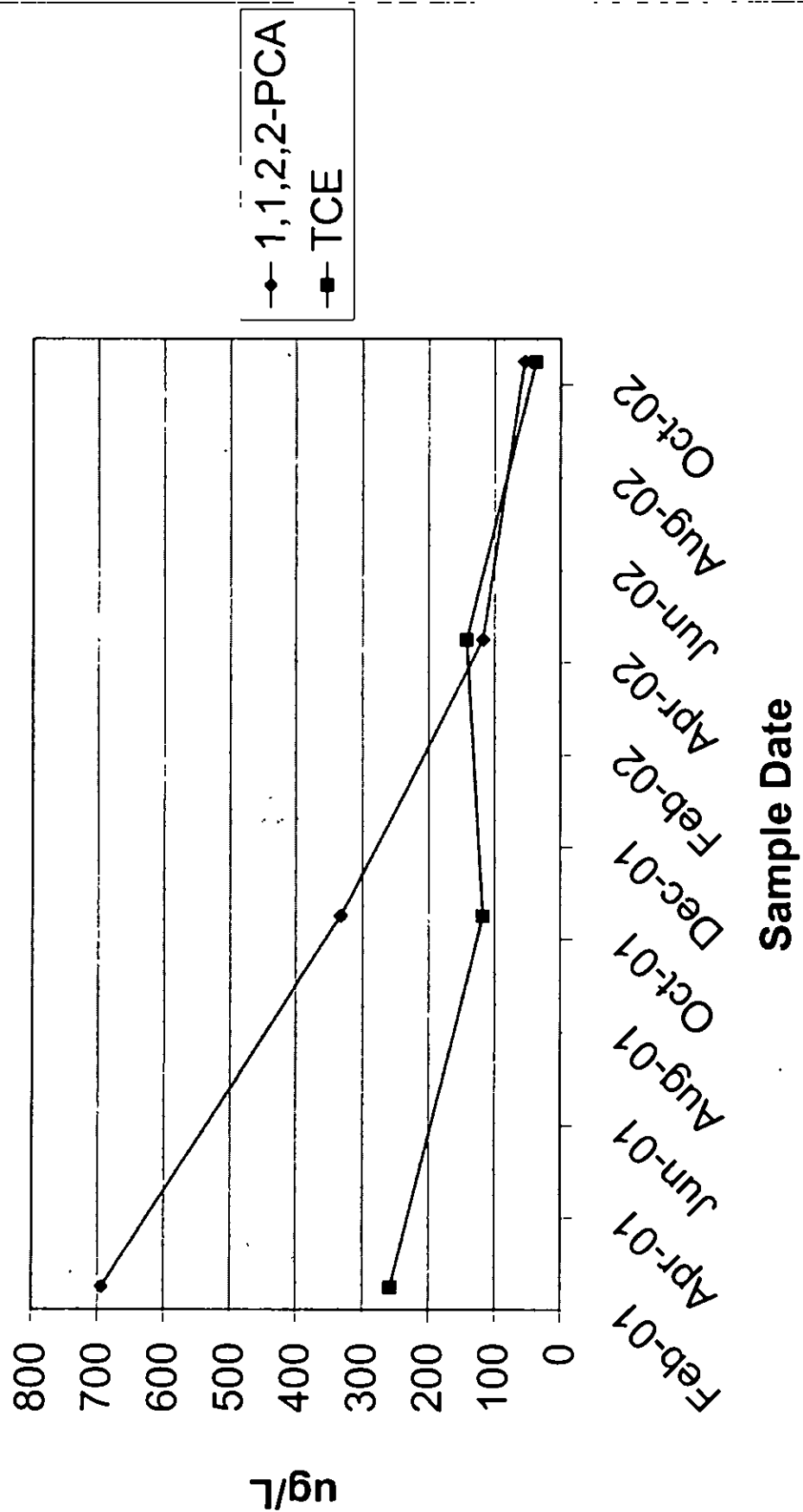


Figure 16A
Contaminant Concentration vs Time
for Well MW-77

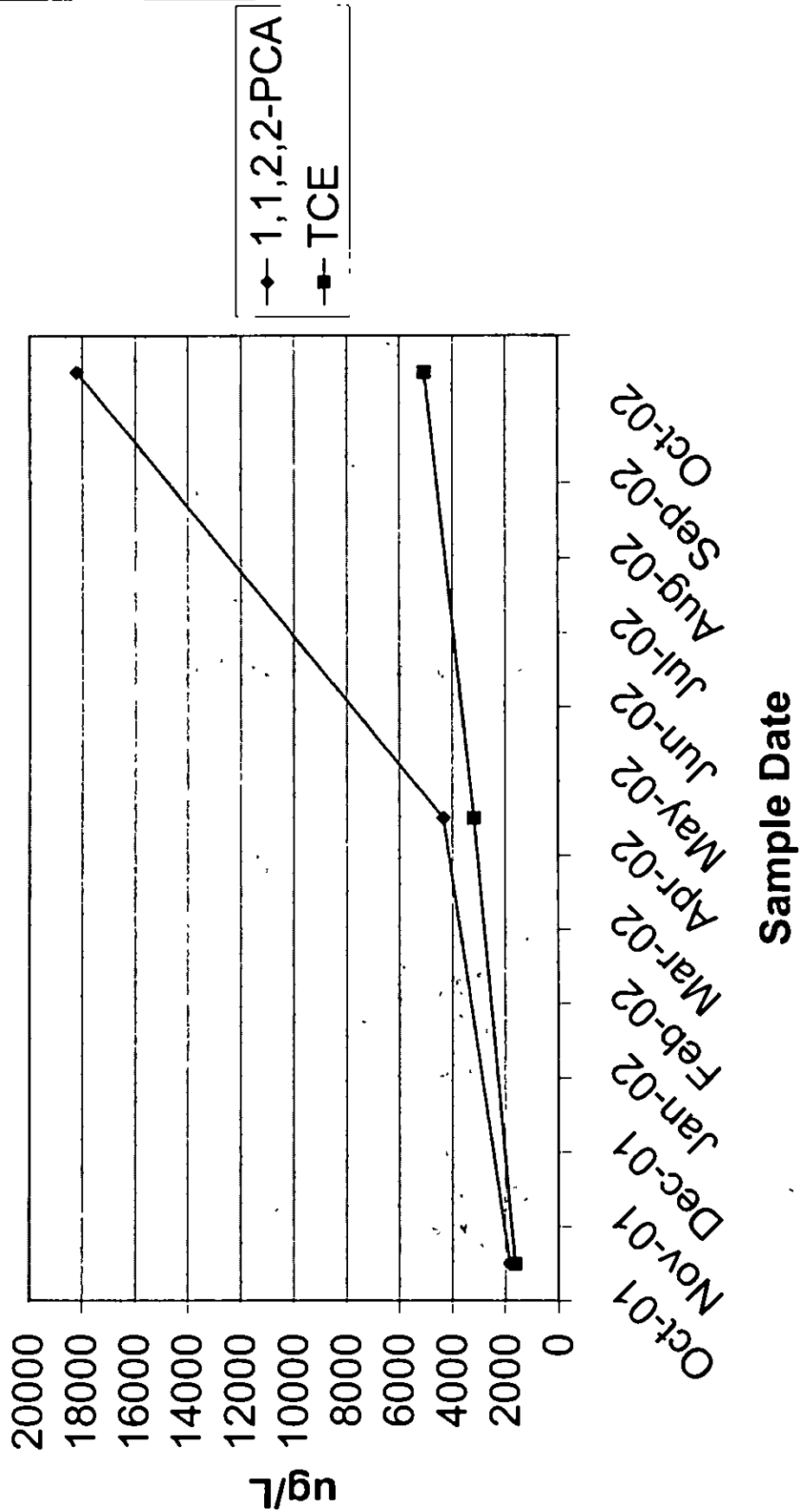


Figure 16B
Contaminant Concentration vs Time
for Well MW-77

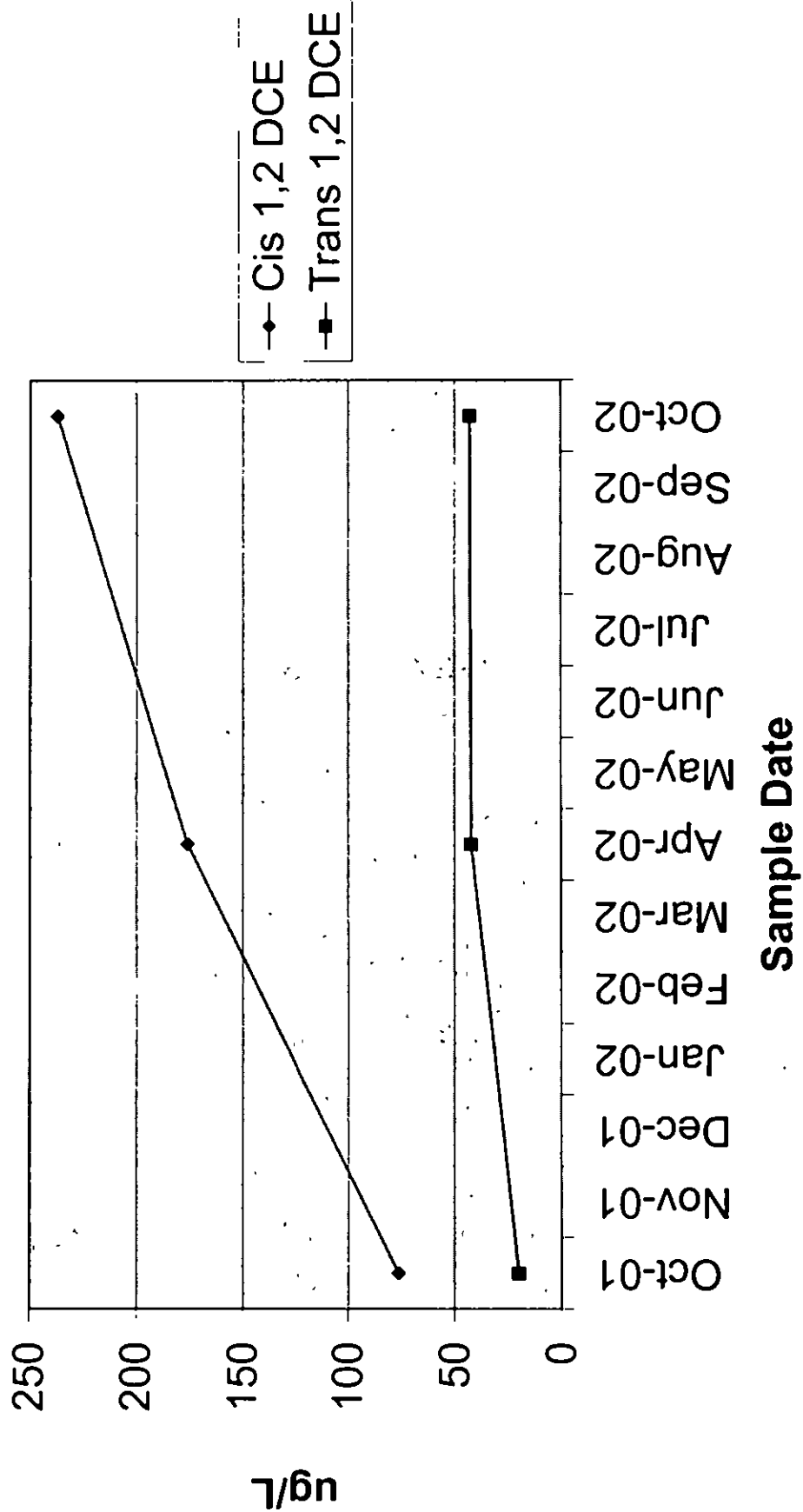
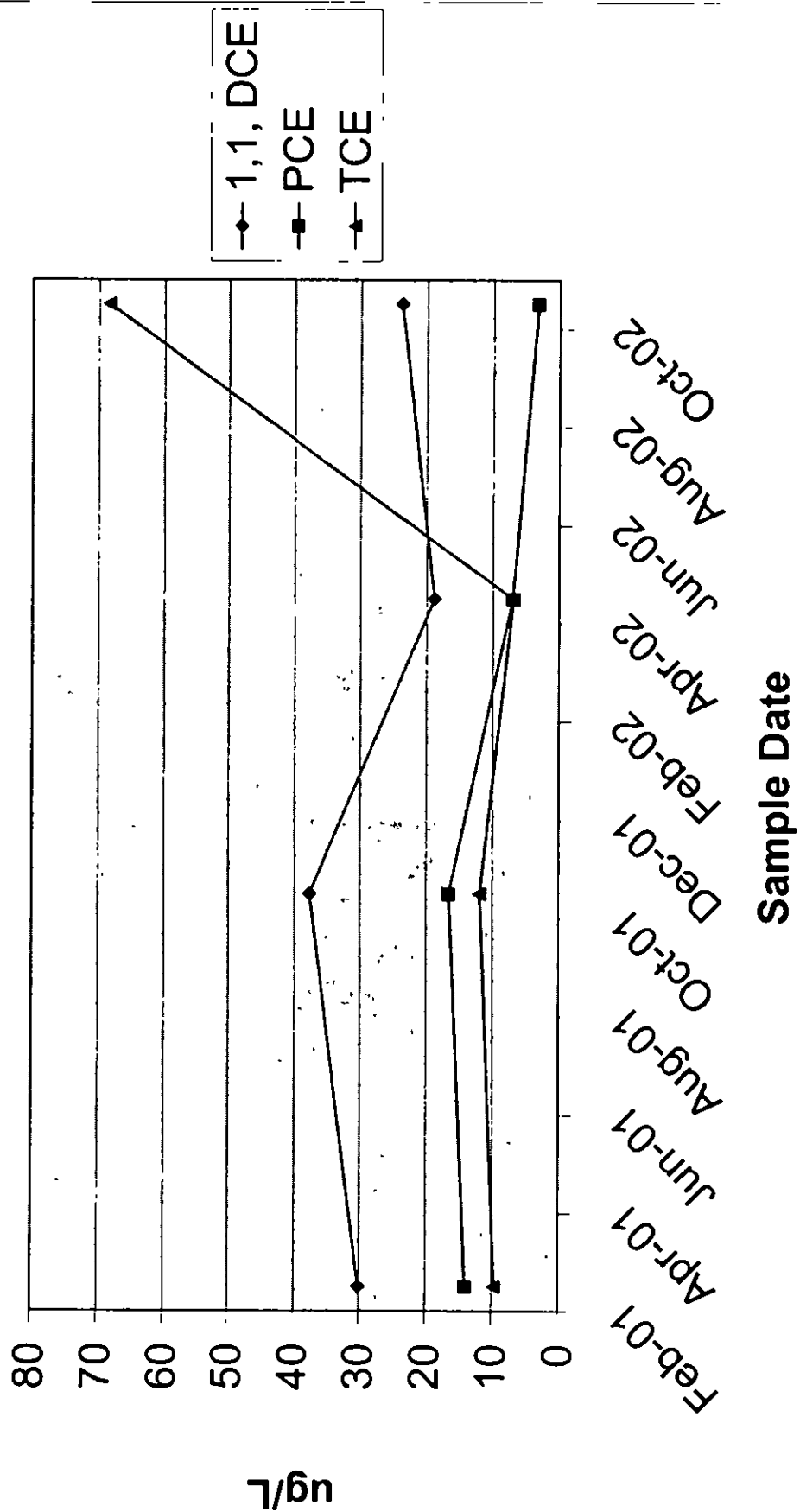


Figure 17
Contaminant Concentration vs Time
for Well MW-79



APPENDIX A
GROUNDWATER MEASUREMENT DATA

[illegible]

[illegible]

[illegible]

[illegible]

Appendix A Groundwater Measurement Data

Well ID	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13
TOC Elevation	282.04	282.35	281.51	284.64	282.59	285.1	282.59	304.32	288.79	299.47	301.3	300.01
Total Depth (ft)	33.00	77.00	81.80	78.25	89.00	77.20	89.00	87.50	77.00	85.00	87.00	83.00
Location	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)
DATE	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)	DTW (BTC)
24-Oct-02												
25-Oct-02												
26-Oct-02												
27-Oct-02												
28-Oct-02												
29-Oct-02												
30-Oct-02												
31-Oct-02												
1-Nov-02												
2-Nov-02												
3-Nov-02												
4-Nov-02												
5-Nov-02												
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22-Nov-02												
23-Nov-02												
24-Nov-02												
25-Nov-02												
26-Nov-02												
27-Nov-02												
28-Nov-02												
29-Nov-02												
30-Nov-02												
1-Dec-02												
2-Dec-02												
3-Dec-02												

NOTES

1. Year One O&M is a separate data set.
 2. Baseline water levels were recorded 01-Nov-98 thru 04-Nov-98.
 3. All elevations are in feet. All depths are in feet. Station Top of Casing (B.C.).
 4. Baseline for the 24-hour period is recorded by the National Weather Service at Montgomery International Airport.
 5. MW-05 gauging required as of year two O&M location unknown until 05-Jan-02.
 6. PG-02 gauging required as of year two O&M location unknown until 15-Mar-02.

TOC = top of casing
 DTW = depth to water
 BTC = top measured
 B.C. = best available

Well ID	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	MW-23	MW-24	MW-25
TOC Elevation	302.22	295.12	308.04	303.86	290.57	273.22	275.14	290.37	265.38	280.71	299.97	308.46
Total Depth (ft)	80.30	81.00	140.00	83.60	86.40	54.00	58.00	79.00	67.60	60.00	158.90	90.00
Location	Dunn Field	Dunn Field	Uppan	Uppan	Uppan	Dunn Field	MLGW Facility	MLGW Facility	Uppan	Off Site	Dunn Field	Dunn Field
DATE	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev
1-Jan-02	75.42	226.80	70.75	224.37	131.71	176.23	89.90	200.57	Ony	Ony	159.74	223.30
2-Jan-02												
3-Jan-02												
4-Jan-02												
5-Jan-02												
6-Jan-02												
7-Jan-02												
8-Jan-02												
9-Jan-02												
10-Jan-02												
11-Jan-02												
12-Jan-02												
13-Jan-02												
14-Jan-02												
15-Jan-02												
16-Jan-02												
17-Jan-02												
18-Jan-02												
19-Jan-02												
20-Jan-02												
21-Jan-02	75.24	226.96	70.60	224.52								223.46
22-Jan-02												
23-Jan-02												
24-Jan-02												
25-Jan-02												
26-Jan-02												
27-Jan-02												
28-Jan-02												
29-Jan-02												
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31-Jan-02												
1-Feb-02												
2-Feb-02												
3-Feb-02												
4-Feb-02												
5-Feb-02												
6-Feb-02												
7-Feb-02												
8-Feb-02												
9-Feb-02												
10-Feb-02												
11-Feb-02												
12-Feb-02	75.35	226.87	70.62	224.50	131.86	176.18	89.77	200.80	Ony	Ony	159.60	223.57
13-Feb-02												
14-Feb-02												
15-Feb-02												
16-Feb-02												
17-Feb-02												
18-Feb-02												
19-Feb-02												
20-Feb-02												
21-Feb-02												
22-Feb-02												
23-Feb-02												
24-Feb-02												
25-Feb-02												
26-Feb-02												
27-Feb-02												
28-Feb-02												
1-Mar-02												
2-Mar-02												
3-Mar-02												
4-Mar-02												
5-Mar-02												
6-Mar-02	75.26	226.96	70.44	224.66	132.00	176.04	Ony	Ony	Ony	Ony	159.60	223.60
7-Mar-02												
8-Mar-02												
9-Mar-02												
10-Mar-02												
11-Mar-02												
12-Mar-02												
13-Mar-02												
14-Mar-02												
15-Mar-02												

[illegible]

Well ID	MW 14	MW 15	MW 18	MW 19	MW 27	MW 28	MW 28	MW 28	MW 30	MW 31	MW 32	MW 33	MW 34	MW 35
TOC Elevation	302.22	295.12	308.04	290.37	302.86	294.78	294.78	294.78	275.14	290.37	285.38	280.71	289.97	280.71
Total Depth (ft)	40.00	81.00	76.00	96.40	93.60	87.00	87.00	87.00	55.00	78.00	67.80	60.00	136.00	90.00
Location	Dunn Field	Dunn Field	Dunn Field	Legg	Dunn Field	Dunn Field	Dunn Field	Dunn Field	LA GW Facility	LA GW Facility	Nyle	Off Site	Dunn Field	Dunn Field
DATE	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev
30-May-02														
31-May-02														
1-Jun-02														
2-Jun-02														
3-Jun-02														
4-Jun-02														
5-Jun-02														
6-Jun-02														
7-Jun-02														
8-Jun-02														
9-Jun-02														
10-Jun-02														
11-Jun-02														
12-Jun-02														
13-Jun-02														
14-Jun-02														
15-Jun-02														
16-Jun-02														
17-Jun-02														
18-Jun-02														
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Well ID	BMV-36	BMV-37	BMV-38	BMV-40	BMV-41	BMV-42	BMV-43	BMV-44	BMV-45	BMV-46	BMV-48	BMV-51	BMV-53
TCC Elevation	310.24	284.81	307.45	283.23	285.81	274.83	284.89	289.07	293.22	287.56	310.48	275.23	306.38
Total Depth (ft)	209.00	182.40	153.00	93.00	61.00	59.00	173.00	74.00	88.00	72.00	90.00	85.00	87.50
Location	Dunn Field	Kyle	Biggs	Off Site	Off Site	Off Site	Elmendorf School	Off Site	Off Site	Dunn Field	Dunn Field	Off Site	Off Site
DATE	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)
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Well ID	MW-36		MW-37		MW-38		MW-40		MW-41		MW-42		MW-43		MW-44		MW-45		MW-46		MW-48		MW-51		MW-53																
	TOC Elevation	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev														
Total Depth (ft)	310.24	324.81	307.45	282.23	283.81	274.83	283.98	289.07	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22	293.22														
Location	Down Field	Up Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field	Down Field														
DATE	24-Oct-02	25-Oct-02	26-Oct-02	27-Oct-02	28-Oct-02	29-Oct-02	30-Oct-02	31-Oct-02	1-Nov-02	2-Nov-02	3-Nov-02	4-Nov-02	5-Nov-02	6-Nov-02	7-Nov-02	8-Nov-02	9-Nov-02	10-Nov-02	11-Nov-02	12-Nov-02	13-Nov-02	14-Nov-02	15-Nov-02	16-Nov-02	17-Nov-02	18-Nov-02	19-Nov-02	20-Nov-02	21-Nov-02	22-Nov-02	23-Nov-02	24-Nov-02	25-Nov-02	26-Nov-02	27-Nov-02	28-Nov-02	29-Nov-02	30-Nov-02	1-Dec-02	2-Dec-02	3-Dec-02
DTW (BTC)	157.46	152.78	132.71	152.20	135.71	171.74	65.48	218.35	56.33	218.50	131.56	153.43	54.271	238.95	53.80	233.76	78.90	231.58	40.50	234.73	53.78	233.80	78.88	231.61	40.58	234.65	53.78	233.78	78.88	231.60	40.54	234.68	73.35	233.03							

Well ID	MW 54	MW 55	MW 56	MW 57	MW 58	MW 59	MW 60	MW 61	MW 62	MW 63	MW 64	MW 67	MW 68		
TOT Elevation	295.35	292.08	293.60	290.77	290.51	290.13	290.86	294.04	293.63	293.06	293.72	278.21	271.89		
Total Depth (ft)	94.50	74.00	89.30	70.50	67.50	87.00	41.00	294.04	112.50	135.00	52.00	273.00	180.00		
Location	ML GW Facility	Depot	Quinn Field	Quinn Field	Quinn Field	Quinn Field	Quinn Field	Quinn Field	Depot	Depot	Clonardale	Off Site	Key Site		
DATE	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	
1-Jan-02	81.88	213.46	221.14	64.81	225.96	64.35	226.16	76.00	224.13	72.41	224.45	68.95	225.09	69.70	221.99
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19-Jan-02															
20-Jan-02	81.65	213.70	221.60	64.64	226.13	64.12	227.39	73.57	226.56	72.20	224.68	68.81	225.23	69.50	222.19
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5-Feb-02	81.81	213.44	221.72	64.60	226.17	64.10	227.33	75.71	224.42	72.14	224.72	68.56	225.48	69.46	222.23
6-Feb-02															
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15-Mar-02	81.54	213.61	Off Bag	64.42	226.35	64.08	226.43	75.43	224.73	71.86	224.98	68.33	225.71	69.22	222.47

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Well ID	MW-54		MW-55	MW-56	MW-57	MW-58	MW-59	MW-60	MW-61	MW-62	MW-63	MW-64	MW-65	
	TOT Elevation	216.75	282.08	283.60	280.77	290.51	320.11	298.88	794.04	293.65	306.06	283.22	276.21	
Total Depth (ft)		74.00	68.50	70.50	67.50	83.00	84.00	84.00	112.50	135.00	135.00	275.00	275.00	
Location	MC GW Facility	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Cloverdale	Kyle St.	
DATE	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev
11-Aug-82														
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Well ID	MW-49		MW-70		MW-71		MW-73		MW-74		MW-75		MW-76		MW-77		MW-78		MW-80		MW-84		MW-87	
	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev
TOC Elevation	307.02	304.99	304.99	304.99	284.4	284.4	300.85	300.85	307.68	307.68	303.61	303.61	302.71	302.71	304.42	304.42	285.03	285.03	273.81	273.81	311.15	311.15	294.93	294.93
Local Depth (ft)	92.70	91.00	91.00	91.00	75.40	75.40	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85	90.85
Location	Off Site	Off Site	Off Site	Off Site	Off Site	Off Site	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Kyle St.	Kyle St.	Kyle St.	Kyle St.	Kyle St.	Kyle St.	Kyle St.	Kyle St.	Magdowick & Dargatzis	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field
DATE	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev
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Well ID	MW-88	MW-89	MW-90	MW-91	MW-95	MW-126	MW-127	PZ-02
TOC Elevation	303.98	304.18		291.89	259.43	252.22	268.71	264.39
Total Depth (ft)								54.50
Location	Depot	Depot	Depot	Quinn Field	Royle St.	Person/Raymer	Westings	Off Site
DATE	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev
16-Mar-02								
17-Mar-02				68.08	27.07			
18-Mar-02								
19-Mar-02								
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28-Mar-02								
29-Mar-02								
30-Mar-02								
31-Mar-02								
1-Apr-02								
2-Apr-02								
3-Apr-02								
4-Apr-02	119.52	184.46	119.64	68.12	273.87	258.45		
5-Apr-02								
6-Apr-02								
7-Apr-02								
8-Apr-02								
9-Apr-02								
10-Apr-02								
11-Apr-02								
12-Apr-02								
13-Apr-02								
14-Apr-02								
15-Apr-02								
16-Apr-02								
17-Apr-02				67.98	274.01	258.45	36.83	247.59
18-Apr-02								
19-Apr-02								
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23-Apr-02								
24-Apr-02								
25-Apr-02								
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27-Apr-02								
28-Apr-02								
29-Apr-02								
30-Apr-02	118.70	185.25	118.92	67.88	274.11	257.81	36.62	247.77
1-May-02								
2-May-02								
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4-May-02								
5-May-02								
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15-May-02								
16-May-02								
17-May-02				67.61	274.38	263.18	36.84	247.45
18-May-02								
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27-May-02								
28-May-02								

Appendix A Groundwater Measurement Data

Well ID	Well 89	Well 90	Well 91	Well 92	Well 126	Well 127	Well 128
LOC Elevation	303.98	304.19	291.99	259.43	252.22	268.71	264.39
Total Depth (ft)							54.50
Loc Elev							Off Log
DATE	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)
29-May-02							
30-May-02							
31-May-02							
1-Jun-02							
2-Jun-02							
3-Jun-02							
4-Jun-02							
5-Jun-02	118.90	182.6	118.90	185.29	67.28	224.71	267.52
6-Jun-02							
7-Jun-02							
8-Jun-02							
9-Jun-02							
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26-Jun-02							
27-Jun-02							
28-Jun-02							
29-Jun-02							
30-Jun-02							
1-Jul-02	112.20	184.92	118.99	185.20	67.18	224.81	265.30
2-Jul-02							
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Appendix A Groundwater Measurements Data

Well ID TCC Elevation Total Depth (ft)	MW-49 303.94		MW-90 304.19		MW-91 291.99		MW-45 259.43		MW-126 252.22		MW-127 268.71		PZ-02 284.39	
	Oppol		Oppol		Dumfries		Roanoke St		Person Rd/Byrd		Westmore		Off Site	
LOCATION	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev
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Well ID T.O.C. Elevation Total Depth (ft)	MW-48 303.98		MW-80 354.19		MW-81 281.98		MW-85 259.43		MW-126 252.72		MW 127 268.71		PZ-02 204.39	
	Output		Dipole		Dum Field		Rogers Sl		Pescadore		Westmore		OW Site	
	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev	DTW (BTC)	GW Elev
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3-Dec-02	119.00	184.95	118.94	185.25	67.90	224.06								

Well ID	TIC Elevation Total Depth (ft)	RW 3		RW 4		RW 5		RW 6		RW 7		RW 8		RW 9		RW 10		RW 11		RW 12	
		Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)
1-Jan-02	299.40	3	0.5	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
2-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
3-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
4-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
5-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
6-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
7-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
8-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
9-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
10-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
11-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
12-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
13-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
14-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
15-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
16-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
17-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
18-Jan-02	299.40	3	0.4	3	3.1	6.7	14.9	14.5	12	2.5	1.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
19-Jan-02	299.40	3	0.4	3	3.1	6.7	1														

WELL	RW-1	RW-4	RW-5	RW-6	RW-7	RW-8	RW-1A	RW-1B	RW-2
LOC Elevation	299.43	365.27	307.23	304.67	297.53	293.09	290.79		
Total Depth (ft)	18.50	85.50	92.50	87.50	90.00	81.00	73.50		
Location	Over Field	Over Field	Over Field	Over Field	Over Field	Over Field	Over Field	Over Field	Over Field
DATE	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)
16-Mar-02	2.0	1.7	3.2	0.0	6.0	14.5	3.4	1.4	1.8
17-Mar-02	2.0	1.7	3.2	0.0	6.0	14.5	3.4	1.4	1.9
18-Mar-02	2.0	1.7	3.2	0.0	6.0	14.5	3.4	1.4	1.9
19-Mar-02	2.3	2.0	3.1	0.0	6.6	14.6	3.0	1.2	1.8
20-Mar-02	2.3	2.0	3.1	0.0	6.6	14.6	3.0	1.2	1.9
21-Mar-02	2.3	2.0	3.1	0.0	6.6	14.6	3.0	1.2	1.9
22-Mar-02	2.3	2.0	3.1	0.0	6.6	14.6	3.0	1.2	1.9
23-Mar-02	2.3	2.0	3.1	0.0	6.6	14.6	3.0	1.2	1.9
24-Mar-02	2.3	2.0	3.1	0.0	6.6	14.6	3.0	1.2	1.9
25-Mar-02	2.0	2.1	3.2	0.0	6.6	14.6	3.0	1.2	1.8
26-Mar-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
27-Mar-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
28-Mar-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
29-Mar-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
30-Mar-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
31-Mar-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
1-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
2-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
3-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
4-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
5-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
6-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
7-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
8-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
9-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
10-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
11-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
12-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
13-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
14-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
15-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
16-Apr-02	2.0	2.1	3.2	0.0	6.7	14.6	3.0	1.2	1.8
17-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
18-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
19-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
20-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
21-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
22-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
23-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
24-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
25-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
26-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
27-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
28-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
29-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
30-Apr-02	1.7	2.0	3.1	0.0	6.5	14.5	2.9	1.1	1.7
1-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
2-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
3-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
4-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
5-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
6-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
7-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
8-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
9-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
10-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
11-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
12-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
13-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
14-May-02	2.7	2.3	3.0	6.2	7.3	14.6	3.5	1.3	2.0
15-May-02	2.3	2.1	3.1	5.5	6.9	14.6	3.1	1.0	1.8
16-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
17-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
18-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
19-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
20-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
21-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
22-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
23-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
24-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
25-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
26-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
27-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8
28-May-02	2.5	1.8	3.1	8.1	7.2	14.9	3.3	0.5	1.8

Well ID TOC Elevation Total Depth (ft) Location	RW-3		RW-4		RW-5		RW-6		RW-7		RW-8		RW-9		RW-10		RW-11		RW-12	
	Flow Rate (gpm)		Flow Rate (gpm)		Flow Rate (gpm)		Flow Rate (gpm)		Flow Rate (gpm)		Flow Rate (gpm)		Flow Rate (gpm)		Flow Rate (gpm)		Flow Rate (gpm)		Flow Rate (gpm)	
	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)
DATE																				
29-May-02	2.5	1.8		3.1	8.1	7.2	14.9	14.7	1.0	3.3	0.0	1.8								
30-May-02	2.5	1.8		3.1	8.1	7.2	14.9	14.7	1.0	3.3	0.0	1.8								
31-May-02	2.5	1.8		3.1	8.1	7.2	14.9	14.7	1.0	3.3	0.0	1.8								
1-Jun-02	2.5	1.8		3.1	8.1	7.2	14.9	14.7	1.0	3.3	0.0	1.8								
2-Jun-02	2.5	1.8		3.1	8.1	7.2	14.9	14.7	1.0	3.3	0.0	1.8								
3-Jun-02	2.5	1.8		3.1	8.1	7.2	14.9	14.7	1.0	3.3	0.0	1.8								
4-Jun-02	2.5	1.8		3.1	8.1	7.2	14.9	14.7	1.0	3.3	0.0	1.8								
5-Jun-02	2.5	2.1		3.1	7.1	6.6	6.0	14.7	1.2	3.4	0.0	1.9								
6-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
7-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
8-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
9-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
10-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
11-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
12-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
13-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
14-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
15-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
16-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
17-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
18-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
19-Jun-02	2.5	2.1		3.1	7.1	6.8	6.0	14.7	1.2	3.4	0.0	1.9								
20-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
21-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
22-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
23-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
24-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
25-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
26-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
27-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
28-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
29-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
30-Jun-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
1-Jul-02	3.3	2.3		3.1	9.2	9.3	9.3	14.8	1.0	3.5	0.0	1.6								
2-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
3-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
4-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
5-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
6-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
7-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
8-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
9-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
10-Jul-02	3.1	2.6		3.2	8.2	8.3	8.3	14.8	1.0	3.7	0.0	1.6								
11-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
12-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
13-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
14-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
15-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
16-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
17-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
18-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
19-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
20-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
21-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
22-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
23-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
24-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
25-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
26-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
27-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
28-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
29-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
30-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
31-Jul-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
1-Aug-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
2-Aug-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
3-Aug-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
4-Aug-02	3.4	2.7		3.2	8.6	9.3	9.3	14.8	1.0	3.7	0.0	1.6								
5-Aug-02	3.5	2.9		3.1	10.0	9.3	9.3	14.9	1.0	4.0	0.0	1.6								
6-Aug-02	3.5	2.9		3.1	10.0	9.3	9.3	14.9	1.0	4.0	0.0	1.6								
7-Aug-02	3.5	2.9		3.1	10.0	9.3	9.3	14.9	1.0	4.0	0.0	1.6								
8-Aug-02	3.5	2.9		3.1	10.0	9.3	9.3	14.9	1.0	4.0	0.0	1.6								
9-Aug-02	3.5	2.6		3.1	10.0	9.3	9.3	14.9	1.0	4.0	0.0	1.6								
10-Aug-02	3.5	2.6		3.1	10.0	9.3	9.3	14.9	1.0	4.0	0.0	1.6								

Well ID	RW-3		RW-4		RW-5		RW-6		RW-7		RW-8		RW-9		RW-10		RW-11		RW-12	
	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field	Flow Rate (gpm)	Dunn Field
TOC Execution	299.40	78.50	305.72	85.50	307.25	92.50	304.87	87.50	297.53	80.00	293.06	81.00	290.76	75.50						
Total Depth (ft)																				
Location																				
DATE																				
11-Aug-02	35		28		31		100		83		00		149		10		40		00	
12-Aug-02	35		29		31		100		83		00		149		10		40		00	
13-Aug-02	35		29		31		100		83		00		149		10		40		00	
14-Aug-02	35		29		31		100		83		00		149		10		40		00	
15-Aug-02	29		27		31		98		91		00		149		10		37		00	
16-Aug-02	29		27		31		98		91		00		149		10		37		00	
17-Aug-02	29		27		31		98		91		00		149		10		37		00	
18-Aug-02	29		27		31		98		91		00		149		10		37		00	
19-Aug-02	29		27		31		98		91		00		149		10		37		00	
20-Aug-02	29		27		31		98		91		00		149		10		37		00	
21-Aug-02	29		27		31		98		91		00		149		10		37		00	
22-Aug-02	29		27		31		98		91		00		149		10		37		00	
23-Aug-02	29		27		31		98		91		00		149		10		37		00	
24-Aug-02	29		27		31		98		91		00		149		10		37		00	
25-Aug-02	29		27		31		98		91		00		149		10		37		00	
26-Aug-02	29		27		31		98		91		00		149		10		37		00	
27-Aug-02	29		27		31		98		91		00		149		10		37		00	
28-Aug-02	29		27		31		98		91		00		149		10		37		00	
29-Aug-02	29		27		31		98		91		00		149		10		37		00	
30-Aug-02	29		27		31		98		91		00		149		10		37		00	
31-Aug-02	29		27		31		98		91		00		149		10		37		00	
1-Sep-02	29		27		31		98		91		00		149		10		37		00	
2-Sep-02	29		27		31		98		91		00		149		10		37		00	
3-Sep-02	33		25		31		103		92		00		149		10		39		00	
4-Sep-02	33		29		31		103		92		00		149		10		39		00	
5-Sep-02	33		29		31		103		92		00		149		10		39		00	
6-Sep-02	33		29		31		103		92		00		149		10		39		00	
7-Sep-02	33		29		31		103		92		00		149		10		39		00	
8-Sep-02	33		29		31		103		92		00		149		10		39		00	
9-Sep-02	33		29		31		103		92		00		149		10		39		00	
10-Sep-02	33		29		31		103		92		00		149		10		39		00	
11-Sep-02	35		27		31		92		81		00		148		10		38		00	
12-Sep-02	35		27		31		92		81		00		148		10		38		00	
13-Sep-02	35		27		31		92		81		00		148		10		38		00	
14-Sep-02	35		27		31		92		81		00		148		10		38		00	
15-Sep-02	35		27		31		92		81		00		148		10		38		00	
16-Sep-02	35		27		31		92		81		00		148		10		38		00	
17-Sep-02	35		27		31		92		81		00		148		10		38		00	
18-Sep-02	35		27		31		92		81		00		148		10		38		00	
19-Sep-02	35		27		31		92		81		00		148		10		38		00	
20-Sep-02	37		27		31		84		76		00		149		10		38		00	
21-Sep-02	37		27		31		84		76		00		149		10		38		00	
22-Sep-02	37		27		31		84		76		00		149		10		38		00	
23-Sep-02	37		27		31		84		76		00		149		10		38		00	
24-Sep-02	37		27		31		84		76		00		149		10		38		00	
25-Sep-02	37		27		31		84		76		00		149		10		38		00	
26-Sep-02	37		27		31		84		76		00		149		10		38		00	
27-Sep-02	37		27		31		84		76		00		149		10		38		00	
28-Sep-02	37		27		31		84		76		00		149		10		38		00	
29-Sep-02	37		27		31		84		76		00		149		10		38		00	
30-Sep-02	37		27		31		84		76		00		149		10		38		00	
1-Oct-02	37		27		31		84		76		00		149		10		38		00	
2-Oct-02	37		27		31		84		76		00		149		10		38		00	
3-Oct-02	37		27		31		84		76		00		149		10		38		00	
4-Oct-02	37		27		31		84		76		00		149		10		38		00	
5-Oct-02	37		27		31		84		76		00		149		10		38		00	
6-Oct-02	37		27		31		84		76		00		149		10		38		00	
7-Oct-02	37		27		31		84		76		00		149		10		38		00	
8-Oct-02	37		27		31		84		76		00		149		10		38		00	
9-Oct-02	37		27		31		84		76		00		149		10		38		00	
10-Oct-02	37		27		31		84		76		00		149		10		38		00	
11-Oct-02	37		27		31		84		76		00		149		10		38		00	
12-Oct-02	37		27		31		84		76		00		149		10		38		00	
13-Oct-02	37		27		31		84		76		00		149		10		38		00	
14-Oct-02	37		27		31		84		76		00		149		10		38		00	
15-Oct-02	37		27		31		84		76		00		149		10		38		00	
16-Oct-02	37		27		31		84		76		00		149		10		38		00	
17-Oct-02	37		27		31		84		76		00		149		10		38		00	
18-Oct-02	37		27		31		84		76		00		149		10		38		00	
19-Oct-02	37		27		31		84		76		00		149		10		38		00	
20-Oct-02	37		27		31		84		76		00		149		10		38		00	
21-Oct-02	37		27		31		84		76		00		149		10		38		00	
22-Oct-02	37		27		31		84		76		00		149		10		38		00	
23-Oct-02	37		27		31		84		76		00		149		10		38		00	

Well ID	RW-3	RW-4	RW-5	RW-6	RW-7	RW-8	RW-9	RW-10	RW-11A	RW-1B	RW-2
TOC Location	299.45	305.22	307.75	304.67	297.53	291.09	290.79				
Location	75.50	85.50	92.50	87.50	80.00	81.00	75.50				
	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field	Dunn Field				
DATE	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)	Flow Rate (gpm)
24-Oct-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
25-Oct-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
26-Oct-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
27-Oct-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
28-Oct-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
29-Oct-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
30-Oct-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
31-Oct-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
1-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
2-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
3-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
4-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
5-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
6-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
7-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
8-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
9-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
10-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
11-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
12-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
13-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
14-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
15-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
16-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
17-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
18-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
19-Nov-02	3.3	2.4	3.1	8.9	6.8	14.4	14.9	0.3	3.3	1.3	1.8
20-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
21-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
22-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
23-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
24-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
25-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
26-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
27-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
28-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
29-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
30-Nov-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
1-Dec-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
2-Dec-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8
3-Dec-02	2.7	2.1	3.1	7.6	6.7	14.8	14.8	0.3	3.4	1.3	1.8

Appendix A C. Groundwater Measurement Data

Well ID TOC Findings To 3.0 Depth (ft) --C--	Average System Effluent			Range 24 hr Period (inches)
	Flow Rate (gpm)	Totalized Flow* (gal)	Adjusted Totalized Flow (gallons)	Time
DATE				
1 Jan-02	51.1	54,562,594	106,114,106	12:00
2 Jan-02	50.0	54,634,594	106,186,106	12:00
3 Jan-02	50.0	54,706,594	106,258,106	12:00
4 Jan-02	50.0	54,778,594	106,330,106	12:00
5 Jan-02	50.0	54,850,594	106,402,106	12:00
6 Jan-02	50.0	54,922,594	106,474,106	12:00
7 Jan-02	50.0	54,994,594	106,546,106	12:00
8 Jan-02	50.0	55,066,594	106,618,106	12:00
9 Jan-02	50.0	55,138,594	106,690,106	12:00
10 Jan-02	50.0	55,210,594	106,762,106	12:00
11 Jan-02	50.0	55,282,594	106,834,106	12:00
12 Jan-02	50.0	55,354,594	106,906,106	12:00
13 Jan-02	50.0	55,426,594	106,978,106	12:00
14 Jan-02	50.0	55,498,594	106,950,106	12:00
15 Jan-02	50.0	55,570,594	109,122,106	12:00
16 Jan-02	53.6	55,642,778	109,199,280	12:00
17 Jan-02	53.6	55,724,862	109,276,474	12:00
18 Jan-02	53.6	55,807,146	109,353,638	12:00
19 Jan-02	53.6	55,879,320	109,430,842	12:00
20 Jan-02	53.6	55,956,514	109,508,026	12:00
21 Jan-02	53.6	56,033,698	109,585,210	12:00
22 Jan-02	53.6	56,110,882	109,662,384	12:00
23 Jan-02	53.6	56,188,066	109,739,578	12:00
24 Jan-02	53.6	56,265,250	109,816,762	12:00
25 Jan-02	53.6	56,342,434	109,893,946	12:00
26 Jan-02	53.6	56,419,618	109,971,130	12:00
27 Jan-02	53.6	56,496,802	110,048,314	12:00
28 Jan-02	53.6	56,573,986	110,125,498	12:00
29 Jan-02	53.6	56,651,170	110,202,682	12:00
30 Jan-02	53.6	56,728,354	110,279,866	12:00
31 Jan-02	53.6	56,805,538	110,357,050	12:00
1 Feb-02	53.6	56,882,722	110,434,234	12:00
2 Feb-02	53.6	56,959,906	110,511,418	12:00
3 Feb-02	53.6	57,037,090	110,588,602	12:00
4 Feb-02	50.0	57,109,048	110,660,560	12:00
5 Feb-02	46.8	57,176,440	110,727,952	12:00
6 Feb-02	46.8	57,243,832	110,795,344	12:00
7 Feb-02	46.8	57,311,224	110,862,736	12:00
8 Feb-02	46.8	57,378,616	110,930,128	12:00
9 Feb-02	46.8	57,446,008	110,997,520	12:00
10 Feb-02	46.8	57,513,400	111,064,912	12:00
11 Feb-02	46.8	57,580,792	111,132,304	12:00
12 Feb-02	46.8	57,648,184	111,199,696	12:00
13 Feb-02	46.8	57,715,576	111,267,088	12:00
14 Feb-02	46.8	57,782,968	111,334,480	12:00
15 Feb-02	46.8	57,850,360	111,401,872	12:00
16 Feb-02	46.8	57,917,752	111,469,264	12:00
17 Feb-02	46.8	57,985,144	111,536,656	12:00
18 Feb-02	46.8	58,052,536	111,604,048	12:00
19 Feb-02	46.8	58,119,928	111,671,440	12:00
20 Feb-02	46.8	58,187,320	111,738,832	12:00
21 Feb-02	50.1	58,254,712	111,806,224	12:00
22 Feb-02	50.1	58,321,104	111,873,616	12:00
23 Feb-02	50.1	58,387,496	111,941,008	12:00
24 Feb-02	50.1	58,453,888	112,008,400	12:00
25 Feb-02	50.1	58,520,280	112,075,792	12:00
26 Feb-02	50.1	58,586,672	112,143,184	12:00
27 Feb-02	50.1	58,653,064	112,210,576	12:00
28 Feb-02	50.1	58,719,456	112,277,968	12:00
1 Mar-02	50.1	58,785,848	112,345,360	12:00
2 Mar-02	50.1	58,852,240	112,412,752	12:00
3 Mar-02	50.1	58,918,632	112,480,144	12:00
4 Mar-02	50.1	58,985,024	112,547,536	12:00
5 Mar-02	50.1	59,051,416	112,614,928	12:00
6 Mar-02	50.1	59,117,808	112,682,320	12:00
7 Mar-02	50.1	59,184,200	112,749,712	12:00
8 Mar-02	50.1	59,250,592	112,817,104	12:00
9 Mar-02	50.1	59,316,984	112,884,496	12:00
10 Mar-02	50.1	59,383,376	112,951,888	12:00
11 Mar-02	50.1	59,449,768	113,019,280	12:00
12 Mar-02	50.1	59,516,160	113,086,672	12:00
13 Mar-02	50.1	59,582,552	113,154,064	12:00
14 Mar-02	50.1	59,648,944	113,221,456	12:00
15 Mar-02	50.1	59,715,336	113,288,848	12:00
		59,781,728	113,356,240	12:00
		59,848,120	113,423,632	12:00
		59,914,512	113,491,024	12:00
		59,980,904	113,558,416	12:00
		60,047,296	113,625,808	12:00
		60,113,688	113,693,200	12:00
		60,180,080	113,760,592	12:00
		60,246,472	113,827,984	12:00
		60,312,864	113,895,376	12:00
		60,379,256	113,962,768	12:00
		60,445,648	114,030,160	12:00
		60,512,040	114,097,552	12:00
		60,578,432	114,164,944	12:00
		60,644,824	114,232,336	12:00
		60,711,216	114,299,728	12:00
		60,777,608	114,367,120	12:00
		60,844,000	114,434,512	12:00
		60,910,392	114,501,904	12:00
		60,976,784	114,569,296	12:00
		61,043,176	114,636,688	12:00
		61,109,568	114,704,080	12:00
		61,175,960	114,771,472	12:00
		61,242,352	114,838,864	12:00
		61,308,744	114,906,256	12:00
		61,375,136	114,973,648	12:00
		61,441,528	115,041,040	12:00
		61,507,920	115,108,432	12:00
		61,574,312	115,175,824	12:00
		61,640,704	115,243,216	12:00
		61,707,096	115,310,608	12:00
		61,773,488	115,378,000	12:00
		61,839,880	115,445,392	12:00
		61,906,272	115,512,784	12:00
		61,972,664	115,580,176	12:00
		62,039,056	115,647,568	12:00
		62,105,448	115,714,960	12:00
		62,171,840	115,782,352	12:00
		62,238,232	115,849,744	12:00
		62,304,624	115,917,136	12:00
		62,371,016	115,984,528	12:00
		62,437,408	116,051,920	12:00
		62,503,800	116,119,312	12:00
		62,570,192	116,186,704	12:00
		62,636,584	116,254,096	12:00
		62,702,976	116,321,488	12:00
		62,769,368	116,388,880	12:00
		62,835,760	116,456,272	12:00
		62,902,152	116,523,664	12:00
		62,968,544	116,591,056	12:00
		63,034,936	116,658,448	12:00
		63,101,328	116,725,840	12:00
		63,167,720	116,793,232	12:00
		63,234,112	116,860,624	12:00
		63,300,504	116,928,016	12:00
		63,366,896	116,995,408	12:00
		63,433,288	117,062,800	12:00
		63,499,680	117,130,192	12:00
		63,566,072	117,197,584	12:00
		63,632,464	117,264,976	12:00
		63,698,856	117,332,368	12:00
		63,765,248	117,399,760	12:00
		63,831,640	117,467,152	12:00
		63,898,032	117,534,544	12:00
		63,964,424	117,601,936	12:00
		64,030,816	117,669,328	12:00
		64,097,208	117,736,720	12:00
		64,163,600	117,804,112	12:00
		64,230,000	117,871,504	12:00
		64,296,400	117,938,896	12:00
		64,362,800	118,006,288	12:00
		64,429,200	118,073,680	12:00
		64,495,600	118,141,072	12:00
		64,562,000	118,208,464	12:00
		64,628,400	118,275,856	12:00
		64,694,800	118,343,248	12:00
		64,761,200	118,410,640	12:00
		64,827,600	118,478,032	12:00
		64,894,000	118,545,424	12:00
		64,960,400	118,612,816	12:00
		65,026,800	118,680,208	12:00
		65,093,200	118,747,600	12:00
		65,159,600	118,815,000	12:00
		65,226,000	118,882,400	12:00
		65,292,400	118,949,800	12:00
		65,358,800	119,017,200	12:00
		65,425,200	119,084,600	12:00
		65,491,600	119,152,000	12:00
		65,558,000	119,219,400	12:00
		65,624,400	119,286,800	12:00
		65,690,800	119,354,200	12:00
		65,757,200	119,421,600	12:00
		65,823,600	119,489,000	12:00
		65,890,000	119,556,400	12:00
		65,956,400	119,623,800	12:00
		66,022,800	119,691,200	12:00
		66,089,200	119,758,600	12:00
		66,155,600	119,826,000	12:00
		66,222,000	119,893,400	12:00
		66,288,400	119,960,800	12:00
		66,354,800	120,028,200	12:00
		66,421,200	120,095,600	12:00
		66,487,600	120,163,000	12:00
		66,554,000	120,230,400	12:00
		66,620,400	120,297,800	12:00
		66,686,800	120,365,200	12:00
		66,753,200	120,432,600	12:00
		66,819,600	120,500,000	12:00
		66,886,000	120,567,400	12:00
		66,952,400	120,634,800	12:00
		67,018,800	120,702,200	12:00
		67,085,200	120,769,600	12:00
		67,151,600	120,837,000	12:00
		67,218,000	120,904,400	12:00
		67,284,400	120,971,800	12:00
		67,350,800	121,039,200	12:00
		67,417,200	121,106,600	12:00
		67,483,600	121,174,000	12:00
		67,550,000	121,241,400	12:00
		67,616,400	121,308,800	12:00
		67,682,800	121,376,200	12:00
		67,749,200	121,443,600	12:00
		67,815,600	121,511,000	12:00
		67,882,000	121,578,400	12:00
		67,948,400	121,645,800	12:00
		68,014,800	121,713,200	12:00
		68,081,200	121,780,600	12:00
		68,147,600	121,848,000	12:00
		68,214,000	121,915,400	12:00
		68,280,400	121,982,800	12:00
		68,346,800	122,050,200	12:00
		68,413,200	122,117,600	12:00
		68,479,600	122,185,000	12:00
		68,546,000	122,252,400	12:00
		68,612,400	122,319,800	1

Well ID TOC E-1 TOC-2 Location	Average System Effluent			Rainfall 24 Hr Period
	Flow Rate (gpm)	Totalized Flow* (gpi)	Adjusted Totalized Flow (gallons)	Time (minutes)
DATE				
16-Mar-02	50.1	59,918.776	113,473.288	12.00
17-Mar-02	50.1	59,990.920	113,542.432	12.00
18-Mar-02	50.1	60,063.064	113,614.576	12.00
19-Mar-02	50.7	60,136.072	113,687.584	12.00
20-Mar-02	50.7	60,209.080	113,760.592	12.00
21-Mar-02	50.7	60,282.088	113,833.600	12.00
22-Mar-02	50.7	60,355.096	113,906.608	12.00
23-Mar-02	50.7	60,428.104	113,979.616	12.00
24-Mar-02	50.7	60,501.112	114,052.624	12.00
25-Mar-02	50.7	60,574.120	114,125.632	12.00
26-Mar-02	50.3	60,646.552	114,198.064	12.00
27-Mar-02	50.3	60,718.984	114,270.496	12.00
28-Mar-02	50.3	60,791.416	114,342.928	12.00
29-Mar-02	50.3	60,863.848	114,415.360	12.00
30-Mar-02	50.3	60,936.280	114,487.792	12.00
31-Mar-02	50.3	61,008.712	114,560.224	12.00
1-Apr-02	50.3	61,081.144	114,632.656	12.00
2-Apr-02	50.3	61,153.576	114,705.088	12.00
3-Apr-02	50.3	61,226.008	114,777.520	12.00
4-Apr-02	50.1	61,298.440	114,849.952	12.00
5-Apr-02	50.1	61,370.872	114,921.384	12.00
6-Apr-02	50.1	61,442.304	114,993.816	12.00
7-Apr-02	50.1	61,514.736	115,066.248	12.00
8-Apr-02	50.1	61,586.168	115,138.680	12.00
9-Apr-02	50.1	61,658.600	115,211.112	12.00
10-Apr-02	50.1	61,731.032	115,283.544	12.00
11-Apr-02	50.8	61,803.464	115,355.976	12.00
12-Apr-02	50.8	61,875.896	115,428.408	12.00
13-Apr-02	50.8	61,948.328	115,500.840	12.00
14-Apr-02	50.8	62,020.760	115,573.272	12.00
15-Apr-02	50.8	62,093.192	115,645.704	12.00
16-Apr-02	50.8	62,165.624	115,718.136	12.00
17-Apr-02	50.1	62,238.056	115,790.568	12.00
18-Apr-02	50.1	62,310.488	115,863.000	12.00
19-Apr-02	50.1	62,382.920	115,935.432	12.00
20-Apr-02	50.1	62,455.352	116,007.864	12.00
21-Apr-02	50.1	62,527.784	116,080.296	12.00
22-Apr-02	50.1	62,600.216	116,152.728	12.00
23-Apr-02	50.1	62,672.648	116,225.160	12.00
24-Apr-02	50.1	62,745.080	116,297.592	12.00
25-Apr-02	50.1	62,817.512	116,370.024	12.00
26-Apr-02	50.1	62,889.944	116,442.456	12.00
27-Apr-02	50.1	62,962.376	116,514.888	12.00
28-Apr-02	50.1	63,034.808	116,587.320	12.00
29-Apr-02	50.1	63,107.240	116,659.752	12.00
30-Apr-02	50.1	63,179.672	116,732.184	12.00
1-May-02	50.0	63,252.104	116,804.616	12.00
2-May-02	50.0	63,324.536	116,877.048	12.00
3-May-02	50.0	63,396.968	116,949.480	12.00
4-May-02	50.0	63,469.400	117,021.912	12.00
5-May-02	50.0	63,541.832	117,094.344	12.00
6-May-02	50.0	63,614.264	117,166.776	12.00
7-May-02	50.0	63,686.696	117,239.208	12.00
8-May-02	50.0	63,759.128	117,311.640	12.00
9-May-02	50.0	63,831.560	117,384.072	12.00
10-May-02	50.0	63,903.992	117,456.504	12.00
11-May-02	50.0	63,976.424	117,528.936	12.00
12-May-02	50.0	64,048.856	117,601.368	12.00
13-May-02	50.0	64,121.288	117,673.800	12.00
14-May-02	50.0	64,193.720	117,746.232	12.00
15-May-02	50.0	64,266.152	117,818.664	12.00
16-May-02	50.0	64,338.584	117,891.096	12.00
17-May-02	50.0	64,411.016	117,963.528	12.00
18-May-02	50.0	64,483.448	118,035.960	12.00
19-May-02	50.0	64,555.880	118,108.392	12.00
20-May-02	50.0	64,628.312	118,180.824	12.00
21-May-02	50.0	64,700.744	118,253.256	12.00
22-May-02	50.0	64,773.176	118,325.688	12.00
23-May-02	50.0	64,845.608	118,398.120	12.00
24-May-02	50.0	64,918.040	118,470.552	12.00
25-May-02	50.0	64,990.472	118,542.984	12.00
26-May-02	50.0	65,062.904	118,615.416	12.00
27-May-02	50.0	65,135.336	118,687.848	12.00
28-May-02	50.0	65,207.768	118,760.280	12.00
29-May-02	50.0	65,280.200	118,832.712	12.00
30-May-02	50.0	65,352.632	118,905.144	12.00
31-May-02	50.0	65,425.064	118,977.576	12.00
1-Jun-02	50.0	65,497.496	119,050.008	12.00
2-Jun-02	50.0	65,569.928	119,122.440	12.00
3-Jun-02	50.0	65,642.360	119,194.872	12.00
4-Jun-02	50.0	65,714.792	119,267.304	12.00
5-Jun-02	50.0	65,787.224	119,339.736	12.00
6-Jun-02	50.0	65,859.656	119,412.168	12.00
7-Jun-02	50.0	65,932.088	119,484.600	12.00
8-Jun-02	50.0	66,004.520	119,557.032	12.00
9-Jun-02	50.0	66,076.952	119,629.464	12.00
10-Jun-02	50.0	66,149.384	119,701.896	12.00
11-Jun-02	50.0	66,221.816	119,774.328	12.00
12-Jun-02	50.0	66,294.248	119,846.760	12.00
13-Jun-02	50.0	66,366.680	119,919.192	12.00
14-Jun-02	50.0	66,439.112	120,000.000	12.00
15-Jun-02	50.0	66,511.544	120,080.808	12.00
16-Jun-02	50.0	66,583.976	120,161.616	12.00
17-Jun-02	50.0	66,656.408	120,242.424	12.00
18-Jun-02	50.0	66,728.840	120,323.232	12.00
19-Jun-02	50.0	66,801.272	120,404.040	12.00
20-Jun-02	50.0	66,873.704	120,484.848	12.00
21-Jun-02	50.0	66,946.136	120,565.656	12.00
22-Jun-02	50.0	67,018.568	120,646.464	12.00
23-Jun-02	50.0	67,090.992	120,727.272	12.00
24-Jun-02	50.0	67,163.424	120,808.080	12.00
25-Jun-02	50.0	67,235.856	120,888.888	12.00
26-Jun-02	50.0	67,308.288	120,969.696	12.00
27-Jun-02	50.0	67,380.720	121,050.504	12.00
28-Jun-02	50.0	67,453.152	121,131.312	12.00
29-Jun-02	50.0	67,525.584	121,212.120	12.00
30-Jun-02	50.0	67,598.016	121,292.928	12.00
1-Jul-02	50.0	67,670.448	121,373.736	12.00
2-Jul-02	50.0	67,742.880	121,454.544	12.00
3-Jul-02	50.0	67,815.312	121,535.352	12.00
4-Jul-02	50.0	67,887.744	121,616.160	12.00
5-Jul-02	50.0	67,960.176	121,696.968	12.00
6-Jul-02	50.0	68,032.608	121,777.776	12.00
7-Jul-02	50.0	68,105.040	121,858.584	12.00
8-Jul-02	50.0	68,177.472	121,939.392	12.00
9-Jul-02	50.0	68,249.904	122,020.200	12.00
10-Jul-02	50.0	68,322.336	122,101.008	12.00
11-Jul-02	50.0	68,394.768	122,181.816	12.00
12-Jul-02	50.0	68,467.200	122,262.624	12.00
13-Jul-02	50.0	68,539.632	122,343.432	12.00
14-Jul-02	50.0	68,612.064	122,424.240	12.00
15-Jul-02	50.0	68,684.496	122,505.048	12.00
16-Jul-02	50.0	68,756.928	122,585.856	12.00
17-Jul-02	50.0	68,829.360	122,666.664	12.00
18-Jul-02	50.0	68,901.792	122,747.472	12.00
19-Jul-02	50.0	68,974.224	122,828.280	12.00
20-Jul-02	50.0	69,046.656	122,909.088	12.00
21-Jul-02	50.0	69,119.088	122,989.896	12.00
22-Jul-02	50.0	69,191.520	123,070.704	12.00
23-Jul-02	50.0	69,263.952	123,151.512	12.00
24-Jul-02	50.0	69,336.384	123,232.320	12.00
25-Jul-02	50.0	69,408.816	123,313.128	12.00
26-Jul-02	50.0	69,481.248	123,393.936	12.00
27-Jul-02	50.0	69,553.680	123,474.744	12.00
28-Jul-02	50.0	69,626.112	123,555.552	12.00
29-Jul-02	50.0	69,698.544	123,636.360	12.00
30-Jul-02	50.0	69,770.976	123,717.168	12.00
31-Jul-02	50.0	69,843.408	123,797.976	12.00
1-Aug-02	50.0	69,915.840	123,878.784	12.00
2-Aug-02	50.0	69,988.272	123,959.592	12.00
3-Aug-02	50.0	70,060.704	124,040.400	12.00
4-Aug-02	50.0	70,133.136	124,121.208	12.00
5-Aug-02	50.0	70,205.568	124,202.016	12.00
6-Aug-02	50.0	70,277.992	124,282.824	12.00
7-Aug-02	50.0	70,350.424	124,363.632	12.00
8-Aug-02	50.0	70,422.856	124,444.440	12.00
9-Aug-02	50.0	70,495.288	124,525.248	12.00
10-Aug-02	50.0	70,567.720	124,606.056	12.00
11-Aug-02	50.0	70,640.152	124,686.864	12.00
12-Aug-02	50.0	70,712.584	124,767.672	12.00
13-Aug-02	50.0	70,785.016	124,848.480	12.00
14-Aug-02	50.0	70,857.448	124,929.288	12.00
15-Aug-02	50.0	70,929.880	125,010.096	12.00
16-Aug-02	50.0	71,002.312	125,090.904	12.00
17-Aug-02	50.0	71,074.744	125,171.712	12.00
18-Aug-02	50.0	71,147.176	125,252.520	12.00
19-Aug-02	50.0	71,219.608	125,333.328	12.00
20-Aug-02	50.0	71,292.040	125,414.136	12.00
21-Aug-02	50.0	71,364.472	125,494.944	12.00
22-Aug-02	50.0	71,436.904	125,575.752	12.00
23-Aug-02	50.0	71,509.336	125,656.560	12.00
24-Aug-02	50.0	71,581.768	125,737.368	12.00
25-Aug-02	50.0	71,654.200	125,818.176	12.00
26-Aug-02	50.0	71,726.632	125,898.984	12.00
27-Aug-02	50.0	71,799.064	125,979.792	12.00
28-Aug-02	50.0	71,871.496	126,060.600	12.00
29-Aug-02	50.0	71,943.928	126,141.408	12.00
30-Aug-02	50.0	72,016.360	126,222.216	12.00
31-Aug-02	50.0	72,088.792	126,303.024	12.00
1-Sep-02	50.0	72,161.224	126,383.832	12.00
2-Sep-02	50.0	72,233.656	126,464.640	12.00
3-Sep-02	50.0	72,306.088	126,545.448	12.00
4-Sep-02	50.0	72,378.520	126,626.256	12.00
5-Sep-02	50.0	72,450.952	126,707.064	12.00
6-Sep-02	50.0	72,523.384	126,787.872	12.00
7-Sep-02	50.0	72,595.816	126,868.680	12.00
8-Sep-02	50.0	72,668.248	126,949.488	12.00
9-Sep-02	50.0	72,740.680	127,030.296	12.00
10-Sep-02	50.0	72,813.112	127,111.104	12.00
11-Sep-02	50.0	72,885.544	127,191.912	12.00
12-Sep-02	50.0	72,957.976	127,272.720	12.00
13-Sep-02	50			

Appendix A Groundwater Measurement Data

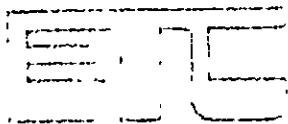
Well ID --- TOC Effluent --- TOC Trip (N) --- Location	Average System Effluent			Rainfall 24 hr Period [inches]
	Flow Rate (gpm)	Totalized Flow* (gal)	Adjusted Totalized Flow (gallons)	Time
DATE				
29 May-02	58.4	65,802,520	119,354,022	12.00
30 May-02	58.4	65,846,816	119,439,128	12.00
31 May-02	58.4	65,910,712	119,522,224	12.00
1 Jun-02	58.4	66,054,608	119,606,320	12.00
2 Jun-02	58.4	66,128,904	119,690,416	12.00
3 Jun-02	58.4	66,223,000	119,774,512	12.00
4 Jun-02	44.8	66,287,512	119,839,024	12.00
5 Jun-02	44.8	66,352,024	119,903,536	12.00
6 Jun-02	44.8	66,416,536	119,968,048	12.00
7 Jun-02	44.8	66,481,048	120,032,560	12.00
8 Jun-02	44.8	66,545,560	120,097,072	12.00
9 Jun-02	44.8	66,610,072	120,161,584	12.00
10 Jun-02	44.8	66,674,584	120,226,096	12.00
11 Jun-02	44.8	66,739,096	120,290,608	12.00
12 Jun-02	44.8	66,803,608	120,355,120	12.00
13 Jun-02	44.8	66,868,120	120,419,632	12.00
14 Jun-02	44.8	66,932,632	120,484,144	12.00
15 Jun-02	44.8	66,997,144	120,548,656	12.00
16 Jun-02	44.8	67,061,656	120,613,168	12.00
17 Jun-02	44.8	67,126,168	120,677,680	12.00
18 Jun-02	44.8	67,190,680	120,742,192	12.00
19 Jun-02	48.1	67,255,192	120,811,456	12.00
20 Jun-02	48.1	67,320,704	120,880,720	12.00
21 Jun-02	48.1	67,385,216	120,949,984	12.00
22 Jun-02	48.1	67,449,728	121,019,248	12.00
23 Jun-02	48.1	67,514,240	121,088,512	12.00
24 Jun-02	48.1	67,578,752	121,157,776	12.00
25 Jun-02	48.1	67,643,264	121,227,040	12.00
26 Jun-02	48.1	67,707,776	121,296,304	12.00
27 Jun-02	48.1	67,772,288	121,365,568	12.00
28 Jun-02	48.1	67,836,800	121,434,832	12.00
29 Jun-02	48.1	67,901,312	121,504,096	12.00
30 Jun-02	48.1	68,021,848	121,573,360	12.00
1 Jul-02	48.1	68,091,112	121,642,624	12.00
2 Jul-02	47.7	68,159,600	121,711,312	12.00
3 Jul-02	47.7	68,228,488	121,780,000	12.00
4 Jul-02	47.7	68,297,176	121,848,688	12.00
5 Jul-02	47.7	68,365,864	121,917,376	12.00
6 Jul-02	47.7	68,434,552	121,986,064	12.00
7 Jul-02	47.7	68,503,240	122,054,752	12.00
8 Jul-02	47.7	68,571,928	122,123,440	12.00
9 Jul-02	47.7	68,640,616	122,192,128	12.00
10 Jul-02	47.7	68,709,304	122,260,816	12.00
11 Jul-02	48.5	68,777,944	122,330,556	12.00
12 Jul-02	48.5	68,846,684	122,400,296	12.00
13 Jul-02	48.5	68,915,424	122,470,036	12.00
14 Jul-02	48.5	68,984,164	122,540,076	12.00
15 Jul-02	48.5	69,052,904	122,610,016	12.00
16 Jul-02	48.5	69,121,644	122,679,856	12.00
17 Jul-02	48.5	69,190,384	122,749,596	12.00
18 Jul-02	48.5	69,259,124	122,819,336	12.00
19 Jul-02	48.5	69,327,864	122,889,076	12.00
20 Jul-02	48.5	69,396,604	122,958,816	12.00
21 Jul-02	48.5	69,465,344	123,028,556	12.00
22 Jul-02	48.5	69,534,084	123,098,296	12.00
23 Jul-02	48.5	69,602,824	123,168,036	12.00
24 Jul-02	48.5	69,671,564	123,237,776	12.00
25 Jul-02	48.5	69,740,304	123,307,516	12.00
26 Jul-02	48.5	69,809,044	123,377,256	12.00
27 Jul-02	48.5	69,877,784	123,446,996	12.00
28 Jul-02	48.5	69,946,524	123,516,736	12.00
29 Jul-02	48.5	70,015,264	123,586,476	12.00
30 Jul-02	48.5	70,084,004	123,656,216	12.00
31 Jul-02	48.5	70,152,744	123,725,956	12.00
1 Aug-02	48.5	70,221,484	123,795,696	12.00
2 Aug-02	48.5	70,290,224	123,865,436	12.00
3 Aug-02	48.5	70,358,964	123,935,176	12.00
4 Aug-02	48.5	70,427,704	124,004,916	12.00
5 Aug-02	50.5	70,496,444	124,074,656	12.00
6 Aug-02	50.5	70,565,184	124,144,396	12.00
7 Aug-02	50.5	70,633,924	124,214,136	12.00
8 Aug-02	50.5	70,702,664	124,283,876	12.00
9 Aug-02	50.5	70,771,404	124,353,616	12.00
10 Aug-02	50.5	70,840,144	124,423,356	12.00

Well ID TOC Effluent Total Dec 2 (ft) Location	Average System Effluent			Rainfall 24 hr Period
	Flow Rate (gpm)	Totalized Flow* (gal)	Adjusted Totalized Flow (gallons)	
			Time (minutes)	Time (minutes)
DATE				
11 Aug 02	50.5	70,964.344	124,515.056	12.00
12 Aug 02	50.5	71,037.064	124,588.576	12.00
13 Aug 02	50.5	71,109.784	124,661.296	12.00
14 Aug 02	50.5	71,182.504	124,734.016	12.00
15 Aug 02	49.0	71,255.064	124,806.576	12.00
16 Aug 02	49.0	71,327.624	124,879.136	12.00
17 Aug 02	49.0	71,399.184	124,951.696	12.00
18 Aug 02	49.0	71,464.744	125,016.256	12.00
19 Aug 02	49.0	71,535.304	125,086.816	12.00
20 Aug 02	49.0	71,605.864	125,157.376	12.00
21 Aug 02	49.0	71,676.424	125,227.936	12.00
22 Aug 02	49.0	71,746.984	125,298.496	12.00
23 Aug 02	49.0	71,817.544	125,369.056	12.00
24 Aug 02	49.0	71,888.104	125,439.616	12.00
25 Aug 02	49.0	71,958.664	125,510.176	12.00
26 Aug 02	49.0	72,028.224	125,580.736	12.00
27 Aug 02	49.0	72,099.784	125,651.296	12.00
28 Aug 02	49.0	72,170.344	125,721.856	12.00
29 Aug 02	49.0	72,240.904	125,792.416	12.00
30 Aug 02	49.0	72,311.464	125,862.976	12.00
31 Aug 02	49.0	72,382.024	125,933.536	12.00
1 Sep 02	49.0	72,452.584	126,004.096	12.00
2 Sep 02	49.0	72,523.144	126,074.656	12.00
3 Sep 02	50.4	72,593.720	126,145.232	12.00
4 Sep 02	50.4	72,664.296	126,215.808	12.00
5 Sep 02	56.8	72,750.016	126,301.528	12.00
6 Sep 02	56.8	72,847.320	126,393.832	12.00
7 Sep 02	54.1	72,934.624	126,486.136	12.00
8 Sep 02	54.1	73,026.928	126,578.440	12.00
9 Sep 02	54.1	73,119.232	126,670.744	12.00
10 Sep 02	54.1	73,211.536	126,763.048	12.00
11 Sep 02	61.9	73,300.872	126,855.184	12.00
12 Sep 02	61.9	73,389.808	126,941.320	12.00
13 Sep 02	61.9	73,478.944	127,030.456	12.00
14 Sep 02	61.9	73,568.080	127,119.592	12.00
15 Sep 02	61.9	73,657.216	127,208.728	12.00
16 Sep 02	61.9	73,746.352	127,297.864	12.00
17 Sep 02	61.9	73,835.488	127,387.000	12.00
18 Sep 02	61.9	73,924.624	127,476.136	12.00
19 Sep 02	61.9	74,013.760	127,565.272	12.00
20 Sep 02	62.6	74,103.904	127,655.416	12.00
21 Sep 02	62.6	74,194.048	127,745.560	12.00
22 Sep 02	62.6	74,284.192	127,835.704	12.00
23 Sep 02	62.6	74,374.336	127,925.848	12.00
24 Sep 02	62.6	74,464.480	128,015.992	12.00
25 Sep 02	62.6	74,554.624	128,106.136	12.00
26 Sep 02	62.6	74,644.768	128,196.280	12.00
27 Sep 02	62.6	74,734.912	128,286.424	12.00
28 Sep 02	62.6	74,825.056	128,376.568	12.00
29 Sep 02	62.6	74,915.200	128,466.712	12.00
30 Sep 02	62.6	75,005.344	128,556.856	12.00
1 Oct 02	62.6	75,095.488	128,647.000	12.00
2 Oct 02	62.6	75,185.632	128,737.144	12.00
3 Oct 02	61.8	75,275.776	128,827.288	12.00
4 Oct 02	61.8	75,365.920	128,917.432	12.00
5 Oct 02	61.8	75,456.064	129,007.576	12.00
6 Oct 02	61.8	75,546.208	129,097.720	12.00
7 Oct 02	61.8	75,636.352	129,187.864	12.00
8 Oct 02	61.8	75,726.496	129,278.008	12.00
9 Oct 02	61.8	75,816.640	129,368.152	12.00
10 Oct 02	61.8	75,906.784	129,458.296	12.00
11 Oct 02	61.8	76,000.000	129,548.440	12.00
12 Oct 02	61.8	76,094.224	129,638.584	12.00
13 Oct 02	61.8	76,188.448	129,728.728	12.00
14 Oct 02	61.8	76,282.672	129,818.872	12.00
15 Oct 02	60.2	76,376.896	129,909.016	12.00
16 Oct 02	60.2	76,471.120	129,999.160	12.00
17 Oct 02	60.2	76,565.344	130,089.304	12.00
18 Oct 02	60.2	76,659.568	130,179.448	12.00
19 Oct 02	60.2	76,753.792	130,269.592	12.00
20 Oct 02	60.2	76,848.016	130,359.736	12.00
21 Oct 02	60.2	76,942.240	130,449.880	12.00
22 Oct 02	60.2	77,036.464	130,539.924	12.00
23 Oct 02	60.2	77,130.688	130,630.068	12.00

Well ID TOC L-1-a or Total Drawn = 1.7760'	Average System Effluent			Rainfall 24 hr Period
	Flow Rate (gpm)	Totalized Flow* (gal)	Adjusted Totalized Flow (gallons)	Time (inches)
DATE				
24 Oct-02	60.2	77 120 416	130 671 828	12 00 0.00
25 Oct-02	60.2	77 207 104	130 758 616	12 00 0.02
26 Oct-02	60.2	77 293 792	130 845 304	12 00 TR
27 Oct-02	60.2	77 380 480	130 931 992	12 00 0.03
28 Oct-02	60.2	77 467 168	131 018 680	12 00 0.02
29 Oct-02	60.2	77 553 856	131 105 368	12 00 0.03
30 Oct-02	60.2	77 640 544	131 192 056	12 00 0.03
31 Oct-02	60.2	77 727 232	131 278 744	12 00 TR
1 Nov-02	60.2	77 813 920	131 365 432	12 00 0.00
2 Nov-02	60.2	77 900 608	131 452 120	12 00 0.00
3 Nov-02	60.2	77 987 296	131 538 808	12 00 0.00
4 Nov-02	57.0	78 073 984	131 625 496	12 00 0.00
5 Nov-02	57.0	78 160 672	131 712 184	12 00 0.00
6 Nov-02	57.0	78 247 360	131 798 872	12 00 0.00
7 Nov-02	57.0	78 334 048	131 885 560	12 00 0.00
8 Nov-02	57.0	78 420 736	131 972 248	12 00 0.00
9 Nov-02	57.0	78 507 424	132 058 936	12 00 TR
10 Nov-02	57.0	78 594 112	132 145 624	12 00 0.00
11 Nov-02	57.0	78 680 800	132 232 312	12 00 0.00
12 Nov-02	57.0	78 767 488	132 318 000	12 00 0.00
13 Nov-02	57.0	78 854 176	132 404 688	12 00 0.00
14 Nov-02	57.0	78 940 864	132 491 376	12 00 0.00
15 Nov-02	57.0	79 027 552	132 578 064	12 00 0.00
16 Nov-02	57.0	79 114 240	132 664 752	12 00 0.00
17 Nov-02	57.0	79 200 928	132 751 440	12 00 0.00
18 Nov-02	57.0	79 287 616	132 838 128	12 00 0.00
19 Nov-02	57.0	79 374 304	132 924 816	12 00 0.00
20 Nov-02	58.3	79 460 992	133 011 504	12 00 0.00
21 Nov-02	58.3	79 547 680	133 098 192	12 00 0.00
22 Nov-02	58.3	79 634 368	133 184 880	12 00 0.00
23 Nov-02	58.3	79 721 056	133 271 568	12 00 0.00
24 Nov-02	58.3	79 807 744	133 358 256	12 00 0.00
25 Nov-02	58.3	79 894 432	133 444 944	12 00 0.00
26 Nov-02	58.3	79 981 120	133 531 632	12 00 0.00
27 Nov-02	58.3	80 067 808	133 618 320	12 00 0.00
28 Nov-02	58.3	80 154 496	133 705 008	12 00 0.00
29 Nov-02	58.3	80 241 184	133 791 696	12 00 0.00
30 Nov-02	58.3	80 327 872	133 878 384	12 00 0.00
1 Dec-02	58.3	80 414 560	133 965 072	12 00 0.00
2 Dec-02	58.3	80 501 248	134 051 760	12 00 0.00
3 Dec-02	58.3	80 587 936	134 138 448	12 00 0.00

APPENDIX B

**SEMI-ANNUAL MONITORING AND RECOVERY WELL SAMPLES
ANALYTICAL LABORATORY DATA**



ENVIRONMENTAL TESTING & CONSULTING, INC.

10000 Highway 100 • Memphis, TN 38111 • (901) 327-2750 • FAX (901) 327-6511

Founded 1972

October 18, 2002

Mr. Kraig Smith
Jacobs
600 William Northern Blvd.
Tullahoma, TN 37388

Ref. Analytical Testing
ETC Order # 0210-053 / 0210-054
Project Description Memphis Depot

Project Number C5X51111

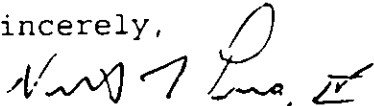
The above referenced project has been analyzed per your instructions. The analyses were performed in our laboratory in accordance with Standard Methods, The Solid Waste Manual SW-846, EPA Methods for Chemical Analysis of Water and Wastes and/or 40 CFR part 136.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, instrumentation maintenance and calibration were performed in accordance with guidelines established by the USEPA

The results are shown on the attached analysis sheet(s).

Please do not hesitate to contact our office if you have any questions

Sincerely,


Nathan A. Pera, IV
Chief Executive Officer

rt
Attachment

JACOBS_DDMT

Certifications

Tennessee #02027
Arkansas
Kentucky #90047
Alabama #40750
Illinois #000537

Mississippi
Oklahoma #9311
Virginia #00106
Louisiana DEQ #04015
USACE_HTRW

USDA #S-46279
EPA #TN00012
NELAP

Environmental Testing & Consulting, Inc.
Data Qualifiers for Organic Reporting

Within the attached report, some analytical data may be reported as "Qualified Data" as indicated by a "Data Qualifier" next to the result. This table summarizes the possible "Data Qualifiers" that may be associated with this report. These qualifiers do not apply for TIC reports.

Q	Surrogate Recovery Outside QC Limits
J	Estimated Value. Presence of the compound was confirmed but less than the reported detection limit.
E	Concentration exceeds the established method calibration range but is within the working range of the instrument
B	Analyte detected in the associated Method Blank
U	Reported result was unconfirmed. Refer to Case Narrative
C	Result reported from GC/MS confirmation analysis
M	Result reported represents a minimum value. Refer to Case Narrative
NC	Result reported from Primary Column. Result did not confirm
*	QC Data (percent recovery/RPD for a particular analyte was outside QC Limits)

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

ANALYTICAL SUMMARY/CROSS REFERENCE TABLE

719 136

Client Name **Jacobs**
Site ID **Memphis Depot****C5X51111**

<u>ETC Sample ID</u>	<u>Field ID</u>	<u>Sample Date</u>	<u>Matrix</u>	<u>Method</u>	<u>Method Description</u>
021005301	MW-30-1	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005302	MW-30-2	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005303	MW-31-1	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005304	MW-31-2	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005305	MW-32-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005306	MW-33-1	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005307	MW-34-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005308	MW-34-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005309	MW-34-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005310	MW-37-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005311	MW-37-100	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005312	MW-37-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005313	MW-37-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005314	MW-40-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005315	MW-42-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005316	MW-43-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005317	MW-43-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005318	MW-44-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005319	MW-44-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005320	MW-44-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005321	MW-51-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005322	MW-51-100	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005323	EQB-1	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005324	MW-51-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005325	MW-54-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005326	MW-54-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005327	MW-54-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics

719 137

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

ANALYTICAL SUMMARY/CROSS REFERENCE TABLE

Client Name **Jacobs**
 Site ID **Memphis Depot**

C5X51111

<u>ETC Sample ID</u>	<u>Field ID</u>	<u>Sample Date</u>	<u>Matrix</u>	<u>Method</u>	<u>Method Description</u>
021005328	MW-56-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005329	MW-57-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005330	MW-57-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005331	MW-58-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005332	MW-65-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005333	MW-65-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005334	MW-65-200	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005335	MW-67-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005336	MW-67-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005337	MW-67-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005338	MW-68-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005339	MW-68-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005340	MW-69-1	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005341	MW-69-2	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005342	MW-70-1	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005343	MW-70-2	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005344	MW-71-1	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005345	MW-71-2	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005346	EQB-2	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005347	MW-76-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005348	MW-76-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005349	Trip Blank	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005350	MW-44-100	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005351	MW-70-100	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005352	MW-71-200	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005353	MW-77-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005354	MW-78-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics

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ANALYTICAL SUMMARY/CROSS REFERENCE TABLE

719 138

Client Name **Jacobs**
Site ID **Memphis Depot**

C5X51111

<u>ETC Sample ID</u>	<u>Field ID</u>	<u>Sample Date</u>	<u>Matrix</u>	<u>Method</u>	<u>Method Description</u>
021005355	MW-78-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005356	MW-78-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005357	MW-79-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics

719.139

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

ANALYTICAL SUMMARY/CROSS REFERENCE TABLE

Client Name **Jacobs**
 Site ID **Memphis Depot**

C5X51111

<u>ETC Sample ID</u>	<u>Field ID</u>	<u>Sample Date</u>	<u>Matrix</u>	<u>Method</u>	<u>Method Description</u>
021005458	MW-79-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005459	MW-79-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005460	MW-79-4	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005461	MW-79-400	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005462	MW-80-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005463	MW-80-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005464	MW-80-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005465	MW-95-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005466	MW-95-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005467	MW-95-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005468	MW-95-4	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005469	MW-126-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005470	MW-127-1	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005471	MW-127-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005472	EQB-3	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005473	PZ-02	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005474	EQB-4	10/02/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005475	RW-1A	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005476	RW-1B	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005477	RW-2	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005478	RW-3	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005479	RW-4	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005480	RW-5	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005481	RW-6	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005482	RW-7	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005483	RW-8	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005484	RW-9	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

ANALYTICAL SUMMARY/CROSS REFERENCE TABLE

713 140

nt Name **Jacobs**
te ID **Memphis Depot**

C5X51111

<u>ETC</u> <u>Sample ID</u>	<u>Field</u> <u>ID</u>	<u>Sample</u> <u>Date</u>	<u>Matrix</u>	<u>Method</u>	<u>Method Description</u>
021005485	RW-9-100	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics
021005486	TB	10/01/02	AQUEOUS	8260B	GC/MS Volatile Organics

Environmental Testing & Consulting, Inc.

Login
Chain-of-Custody



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Memphis, TN 38111
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ETC Work Order :

(901)327-2750 FAX (901)327-6334

Company Name		Phone #		Fax Results		Analysis Requested	
Project/Site		Fax #		RUSH		(Note special detection limits or methods)	
Project #		FID #		Ice			
Project Manager/Contact		PO #					
JACOBS ENVG.		931 393 6448					
MEMPHIS DEPOT							
CSXS1111							
KRAIG SMITH							
# of cont	Sample ID/Number	Depth	Sample Date	Sample Time	Matrix	Type Grab/Comp	Comments
3	MW-30-1		10/2	0820	GW	LAB	
1	MW-30-2		10/2	0822			
	MW-31-1		10/2	0830			
	MW-31-2		10/2	0831			
	MW-32-1		10/1	1000			
	MW-33-1		10/2	0905			
	MW-34-1		10/1	0845			
	MW-34-2		10/1	0846			
	MW-34-3		10/1	0847			
	MW-37-1		10/1	1005			
	MW-37-100		10/1	1005			
Sampled By		Method of Shipment		Blank/Cooler Temp		Remarks	
K Smith				24°C		EDDS	
RELINQUISHED BY (sign)		DATE		TIME		RECEIVED BY (sign)	
Kraig Smith		10/2		1100			
RELINQUISHED BY (sign)		DATE		TIME		RECEIVED BY (sign)	
Kraig Smith							
RELINQUISHED BY (sign)		DATE		TIME		RECEIVED BY (sign)	
Kraig Smith							

Original and Yellow accompany samples to the laboratory. Pink copy for Field Crew
Original copy returned with results Yellow copy for ETC, Inc. files

719 142

Original copy returned with results Yellow copy for ETC, Inc. files



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(901)327-2750 FAX (901)327-6334

CHAIN OF CUSTODY RECORD

719 143

ETC Work Order : 0210053

Company Name <u>JACOBS ENG</u>		Phone # : <u>931 393 6448</u>		Fax Results <u>RUSH</u>											
Project/Site <u>MEMPHIS DEIST</u>		FID #		Ice											
Project # <u>CSXS1111</u>		PO #													
Project Manager/Contact <u>KRALG SMITH</u>		Matrix		Analysis Requested (Note special detection limits or methods)											
		1 Wastewater		4 Sludge											
		2 Aqueous		5 Oil/Solvent											
		3 Soil/Sediment		6 Other											
# of cont	Sample ID/ Number	Depth	Sample Date	Sample Time	Matrix	Type Grab/Comp					Comments				
3	MW-37-2		10/1	1306	6W	6AAB									
1	MW-37-3		10/1	1307											
1	MW-40-1		10/1	1330											
1	MW-42-1		10/1	1125											
1	MW-43-1		10/1	1245											
1	MW-43-2		10/1	1246											
1	MW-44-1		10/1	1130											
1	MW-44-2		10/1	1131											
1	MW-44-3		10/1	1132											
1	MW-51-1		10/1	0855											
1	MW-57-1000		10/1	0855											
Sampled By <u>B. Smith</u>		Method of Shipment		Blank/Cooler Temp <u>24°C</u>		Remarks <u>EDUS</u>									
RELINQUISHED BY (sign) <u>B. Smith</u>		DATE <u>10/2</u>		TIME <u>1000</u>		RECEIVED BY (sign)		DATE		TIME		Sample Delivery Group ID			
RELINQUISHED BY (sign) <u>B. Smith</u>		DATE		TIME		RECEIVED BY (sign)		DATE		TIME					
RELINQUISHED BY (sign) <u>B. Smith</u>		DATE		TIME		RECEIVED BY (sign) <u>B. Smith</u>		DATE <u>10/2</u>		TIME <u>1100</u>					

Distribution : Original and Yellow accompany samples to the laboratory Pink copy for Field w.
Original copy returned with results. Yellow copy for ETC, Inc files.



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CHAIN OF CUSTODY RECORD

ETC Work Order: 0210053

Company Name		Phone #	Fax Results	Analysis Requested											
Project/Site		Fax #	RUSH	(Note special detection limits or methods)											
Project #		FID #	Ice												
Project Manager/Contact		PO #													
Matrix		Sample			Matrix			Type			Comments				
# of cont.	Sample ID/Number	Depth	Sample Date	Sample Time	Matrix	Grab/Comp									
3	EQB-1		10/2	0800	66W	66AB									
1	MW-51-2		10/1	0856											
1	MW-54-1		10/1	0900											
1	MW-54-2		10/1	0901											
1	MW-54-3		10/1	0902											
1	MW-56-1		10/1	0840											
3	MW-57-1		10/1	0820											
1	MW-57-2		10/1	0822											
1	MW-58-1		10/1	0830											
1	MW-65-1		10/1	1250											
1	MW-65-2		10/1	1251											
Sampled By		Method of Shipment		Blank/Cooler Temp		Remarks									
K. Smith				24°C		EDDS									
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY (sign)		DATE	TIME	Sample Delivery Group ID							
K. Smith		10/2	1130	K. Smith		10/2	1100								
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY (sign)		DATE	TIME								
K. Smith				K. Smith											
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY (sign)		DATE	TIME								
K. Smith				K. Smith											



719 145

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Memphis, TN 38111
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ETC Work Order : 0210053

Company Name		Phone #		Fax #		Fax Results		Analysis Requested	
JACOBS ENV		931-343-6448				RUSH		(Note special detection limits or methods)	
Project/Site		FID #		Ice					
MEMPHIS DEPST		PO #							
Project #		Matrix		1 Wastewater		4 Sludge			
CSX51111				2 Aqueous		5 Oil/Solvent			
Project Manager/Contact		3 Soil/Sediment		6 Other					
KRALG SMITH									
# of cont	Sample ID/ Number	Depth	Sample Date	Sample Time	Matrix	Type Grab/Comp	Comments		
3	MW-65-200		10/1	1251	GLW	GLAB	X		
1	MW-67-1		10/1	1315			X		
1	MW-67-2		10/1	1316			X		
1	MW-67-3		10/1	1317			X		
1	MW-68-1		10/1	0940			X		
1	MW-68-2		10/1	0942			X		
1	MW-69-1		10/2	0840			X		
1	MW-69-2		10/2	0842			X		
1	MW-70-1		10/2	0945			X		
1	MW-70-2		10/2	0946			X		
1	MW-71-1		10/2	0858			X		
Sampled By		Method of Shipment		Blank/Cooler Temp		Remarks		EDDS	
K. Smith				74000					
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY (sign)		DATE	TIME	Sample Delivery Group ID	
K. Smith		10/2	1100						
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY (sign)		DATE	TIME		
K. Smith									
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY (sign)		DATE	TIME		
K. Smith									

Distribution : Original and Yellow accompany samples to the laboratory Pink copy
Original copy returned with results. Yellow copy for ETC, Inc. files.

F:\QAQC\SILOP\10-29-08 XLS



ETC Work Order :

000000

[illegible]

Original and Yellow accompany samples to the laboratory. Pink copy for Field Crew.

Original copy returned with results Yellow copy for ETC, Inc files.

719:146

F:\QAQC\SILOP\COC0006.XLS



ETC Work Order . 0210053,054

Distribution : Original and Yellow accompany samples to the laboratory. Pink copy
Original copy returned with results. Yellow copy for ETC, Inc files.

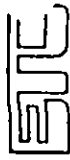


Environmental Testing & Consulting, Inc
2924 Walnut Grove Rd.
Memphis, TN 38111
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ETC Work Order : 030054 719 148

[illegible]

Original and Yellow accompany samples to the laboratory. Pink copy returned with results. Yellow copy for ETC, Inc. files.



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Memphis, TN 38111
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CHAIN OF CUSTODY RECORD

719 149

ETC Work Order :

0210054

Company Name		Phone #	Fax #	Fax Results	Analysis Requested									
Project/Site		FID #	PO #	RUSH	(Note special detection limits or methods)									
Project #		Matrix	Matrix				Type				Comments			
Project Manager/Contact		1 Wastewater	2 Aqueous	3 Soil/Sediment	4 Sludge	5 Oil/Solvent	6 Other	Sample Date	Sample Time	Matrix	Grab/Comp			
3	EQB-4	10/2	1040	6W	GRAB									
3	RW-1A	10/1	1340	6W										
1	RW-1B	10/1	1342											
	RW-2	10/1	1344											
	RW-3	10/1	1350											
	RW-4	10/1	1354											
	RW-5	10/1	1356											
	RW-6	10/1	1358											
	RW-7	10/1	1400											
	RW-8	10/1	1405											
Sampled By		Method of Shipment		Blank/Cooler Temp		Remarks								
K. Smith				24°C (R)		EDDS								
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY (sign)		DATE	TIME	Sample Delivery Group ID						
K. Smith		10/2	1130											
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY (sign)		DATE	TIME							
RELINQUISHED BY (sign)		DATE	TIME	RECEIVED BY LAB (print/sign)		DATE	TIME							
				K. Smith		10/2	1100							

Distribution : Original and Yellow accompany samples to the laboratory. Pink copy for Field Use.
Original copy returned with results Yellow copy for ETC, Inc. files.



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Memphis, TN 38111
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ETC Work Order : 0210054

719 150

[illegible]

Original and Yellow accompany samples to the laboratory. Pink copy for Field Crew
Original copy returned with results Yellow copy for ETC, Inc files.

Environmental Testing & Consulting, Inc.
Cooler Receipt Form

Date/Time Received 10/2/02-11:00
 Date/Time Checked In 10/2/02-11:00
 Carrier/Bill# Client delivered

LIMS# C210-053-054
 Project Memphis Depot
 By Rebekah Barger

1	Custody Seals?/Location-	No
2.	Samples are non-radioactive?	Yes
3.	Chain of Custody in plastic?	Yes
4.	Temperature at receipt (ok = 4 ± 2 °C) < 4°C	OK
5	Ice & Packing-boxes, ice, bags	Yes
6.	Chain of Custody filled out properly?	Yes
7.	All containers in separate bags?	No
8.	Sample containers intact?	Yes
9.	Label(s) complete and in good condition?	Yes
10.	Label(s) agree with Chain of Custody?	Yes
11	Correct containers used?	Yes
12.	Sufficient sample?	Yes
13	VOA vials bubble-free (H ₂ O) or no head space (soil)?	Yes
14.	Preservation OK? TM pH____; TRPH pH____; TOC pH____; TOX pH____; CN pH____; N/P pH____; Other pH____	Yes

Comments _____

*Validated Date and Time of Sample Receipt (VDTSR)

Environmental Testing & Consulting, Inc.

Sample Reports

719 153

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-01**
 Field ID : **MW-30-1**

Matrix **AQUEOUS**Sample Date : **10/02/02 08:20:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	103	84 115
S2 - Toluene-d8	104	69 133
S3 - 4-Bromofluorobenzene	115	80 120
S4 - 1,2-Dichloroethane-d4	81	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 154 CLIENT SAMPLE NO.

021005301

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005301

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0701008

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000020

719 155

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-02**
 Field ID **MW-30-2**

Matrix : **AQUEOUS**
 Sample Date **10/02/02 08:22:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	101	84 115
S2 - Toluene-d8	108	69 133
S3 - 4-Bromofluorobenzene	113	80 120
S4 - 1,2-Dichloroethane-d4	83	58 131


 Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000021

FORM 1 719 156 CLIENT SAMPLE NO.
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

021005302

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005302

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0801009

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000022

719 157

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**ETC Order Number **0210053**ETC Lab ID **0210053-03**Field ID **MW-31-1**Matrix : **AQUEOUS**Sample Date : **10/02/02 08:30:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	0.88J	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	1.08	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	39.3	ug/L	1.00			
trans-1,2-Dichloroethene	11.3	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	1.32	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	0.62J	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	87.5	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	17.0	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	107	84	115
S2 - Toluene-d8	106	69	133
S3 - 4-Bromofluorobenzene	116	80	120
S4 - 1,2-Dichloroethane-d4	89	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 158 CLIENT SAMPLE NO.

021005303

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005303

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0901010

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 159

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-04**
 Field ID : **MW-31-2**

Matrix : **AQUEOUS**Sample Date : **10/02/02 08:31:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	55.4	ug/L	1.00			
trans-1,2-Dichloroethene	0.73	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	1.10	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	0.63	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	15.8	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	1.24	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	103	84 115
S2 - Toluene-d8	108	69 133
S3 - 4-Bromofluorobenzene	115	80 120
S4 - 1,2-Dichloroethane-d4	85	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 160 CLIENT SAMPLE NO.

021005304

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005304

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1001011

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000026

719 161

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-05**
 Field ID : **MW-32-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 10:00:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	12.3	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	91.5	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	0.721	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	14.0	ug/L	1.00			
Tetrachloroethene	1.41	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	34.8	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	3.49	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	105	84 115
S2 - Toluene-d8	109	69 133
S3 - 4-Bromofluorobenzene	121 Q	80 120
S4 - 1,2-Dichloroethane-d4	90	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000027

FORM 1 719 162
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005305

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005305

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1101012

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 163

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-06**
 Field ID **MW-33-1**

Matrix **AQUEOUS**Sample Date : **10/02/02 09:05:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	114	69 133
S3 - 4-Bromofluorobenzene	117	80 120
S4 - 1,2-Dichloroethane-d4	88	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 164

CLIENT SAMPLE NO.

021005306

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005306

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1201013

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 165

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-07**
 Field ID : **MW-34-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 08:45:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	2.56	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	112	69 133
S3 - 4-Bromofluorobenzene	118	80 120
S4 - 1,2-Dichloroethane-d4	90	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000031

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 166 CLIENT SAMPLE NO.

021005307

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005307

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1301014

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 167

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-08**
 Field ID : **MW-34-2**

Matrix : **AQUEOUS**Sample Date : **10/01/02 08:46:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	1.26	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	101	84 115
S2 - Toluene-d8	111	69 133
S3 - 4-Bromofluorobenzene	117	80 120
S4 - 1,2-Dichloroethane-d4	87	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 168 CLIENT SAMPLE NO.

021005308

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005308

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1401015

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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27.				
28.				
29.				
30.				

719 163

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-09**
 Field ID : **MW-34-3**

Matrix : **AQUEOUS**Sample Date : **10/01/02 08:47:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	114	69 133
S3 - 4-Bromofluorobenzene	120	80 120
S4 - 1,2-Dichloroethane-d4	91	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

900635

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 170 CLIENT SAMPLE NO.

021005309

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005309

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1501016

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
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FORM I VOA-GCMS-TIC

.00036

719 171

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-10**
 Field ID : **MW-37-1**

Matrix : **AQUEOUS**
 Sample Date **10/01/02 10:05:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	104	84	115
S2 - Toluene-d8	112	69	133
S3 - 4-Bromofluorobenzene	119	80	120
S4 - 1,2-Dichloroethane-d4	95	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 172

CLIENT SAMPLE NO.

021005310

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005310

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1601017

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

FORM I VOA-GCMS-TIC

000038

719 173

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-11**
 Field ID : **MW-37-100**

Matrix **AQUEOUS**
 Sample Date : **10/01/02 10:05:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/04/02	LS	8260B 5030B
QC Batch	V310041					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Dibromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	108	84 115
S2 - Toluene-d8	117	69 133
S3 - 4-Bromofluorobenzene	121 Q	80 120
1,2-Dichloroethane-d4	93	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000039

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 174

CLIENT SAMPLE NO.

021005311

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005311

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1701018

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
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ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

719 175

Client Name

Jacobs
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID Memphis Depot

FID #

Date Arrived 10/02/02

ETC Order Number 0210053

ETC Lab ID 0210053-12

Field ID MW-37-2

Matrix : AQUEOUS

Sample Date : 10/01/02 10:06:00

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Dibromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	105	84 115
S2 - Toluene-d8	98	69 133
S3 - 4-Bromofluorobenzene	113	80 120
- 1,2-Dichloroethane-d4	100	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000041

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 176 CLIENT SAMPLE NO.

021005312

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005312

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0402006

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

FORM I VOA-GCMS-TIC

900042

719 177

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-13**
 Field ID : **MW-37-3**

Matrix : **AQUEOUS**Sample Date : **10/01/02 10:07:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	108	84 115
S2 - Toluene-d8	99	69 133
S3 - 4-Bromofluorobenzene	115	80 120
S4 - 1,2-Dichloroethane-d4	104	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 178 CLIENT SAMPLE NO.

021005313

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005313

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0501007

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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719 179

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-14**
 Field ID **MW-40-1**

Matrix : **AQUEOUS**
 Sample Date **10/01/02 13:30:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	109	84 115
S2 - Toluene-d8	100	69 133
S3 - 4-Bromofluorobenzene	113	80 120
S4 - 1,2-Dichloroethane-d4	107	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

600045

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 180 CLIENT SAMPLE NO.

021005314

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005314

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0601008

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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FORM I VOA-GCMS-TIC

000046

719 181

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-15**
 Field ID **MW-42-1**

Matrix : **AQUEOUS**Sample Date **10/01/02 11:25:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	111	84 115
S2 - Toluene-d8	99	69 133
S3 - 4-Bromofluorobenzene	115	80 120
1,2-Dichloroethane-d4	110	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 182 CLIENT SAMPLE NO.

021005315

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005315

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0701009

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
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719 183

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-16**
 Field ID : **MW-43-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 12:45:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	111	84	115
S2 - Toluene-d8	101	69	133
S3 - 4-Bromofluorobenzene	114	80	120
S4 - 1,2-Dichloroethane-d4	110	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 184

CLIENT SAMPLE NO.

021005316

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005316

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0801010

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 185

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-17**
 Field ID : **MW-43-2**

Matrix : **AQUEOUS**Sample Date : **10/01/02 12:46:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Bromotorm	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	110	84 115
S2 - Toluene-d8	102	69 133
S3 - 4-Bromofluorobenzene	115	80 120
1,2-Dichloroethane-d4	110	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000051

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 186 CLIENT SAMPLE NO.

021005317

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005317

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0901011

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 187

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-18**
 Field ID : **MW-44-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 11:30:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	112	84	115
S2 - Toluene-d8	100	69	133
S3 - 4-Bromofluorobenzene	116	80	120
S4 - 1,2-Dichloroethane-d4	110	58	131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000053

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 188

CLIENT SAMPLE NO.

021005318

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005318

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1001012

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 189

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-19**
 Field ID **MW-44-2**

Matrix : **AQUEOUS**Sample Date : **10/01/02 11:31:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	4.39	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	2.80	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,1,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	1.67	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	1.01	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	111	84 115
S2 - Toluene-d8	102	69 133
S3 - 4-Bromofluorobenzene	115	80 120
S4 - 1,2-Dichloroethane-d4	111	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000055

FORM 1 719 190
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005319

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005319

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1101013

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 191

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-20**
 Field ID **MW-44-3**

Matrix **AQUEOUS**
 Sample Date : **10/01/02 11:32:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	1.55	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	1.03	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	113	84	115
S2 - Toluene-d8	102	69	133
S3 - 4-Bromofluorobenzene	114	80	120
S4 - 1,2-Dichloroethane-d4	117	58	131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

900057

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 192 CLIENT SAMPLE NO.

021005320

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005320

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1201014

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000058

719 193

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-21**
 Field ID **MW-51-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 08:55:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	57.0	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	0.74	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	1.09	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	7.11	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	113	84 115
S2 - Toluene-d8	102	69 133
S3 - 4-Bromofluorobenzene	115	80 120
S4 - 1,2-Dichloroethane-d4	115	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

00059

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 194 CLIENT SAMPLE NO.

021005321

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005321

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1301015

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 195

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-22**
 Field ID **MW-51-100**

Matrix : **AQUEOUS**Sample Date : **10/01/02 08:55:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	59.5	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	0.85	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	1.07	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	6.81	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	115	84 115
S2 - Toluene-d8	102	69 133
S3 - 4-Bromofluorobenzene	116	80 120
S4 - 1,2-Dichloroethane-d4	116	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 196

CLIENT SAMPLE NO.

021005322

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005322

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1401016

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000062

719 197

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-23**
 Field ID : **EQB-1**

Matrix : **AQUEOUS**
 Sample Date : **10/02/02 08:00:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoforn	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	113	84 115
S2 - Toluene-d8	101	69 133
S3 - 4-Bromofluorobenzene	116	80 120
S4 - 1,2-Dichloroethane-d4	116	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000063

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 198

CLIENT SAMPLE NO.

021005323

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005323

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1501017

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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2.				
3.				
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FORM I VOA-GCMS-TIC

000064

719 199

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-24**
 Field ID **MW-51-2**

Matrix : **AQUEOUS**
 Sample Date **10/01/02 08:56:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	53.7	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	1.00	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	7.04	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	114	84 115
S2 - Toluene-d8	106	69 133
S3 - 4-Bromofluorobenzene	115	80 120
S4 - 1,2-Dichloroethane-d4	114	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 200

CLIENT SAMPLE NO.

021005324

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005324

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1601018

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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FORM I VOA-GCMS-TIC

900066

719 201

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-25**
 Field ID **MW-54-1**

Matrix : **AQUEOUS**Sample Date : **10/01/02 09:00:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
2-Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	ND	ug/L	10.0			
Carbon Tetrachloride	5.58J	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	11.5	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	ND	ug/L	10.0			
trans-1,2-Dichloroethene	12.1	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	ND	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	40.0	ug/L	10.0			
Tetrachloroethene	ND	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	ND	ug/L	10.0			
Trichloroethene	333	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	66.0	ug/L	10.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	116 Q	84 115
S2 - Toluene-d8	104	69 133
S3 - 4-Bromofluorobenzene	114	80 120
S4 - 1,2-Dichloroethane-d4	117	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 202

CLIENT SAMPLE NO.

021005325

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005325

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1701019

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 203

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-26**
 Field ID **MW-54-2**

Matrix **AQUEOUS**Sample Date **10/01/02 09:01:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/07/02	LS	8260B 5030B
QC Batch	V410071					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
2-Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	ND	ug/L	10.0			
Carbon Tetrachloride	14.4	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	11.6	ug/L	10.0			
Chloromethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	ND	ug/L	10.0			
trans-1,2-Dichloroethene	15.2	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	51.7	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	60.1	ug/L	10.0			
Tetrachloroethene	ND	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	ND	ug/L	10.0			
Trichloroethene	632	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	85.9	ug/L	10.0			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	116 Q	84	115
S2 - Toluene-d8	103	69	133
S3 - 4-Bromofluorobenzene	111	80	120
S4 - 1,2-Dichloroethane-d4	117	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 204 CLIENT SAMPLE NO.

021005326

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005326

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1801020

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 205

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-27**
 Field ID : **MW-54-3**

Matrix **AQUEOUS**
 Sample Date **10/01/02 09:02:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
2-Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	ND	ug/L	10.0			
Carbon Tetrachloride	14.0	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	10.9	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	ND	ug/L	10.0			
trans-1,2-Dichloroethene	16.2	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	ND	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	50.7	ug/L	10.0			
Tetrachloroethene	ND	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	ND	ug/L	10.0			
Trichloroethene	920	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	80.2	ug/L	10.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	100	84 115
S2 - Toluene-d8	109	69 133
S3 - 4-Bromofluorobenzene	114	80 120
S4 - 1,2-Dichloroethane-d4	75	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 206 CLIENT SAMPLE NO.

021005327

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005327

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0401004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 207

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-28**Field ID : **MW-56-1**Matrix : **AQUEOUS**Sample Date : **10/01/02 08:40:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	49.3	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	1.95	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	102	84 115
S2 - Toluene-d8	108	69 133
S3 - 4-Bromofluorobenzene	113	80 120
S4 - 1,2-Dichloroethane-d4	75	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

600073

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 208

CLIENT SAMPLE NO.

021005328

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005328

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0501005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 108-70-3	BENZENE, 1,3,5-TRICHLORO-	13.14	4.49	NJ
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719 209

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-29**
 Field ID **MW-57-1**

Matrix : **AQUEOUS**Sample Date : **10/01/02 08:20:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	19.6	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	12.6	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	1.10	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	3.64	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	54.1	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	0.54J	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	103	84 115
S2 - Toluene-d8	104	69 133
S3 - 4-Bromofluorobenzene	112	80 120
S4 - 1,2-Dichloroethane-d4	81	58 131

719 210

FORM 1

CLIENT SAMPLE NO.

VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

021005329

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005329

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0601006

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000076

719 211

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-30**
 Field ID **MW-57-2**

Matrix **AQUEOUS**Sample Date : **10/01/02 08:22:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	43.0	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	29.7	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	2.27	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	8.14	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	111	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	1.13	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	101	84 115
S2 - Toluene-d8	109	69 133
S3 - 4-Bromofluorobenzene	114	80 120
S4 - 1,2-Dichloroethane-d4	77	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 212

CLIENT SAMPLE NO.

021005330

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005330

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0701007

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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713 213

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-31**
 Field ID : **MW-58-1**

Matrix : **AQUEOUS**Sample Date : **10/01/02 08:30:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	3.36	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	1.82	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	102	84	115
S2 - Toluene-d8	111	69	133
S3 - 4-Bromofluorobenzene	116	80	120
S4 - 1,2-Dichloroethane-d4	82	58	131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000079

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 214

CLIENT SAMPLE NO.

021005331

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005331

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0801008

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000080

719 215

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-32**
 Field ID : **MW-65-1**

Matrix **AQUEOUS**
 Sample Date : **10/01/02 12:50:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	105	84 115
S2 - Toluene-d8	117	69 133
S3 - 4-Bromofluorobenzene	117	80 120
S4 - 1,2-Dichloroethane-d4	84	58 131

FORM 1 719 216
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005332

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005332

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0901009

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

713 217

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-33**
 Field ID **MW-65-2**

Matrix **AQUEOUS**
 Sample Date : **10/01/02 12:51:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	108	84 115
S2 - Toluene-d8	118	69 133
S3 - 4-Bromofluorobenzene	117	80 120
S4 - 1,2-Dichloroethane-d4	85	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 213

CLIENT SAMPLE NO.

021005333

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005333

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1001010

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

FORM I VOA-GCMS-TIC

000084

719 219

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-34**
 Field ID : **MW-65-200**

Matrix : **AQUEOUS**Sample Date : **10/01/02 12:51:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	105	84 115
S2 - Toluene-d8	113	69 133
S3 - 4-Bromofluorobenzene	120	80 120
S4 - 1,2-Dichloroethane-d4	88	58 131

Data Validator  ND - Not Detected

Q - Recovery Outside QC Limits

000085

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 220

CLIENT SAMPLE NO.

021005334

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005334

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1101011

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
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FORM I VOA-GCMS-TIC

600086

713 221

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-35**
 Field ID **MW-67-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 13:15:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	3.33	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	116	69 133
S3 - 4-Bromofluorobenzene	120	80 120
S4 - 1,2-Dichloroethane-d4	84	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 222

CLIENT SAMPLE NO.

021005335

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005335

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1201012

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000088

719 223

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-36**
 Field ID **MW-67-2**

Matrix **AQUEOUS**
 Sample Date **10/01/02 13:16:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	108	84	115
S2 - Toluene-d8	116	69	133
S3 - 4-Bromofluorobenzene	118	80	120
S4 - 1,2-Dichloroethane-d4	86	58	131



FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 224

CLIENT SAMPLE NO.

021005336

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005336

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1301013

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
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FORM I VOA-GCMS-TIC

900090

713 225

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-37**
 Field ID **MW-67-3**

Matrix : **AQUEOUS**Sample Date : **10/01/02 13:17:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	3.95	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	107	84 115
S2 - Toluene-d8	117	69 133
S3 - 4-Bromofluorobenzene	119	80 120
S4 - 1,2-Dichloroethane-d4	89	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000091

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 226

CLIENT SAMPLE NO.

021005337

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005337

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1401014

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000092

719 227

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-38**
 Field ID : **MW-68-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 09:40:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	7.88	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	0.94	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	109	84	115
S2 - Toluene-d8	116	69	133
S3 - 4-Bromofluorobenzene	121 Q	80	120
1,2-Dichloroethane-d4	91	58	131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000093

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 228

CLIENT SAMPLE NO.

021005338

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005338

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1501015

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000094

719 229

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-39**
 Field ID **MW-68-2**

Matrix : **AQUEOUS**Sample Date **10/01/02 09:42:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	1.43	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	9.01	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	4.30	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	3.85	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	109	84 115
S2 - Toluene-d8	114	69 133
S3 - 4-Bromofluorobenzene	120	80 120
1,2-Dichloroethane-d4	93	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

600095

FORM 1 719 230
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005339

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005339

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1601016

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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713 231

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-40**
 Field ID **MW-69-1**

Matrix : **AQUEOUS**Sample Date : **10/02/02 08:40:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/09/02	LS	8260B 5030B
QC Batch	V310091					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	0.98J	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	8.12	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	108	84 115
S2 - Toluene-d8	121	69 133
S3 - 4-Bromofluorobenzene	123 Q	80 120
1,2-Dichloroethane-d4	90	58 131

FORM 1 719 232
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005340

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005340

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1701017

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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713 233

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-41**
 Field ID **MW-69-2**

Matrix **AQUEOUS**
 Sample Date : **10/02/02 08:42:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	99	84 115
S2 - Toluene-d8	108	69 133
S3 - 4-Bromofluorobenzene	108	80 120
1,2-Dichloroethane-d4	75	58 131



000099

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 234

CLIENT SAMPLE NO.

021005341

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005341

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0501006

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 235

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-42**
 Field ID : **MW-70-1**

Matrix : **AQUEOUS**Sample Date : **10/02/02 09:45:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	50					
Acetone	ND	ug/L	1000			
Benzene	ND	ug/L	50.0			
Bromodichloromethane	ND	ug/L	50.0			
Bromoform	ND	ug/L	50.0			
Bromomethane	ND	ug/L	50.0			
2-Butanone (MEK)	ND	ug/L	1000			
Carbon Disulfide	ND	ug/L	50.0			
Carbon Tetrachloride	ND	ug/L	50.0			
Chlorobenzene	ND	ug/L	50.0			
Chlorodibromomethane	ND	ug/L	50.0			
Chloroethane	ND	ug/L	50.0			
Chloroform	ND	ug/L	50.0			
Bromomethane	ND	ug/L	50.0			
1,1-Dichloroethane	ND	ug/L	50.0			
1,2-Dichloroethane	ND	ug/L	50.0			
1,1-Dichloroethene	ND	ug/L	50.0			
trans-1,2-Dichloroethene	ND	ug/L	50.0			
1,2-Dichloropropane	ND	ug/L	50.0			
cis-1,3-Dichloropropene	ND	ug/L	50.0			
trans-1,3-Dichloropropene	ND	ug/L	50.0			
Ethylbenzene	ND	ug/L	50.0			
2-Hexanone (MBK)	ND	ug/L	250			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250			
Methylene Chloride	ND	ug/L	250			
Styrene	ND	ug/L	50.0			
1,1,2,2-Tetrachloroethane	11,300E	ug/L	50.0			
Tetrachloroethene	ND	ug/L	50.0			
Toluene	ND	ug/L	100			
1,1,1-Trichloroethane	ND	ug/L	50.0			
1,1,2-Trichloroethane	ND	ug/L	50.0			
Trichloroethene	1,980	ug/L	50.0			
Vinyl Acetate	ND	ug/L	1000			
Vinyl Chloride	ND	ug/L	50.0			
Xylenes-m,p	ND	ug/L	50.0			
Xylenes-o	ND	ug/L	50.0			
cis-1,2-Dichloroethene	72.4	ug/L	50.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	101	84 115
S2 - Toluene-d8	104	69 133
S3 - 4-Bromofluorobenzene	109	80 120
1,2-Dichloroethane-d4	78	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 236

CLIENT SAMPLE NO.

021005342

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005342

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0601007

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 50.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 237

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
ETC Order Number **0210054**

ETC Lab ID **0210054-87**
Field ID : **MW-70-1-DIL**

Matrix **AQUEOUS**
Sample Date : **10/02/02**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V310111					
Dilution Factor	500					
1,1,2,2-Tetrachloroethane	12,400	ug/L	500			
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>			
S1 - Dibromofluoromethane	104		84	115		
S2 - Toluene-d8	102		69	133		
S3 - 4-Bromofluorobenzene	105		80	120		
S4 - 1,2-Dichloroethane-d4	74		58	131		

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

719 238

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**ETC Order Number **0210053**ETC Lab ID **0210053-43**Field ID **MW-70-2**Matrix : **AQUEOUS**Sample Date : **10/02/02 09:46:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	50					
Acetone	ND	ug/L	1000			
Benzene	ND	ug/L	50.0			
Bromodichloromethane	ND	ug/L	50.0			
Bromoform	ND	ug/L	50.0			
Bromomethane	ND	ug/L	50.0			
2-Butanone (MEK)	ND	ug/L	1000			
Carbon Disulfide	89.2	ug/L	50.0			
Carbon Tetrachloride	ND	ug/L	50.0			
Chlorobenzene	ND	ug/L	50.0			
Chlorodibromomethane	ND	ug/L	50.0			
Chloroethane	ND	ug/L	50.0			
Chloroform	ND	ug/L	50.0			
Bromomethane	ND	ug/L	50.0			
1,1-Dichloroethane	ND	ug/L	50.0			
1,2-Dichloroethane	ND	ug/L	50.0			
1,1-Dichloroethene	ND	ug/L	50.0			
trans-1,2-Dichloroethene	ND	ug/L	50.0			
1,2-Dichloropropane	ND	ug/L	50.0			
cis-1,3-Dichloropropene	ND	ug/L	50.0			
trans-1,3-Dichloropropene	ND	ug/L	50.0			
Ethylbenzene	ND	ug/L	50.0			
2-Hexanone (MBK)	ND	ug/L	250			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250			
Methylene Chloride	ND	ug/L	250			
Styrene	ND	ug/L	50.0			
1,1,2,2-Tetrachloroethane	7,980	ug/L	50.0			
Tetrachloroethene	ND	ug/L	50.0			
Toluene	ND	ug/L	100			
1,1,1-Trichloroethane	ND	ug/L	50.0			
1,1,2-Trichloroethane	ND	ug/L	50.0			
Trichloroethene	1,340	ug/L	50.0			
Vinyl Acetate	ND	ug/L	1000			
Vinyl Chloride	ND	ug/L	50.0			
Xylenes-m,p	ND	ug/L	50.0			
Xylenes-o	ND	ug/L	50.0			
cis-1,2-Dichloroethene	42.5	ug/L	50.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	97	84 115
S2 - Toluene-d8	107	69 133
S3 - 4-Bromofluorobenzene	105	80 120
1,2-Dichloroethane-d4	79	58 131

000104

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

719 239

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005343

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005343

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0701008

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 50.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
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FORM I VOA-GCMS-TIC

000105

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 240

CLIENT SAMPLE NO.

021005343

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005343

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0701008

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 50.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
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FORM I VOA-GCMS-TIC

000105

713 24i

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-44**
 Field ID : **MW-71-1**

Matrix : **AQUEOUS**
 Sample Date : **10/02/02 08:58:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	8.89	ug/L	1.00			
Dibromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	9.49	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	1.60	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	111	69 133
S3 - 4-Bromofluorobenzene	109	80 120
S4 - 1,2-Dichloroethane-d4	80	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 242

CLIENT SAMPLE NO.

021005344

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005344

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0801009

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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30.				

FORM I VOA-GCMS-TIC

000107

713 243

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-45**
 Field ID : **MW-71-2**

Matrix : **AQUEOUS**Sample Date : **10/02/02 09:00:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	11.2	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	73.1	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	26.7	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	27.0	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	1.12	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	98	84 115
S2 - Toluene-d8	107	69 133
S3 - 4-Bromofluorobenzene	110	80 120
1,2-Dichloroethane-d4	82	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000108

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 244 CLIENT SAMPLE NO.

021005345

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005345

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0901010

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 55429-29-3	ARSENOUS ACID, TRIS(TRIMETHY	8.97	5.15	NJ
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 245

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-46**
 Field ID : **EQB-2**

Matrix : **AQUEOUS**
 Sample Date **10/02/02 09:02:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	102	84	115
S2 - Toluene-d8	109	69	133
S3 - 4-Bromofluorobenzene	111	80	120
S4 - 1,2-Dichloroethane-d4	84	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 246

CLIENT SAMPLE NO.

021005346

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005346

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1001011

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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713 247

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-47**
 Field ID : **MW-76-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 09:45:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	1.17	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	54.7	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	37.2	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	2.94	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	102	84 115
S2 - Toluene-d8	109	69 133
S3 - 4-Bromofluorobenzene	114	80 120
S4 - 1,2-Dichloroethane-d4	85	58 131


 Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

900112

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 248 CLIENT SAMPLE NO.

021005347

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005347

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1101012

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000113

713 243

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-48**
 Field ID : **MW-76-2**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 09:47:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	14.0	ug/L	1.00			
Tetrachloroethene	1.80	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	20.3	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	1.90	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	111	69 133
S3 - 4-Bromofluorobenzene	114	80 120
S4 - 1,2-Dichloroethane-d4	88	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 250 CLIENT SAMPLE NO.

021005348

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005348

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1201013

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 251

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-49**
 Field ID **Trip Blank**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	97	84 115
S2 - Toluene-d8	105	69 133
S3 - 4-Bromofluorobenzene	106	80 120
S4 - 1,2-Dichloroethane-d4	75	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

900116

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 252

CLIENT SAMPLE NO.

021005349

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005349

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0401005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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713 253

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-50**
 Field ID : **MW-44-100**

Matrix : **AQUEOUS**Sample Date : **10/01/02 11:30:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	101	84 115
S2 - Toluene-d8	113	69 133
S3 - 4-Bromofluorobenzene	114	80 120
S4 - 1,2-Dichloroethane-d4	88	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

900118

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 254

CLIENT SAMPLE NO.

021005350

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005350

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1301014

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000119

719 255

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-51**
 Field ID **MW-70-100**

Matrix **AQUEOUS**Sample Date : **10/02/02 09:45:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	50					
Acetone	ND	ug/L	1000			
Benzene	ND	ug/L	50.0			
Bromodichloromethane	ND	ug/L	50.0			
Bromoform	ND	ug/L	50.0			
Bromomethane	ND	ug/L	50.0			
2-Butanone (MEK)	ND	ug/L	1000			
Carbon Disulfide	ND	ug/L	50.0			
Carbon Tetrachloride	ND	ug/L	50.0			
Chlorobenzene	ND	ug/L	50.0			
Chlorodibromomethane	ND	ug/L	50.0			
Chloroethane	ND	ug/L	50.0			
Chloroform	ND	ug/L	50.0			
Bromomethane	ND	ug/L	50.0			
1,1-Dichloroethane	ND	ug/L	50.0			
1,2-Dichloroethane	ND	ug/L	50.0			
1,1-Dichloroethene	ND	ug/L	50.0			
trans-1,2-Dichloroethene	ND	ug/L	50.0			
1,2-Dichloropropane	ND	ug/L	50.0			
cis-1,3-Dichloropropene	ND	ug/L	50.0			
trans-1,3-Dichloropropene	ND	ug/L	50.0			
Ethylbenzene	ND	ug/L	50.0			
2-Hexanone (MBK)	ND	ug/L	250			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250			
Methylene Chloride	ND	ug/L	250			
Styrene	ND	ug/L	50.0			
1,1,2,2-Tetrachloroethane	11,500E	ug/L	50.0			
Tetrachloroethene	ND	ug/L	50.0			
Toluene	ND	ug/L	100			
1,1,1-Trichloroethane	ND	ug/L	50.0			
1,1,2-Trichloroethane	ND	ug/L	50.0			
Trichloroethene	1,870	ug/L	50.0			
Vinyl Acetate	ND	ug/L	1000			
Vinyl Chloride	ND	ug/L	50.0			
Xylenes-m,p	ND	ug/L	50.0			
Xylenes-o	ND	ug/L	50.0			
cis-1,2-Dichloroethene	67.0	ug/L	50.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	103	84 115
S2 - Toluene-d8	110	69 133
S3 - 4-Bromofluorobenzene	110	80 120
S4 - 1,2-Dichloroethane-d4	88	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000120

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 256

CLIENT SAMPLE NO.

021005351

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005351

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1401015

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 50.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 257

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-88**
 Field ID : **MW-70-100-DIL**

Matrix : **AQUEOUS**
 Sample Date : **10/02/02**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V310111					
Dilution Factor	500					
1,1,2,2-Tetrachloroethane	11,200	ug/L	500			
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>			
S1 - Dibromofluoromethane	98		84	115		
S2 - Toluene-d8	106		69	133		
S3 - 4-Bromofluorobenzene	106		80	120		
S4 - 1,2-Dichloroethane-d4	75		58	131		



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

700122

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

713 258

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
ETC Order Number **0210053**

ETC Lab ID **0210053-52**
Field ID **MW-71-200**

Matrix **AQUEOUS**
Sample Date **10/02/02 09:00:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V310111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	14.4	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	133	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	1.00	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	51.0	ug/L	1.00			
Tetrachloroethene	1.35	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	1.00	ug/L	1.00			
Trichloroethene	49.7	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	2.19	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	100	84 115
S2 - Toluene-d8	106	69 133
S3 - 4-Bromofluorobenzene	106	80 120
S4 - 1,2-Dichloroethane-d4	78	58 131

713 253

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005352

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005352

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0701006

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot****713 260**

FID #

Date Arrived **10/02/02**
ETC Order Number **0210053**

ETC Lab ID **0210053-53**
Field ID : **MW-77-1**

Matrix : **AQUEOUS**Sample Date : **10/01/02 09:50:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	50					
Acetone	ND	ug/L	1000			
Benzene	ND	ug/L	50.0			
Bromodichloromethane	ND	ug/L	50.0			
Bromoform	ND	ug/L	50.0			
Bromomethane	ND	ug/L	50.0			
2-Butanone (MEK)	ND	ug/L	1000			
Carbon Disulfide	ND	ug/L	50.0			
Carbon Tetrachloride	ND	ug/L	50.0			
Chlorobenzene	ND	ug/L	50.0			
Chlorodibromomethane	ND	ug/L	50.0			
Chloroethane	ND	ug/L	50.0			
Chloroform	ND	ug/L	50.0			
Bromomethane	ND	ug/L	50.0			
1,1-Dichloroethane	ND	ug/L	50.0			
1,2-Dichloroethane	ND	ug/L	50.0			
1,1-Dichloroethene	ND	ug/L	50.0			
trans-1,2-Dichloroethene	42.9J	ug/L	50.0			
1,2-Dichloropropane	ND	ug/L	50.0			
cis-1,3-Dichloropropene	ND	ug/L	50.0			
trans-1,3-Dichloropropene	ND	ug/L	50.0			
Ethylbenzene	ND	ug/L	50.0			
2-Hexanone (MBK)	ND	ug/L	250			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250			
Methylene Chloride	ND	ug/L	250			
Styrene	ND	ug/L	50.0			
1,1,2,2-Tetrachloroethane	17,800E	ug/L	50.0			
Tetrachloroethene	ND	ug/L	50.0			
Toluene	ND	ug/L	100			
1,1,1-Trichloroethane	ND	ug/L	50.0			
1,1,2-Trichloroethane	ND	ug/L	50.0			
Trichloroethene	5,040	ug/L	50.0			
Vinyl Acetate	ND	ug/L	1000			
Vinyl Chloride	ND	ug/L	50.0			
Xylenes-m,p	ND	ug/L	50.0			
Xylenes-o	ND	ug/L	50.0			
cis-1,2-Dichloroethene	237	ug/L	50.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	106	84 115
S2 - Toluene-d8	111	69 133
S3 - 4-Bromofluorobenzene	114	80 120
S4 - 1,2-Dichloroethane-d4	92	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000125

710 261

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005353

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005353

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1601017

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 50.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000126

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

719 262

Date Arrived **10/02/02**
ETC Order Number **0210054**

ETC Lab ID **0210054-89**
Field ID **MW-77-1-DIL**

Matrix **AQUEOUS**
Sample Date : **10/01/02**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V310111					
Dilution Factor	500					
1,1,2,2-Tetrachloroethane	18,200	ug/L	500			
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>			
S1 - Dibromofluoromethane	97		84	115		
S2 - Toluene-d8	110		69	133		
S3 - 4-Bromofluorobenzene	110		80	120		
S4 - 1,2-Dichloroethane-d4	77		58	131		

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

700127

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

719 263

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-54**
 Field ID : **MW-78-1**

Matrix : **AQUEOUS**
 Sample Date **10/01/02 09:30:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	102	84 115
S2 - Toluene-d8	112	69 133
S3 - 4-Bromofluorobenzene	113	80 120
S4 - 1,2-Dichloroethane-d4	90	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

900128

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 264

CLIENT SAMPLE NO.

021005354

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005354

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1701018

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 265

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-55**
 Field ID **MW-78-2**

Matrix : **AQUEOUS**Sample Date **10/01/02 09:32:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/10/02	LS	8260B 5030B
QC Batch	V310101					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	100	84 115
S2 - Toluene-d8	112	69 133
S3 - 4-Bromofluorobenzene	113	80 120
S4 - 1,2-Dichloroethane-d4	89	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000130

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 266

CLIENT SAMPLE NO.

021005355

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005355

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1801019

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000131

713 267

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-56**
 Field ID **MW-78-3**

Matrix : **AQUEOUS**Sample Date : **10/01/02 09:34:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	2.07	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	98	84	115
S2 - Toluene-d8	97	69	133
S3 - 4-Bromofluorobenzene	106	80	120
S4 - 1,2-Dichloroethane-d4	86	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 268

CLIENT SAMPLE NO.

021005356

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021005356

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0401005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 269

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210053**

ETC Lab ID **0210053-57**
 Field ID : **MW-79-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 10:35:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
2-Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	112	ug/L	10.0			
Carbon Tetrachloride	ND	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	19.8	ug/L	10.0			
trans-1,2-Dichloroethene	6.82J	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	ND	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0			
Tetrachloroethene	ND	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	ND	ug/L	10.0			
Trichloroethene	37.8	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	5.34J	ug/L	10.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	102	84 115
S2 - Toluene-d8	99	69 133
S3 - 4-Bromofluorobenzene	107	80 120
S4 - 1,2-Dichloroethane-d4	94	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

** - Method Detection Limit

900134

FORM 1 719 270
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005357

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 021003557

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0501006

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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713 271

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-58**
 Field ID **MW-79-2**

Matrix : **AQUEOUS**Sample Date : **10/01/02 10:36:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
2-Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	25.7	ug/L	10.0			
Carbon Tetrachloride	ND	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	22.6	ug/L	10.0			
trans-1,2-Dichloroethene	11.2	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	ND	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0			
Tetrachloroethene	2.89J	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	ND	ug/L	10.0			
Trichloroethene	67.6	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	8.67J	ug/L	10.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	99	69 133
S3 - 4-Bromofluorobenzene	108	80 120
S4 - 1,2-Dichloroethane-d4	100	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000136

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

713 272

CLIENT SAMPLE NO.

021005458

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005458

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0601007

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

900137

713 273

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-59**
 Field ID : **MW-79-3**

Matrix . **AQUEOUS**
 Sample Date : **10/01/02 10:37:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	34.4	ug/L	10.0			
Carbon Tetrachloride	ND	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	ND	ug/L	10.0			
Chloromethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	23.5	ug/L	10.0			
trans-1,2-Dichloroethene	10.7	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	ND	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0			
Tetrachloroethene	3.26J	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	ND	ug/L	10.0			
Trichloroethene	68.4	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	8.07J	ug/L	10.0			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	99	69 133
S3 - 4-Bromofluorobenzene	112	80 120
1,2-Dichloroethane-d4	99	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 274

CLIENT SAMPLE NO.

021005459

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005459

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0701008

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000139

719 275

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-60**
 Field ID **MW-79-4**

Matrix : **AQUEOUS**Sample Date : **10/01/02 10:38:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
2-Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	ND	ug/L	10.0			
Carbon Tetrachloride	ND	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	ND	ug/L	10.0			
Chloromethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	23.8	ug/L	10.0			
trans-1,2-Dichloroethene	9.00	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	ND	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0			
Tetrachloroethene	3.18J	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	ND	ug/L	10.0			
Trichloroethene	56.6	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	7.02J	ug/L	10.0			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	106	84	115
S2 - Toluene-d8	100	69	133
S3 - 4-Bromofluorobenzene	110	80	120
S4 - 1,2-Dichloroethane-d4	102	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 276

CLIENT SAMPLE NO.

021005460

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005460

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0801009

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

900141

713 277

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-61**
 Field ID : **MW-79-400**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 10:38:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
2-Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	2.57J	ug/L	10.0			
Carbon Tetrachloride	ND	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	23.7	ug/L	10.0			
trans-1,2-Dichloroethene	9.81J	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	ND	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0			
Tetrachloroethene	3.31J	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	ND	ug/L	10.0			
Trichloroethene	58.8	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	6.70J	ug/L	10.0			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	108	84	115
S2 - Toluene-d8	100	69	133
S3 - 4-Bromofluorobenzene	110	80	120
S4 - 1,2-Dichloroethane-d4	106	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 278 CLIENT SAMPLE NO.

021005461

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005461

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0901010

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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713 273

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-62**
 Field ID **MW-80-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 11:05:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	110	84 115
S2 - Toluene-d8	99	69 133
S3 - 4-Bromofluorobenzene	110	80 120
1,2-Dichloroethane-d4	106	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 230

CLIENT SAMPLE NO. .

021005462

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005462

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1001011

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 281 ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
ETC Order Number **0210054**

ETC Lab ID **0210054-63**
Field ID : **MW-80-2**

Matrix : **AQUEOUS**
Sample Date : **10/01/02 11:06:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	1.13	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Dibromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	112	84 115
S2 - Toluene-d8	99	69 133
S3 - 4-Bromofluorobenzene	110	80 120
S4 - 1,2-Dichloroethane-d4	111	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 282 CLIENT SAMPLE NO.

021005463

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005463

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1101012

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

900147

719 283

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-64**
 Field ID : **MW-80-3**

Matrix **AQUEOUS**
 Sample Date **10/01/02 11:07:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	109	84 115
S2 - Toluene-d8	102	69 133
S3 - 4-Bromofluorobenzene	110	80 120
S4 - 1,2-Dichloroethane-d4	110	58 131



FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 284 CLIENT SAMPLE NO.

021005464

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005464

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1201013

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000149

719 285

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-65**
 Field ID : **MW-95-1**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 10:50:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	111	84 115
S2 - Toluene-d8	101	69 133
S3 - 4-Bromofluorobenzene	111	80 120
S4 - 1,2-Dichloroethane-d4	110	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000150

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 286

CLIENT SAMPLE NO.

021005465

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005465

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1301014

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

719 287

Client Name

Jacobs
 Memphis Defense Depot
 600 William Northern Blvd.
 Tullahoma, TN 37388

Site ID Memphis Depot

FID #

Date Arrived 10/02/02

ETC Order Number 0210054

ETC Lab ID 0210054-66

Field ID MW-95-2

Matrix AQUEOUS

Sample Date 10/01/02 10:51:00

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	112	84 115
S2 - Toluene-d8	101	69 133
S3 - 4-Bromofluorobenzene	111	80 120
S4 - 1,2-Dichloroethane-d4	113	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000152

FORM 1 719 288
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005466

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005466

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1401015

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 289

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-67**
 Field ID : **MW-95-3**

Matrix : **AQUEOUS**Sample Date : **10/01/02 10:52:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	112	84	115
S2 - Toluene-d8	102	69	133
S3 - 4-Bromofluorobenzene	110	80	120
S4 - 1,2-Dichloroethane-d4	113	58	131


 Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000154

FORM 1 719 290
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005467

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005467

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1501016

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
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28.				
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30.				

719 291

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-68**
 Field ID : **MW-95-4**

Matrix : **AQUEOUS**Sample Date : **10/01/02 10:53:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	0.60J	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	113	84 115
S2 - Toluene-d8	102	69 133
S3 - 4-Bromofluorobenzene	112	80 120
S4 - 1,2-Dichloroethane-d4	115	58 131

FORM 1 719 292
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005468

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005468

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1601017

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 293

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-69**
 Field ID : **MW-126-1**

Matrix : **AQUEOUS**Sample Date : **10/01/02 11:00:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	0.84J	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
proform	ND	ug/L	1.00			
bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	7.10B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	114	84 115
S2 - Toluene-d8	100	69 133
S3 - 4-Bromofluorobenzene	124 Q	80 120
1,2-Dichloroethane-d4	117	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 294

CLIENT SAMPLE NO.

021005469

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005469

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0401005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
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FORM I VOA-GCMS-TIC

000159

719 295

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-70**
 Field ID **MW-127-1**

Matrix : **AQUEOUS**Sample Date : **10/01/02 11:20:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/11/02	LS	8260B 5030B
QC Batch	V410111					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	1.36	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	116 Q	84 115
S2 - Toluene-d8	102	69 133
S3 - 4-Bromofluorobenzene	112	80 120
S4 - 1,2-Dichloroethane-d4	118	58 131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000160

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 296

CLIENT SAMPLE NO.

021005470

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005470

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1801019

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
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FORM I VOA-GCMS-TIC

000161

719 297

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-71**
 Field ID **MW-127-2**

Matrix **AQUEOUS**
 Sample Date **10/01/02 11:21:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	6	60B ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			
Surrogate Standard	% Recovery		QC Limits			
S1 - Dibromofluoromethane	118 Q		84 115			
S2 - Toluene-d8	103		69 133			
S3 - 4-Bromofluorobenzene	122 Q		80 120			
S4 - 1,2-Dichloroethane-d4	127		58 131			



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

900162

FORM 1 719 298
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005471

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005471

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0502007

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 299

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-72**
 Field ID : **EQB-3**

Matrix : **AQUEOUS**
 Sample Date **10/02/02 10:00:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/12/02	LS	8260B 5030B
QC Batch	V410112					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	105	84	115
S2 - Toluene-d8	100	69	133
S3 - 4-Bromofluorobenzene	104	80	120
S4 - 1,2-Dichloroethane-d4	96	58	131

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000164

FORM 1 719 300

VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005472

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005472

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 2502032

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/12/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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2.				
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FORM I VOA-GCMS-TIC

000165

719 301

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-73**
 Field ID : **PZ-02**

Matrix **AQUEOUS**Sample Date : **10/02/02 09:25:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/12/02	LS	8260B 5030B
QC Batch	V410112					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	1.13	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	1.71	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	3.10	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	109	84	115
S2 - Toluene-d8	100	69	133
S3 - 4-Bromofluorobenzene	107	80	120
S4 - 1,2-Dichloroethane-d4	103	58	131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000166

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 302 CLIENT SAMPLE NO.

021005473

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005473

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 2603033

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/12/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 303

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-74**
 Field ID : **EQB-4**

Matrix : **AQUEOUS**
 Sample Date : **10/02/02 10:40:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/12/02	LS	8260B 5030B
QC Batch	V410112					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	108	84 115
S2 - Toluene-d8	98	69 133
S3 - 4-Bromofluorobenzene	105	80 120
S4 - 1,2-Dichloroethane-d4	100	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000168

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 304

CLIENT SAMPLE NO.

021005474

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005474

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 2701034

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/12/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000169

719 305

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-75**
 Field ID : **RW-1A**

Matrix : **AQUEOUS**
 Sample Date **10/01/02 13:40:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	10					
Acetone	ND	ug/L	200			
Benzene	ND	ug/L	10.0			
Bromodichloromethane	ND	ug/L	10.0			
Bromoform	ND	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
2-Butanone (MEK)	ND	ug/L	200			
Carbon Disulfide	ND	ug/L	10.0			
Carbon Tetrachloride	65.3	ug/L	10.0			
Chlorobenzene	ND	ug/L	10.0			
Chlorodibromomethane	ND	ug/L	10.0			
Chloroethane	ND	ug/L	10.0			
Chloroform	1,120	ug/L	10.0			
Bromomethane	ND	ug/L	10.0			
1,1-Dichloroethane	ND	ug/L	10.0			
1,2-Dichloroethane	ND	ug/L	10.0			
1,1-Dichloroethene	ND	ug/L	10.0			
trans-1,2-Dichloroethene	6.35J	ug/L	10.0			
1,2-Dichloropropane	ND	ug/L	10.0			
cis-1,3-Dichloropropene	ND	ug/L	10.0			
trans-1,3-Dichloropropene	ND	ug/L	10.0			
Ethylbenzene	ND	ug/L	10.0			
2-Hexanone (MBK)	ND	ug/L	50.0			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0			
Methylene Chloride	71.2B	ug/L	50.0			
Styrene	ND	ug/L	10.0			
1,1,2,2-Tetrachloroethane	187	ug/L	10.0			
Tetrachloroethene	12.3	ug/L	10.0			
Toluene	ND	ug/L	20.0			
1,1,1-Trichloroethane	ND	ug/L	10.0			
1,1,2-Trichloroethane	3.32J	ug/L	10.0			
Trichloroethene	294	ug/L	10.0			
Vinyl Acetate	ND	ug/L	200			
Vinyl Chloride	ND	ug/L	10.0			
Xylenes-m,p	ND	ug/L	10.0			
Xylenes-o	ND	ug/L	10.0			
cis-1,2-Dichloroethene	17.6	ug/L	10.0			
Surrogate Standard	% Recovery		QC Limits			
S1 - Dibromofluoromethane	120 Q		84	115		
S2 - Toluene-d8	101		69	133		
S3 - 4-Bromofluorobenzene	119		80	120		
S4 - 1,2-Dichloroethane-d4	128		58	131		

Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000170

FORM 1 719 306
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005475

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005475

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0601008

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 10.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 307

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-76**
 Field ID **RW-1B**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 13:42:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	27.9	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	20.8	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	2.45	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	6.94B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	1.43	ug/L	1.00			
Tetrachloroethene	2.05	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	0.66J	ug/L	1.00			
Trichloroethene	24.1	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	12.5	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	119 Q	84 115
S2 - Toluene-d8	102	69 133
S3 - 4-Bromofluorobenzene	122 Q	80 120
S4 - 1,2-Dichloroethane-d4	126	58 131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

000172

FORM 1 719 308
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005476

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005476

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0701009

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

500173

719 309

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-77**
 Field ID : **RW-2**

Matrix : **AQUEOUS**Sample Date : **10/01/02 13:44:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	21.6	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	23.1	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	6.49	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	6.92B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	94.7	ug/L	1.00			
Tetrachloroethene	1.48	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	3.34	ug/L	1.00			
Trichloroethene	64.6	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	88.1	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	121 Q	84	115
S2 - Toluene-d8	104	69	133
S3 - 4-Bromofluorobenzene	123 Q	80	120
S4 - 1,2-Dichloroethane-d4	128	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 310

CLIENT SAMPLE NO.

021005477

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005477

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0801010

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
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23. _____	_____	_____	_____	_____
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26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
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30. _____	_____	_____	_____	_____

FORM I VOA-GCMS-TIC

500175

719 311

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-78**
 Field ID : **RW-3**

Matrix : **AQUEOUS**Sample Date : **10/01/02 13:50:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	15.2	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	3.97	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	2.56	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	6.66B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	3.61	ug/L	1.00			
Tetrachloroethene	0.92J	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	70.4	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	16.9	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	120 Q	84 115
S2 - Toluene-d8	101	69 133
S3 - 4-Bromofluorobenzene	124 Q	80 120
S4 - 1,2-Dichloroethane-d4	126	58 131

FORM 1 719 312
 VOA-GCMS ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005478

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005478

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0901011

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
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719 313

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-79**
 Field ID : **RW-4**

Matrix : **AQUEOUS**Sample Date : **10/01/02 13:54:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	1.77	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	3.33	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	8.11	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	6.24B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	335E	ug/L	1.00			
Tetrachloroethene	5.73	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	5.25	ug/L	1.00			
Trichloroethene	775E	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	38.8	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	121 Q	84	115
S2 - Toluene-d8	104	69	133
S3 - 4-Bromofluorobenzene	120	80	120
S4 - 1,2-Dichloroethane-d4	127	58	131



Data Validator

ND - Not Detected

Q - Recovery Outside QC Limits

00178

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 314

CLIENT SAMPLE NO.

021005479

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005479

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1001012

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000179

719 315

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name

**Jacobs
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388**Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**ETC Order Number **0210054**ETC Lab ID **0210054-90**Field ID : **RW-4-DIL**Matrix : **AQUEOUS**Sample Date : **10/01/02**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/15/02	LS	8260B 5030B
QC Batch	V410151					
Dilution Factor	10					
1,1,2,2-Tetrachloroethane	669	ug/L	10.0			
Trichloroethene	1,050	ug/L	10.0			
Surrogate Standard	% Recovery		QC Limits			
S1 - Dibromofluoromethane	108		84	115		
S2 - Toluene-d8	99		69	133		
S3 - 4-Bromofluorobenzene	114		80	120		
S4 - 1,2-Dichloroethane-d4	105		58	131		

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

719 316

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-80**
 Field ID **RW-5**

Matrix : **AQUEOUS**
 Sample Date **10/01/02 13:56:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/15/02	LS	8260B 5030B
QC Batch	V410151					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	2.30	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	47.8	ug/L	1.00			
Tetrachloroethene	4.36	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	142	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	12.8	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	104	84 115
S2 - Toluene-d8	100	69 133
S3 - 4-Bromofluorobenzene	112	80 120
S4 - 1,2-Dichloroethane-d4	96	58 131

719 317

FORM 1

CLIENT SAMPLE NO.

VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

021005480

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005480

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0401006

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/15/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000182

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

719 318

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
ETC Order Number **0210054**

ETC Lab ID **0210054-81**
Field ID : **RW-6**

Matrix : **AQUEOUS**
Sample Date : **10/01/02 13:58:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	3.15	ug/L	1.00			
Chloromethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	3.98	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	6.76B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	2.00	ug/L	1.00			
Tetrachloroethene	32.6	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	27.2	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	10.0	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	124 Q	84 115
S2 - Toluene-d8	103	69 133
S3 - 4-Bromofluorobenzene	118	80 120
S4 - 1,2-Dichloroethane-d4	128	58 131

719 319

FORM 1

CLIENT SAMPLE NO.

VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

021005481

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005481

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1201014

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

FORM I VOA-GCMS-TIC

000101

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name

Jacobs
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388Site ID **Memphis Depot****719 320**

FID #

Date Arrived **10/02/02**ETC Order Number **0210054**ETC Lab ID **0210054-82**Field ID **RW-7**Matrix **AQUEOUS**Sample Date : **10/01/02 14:00:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	0.98J	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	6.66	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
trans-1,2-Dichloroethene	10.8	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	6.29B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	156	ug/L	1.00			
Tetrachloroethene	4.22	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	1.43	ug/L	1.00			
Trichloroethene	55.3	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	50.4	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	122 Q	84 115
S2 - Toluene-d8	103	69 133
S3 - 4-Bromofluorobenzene	119	80 120
S4 - 1,2-Dichloroethane-d4	129	58 131

719 321

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

021005482

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005482

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1301015

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
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9.				
10.				
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12.				
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14.				
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22.				
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28.				
29.				
30.				

FORM I VOA-GCMS-TIC

000185

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

719 322

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
ETC Order Number **0210054**

ETC Lab ID **0210054-83**
Field ID : **RW-8**

Matrix : **AQUEOUS**Sample Date : **10/01/02 14:05:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	2.76	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	36.2	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	21.8	ug/L	1.00			
trans-1,2-Dichloroethene	38.6	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	5.70B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	223E	ug/L	1.00			
Tetrachloroethene	8.35	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	0.60J	ug/L	1.00			
1,1,2-Trichloroethane	3.90	ug/L	1.00			
Trichloroethene	189	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	166	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	121 Q	84 115
S2 - Toluene-d8	103	69 133
S3 - 4-Bromofluorobenzene	118	80 120
S4 - 1,2-Dichloroethane-d4	126	58 131

719 323

FORM 1

CLIENT SAMPLE NO.

VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

021005483

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005483

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1401016

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. 66-25-1	HEXANAL	8.26	7.99	NJ
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
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14.				
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28.				
29.				
30.				

FORM I VOA-GCMS-TIC

000188

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

719 324

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tullahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
ETC Order Number **0210054**

ETC Lab ID **0210054-91**
Field ID : **RW-8-DIL**

Matrix : **AQUEOUS**
Sample Date : **10/01/02**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/15/02	LS	8260B 5030B
QC Batch	V410151					
Dilution Factor	10					
1,1,2,2-Tetrachloroethane	312	ug/L	10.0			
<u>Surrogate Standard</u>	<u>% Recovery</u>		<u>QC Limits</u>			
S1 - Dibromofluoromethane	113		84	115		
S2 - Toluene-d8	101		69	133		
S3 - 4-Bromofluorobenzene	112		80	120		
S4 - 1,2-Dichloroethane-d4	107		58	131		

ENVIRONMENTAL TESTING & CONSULTING, INC.

719 325

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-84**
 Field ID **RW-9**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02 14:10:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	1.28	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	23.4	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	1.68	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	42.0	ug/L	1.00			
trans-1,2-Dichloroethene	2.03	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	6.35B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	10.2	ug/L	1.00			
Tetrachloroethene	30.4	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	1.49	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	35.0	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	7.55	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	123 Q	84 115
S2 - Toluene-d8	104	69 133
S3 - 4-Bromofluorobenzene	120	80 120
S4 - 1,2-Dichloroethane-d4	126	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 326

CLIENT SAMPLE NO.

021005484

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005484

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1501017

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

719 327

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-85**
 Field ID : **RW-9-100**

Matrix : **AQUEOUS**Sample Date : **10/01/02 14:10:00**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/14/02	LS	8260B 5030B
QC Batch	V410141					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	1.09	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	21.4	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	1.71	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	42.4	ug/L	1.00			
trans-1,2-Dichloroethene	1.95	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	5.88B	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	6.24	ug/L	1.00			
Tetrachloroethene	29.6	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	1.36	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	32.9	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	6.94	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits
S1 - Dibromofluoromethane	120 Q	84 115
S2 - Toluene-d8	100	69 133
S3 - 4-Bromofluorobenzene	116	80 120
S4 - 1,2-Dichloroethane-d4	126	58 131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 328

CLIENT SAMPLE NO.

021005485

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005485

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 1601018

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

FORM I VOA-GCMS-TIC

000122

719 329

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

Client Name **Jacobs**
Memphis Defense Depot
600 William Northern Blvd.
Tulahoma, TN 37388

Site ID **Memphis Depot**

FID #

Date Arrived **10/02/02**
 ETC Order Number **0210054**

ETC Lab ID **0210054-86**
 Field ID **TB**

Matrix : **AQUEOUS**
 Sample Date : **10/01/02**

TEST	RESULT	UNITS	DETECTION LIMIT	DATE ANALYZED	DATE EXTRACTED BY	METHOD
GC/MS Volatile Organics				10/12/02	LS	8260B 5030B
QC Batch	V410112					
Dilution Factor	1					
Acetone	ND	ug/L	20.0			
Benzene	ND	ug/L	1.00			
Bromodichloromethane	ND	ug/L	1.00			
Bromoform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
2-Butanone (MEK)	ND	ug/L	20.0			
Carbon Disulfide	ND	ug/L	1.00			
Carbon Tetrachloride	ND	ug/L	1.00			
Chlorobenzene	ND	ug/L	1.00			
Chlorodibromomethane	ND	ug/L	1.00			
Chloroethane	ND	ug/L	1.00			
Chloroform	ND	ug/L	1.00			
Bromomethane	ND	ug/L	1.00			
1,1-Dichloroethane	ND	ug/L	1.00			
1,2-Dichloroethane	ND	ug/L	1.00			
1,1-Dichloroethene	ND	ug/L	1.00			
trans-1,2-Dichloroethene	ND	ug/L	1.00			
1,2-Dichloropropane	ND	ug/L	1.00			
cis-1,3-Dichloropropene	ND	ug/L	1.00			
trans-1,3-Dichloropropene	ND	ug/L	1.00			
Ethylbenzene	ND	ug/L	1.00			
2-Hexanone (MBK)	ND	ug/L	5.00			
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.00			
Methylene Chloride	ND	ug/L	5.00			
Styrene	ND	ug/L	1.00			
1,1,2,2-Tetrachloroethane	ND	ug/L	1.00			
Tetrachloroethene	ND	ug/L	1.00			
Toluene	ND	ug/L	2.00			
1,1,1-Trichloroethane	ND	ug/L	1.00			
1,1,2-Trichloroethane	ND	ug/L	1.00			
Trichloroethene	ND	ug/L	1.00			
Vinyl Acetate	ND	ug/L	20.0			
Vinyl Chloride	ND	ug/L	1.00			
Xylenes-m,p	ND	ug/L	1.00			
Xylenes-o	ND	ug/L	1.00			
cis-1,2-Dichloroethene	ND	ug/L	1.00			

Surrogate Standard	% Recovery	QC Limits	
S1 - Dibromofluoromethane	105	84	115
S2 - Toluene-d8	100	69	133
S3 - 4-Bromofluorobenzene	104	80	120
S4 - 1,2-Dichloroethane-d4	102	58	131

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 330

CLIENT SAMPLE NO.

021005486

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 021005486

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 2401031

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/12/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

FORM I VOA-GCMS-TIC

000195

719 331

Environmental Testing & Consulting, Inc.

**Quality Control Reports
Level III
GC/MS Volatiles**

000196

ENVIRONMENTAL TESTING AND CONSULTING, INC.**CASE NARRATIVE****719 332****GC/MS VOLATILE COMPOUNDS – AQUEOUS**

Client Name Jacobs
Project Name Memphis Defense Depot

ETC Order # 0210-053

SAMPLE PRESERVATION (Verified at time of analysis)

All water samples preserved with HCl to pH < 2 and maintained at 4oC until analysis

METHOD

Preparation SW-846 5030A
Analysis SW-846 8260B

HOLDING TIMES

Sample Analysis All samples analyzed within 14 days of collection

QUALITY CONTROL

<u>QC Batch</u>	<u>Form 4 Summary</u>
V310041	V3100411LB
V410071	V4100711LB
V310091	V3100911LB
V310101	V3101011LB
V310111	V3101111LB
V410111	V4101111LB

System Monitoring Compounds FORM 2

Surrogate recoveries within QC limits except as listed below

Surrogate Bromofluorobenzene was flagged for high recovery in multiple project samples Surrogate

Dibromofluoromethane was flagged for high recovery in multiple project samples Refer to Form 2

Method Blank FORM 4

V3100411LB
V4100711LB
V3100911LB
V3101011LB
V3101111LB
V4101111LB

Target analytes were not detected in the method blank, except as listed below

Methylene Chloride was identified in method blanks V4100711LB and V4101111LB This analyte was not reported in any associated project samples The data was not affected

Laboratory Control Sample FORM 3

V3100411LCS
V4100711LCS
V3100911LCS
V3101011LCS
V3101111LCS
V4101111LCS

All target analyte acceptance criteria met, except as listed below

Methylene Chloride was flagged for high recovery in V3100411LCS and V3100911LCS Toluene was flagged for high recovery in V3100911LCS. These analytes were not reported in any associated project sample The data was not affected

CASE NARRATIVE

GC/MS VOLATILE COMPOUNDS - AQUEOUS

Client Name Jacobs
Project Name Memphis Defense Depot

ETC Order # 0210-053

Matrix Spike / Matrix Spike Dup FORM 3

Batch V310041

0210-053-11 RPD All analytes within QC limits.

MW-37-100 Spike Recovery All analytes within QC limits *

*Toluene was flagged for high recovery in the MSD MS recovery was within QC limits Refer to Laboratory Control Sample(s) for system verification

Batch V410071

0210-053-20 RPD All analytes within QC limits

MW-44-3 Spike Recovery All analytes within QC limits

Refer to Laboratory Control Sample(s) for system verification

Batch V310091

0210-053-30 RPD All analytes within QC limits *

MW-57-2 Spike Recovery All analytes within QC limits *

*RPD for Trichloroethene was flagged as outside QC limits due to lower recovery in the MSD MS/MSD recoveries were within QC limits. Chlorobenzene and 1,1-Dichloroethene were flagged for high recoveries in the MS MSD recoveries were within QC limits Toluene was flagged for high recoveries in the MS/MSD. Refer to Laboratory Control Sample(s) for system verification

Batch V310101

0210-053-50 RPD All analytes within QC limits.

MW-44-100 Spike Recovery All analytes within QC limits *

*Chlorobenzene, Toluene and Trichloroethene were flagged for high recoveries in the MS/MSD Refer to Laboratory Control Sample(s) for system verification

Batch V310111

0210-053-52 RPD All analytes within QC limits

MW-71-200 Spike Recovery All analytes within QC limits *

*Chlorobenzene and Toluene were flagged for high recoveries in the MS/MSD Refer to Laboratory Control Sample(s) for system verification.

Batch V410111

0210-054-70 RPD All analytes within QC limits

MW-127-1 Spike Recovery All analytes within QC limits

Refer to Laboratory Control Sample(s) for system verification

CALIBRATION

BFB Daily 12-Hour Tune

All criteria met FORM 5

Initial Calibration

All criteria met FORM 6

Calibration Verification

% Differences >30% FORM 7

Multiple analytes were flagged for high % Differences in the CV These analytes were not reported in the associated project samples. The data was not affected

Calibration Verification

% Differences >30%. FORM 7

Analyte(s) were flagged with % Differences >30% affecting the data as listed below

Sequence	Analyte	Date/Time Analyzed	% Difference	High/Low
V310101	Chloromethane	10/10/02 1201	39.3	Low*
V410111	Bromomethane	10/11/02 0854	49.7	Low*

ENVIRONMENTAL TESTING AND CONSULTING, INC.
CASE NARRATIVE
GC/MS VOLATILE COMPOUNDS - AQUEOUS

719 334

Client Name Jacobs
Project Name Memphis Defense Depot
ETC Order # 0210-053

CALIBRATION (cont)

*Difference was less than 50% indicating that the ability to detect this analyte between the Method Quantitation Limit (MQL) and the Method Detection Limit (MDL) was not affected. This analyte was not identified in the associated project samples. Results for this analyte should be considered as an estimated value.

Volatile Internal Standard Area and RT FORM 8

Calibration Verification standard(s) Internal Standard Areas and Retention Times within QC limits

SAMPLE ANALYSIS

Instrumentation HP 5890 Series II GC, 5971MSD
Dilutions Required Dilutions performed, as indicated on the result sheets, to bring target analytes within calibration range

Due to limitations with the current LIMS, sample dilutions were reported with a separate ETC Sample ID. The Jacobs Field ID remained unchanged.

Original ETC ID	Dilution ETC ID	Jacobs Field ID
0210-053-42	0210-054-87	MW-70-1
0210-053-51	0210-054-88	MW-70-100
0210-053-53	0210-054-89	MW-77-1
0210-053-57	0210-054-90	MW-79-1


Project Manager

000199

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

	CLIENT SAMPLE NO.	SMC1 (DFM) #	SMC2 (TOL) #	SMC3 (BFB) #	OTHER (DCE) #	TOT OUT
	=====	=====	=====	=====	=====	=====
01	V3100411LB	94	106	110	69	0
02	021005301	103	104	115	81	0
03	021005302	101	108	113	83	0
04	021005303	107	106	116	89	0
05	021005304	103	108	115	85	0
06	021005305	105	109	121*	90	1
07	021005306	104	114	117	88	0
08	021005307	104	112	118	90	0
09	021005308	101	111	117	87	0
10	021005309	104	114	120*	91	1
11	021005310	104	112	119	95	0
12	021005311	108	117	121*	93	1
13	V3100411LCS	100	118	108	86	0
14	021005311MS	97	110	103	80	0
15	021005311MSD	97	114	100	78	0
16	V4100711LCS	87	98	84	79	0
17	V4100711LB	98	99	108	87	0
18	021005312	105	98	113	100	0
19	021005313	108	99	115	104	0
20	021005314	109	100	113	107	0
21	021005315	111	99	115	110	0
22	021005316	111	101	114	110	0
23	021005317	110	102	115	110	0
24	021005318	112	100	116	110	0
25	021005319	111	102	115	111	0
26	021005320	113	102	114	117	0
27	021005321	113	102	115	115	0
28	021005322	115*	102	116	116	1
29	021005323	113	101	116	116	0
30	021005324	114	106	115	114	0

QC LIMITS

SMC1 (DFM) = Dibromofluoromethane (84-115)
 SMC2 (TOL) = Toluene-d8 (69-133)
 SMC3 (BFB) = Bromofluorobenzene (80-120)
 OTHER (DCE) = 1,2-Dichloroethane-d4 (58-131)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 2
WATER VOA-GCMS SYSTEM MONITORING COMPOUND RECOVERY

719 336

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

	CLIENT SAMPLE NO.	SMC1 (DFM) #	SMC2 (TOL) #	SMC3 (BFB) #	OTHER (DCE) #	TOT OUT
	=====	=====	=====	=====	=====	=====
01	021005325	116*	104	114	117	1
02	021005326	116*	103	111	117	1
03	021005320MS	103	106	100	108	0
04	021005320MSD	100	103	97	98	0
05	V3100911LB	98	110	112	71	0
06	021005327	100	109	114	75	0
07	021005328	102	108	113	75	0
08	021005329	103	104	112	81	0
09	021005330	101	109	114	77	0
10	021005331	102	111	116	82	0
11	021005332	105	117	117	84	0
12	021005333	108	118	117	85	0
13	021005334	105	113	120*	88	1
14	021005335	104	116	120	84	0
15	021005336	108	116	118	86	0
16	021005337	107	117	119	89	0
17	021005338	109	116	121*	91	1
18	021005339	109	114	120*	93	1
19	021005340	108	121	123*	90	1
20	V3100911LCS	104	115	115	89	0
21	021005330MS	100	112	107	78	0
22	021005330MSD	98	106	108	75	0
23	V3101011LCS	86	99	95	73	0
24	V3101011LB	94	110	106	69	0
25	021005349	97	105	106	75	0
26	021005341	99	108	108	75	0
27	021005342	101	104	109	78	0
28	021005343	97	107	105	79	0
29	021005344	104	111	109	80	0
30	021005345	98	107	110	82	0

QC LIMITS

SMC1 (DFM) = Dibromofluoromethane (84-115)
 SMC2 (TOL) = Toluene-d8 (69-133)
 SMC3 (BFB) = Bromofluorobenzene (80-120)
 OTHER (DCE) = 1,2-Dichloroethane-d4 (58-131)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

	CLIENT SAMPLE NO.	SMC1 (DFM) #	SMC2 (TOL) #	SMC3 (BFB) #	OTHER (DCE) #	TOT OUT
01	021005346	102	109	111	84	0
02	021005347	102	109	114	85	0
03	021005348	104	111	114	88	0
04	021005350	101	113	114	88	0
05	021005351	103	110	110	88	0
06	021005353	106	111	114	92	0
07	021005354	102	112	113	90	0
08	021005355	100	112	113	89	0
09	021005350MS	101	113	112	86	0
10	021005350MSD	93	111	100	77	0
11	V3101111LCS	90	107	96	73	0
12	V4101111LCS	85	97	87	76	0
13	V3101111LB	98	106	109	72	0
14	V4101111LB	96	94	100	83	0
15	021005356	98	97	106	86	0
16	021005357	102	99	107	94	0
17	021005352	100	106	106	78	0
18	021005352MS	94	108	102	78	0
19	021005352MSD	90	97	101	73	0
20	021005342	104	102	105	74	0
21	021005351	98	106	106	75	0
22	021005353	97	110	110	77	0
23						
24						
25						
26						
27						
28						
29						
30						

QC LIMITS

SMC1 (DFM) = Dibromofluoromethane (84-115)
 SMC2 (TOL) = Toluene-d8 (69-133)
 SMC3 (BFB) = Bromofluorobenzene (80-120)
 OTHER (DCE) = 1,2-Dichloroethane-d4 (58-131)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Lab Name: ETC, INC.

Contract:

V3100411LB

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0302004

Lab Prep Batch: V310041

Date Analyzed: 10/04/02

Time Analyzed: 1315

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC3

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	021005301	021005301	0701008	1517
02	021005302	021005302	0801009	1548
03	021005303	021005303	0901010	1618
04	021005304	021005304	1001011	1649
05	021005305	021005305	1101012	1719
06	021005306	021005306	1201013	1749
07	021005307	021005307	1301014	1820
08	021005308	021005308	1401015	1850
09	021005309	021005309	1501016	1921
10	021005310	021005310	1601017	1951
11	021005311	021005311	1701018	2022
12	V3100411LCS	11LCS	1801019	2053
13	021005311MS	MS	1901020	2123
14	021005311MSD	MSD	2001021	2153
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

719 339

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V3100411LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V310041

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	5.00	U
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

FORM I VOA-GCMS

000204

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

719 340

CLIENT SAMPLE NO.

V3100411LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V310041

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

75-01-4-----Vinyl Chloride	1.00	U
108-38-3-----Xylene-mp	1.00	U
95-47-6-----Xylene-o	1.00	U

719 341

FORM 1

CLIENT SAMPLE NO.

VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

V3100411LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/04/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
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29.				
30.				

FORM I VOA-GCMS-TIC

000206

Lab Name: ETC, INC.

Lab Prep Batch: V310041

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V3100411LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Acetone	100.0		123.0	123	59-151
Benzene	100.0		103.6	104	72-124
Bromodichloromethane	100.0		99.33	99	68-119
Bromoform	100.0		88.03	88	66-136
2-Butanone	100.0		101.8	102	55-151
Bromomethane	100.0		107.3	107	40-134
Carbon Disulfide	100.0		75.67	76	60-133
Carbon Tetrachloride	100.0		91.80	92	64-123
Chlorobenzene	100.0		87.22	87	77-112
Chlorodibromomethane	100.0		102.8	103	72-118
Chloroethane	100.0		101.3	101	64-142
Chloroform	100.0		98.38	98	70-115
Chloromethane	100.0		66.07	66	58-139
1,1-Dichloroethane	100.0		103.6	104	76-118
1,2-Dichloroethane	100.0		102.1	102	62-124
1,1-Dichloroethene	100.0		100.1	100	69-121
cis-1,2-Dichloroethene	100.0		101.1	101	76-114
trans-1,2-Dichloroethene	100.0		80.82	81	72-121
1,2-Dichloropropane	100.0		111.4	111	64-133
cis-1,3-Dichloropropene	100.0		106.0	106	77-120
trans-1,3-Dichloroprope	100.0		104.9	105	73-124
Ethylbenzene	100.0		90.71	91	77-111
2-Hexanone	100.0		118.4	118	53-144
Methylene Chloride	100.0		120.0	120*	76-115
4-Methyl-2-Pentanone	100.0		127.2	127	42-144
Styrene	100.0		93.49	93	77-117
1,1,2,2-Tetrachloroetha	100.0		86.04	86	67-126
Tetrachloroethene	100.0		99.41	99	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

719 343

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

Lab Name: ETC, INC.

Lab Prep Batch: V310041

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V3100411LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		94.97	95	63-122
Toluene	100.0		107.3	107	77-115
1,1,2-Trichloroethane	100.0		114.1	114	69-117
Trichloroethene	100.0		101.0	101	75-113
Vinyl Acetate	100.0		102.2	102	28-146
Vinyl Chloride	100.0		85.38	85	65-134
Xylene-mp	200.0		182.1	91	77-115
Xylene-o	100.0		92.78	93	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 1 out of 36 outside limits

COMMENTS: _____

Lab Name: ETC, INC.

Lab Prep Batch: V310041

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: 021005311

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Benzene	100.0	0.000	106.1	106	72-124
Chlorobenzene	100.0	0.000	99.27	99	77-112
1,1-Dichloroethene	100.0	0.000	100.9	101	69-121
Toluene	100.0	0.000	112.6	113	77-115
Trichloroethene	100.0	0.000	108.0	108	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Benzene	100.0	103.6	104	2	20	72-124
Chlorobenzene	100.0	94.08	94	5	20	77-112
1,1-Dichloroethene	100.0	99.30	99	2	20	69-121
Toluene	100.0	117.1	117*	3	20	77-115
Trichloroethene	100.0	109.1	109	1	20	75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 1 out of 10 outside limits

COMMENTS:

719 345

FORM 4
VOA-GCMS METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

V4100711LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0303005

Lab Prep Batch: V410071

Date Analyzed: 10/07/02

Time Analyzed: 1405

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC4

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	V4100711LCS	11LCS	0201002LCS	1149
02	021005312	021005312	0402006	1507
03	021005313	021005313	0501007	1538
04	021005314	021005314	0601008	1609
05	021005315	021005315	0701009	1640
06	021005316	021005316	0801010	1711
07	021005317	021005317	0901011	1741
08	021005318	021005318	1001012	1812
09	021005319	021005319	1101013	1843
10	021005320	021005320	1201014	1914
11	021005321	021005321	1301015	1945
12	021005322	021005322	1401016	2015
13	021005323	021005323	1501017	2046
14	021005324	021005324	1601018	2116
15	021005325	021005325	1701019	2147
16	021005326	021005326	1801020	2217
17	021005320MS	MS	1901021	2248
18	021005320MSD	MSD	2001022	2318
19				
20				
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22				
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27				
28				
29				
30				

COMMENTS:

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

719 346

CLIENT SAMPLE NO.

V4100711LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V410071

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0303005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	4.15	J
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

FORM I VOA-GCMS

000211

719 347

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

V4100711LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0303005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/07/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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28.				
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30.				

FORM I VOA-GCMS-TIC

600213

Lab Name: ETC, INC.

Lab Prep Batch: V410071

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V4100711LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Acetone	100.0		112.7	113	59-151
Benzene	100.0		113.5	114	72-124
Bromodichloromethane	100.0		79.49	79	68-119
Bromoform	100.0		81.32	81	66-136
2-Butanone	100.0		117.3	117	55-151
Bromomethane	100.0		82.03	82	40-134
Carbon Disulfide	100.0		90.41	90	60-133
Carbon Tetrachloride	100.0		85.45	85	64-123
Chlorobenzene	100.0		89.17	89	77-112
Chlorodibromomethane	100.0		84.09	84	72-118
Chloroethane	100.0		109.2	109	64-142
Chloroform	100.0		94.23	94	70-115
Chloromethane	100.0		88.47	88	58-139
1,1-Dichloroethane	100.0		106.3	106	76-118
1,2-Dichloroethane	100.0		87.15	87	62-124
1,1-Dichloroethene	100.0		93.62	94	69-121
cis-1,2-Dichloroethene	100.0		101.8	102	76-114
trans-1,2-Dichloroethen	100.0		90.71	91	72-121
1,2-Dichloropropane	100.0		100.1	100	64-133
cis-1,3-Dichloropropene	100.0		97.68	98	77-120
trans-1,3-Dichloroprope	100.0		92.62	93	73-124
Ethylbenzene	100.0		86.30	86	77-111
2-Hexanone	100.0		98.86	99	53-144
Methylene Chloride	100.0		95.12	95	76-115
4-Methyl-2-Pentanone	100.0		95.84	96	42-144
Styrene	100.0		88.12	88	77-117
1,1,2,2-Tetrachloroetha	100.0		97.93	98	67-126
Tetrachloroethene	100.0		91.07	91	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

719 349

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

Lab Name: ETC, INC.

Lab Prep Batch: V410071

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V4100711LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		87.94	88	63-122
Toluene	100.0		95.30	95	77-115
1,1,2-Trichloroethane	100.0		97.97	98	69-117
Trichloroethene	100.0		91.08	91	75-113
Vinyl Acetate	100.0		102.1	102	28-146
Vinyl Chloride	100.0		90.59	90	65-134
Xylene-mp	200.0		167.0	84	77-115
Xylene-o	100.0		85.56	86	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 36 outside limits

COMMENTS:

FORM 3
WATER VOA-GCMS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

719 350

Lab Name: ETC, INC.

Lab Prep Batch: V410071

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: 021005320

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Benzene	100.0	0.000	124.1	124	72-124
Chlorobenzene	100.0	0.000	95.43	95	77-112
1,1-Dichloroethene	100.0	0.000	97.03	97	69-121
Toluene	100.0	0.000	103.0	103	77-115
Trichloroethene	100.0	0.000	90.74	91	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
Benzene	100.0	120.6	121	2	20	72-124
Chlorobenzene	100.0	94.36	94	1	20	77-112
1,1-Dichloroethene	100.0	98.84	99	2	20	69-121
Toluene	100.0	96.36	96	7	20	77-115
Trichloroethene	100.0	87.21	87	4	20	75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM III VOA-GCMS

000216

719 351

FORM 4
VOA-GCMS METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

V3100911LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0302003

Lab Prep Batch: V310091

Date Analyzed: 10/09/02

Time Analyzed: 1201

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC3

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	021005327	021005327	0401004	1231
02	021005328	021005328	0501005	1301
03	021005329	021005329	0601006	1332
04	021005330	021005330	0701007	1402
05	021005331	021005331	0801008	1433
06	021005332	021005332	0901009	1503
07	021005333	021005333	1001010	1533
08	021005334	021005334	1101011	1603
09	021005335	021005335	1201012	1634
10	021005336	021005336	1301013	1704
11	021005337	021005337	1401014	1734
12	021005338	021005338	1501015	1805
13	021005339	021005339	1601016	1835
14	021005340	021005340	1701017	1905
15	V3100911LCS	11LCS	1801018LCS	1935
16	021005330MS	MS	1901019	2006
17	021005330MSD	MSD	2001020	2036
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COMMENTS:

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

719 352 CLIENT SAMPLE NO.

V3100911LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V310091

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302003

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	5.00	U
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

FORM I VOA-GCMS

000218

719 353

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V3100911LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V310091

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302003

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

75-01-4-----	Vinyl Chloride	1.00	U
108-38-3-----	Xylene-mp	1.00	U
95-47-6-----	Xylene-o	1.00	U

FORM I VOA-GCMS

000219

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 354

CLIENT SAMPLE NO.

V3100911LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302003

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/09/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1. _____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

FORM I VOA-GCMS-TIC

000220

Lab Name: ETC, INC.

Lab Prep Batch: V310091

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V3100911LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Acetone	100.0		122.3	122	59-151
Benzene	100.0		114.9	115	72-124
Bromodichloromethane	100.0		95.56	96	68-119
Bromoform	100.0		92.27	92	66-136
2-Butanone	100.0		108.4	108	55-151
Bromomethane	100.0		128.4	128	40-134
Carbon Disulfide	100.0		88.29	88	60-133
Carbon Tetrachloride	100.0		100.4	100	64-123
Chlorobenzene	100.0		100.7	101	77-112
Chlorodibromomethane	100.0		103.3	103	72-118
Chloroethane	100.0		117.3	117	64-142
Chloroform	100.0		103.0	103	70-115
Chloromethane	100.0		85.56	86	58-139
1,1-Dichloroethane	100.0		112.5	112	76-118
1,2-Dichloroethane	100.0		105.3	105	62-124
1,1-Dichloroethene	100.0		107.8	108	69-121
cis-1,2-Dichloroethene	100.0		111.2	111	76-114
trans-1,2-Dichloroethen	100.0		91.00	91	72-121
1,2-Dichloropropane	100.0		113.4	113	64-133
cis-1,3-Dichloropropene	100.0		107.9	108	77-120
trans-1,3-Dichloroprope	100.0		105.3	105	73-124
Ethylbenzene	100.0		105.6	106	77-111
2-Hexanone	100.0		115.6	116	53-144
Methylene Chloride	100.0		128.0	128*	76-115
4-Methyl-2-Pentanone	100.0		126.5	126	42-144
Styrene	100.0		103.8	104	77-117
1,1,2,2-Tetrachloroetha	100.0		85.49	85	67-126
Tetrachloroethene	100.0		105.5	106	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

Lab Name: ETC, INC.

Lab Prep Batch: V310091

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V3100911LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		99.59	100	63-122
Toluene	100.0		117.4	117*	77-115
1,1,2-Trichloroethane	100.0		114.3	114	69-117
Trichloroethene	100.0		105.6	106	75-113
Vinyl Acetate	100.0		102.3	102	28-146
Vinyl Chloride	100.0		100.5	100	65-134
Xylene-mp	200.0		203.2	102	77-115
Xylene-o	100.0		104.4	104	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 2 out of 36 outside limits

COMMENTS:

719 357

FORM 3

WATER VOA-GCMS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETC, INC.

Lab Prep Batch: V310091

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: 021005330

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Benzene	100.0	0.000	120.1	120	72-124
Chlorobenzene	100.0	0.000	117.6	118*	77-112
1,1-Dichloroethene	100.0	0.000	122.9	123*	69-121
Toluene	100.0	0.000	136.7	137*	77-115
Trichloroethene	100.0	111.3	217.4	106	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
Benzene	100.0	104.6	105	13	20	72-124
Chlorobenzene	100.0	107.4	107	10	20	77-112
1,1-Dichloroethene	100.0	111.9	112	9	20	69-121
Toluene	100.0	120.8	121*	12	20	77-115
Trichloroethene	100.0	188.2	77	32*	20	75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 4 out of 10 outside limits

COMMENTS:

FORM III VOA-GCMS

000223

FORM 4
VOA-GCMS METHOD BLANK SUMMARY

719 358

CLIENT SAMPLE NO.

Lab Name: ETC, INC.

Contract:

V3101011LB

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0302004

Lab Prep Batch: V310101

Date Analyzed: 10/10/02

Time Analyzed: 1407

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC3

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	V3101011LCS	11LCS	0201002LCS	1201
02	021005349	021005349	0401005	1438
03	021005341	021005341	0501006	1508
04	021005342	021005342	0601007	1539
05	021005343	021005343	0701008	1610
06	021005344	021005344	0801009	1640
07	021005345	021005345	0901010	1710
08	021005346	021005346	1001011	1741
09	021005347	021005347	1101012	1812
10	021005348	021005348	1201013	1842
11	021005350	021005350	1301014	1913
12	021005351	021005351	1401015	1944
13	021005353	021005353	1601017	2045
14	021005354	021005354	1701018	2115
15	021005355	021005355	1801019	2146
16	021005350MS	MS	1901020	2216
17	021005350MSD	MSD	2001021	2247
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

719 359

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V3101011LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V310101

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	5.00	U
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

FORM I VOA-GCMS

990225

V3101011LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V310101

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

75-01-4-----	Vinyl Chloride	1.00	U
108-38-3-----	Xylene-mp	1.00	U
95-47-6-----	Xylene-o	1.00	U

719 361

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

V3101011LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/10/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
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FORM I VOA-GCMS-TIC

900227

Lab Name: ETC, INC.

Lab Prep Batch: V310101

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V3101011LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Acetone	100.0		94.56	94	59-151
Benzene	100.0		90.44	90	72-124
Bromodichloromethane	100.0		96.95	97	68-119
Bromoform	100.0		104.6	105	66-136
2-Butanone	100.0		98.37	98	55-151
Bromomethane	100.0		107.5	108	40-134
Carbon Disulfide	100.0		98.96	99	60-133
Carbon Tetrachloride	100.0		92.66	93	64-123
Chlorobenzene	100.0		111.6	112	77-112
Chlorodibromomethane	100.0		110.5	110	72-118
Chloroethane	100.0		90.60	91	64-142
Chloroform	100.0		86.89	87	70-115
Chloromethane	100.0		60.72	61	58-139
1,1-Dichloroethane	100.0		95.98	96	76-118
1,2-Dichloroethane	100.0		86.95	87	62-124
1,1-Dichloroethene	100.0		99.00	99	69-121
cis-1,2-Dichloroethene	100.0		94.78	95	76-114
trans-1,2-Dichloroethene	100.0		96.36	96	72-121
1,2-Dichloropropane	100.0		94.89	95	64-133
cis-1,3-Dichloropropene	100.0		106.7	107	77-120
trans-1,3-Dichloroprope	100.0		107.2	107	73-124
Ethylbenzene	100.0		111.1	111	77-111
2-Hexanone	100.0		100.0	100	53-144
Methylene Chloride	100.0		94.42	94	76-115
4-Methyl-2-Pentanone	100.0		105.9	106	42-144
Styrene	100.0		110.9	111	77-117
1,1,2,2-Tetrachloroetha	100.0		111.1	111	67-126
Tetrachloroethene	100.0		115.2	115	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

719 363

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

Lab Name: ETC, INC.

Lab Prep Batch: V310101

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V3101011LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		88.57	88	63-122
Toluene	100.0		113.1	113	77-115
1,1,2-Trichloroethane	100.0		114.1	114	69-117
Trichloroethene	100.0		108.3	108	75-113
Vinyl Acetate	100.0		88.41	88	28-146
Vinyl Chloride	100.0		80.09	80	65-134
Xylene-mp	200.0		208.9	104	77-115
Xylene-o	100.0		105.7	106	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 36 outside limits

COMMENTS:

Lab Name: ETC, INC.

Lab Prep Batch: V310101

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: 021005350

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Benzene	100.0	0.000	119.5	120	72-124
Chlorobenzene	100.0	0.000	120.5	120*	77-112
1,1-Dichloroethene	100.0	0.000	110.9	111	69-121
Toluene	100.0	0.000	125.4	125*	77-115
Trichloroethene	100.0	0.000	116.6	117*	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Benzene	100.0	103.6	104	14	20	72-124
Chlorobenzene	100.0	113.3	113*	6	20	77-112
1,1-Dichloroethene	100.0	101.8	102	8	20	69-121
Toluene	100.0	123.0	123*	2	20	77-115
Trichloroethene	100.0	115.5	116*	1	20	75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 6 out of 10 outside limits

COMMENTS:

719 365

FORM 4
VOA-GCMS METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

V3101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0302003

Lab Prep Batch: V310111

Date Analyzed: 10/11/02

Time Analyzed: 1035

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC3

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	V3101111LCS	11LCS	0201002LCS	0920
02	021005352	021005352	0701006	1301
03	021005352MS	MS	0801007	1331
04	021005352MSD	MSD	0901008	1401
05	021005342	021005342	1001008	1500
06	021005351	021005351	1101009	1530
07	021005353	021005353	1201010	1600
08				
09				
10				
11				
12				
13				
14				
15				
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COMMENTS:

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

719 366

CLIENT SAMPLE NO.

V3101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V310111

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302003

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	5.00	U
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

FORM I VOA-GCMS

300232

719 367

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V3101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V310111

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302003

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

75-01-4-----	Vinyl Chloride	1.00	U
108-38-3-----	Xylene-mp	1.00	U
95-47-6-----	Xylene-o	1.00	U

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 368 CLIENT SAMPLE NO.

V3101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302003

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
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8.				
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10.				
11.				
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27.				
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30.				

719 369

Lab Name: ETC, INC.

Lab Prep Batch: V310111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V3101111LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Acetone	100.0		132.3	132	59-151
Benzene	100.0		92.41	92	72-124
Bromodichloromethane	100.0		94.34	94	68-119
Bromoform	100.0		95.25	95	66-136
2-Butanone	100.0		121.6	122	55-151
Bromomethane	100.0		96.65	97	40-134
Carbon Disulfide	100.0		106.5	106	60-133
Carbon Tetrachloride	100.0		85.18	85	64-123
Chlorobenzene	100.0		106.1	106	77-112
Chlorodibromomethane	100.0		103.4	103	72-118
Chloroethane	100.0		120.0	120	64-142
Chloroform	100.0		85.05	85	70-115
Chloromethane	100.0		76.05	76	58-139
1,1-Dichloroethane	100.0		105.6	106	76-118
1,2-Dichloroethane	100.0		84.83	85	62-124
1,1-Dichloroethene	100.0		103.0	103	69-121
cis-1,2-Dichloroethene	100.0		100.1	100	76-114
trans-1,2-Dichloroethen	100.0		98.84	99	72-121
1,2-Dichloropropane	100.0		106.0	106	64-133
cis-1,3-Dichloropropene	100.0		109.5	110	77-120
trans-1,3-Dichloroprope	100.0		103.9	104	73-124
Ethylbenzene	100.0		105.2	105	77-111
2-Hexanone	100.0		118.3	118	53-144
Methylene Chloride	100.0		103.2	103	76-115
4-Methyl-2-Pentanone	100.0		116.9	117	42-144
Styrene	100.0		105.2	105	77-117
1,1,2,2-Tetrachloroetha	100.0		104.2	104	67-126
Tetrachloroethene	100.0		110.2	110	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

Lab Name: ETC, INC.

Lab Prep Batch: V310111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V3101111LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		83.08	83	63-122
Toluene	100.0		113.0	113	77-115
1,1,2-Trichloroethane	100.0		110.9	111	69-117
Trichloroethene	100.0		111.1	111	75-113
Vinyl Acetate	100.0		98.48	98	28-146
Vinyl Chloride	100.0		105.5	106	65-134
Xylene-mp	200.0		200.2	100	77-115
Xylene-o	100.0		102.9	103	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 36 outside limits

COMMENTS:

719 371

FORM 3

WATER VOA-GCMS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETC, INC.

Lab Prep Batch: V310111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: 021005352

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Benzene	100.0	0.000	108.9	109	72-124
Chlorobenzene	100.0	0.000	128.8	129*	77-112
1,1-Dichloroethene	100.0	0.000	101.7	102	69-121
Toluene	100.0	0.000	130.7	131*	77-115
Trichloroethene	100.0	49.72	161.1	111	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
Benzene	100.0	103.4	103	6	20	72-124
Chlorobenzene	100.0	130.2	130*	1	20	77-112
1,1-Dichloroethene	100.0	99.08	99	3	20	69-121
Toluene	100.0	126.0	126*	4	20	77-115
Trichloroethene	100.0	154.2	104	6	20	75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 4 out of 10 outside limits

COMMENTS:

FORM III VOA-GCMS

000237

FORM 4
VOA-GCMS METHOD BLANK SUMMARY

719 372

CLIENT SAMPLE NO.

V4101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0302004

Lab Prep Batch: V410111

Date Analyzed: 10/11/02

Time Analyzed: 1152

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC4

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	V4101111LCS	11LCS	0202002LCS	0930
02	021005356	021005356	0401005	1223
03	021005357	021003557	0501006	1254
04	021005470	021005470	1801019	1930
05	021005470MS	MS	1901020	2000
06	021005470MSD	MSD	2001021	2030
07				
08				
09				
10				
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COMMENTS:

719 373

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V4101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V410111

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	1.60	J
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

FORM I VOA-GCMS

000239

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

719 374

CLIENT SAMPLE NO.

V4101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Prep Batch: V410111

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

75-01-4-----	Vinyl Chloride	1.00	U
108-38-3-----	Xylene-mp	1.00	U
95-47-6-----	Xylene-o	1.00	U

719 375

FORM 1

CLIENT SAMPLE NO.

VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

V4101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
=====	=====	=====	=====	=====
1.				
2.				
3.				
4.				
5.				
6.				
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FORM I VOA-GCMS-TIC

600241

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

719 376

Lab Name: ETC, INC.

Lab Prep Batch: V410111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V410111LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Acetone	100.0		142.7	143	59-151
Benzene	100.0		105.0	105	72-124
Bromodichloromethane	100.0		67.89	68	68-119
Bromoform	100.0		78.38	78	66-136
2-Butanone	100.0		149.9	150	55-151
Bromomethane	100.0		58.50	58	40-134
Carbon Disulfide	100.0		92.23	92	60-133
Carbon Tetrachloride	100.0		74.08	74	64-123
Chlorobenzene	100.0		86.99	87	77-112
Chlorodibromomethane	100.0		71.77	72	72-118
Chloroethane	100.0		97.30	97	64-142
Chloroform	100.0		83.83	84	70-115
Chloromethane	100.0		104.0	104	58-139
1,1-Dichloroethane	100.0		98.57	98	76-118
1,2-Dichloroethane	100.0		77.03	77	62-124
1,1-Dichloroethene	100.0		89.86	90	69-121
cis-1,2-Dichloroethene	100.0		98.80	99	76-114
trans-1,2-Dichloroethene	100.0		81.07	81	72-121
1,2-Dichloropropane	100.0		89.67	90	64-133
cis-1,3-Dichloropropene	100.0		86.28	86	77-120
trans-1,3-Dichloropropene	100.0		81.24	81	73-124
Ethylbenzene	100.0		81.64	82	77-111
2-Hexanone	100.0		117.0	117	53-144
Methylene Chloride	100.0		83.95	84	76-115
4-Methyl-2-Pentanone	100.0		97.51	98	42-144
Styrene	100.0		87.05	87	77-117
1,1,2,2-Tetrachloroethane	100.0		99.88	100	67-126
Tetrachloroethene	100.0		81.00	81	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

719 377

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

Lab Name: ETC, INC.

Lab Prep Batch: V410111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: V4101111LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		76.00	76	63-122
Toluene	100.0		86.00	86	77-115
1,1,2-Trichloroethane	100.0		89.80	90	69-117
Trichloroethene	100.0		82.47	82	75-113
Vinyl Acetate	100.0		99.21	99	28-146
Vinyl Chloride	100.0		81.01	81	65-134
Xylene-mp	200.0		160.1	80	77-115
Xylene-o	100.0		80.95	81	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 36 outside limits

COMMENTS: _____

FORM 3
WATER VOA-GCMS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

719 378 .

Lab Name: ETC, INC.

Lab Prep Batch: V410111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Matrix Spike - Sample No.: 021005470

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Benzene	100.0	0.000	123.8	124	72-124
Chlorobenzene	100.0	0.000	107.0	107	77-112
1,1-Dichloroethene	100.0	0.000	102.2	102	69-121
Toluene	100.0	0.000	104.4	104	77-115
Trichloroethene	100.0	0.000	89.10	89	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
Benzene	100.0	120.9	121	2	20	72-124
Chlorobenzene	100.0	93.00	93	14	20	77-112
1,1-Dichloroethene	100.0	103.4	103	1	20	69-121
Toluene	100.0	96.37	96	8	20	77-115
Trichloroethene	100.0	86.50	86	3	20	75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

ENVIRONMENTAL TESTING AND CONSULTING, INC.
CASE NARRATIVE
GC/MS VOLATILE COMPOUNDS – AQUEOUS

Client Name Jacobs
Project Name Memphis Defense Depot

ETC Order # 0210-054

SAMPLE PRESERVATION (Verified at time of analysis)

All water samples preserved with HCl to pH < 2 and maintained at 4oC until analysis

METHOD

Preparation: SW-846 5030A
Analysis SW-846 8260B

HOLDING TIMES

Sample Analysis All samples analyzed within 14 days of collection.

QUALITY CONTROL

<u>QC Batch</u>	<u>Form 4 Summary</u>
V410111	V410111LB
V410112	V410112LB
V410141	V410141LB
V410151	V410151LB

System Monitoring Compounds FORM 2

Surrogate recoveries within QC limits except as listed below

Surrogate Bromofluorobenzene was flagged for high recovery in multiple project samples Surrogate

Dibromofluoromethane was flagged for high recovery in multiple project samples. Refer to Form 2

Method Blank FORM 4

V410111LB
V410112LB
V410141LB
V410151LB

Target analytes were not detected in the method blank, except as listed below

Methylene Chloride was identified in the method blanks associated with this project This analyte was reported in associated project samples Sample results within 20 times the method blank were flagged "B – Detected in Blank" to indicate that the result was due to laboratory contamination

Laboratory Control Sample FORM 3

V410111LCS
V410112LCS
V410141LCS
V410151LCS

All target analyte acceptance criteria met, except as listed below

1,1-Dichloroethene, cis-1,2-Dichloroethene and trans-1,2-Dichloroethene were flagged for high recoveries in V410112LCS These analytes were not identified in the associated project samples. The data was not affected

Acetone and 1,2-Dichloroethane were flagged for high recoveries in V410141LCS These analytes were not identified in the associated project samples The data was not affected

Matrix Spike / Matrix Spike Dup FORM 3

Batch V410111

0210-054-70

RPD

All analytes within QC limits

MW-127-1

Spike Recovery

All analytes within QC limits.

Refer to Laboratory Control Sample(s) for system verification.

ENVIRONMENTAL TESTING AND CONSULTING, INC.

CASE NARRATIVE

GC/MS VOLATILE COMPOUNDS - AQUEOUS

719 380

Client Name Jacobs
Project Name Memphis Defense Depot

ETC Order # 0210-054

Matrix Spike / Matrix Spike Dup FORM 3

Batch V410141

0210-054-80

RPD

All analytes within QC limits *

RW-5

Spike Recovery

All analytes within QC limits.*

*RPD and recoveries were flagged as outside QC limits for Trichloroethene due to the level of this analyte present relative to the spike amount Refer to Laboratory Control Sample(s) for system verification

Batch V410151

0210-224-03

RPD

All analytes within QC limits.

Spike Recovery

All analytes within QC limits *

*The MS/MSD was performed on a sample not directly associated with this project Batch QC provided for information only Recoveries for Benzene were flagged as outside QC limits in the MS/MSD Refer to Laboratory Control Sample(s) for system verification

CALIBRATION

BFB Daily 12-Hour Tune

All criteria met FORM 5

Initial Calibration

All criteria met FORM 6

Calibration Verification

% Differences >30% FORM 7

Multiple analytes were flagged for high % Differences in the CV These analytes were not reported in the associated project samples. The data was not affected

Calibration Verification

% Differences >30% FORM 7

Analyte(s) were flagged with % Differences >30% affecting the data as listed below

Sequence	Analyte	Date/Time Analyzed	% Difference	High/Low
V410111	Bromomethane	10/11/02 0854	49.7	Low*

*Difference was less than 50% indicating that the ability to detect this analyte between the Method Quantitation Limit (MQL) and the Method Detection Limit (MDL) was not affected This analyte was not identified in the associated project samples Results for this analyte should be considered as an estimated value

Volatile Internal Standard Area and RT FORM 8

Calibration Verification standard(s) Internal Standard Areas and Retention Times within QC limits

SAMPLE ANALYSIS

Instrumentation

HP 5890 Series II GC, 5971MSD

Dilutions Required

Dilutions performed, as indicated on the result sheets, to bring target analytes within calibration range

Due to limitations with the current LIMS, sample dilutions were reported with a separate ETC Sample ID The Jacobs Field ID remained unchanged

Original ETC ID	Dilution ETC ID	Jacobs Field ID
0210-054-79	0210-054-90	RW-4
0210-054-83	0210-054-91	RW-8

The Methylene Chloride result for sample 0210-054-75 (RW-1A) was artificially raised due to the required sample dilution When the dilution factor was applied to the Methylene Chloride amount found in the associated method blank, the sample results was within 20 times that level The result was flagged "B - Detected in Blank."


Project Manager

700246

719, 381

FORM 2

WATER VOA-GCMS SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

	CLIENT SAMPLE NO.	SMC1 (DFM) #	SMC2 (TOL) #	SMC3 (BFB) #	OTHER (DCE) #	TOT OUT
	=====	=====	=====	=====	=====	=====
01	V4101111LCS	85	97	87	76	0
02	V4101111LB	96	94	100	83	0
03	021005458	104	99	108	100	0
04	021005459	104	99	112	99	0
05	021005460	106	100	110	102	0
06	021005461	108	100	110	106	0
07	021005462	110	99	110	106	0
08	021005463	112	99	110	111	0
09	021005464	109	102	110	110	0
10	021005465	111	101	111	110	0
11	021005466	112	101	111	113	0
12	021005467	112	102	110	113	0
13	021005468	113	102	112	115	0
14	021005469	114	101	112	116	0
15	021005470	116*	102	112	118	1
16	021005470MS	102	107	108	107	0
17	021005470MSD	98	99	92	96	0
18	V4101121LCS	97	100	90	93	0
19	V4101121LB	99	98	100	86	0
20	021005486	105	100	104	102	0
21	021005472	105	100	104	96	0
22	021005473	109	100	107	103	0
23	021005474	108	98	105	100	0
24	V4101411LCS	101	104	107	109	0
25	V4101411LB	110	99	117	114	0
26	021005469	114	100	124*	117	1
27	021005471	118*	103	122*	127	2
28	021005475	120*	101	119	128	1
29	021005476	119*	102	122*	126	2
30	021005477	121*	104	123*	128	2

QC LIMITS

SMC1 (DFM) = Dibromofluoromethane (84-115)
 SMC2 (TOL) = Toluene-d8 (69-133)
 SMC3 (BFB) = Bromofluorobenzene (80-120)
 OTHER (DCE) = 1,2-Dichloroethane-d4 (58-131)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

FORM 2
WATER VOA-GCMS SYSTEM MONITORING COMPOUND RECOVERY

719 382

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

	CLIENT SAMPLE NO.	SMC1 (DFM) #	SMC2 (TOL) #	SMC3 (BFB) #	OTHER (DCE) #	TOT OUT
	=====	=====	=====	=====	=====	=====
01	021005478	120*	101	124*	126	2
02	021005479	121*	104	120*	127	2
03	021005480	123*	102	119	130	1
04	021005481	124*	103	118	128	1
05	021005482	122*	103	119	129	1
06	021005483	121*	103	118	126	1
07	021005484	123*	104	120*	126	2
08	021005485	120*	100	116	126	1
09	021005480MS	101	99	104	99	0
10	021005480MSD	97	102	102	94	0
11	V4101511LCS	87	98	86	81	0
12	V4101511LB	100	98	109	91	0
13	021005480	104	100	112	96	0
14	021005479	108	99	114	103	0
15	021005483	113	101	112	107	0
16						
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QC LIMITS

SMC1 (DFM) = Dibromofluoromethane (84-115)
 SMC2 (TOL) = Toluene-d8 (69-133)
 SMC3 (BFB) = Bromofluorobenzene (80-120)
 OTHER (DCE) = 1,2-Dichloroethane-d4 (58-131)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

719 383

FORM 4
VOA-GCMS METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

V4101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID: 0302004

Lab Prep Batch: V410111

Date Analyzed: 10/11/02

Time Analyzed: 1152

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC4

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
	=====	=====	=====	=====
01	V4101111LCS	11LCS	0202002LCS	0930
02	021005458	021005458	0601007	1325
03	021005459	021005459	0701008	1356
04	021005460	021005460	0801009	1427
05	021005461	021005461	0901010	1457
06	021005462	021005462	1001011	1527
07	021005463	021005463	1101012	1557
08	021005464	021005464	1201013	1628
09	021005465	021005465	1301014	1658
10	021005466	021005466	1401015	1728
11	021005467	021005467	1501016	1759
12	021005468	021005468	1601017	1829
13	021005469	021005469	1701018	1859
14	021005470	021005470	1801019	1930
15	021005470MS	MS	1901020	2000
16	021005470MSD	MSD	2001021	2030
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COMMENTS:

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

719 384

CLIENT SAMPLE NO.

V4101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Prep Batch: V410111

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	1.60	J
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

FORM I VOA-GCMS

000250

719 385

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V4101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Prep Batch: V410111

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

75-01-4-----	Vinyl Chloride	1.00	U
108-38-3-----	Xylene-mp	1.00	U
95-47-6-----	Xylene-o	1.00	U

FORM I VOA-GCMS

000251

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 386 CLIENT SAMPLE NO.

V4101111LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/11/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
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FORM I VOA-GCMS-TIC

300252

719 387

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

Lab Name: ETC, INC.

Lab Prep Batch: V410111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: V4101111LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Acetone	100.0		142.7	143	59-151
Benzene	100.0		105.0	105	72-124
Bromodichloromethane	100.0		67.89	68	68-119
Bromoform	100.0		78.38	78	66-136
2-Butanone	100.0		149.9	150	55-151
Bromomethane	100.0		58.50	58	40-134
Carbon Disulfide	100.0		92.23	92	60-133
Carbon Tetrachloride	100.0		74.08	74	64-123
Chlorobenzene	100.0		86.99	87	77-112
Chlorodibromomethane	100.0		71.77	72	72-118
Chloroethane	100.0		97.30	97	64-142
Chloroform	100.0		83.83	84	70-115
Chloromethane	100.0		104.0	104	58-139
1,1-Dichloroethane	100.0		98.57	98	76-118
1,2-Dichloroethane	100.0		77.03	77	62-124
1,1-Dichloroethene	100.0		89.86	90	69-121
cis-1,2-Dichloroethene	100.0		98.80	99	76-114
trans-1,2-Dichloroethene	100.0		81.07	81	72-121
1,2-Dichloropropane	100.0		89.67	90	64-133
cis-1,3-Dichloropropene	100.0		86.28	86	77-120
trans-1,3-Dichloropropene	100.0		81.24	81	73-124
Ethylbenzene	100.0		81.64	82	77-111
2-Hexanone	100.0		117.0	117	53-144
Methylene Chloride	100.0		83.95	84	76-115
4-Methyl-2-Pentanone	100.0		97.51	98	42-144
Styrene	100.0		87.05	87	77-117
1,1,2,2-Tetrachloroethane	100.0		99.88	100	67-126
Tetrachloroethene	100.0		81.00	81	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

Lab Name: ETC, INC.

Lab Prep Batch: V410111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: V4101111LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		76.00	76	63-122
Toluene	100.0		86.00	86	77-115
1,1,2-Trichloroethane	100.0		89.80	90	69-117
Trichloroethene	100.0		82.47	82	75-113
Vinyl Acetate	100.0		99.21	99	28-146
Vinyl Chloride	100.0		81.01	81	65-134
Xylene-mp	200.0		160.1	80	77-115
Xylene-o	100.0		80.95	81	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 36 outside limits

COMMENTS:

719 389

FORM 3

WATER VOA-GCMS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETC, INC.

Lab Prep Batch: V410111

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: 021005470

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Benzene	100.0	0.000	123.8	124	72-124
Chlorobenzene	100.0	0.000	107.0	107	77-112
1,1-Dichloroethene	100.0	0.000	102.2	102	69-121
Toluene	100.0	0.000	104.4	104	77-115
Trichloroethene	100.0	0.000	89.10	89	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
Benzene	100.0	120.9	121	2	20	72-124
Chlorobenzene	100.0	93.00	93	14	20	77-112
1,1-Dichloroethene	100.0	103.4	103	1	20	69-121
Toluene	100.0	96.37	96	8	20	77-115
Trichloroethene	100.0	86.50	86	3	20	75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM III VOA-GCMS

000255

FORM 4
VOA-GCMS METHOD BLANK SUMMARY

719 390

CLIENT SAMPLE NO.

Lab Name: ETC, INC.

Contract:

V4101121LB

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID: 2302030

Lab Prep Batch: V410112

Date Analyzed: 10/12/02

Time Analyzed: 0100

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC4

Lab Sample ID: 21LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	V4101121LCS	21LCS	2201026LCS	2300
02	021005486	021005486	2401031	0130
03	021005472	021005472	2502032	0200
04	021005473	021005473	2603033	0230
05	021005474	021005474	2701034	0300
06				
07				
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COMMENTS:

V4101121LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Prep Batch: V410112

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 2302030

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/12/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1	Acetone	20.00	U
71-43-2	Benzene	1.00	U
75-27-4	Bromodichloromethane	1.00	U
75-25-2	Bromoform	1.00	U
78-93-3	2-Butanone	20.00	U
74-83-9	Bromomethane	1.00	U
75-15-0	Carbon Disulfide	1.00	U
56-23-5	Carbon Tetrachloride	1.00	U
108-90-7	Chlorobenzene	1.00	U
124-48-1	Chlorodibromomethane	1.00	U
75-00-3	Chloroethane	1.00	U
67-66-3	Chloroform	1.00	U
74-87-3	Chloromethane	1.00	U
75-34-3	1,1-Dichloroethane	1.00	U
107-06-2	1,2-Dichloroethane	1.00	U
75-35-4	1,1-Dichloroethene	1.00	U
156-59-2	cis-1,2-Dichloroethene	1.00	U
156-60-5	trans-1,2-Dichloroethene	1.00	U
78-87-5	1,2-Dichloropropane	1.00	U
10061-01-5	cis-1,3-Dichloropropene	1.00	U
10061-02-6	trans-1,3-Dichloropropene	1.00	U
100-41-4	Ethylbenzene	1.00	U
591-78-6	2-Hexanone	5.00	U
75-09-2	Methylene Chloride	1.44	J
108-10-1	4-Methyl-2-Pentanone	5.00	U
100-42-5	Styrene	1.00	U
79-34-5	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4	Tetrachloroethene	1.00	U
71-55-6	1,1,1-Trichloroethane	1.00	U
108-88-3	Toluene	1.00	U
79-00-5	1,1,2-Trichloroethane	1.00	U
79-01-6	Trichloroethene	1.00	U
108-05-4	Vinyl Acetate	20.00	U

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

719 392 CLIENT SAMPLE NO.

V4101121LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Prep Batch: V410112

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 2302030

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/12/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-01-4-----	Vinyl Chloride	1.00	U
108-38-3-----	Xylene-mp	1.00	U
95-47-6-----	Xylene-o	1.00	U

719 393

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

V4101121LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 21LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 2302030

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/12/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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FORM I VOA-GCMS-TIC

000259

Lab Name: ETC, INC.

Lab Prep Batch: V410112

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: V4101121LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Acetone	100.0		114.1	114	59-151
Benzene	100.0		124.0	124	72-124
Bromodichloromethane	100.0		87.60	88	68-119
Bromoform	100.0		87.01	87	66-136
2-Butanone	100.0		137.4	137	55-151
Bromomethane	100.0		87.82	88	40-134
Carbon Disulfide	100.0		117.5	118	60-133
Carbon Tetrachloride	100.0		91.66	92	64-123
Chlorobenzene	100.0		91.43	91	77-112
Chlorodibromomethane	100.0		87.92	88	72-118
Chloroethane	100.0		125.1	125	64-142
Chloroform	100.0		111.2	111	70-115
Chloromethane	100.0		115.4	115	58-139
1,1-Dichloroethane	100.0		129.9	130*	76-118
1,2-Dichloroethane	100.0		116.9	117	62-124
1,1-Dichloroethene	100.0		108.0	108	69-121
cis-1,2-Dichloroethene	100.0		120.0	120*	76-114
trans-1,2-Dichloroethene	100.0		134.0	134*	72-121
1,2-Dichloropropane	100.0		110.3	110	64-133
cis-1,3-Dichloropropene	100.0		102.6	103	77-120
trans-1,3-Dichloropropene	100.0		101.8	102	73-124
Ethylbenzene	100.0		89.32	89	77-111
2-Hexanone	100.0		110.1	110	53-144
Methylene Chloride	100.0		113.4	113	76-115
4-Methyl-2-Pentanone	100.0		116.6	117	42-144
Styrene	100.0		93.24	93	77-117
1,1,2,2-Tetrachloroethane	100.0		114.4	114	67-126
Tetrachloroethene	100.0		83.02	83	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

719.395

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

Lab Name: ETC, INC.

Lab Prep Batch: V410112

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: V4101121LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		96.21	96	63-122
Toluene	100.0		95.75	96	77-115
1,1,2-Trichloroethane	100.0		109.4	109	69-117
Trichloroethene	100.0		86.14	86	75-113
Vinyl Acetate	100.0		124.8	125	28-146
Vinyl Chloride	100.0		105.3	105	65-134
Xylene-mp	200.0		168.0	84	77-115
Xylene-o	100.0		89.53	90	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 3 out of 36 outside limits

COMMENTS:

V4101411LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID: 0302004

Lab Prep Batch: V410141

Date Analyzed: 10/14/02

Time Analyzed: 1246

GC Column: ID: 2 (mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC4

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	V4101411LCS	11LCS	0201002LCS	1031
02	021005469	021005469	0401005	1317
03	021005471	021005471	0502007	1417
04	021005475	021005475	0601008	1448
05	021005476	021005476	0701009	1518
06	021005477	021005477	0801010	1549
07	021005478	021005478	0901011	1619
08	021005479	021005479	1001012	1650
09	021005480	021005480	1101013	1720
10	021005481	021005481	1201014	1751
11	021005482	021005482	1301015	1821
12	021005483	021005483	1401016	1851
13	021005484	021005484	1501017	1921
14	021005485	021005485	1601018	1951
15	021005480MS	MS	1801020	2051
16	021005480MSD	MSD	1901021	2122
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COMMENTS:

719 397

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V4101411LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Prep Batch: V410141

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L Q

67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	2.14	J
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

FORM I VOA-GCMS

900263

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

719 398

CLIENT SAMPLE NO.

V4101411LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Prep Batch: V410141

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

75-01-4-----	Vinyl Chloride	1.00	U
108-38-3-----	Xylene-mp	1.00	U
95-47-6-----	Xylene-o	1.00	U

719 399

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

V4101411LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0302004

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/14/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
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FORM I VOA-GCMS-TIC

000265

Lab Name: ETC, INC.

Lab Prep Batch: V410141

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: V4101411LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Acetone	100.0		155.9	156*	59-151
Benzene	100.0		113.2	113	72-124
Bromodichloromethane	100.0		102.3	102	68-119
Bromoform	100.0		104.7	105	66-136
2-Butanone	100.0		127.2	127	55-151
Bromomethane	100.0		85.08	85	40-134
Carbon Disulfide	100.0		107.5	108	60-133
Carbon Tetrachloride	100.0		112.7	113	64-123
Chlorobenzene	100.0		101.5	102	77-112
Chlorodibromomethane	100.0		103.5	104	72-118
Chloroethane	100.0		121.3	121	64-142
Chloroform	100.0		115.1	115	70-115
Chloromethane	100.0		107.4	107	58-139
1,1-Dichloroethane	100.0		96.12	96	76-118
1,2-Dichloroethane	100.0		129.9	130*	62-124
1,1-Dichloroethene	100.0		101.4	101	69-121
cis-1,2-Dichloroethene	100.0		106.7	107	76-114
trans-1,2-Dichloroethene	100.0		120.5	120	72-121
1,2-Dichloropropane	100.0		106.8	107	64-133
cis-1,3-Dichloropropene	100.0		111.8	112	77-120
trans-1,3-Dichloropropene	100.0		115.3	115	73-124
Ethylbenzene	100.0		103.2	103	77-111
2-Hexanone	100.0		124.2	124	53-144
Methylene Chloride	100.0		113.1	113	76-115
4-Methyl-2-Pentanone	100.0		116.9	117	42-144
Styrene	100.0		103.3	103	77-117
1,1,2,2-Tetrachloroethane	100.0		111.1	111	67-126
Tetrachloroethene	100.0		99.98	100	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

719 401

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

Lab Name: ETC, INC.

Lab Prep Batch: V410141

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: V4101411LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
1,1,1-Trichloroethane	100.0		114.5	114	63-122
Toluene	100.0		104.0	104	77-115
1,1,2-Trichloroethane	100.0		110.0	110	69-117
Trichloroethene	100.0		91.90	92	75-113
Vinyl Acetate	100.0		80.96	81	28-146
Vinyl Chloride	100.0		115.1	115	65-134
Xylene-mp	200.0		200.0	100	77-115
Xylene-o	100.0		101.8	102	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 2 out of 36 outside limits

COMMENTS:

Lab Name: ETC, INC.

Lab Prep Batch: V410141

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: 021005480

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Benzene	100.0	0.000	123.9	124	72-124
Chlorobenzene	100.0	0.000	102.9	103	77-112
1,1-Dichloroethene	100.0	0.000	114.3	114	69-121
Toluene	100.0	0.000	97.21	97	77-115
Trichloroethene	100.0	182.5	256.6	74*	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD REC.
=====	=====	=====	=====	=====	=====
Benzene	100.0	122.8	123	1	20 72-124
Chlorobenzene	100.0	104.0	104	1	20 77-112
1,1-Dichloroethene	100.0	109.1	109	4	20 69-121
Toluene	100.0	98.84	99	2	20 77-115
Trichloroethene	100.0	237.7	55*	29*	20 75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 5 outside limits

Spike Recovery: 2 out of 10 outside limits

COMMENTS:

719 403

FORM 4
VOA-GCMS METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

V4101511LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID: 0303005

Lab Prep Batch: V410151

Date Analyzed: 10/15/02

Time Analyzed: 1228

GC Column:

ID: 2

(mm)

Heated Purge: (Y/N) Y

Instrument ID: VOC4

Lab Sample ID: 11LB

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	V4101511LCS	11LCS	0201002LCS	1011
02	021005480	021005480	0401006	1300
03	021005479	021005479	0501007	1330
04	021005483	021005483	0601008	1401
05	021022403	021022403	1201014	1705
06	021022403MS	MS	1601018	1907
07	021022403MSD	MSD	1701019	1937
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COMMENTS:

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V4101511LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Prep Batch: V410151

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0303005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/15/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
67-64-1-----	Acetone	20.00	U
71-43-2-----	Benzene	1.00	U
75-27-4-----	Bromodichloromethane	1.00	U
75-25-2-----	Bromoform	1.00	U
78-93-3-----	2-Butanone	20.00	U
74-83-9-----	Bromomethane	1.00	U
75-15-0-----	Carbon Disulfide	1.00	U
56-23-5-----	Carbon Tetrachloride	1.00	U
108-90-7-----	Chlorobenzene	1.00	U
124-48-1-----	Chlorodibromomethane	1.00	U
75-00-3-----	Chloroethane	1.00	U
67-66-3-----	Chloroform	1.00	U
74-87-3-----	Chloromethane	1.00	U
75-34-3-----	1,1-Dichloroethane	1.00	U
107-06-2-----	1,2-Dichloroethane	1.00	U
75-35-4-----	1,1-Dichloroethene	1.00	U
156-59-2-----	cis-1,2-Dichloroethene	1.00	U
156-60-5-----	trans-1,2-Dichloroethene	1.00	U
78-87-5-----	1,2-Dichloropropane	1.00	U
10061-01-5-----	cis-1,3-Dichloropropene	1.00	U
10061-02-6-----	trans-1,3-Dichloropropene	1.00	U
100-41-4-----	Ethylbenzene	1.00	U
591-78-6-----	2-Hexanone	5.00	U
75-09-2-----	Methylene Chloride	4.09	J
108-10-1-----	4-Methyl-2-Pentanone	5.00	U
100-42-5-----	Styrene	1.00	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.00	U
127-18-4-----	Tetrachloroethene	1.00	U
71-55-6-----	1,1,1-Trichloroethane	1.00	U
108-88-3-----	Toluene	1.00	U
79-00-5-----	1,1,2-Trichloroethane	1.00	U
79-01-6-----	Trichloroethene	1.00	U
108-05-4-----	Vinyl Acetate	20.00	U

719 405

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

V4101511LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Prep Batch: V410151

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0303005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/15/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
---------	----------	--	---

75-01-4-----	Vinyl Chloride	1.00	U
108-38-3-----	Xylene-mp	1.00	U
95-47-6-----	Xylene-o	1.00	U

FORM I VOA-GCMS

000271

FORM 1
VOA-GCMS ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

719 406 CLIENT SAMPLE NO.

V4101511LB

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix: (soil/water) WATER

Lab Sample ID: 11LB

Sample wt/vol: 10.00 (g/mL) ML

Lab File ID: 0303005

Level: (low/med) LOW

Date Received: _____

% Moisture: not dec. _____

Date Analyzed: 10/15/02

GC Column: ID: 2.00 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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719 407

FORM 3
WATER VOA-GCMS LAB CONTROL SAMPLE

Lab Name: ETC, INC.

Lab Prep Batch: V410151

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: V4101511LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Acetone	100.0		140.2	140	59-151
Benzene	100.0		119.8	120	72-124
Bromodichloromethane	100.0		89.06	89	68-119
Bromoform	100.0		86.03	86	66-136
2-Butanone	100.0		132.4	132	55-151
Bromomethane	100.0		94.78	95	40-134
Carbon Disulfide	100.0		108.9	109	60-133
Carbon Tetrachloride	100.0		95.79	96	64-123
Chlorobenzene	100.0		91.60	92	77-112
Chlorodibromomethane	100.0		91.56	92	72-118
Chloroethane	100.0		130.3	130	64-142
Chloroform	100.0		106.4	106	70-115
Chloromethane	100.0		103.3	103	58-139
1,1-Dichloroethane	100.0		109.6	110	76-118
1,2-Dichloroethane	100.0		99.70	100	62-124
1,1-Dichloroethene	100.0		114.3	114	69-121
cis-1,2-Dichloroethene	100.0		112.1	112	76-114
trans-1,2-Dichloroethene	100.0		105.3	105	72-121
1,2-Dichloropropane	100.0		109.3	109	64-133
cis-1,3-Dichloropropene	100.0		107.0	107	77-120
trans-1,3-Dichloropropene	100.0		104.1	104	73-124
Ethylbenzene	100.0		89.76	90	77-111
2-Hexanone	100.0		112.4	112	53-144
Methylene Chloride	100.0		109.6	110	76-115
4-Methyl-2-Pentanone	100.0		113.0	113	42-144
Styrene	100.0		89.70	90	77-117
1,1,2,2-Tetrachloroethane	100.0		107.7	108	67-126
Tetrachloroethene	100.0		99.17	99	77-115

* Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

COMMENTS:

Lab Name: ETC, INC.

Lab Prep Batch: V410151

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: V4101511LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
1,1,1-Trichloroethane	100.0		98.96	99	63-122
Toluene	100.0		101.9	102	77-115
1,1,2-Trichloroethane	100.0		108.4	108	69-117
Trichloroethene	100.0		97.84	98	75-113
Vinyl Acetate	100.0		94.38	94	28-146
Vinyl Chloride	100.0		107.3	107	65-134
Xylene-mp	200.0		171.1	86	77-115
Xylene-o	100.0		88.12	88	77-115

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 36 outside limits

COMMENTS:

719 409

FORM 3

WATER VOA-GCMS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: ETC, INC.

Lab Prep Batch: V410151

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Matrix Spike - Sample No.: 021022403

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
=====	=====	=====	=====	=====	=====
Benzene	100.0	0.000	126.4	126*	72-124
Chlorobenzene	100.0	0.000	92.78	93	77-112
1,1-Dichloroethene	100.0	4.02	113.4	109	69-121
Toluene	100.0	0.000	95.62	96	77-115
Trichloroethene	100.0	0.802	91.66	91	75-113

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
=====	=====	=====	=====	=====	=====	=====
Benzene	100.0	126.2	126*	0	20	72-124
Chlorobenzene	100.0	90.64	91	2	20	77-112
1,1-Dichloroethene	100.0	107.1	103	6	20	69-121
Toluene	100.0	95.34	95	1	20	77-115
Trichloroethene	100.0	89.42	89	2	20	75-113

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 2 out of 10 outside limits

COMMENTS:

Environmental Testing & Consulting, Inc.

**Quality Control Reports
Level IV
GC/MS Volatiles**

719 411

ENVIRONMENTAL TESTING & CONSULTING, INC.

GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: V310041Matrix: H₂O

HBN: _____

Analyst: ESSuper: ///Date: 10-7-02

Applicable ETC Order Nos. for this sequence:

0209-648-6, 7, 90210-053-1-11

Validated

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begins until criteria are met (SOP) ✓
2. Initial Calibration Verification Criteria - Method V309061.8260B
 - a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
 - b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$ ✓
 - c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation ✓
 - d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99 ✓

3. Calibration Verification - Each 12-Hour Shift

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
- b. CCC - % Difference for Average RF Calibration - $\leq 20\%$ ✓
- c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$ ✓
- d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$ ✓
- e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD ✓
- f. Internal Standards - Areas within (-50% to +100%) from Mid-Point ICAL STD ✓

4. Method Blanks included in this sequence :

Analyze daily or for each analytical batch (20 samples):

List compounds identified in Method Blank w/concentration.

Flag final result "B-Detected in Blank"

MGC 1.2 BDLHexane C 8.79 ppb

5. Matrix Spike/Matrix Spike Duplicates included in this sequence :

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix)

List MS/MSD(s) performed with any failures :

0210-053-11 MS, MSD11/10 recoveries exceed limits

6. Laboratory Control Samples included in this sequence :

Must contain all Target Analytes

6/88 ↑

7. Surrogate Recoveries within QC Limits

8. All positive compounds within calibration range

Narrative/Notes

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

719 412

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0101001

BFB Injection Date: 10/04/02

Instrument ID: VOC3

BFB Injection Time: 1121

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.7
75	30.0 - 60.0% of mass 95	41.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	88.9
175	5.0 - 9.0% of mass 174	7.1 (8.0)1
176	95.0 - 101.0% of mass 174	88.8 (99.9)1
177	5.0 - 9.0% of mass 176	6.1 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DCS100PPB		0201002	10/04/02	1140
02	V3100411LB	11LB	0302004	10/04/02	1315
03	021005301	021005301	0701008	10/04/02	1517
04	021005302	021005302	0801009	10/04/02	1548
05	021005303	021005303	0901010	10/04/02	1618
06	021005304	021005304	1001011	10/04/02	1649
07	021005305	021005305	1101012	10/04/02	1719
08	021005306	021005306	1201013	10/04/02	1749
09	021005307	021005307	1301014	10/04/02	1820
10	021005308	021005308	1401015	10/04/02	1850
11	021005309	021005309	1501016	10/04/02	1921
12	021005310	021005310	1601017	10/04/02	1951
13	021005311	021005311	1701018	10/04/02	2022
14	V3100411LCS	11LCS	1801019	10/04/02	2053
15	021005311MS	MS	1901020	10/04/02	2123
16	021005311MSD	MSD	2001021	10/04/02	2153
17					
18					
19					
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21					
22					

719 413

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC3

Calibration Date: 10/04/02

Time: 1140

Lab File ID: 0201002

Init. Calib. Date(s): 09/06/02 09/09/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1111

1119

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Acetone	129.1	100.0	AVRG	29.1	30.0
Benzene	105.6	100.0	AVRG	5.6	30.0
Bromodichloromethane	99.80	100.0	LINR	0.2	30.0
Bromoform	94.05	100.0	AVRG	6.0	30.0
2-Butanone	123.2	100.0	AVRG	23.2	30.0
Bromomethane	122.7	100.0	AVRG	22.7	30.0
Carbon Disulfide	76.52	100.0	AVRG	23.5	30.0
Carbon Tetrachloride	94.30	100.0	AVRG	5.7	30.0
Chlorobenzene	101.6	100.0	AVRG	1.6	30.0
Chlorodibromomethane	112.7	100.0	AVRG	12.7	30.0
Chloroethane	114.5	100.0	AVRG	14.5	30.0
Chloroform	94.92	100.0	AVRG	5.1	20.0
Chloromethane	71.12	100.0	AVRG	28.9	30.0
1,1-Dichloroethane	113.0	100.0	AVRG	13.0	30.0
1,2-Dichloroethane	95.92	100.0	AVRG	4.1	30.0
1,1-Dichloroethene	105.1	100.0	AVRG	5.1	20.0
cis-1,2-Dichloroethene	111.4	100.0	AVRG	11.4	30.0
trans-1,2-Dichloroethene	107.2	100.0	AVRG	7.2	30.0
1,2-Dichloropropane	108.0	100.0	AVRG	8.0	20.0
cis-1,3-Dichloropropene	115.5	100.0	AVRG	15.5	30.0
trans-1,3-Dichloropropene	112.4	100.0	AVRG	12.4	30.0
Ethylbenzene	99.48	100.0	AVRG	0.5	20.0
2-Hexanone	114.8	100.0	AVRG	14.8	30.0
Methylene Chloride	116.7	100.0	LINR	16.7	30.0
4-Methyl-2-Pentanone	119.0	100.0	AVRG	19.0	30.0
Styrene	103.6	100.0	AVRG	3.6	30.0
1,1,2,2-Tetrachloroethane	97.27	100.0	AVRG	2.7	30.0
Tetrachloroethene	117.3	100.0	AVRG	17.3	30.0
1,1,1-Trichloroethane	94.38	100.0	AVRG	5.6	30.0
Toluene	114.8	100.0	AVRG	14.8	20.0
1,1,2-Trichloroethane	117.2	100.0	AVRG	17.2	30.0
Trichloroethene	114.1	100.0	AVRG	14.1	30.0
Vinyl Acetate	106.8	100.0	AVRG	6.8	30.0
Vinyl Chloride	92.22	100.0	AVRG	7.8	20.0
Xylene-mp	198.6	200.0	AVRG	0.7	30.0
Xylene-o	97.90	100.0	AVRG	2.1	30.0
=====	=====	=====	=====	=====	=====

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

719 414

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC3

Calibration Date: 10/04/02 Time: 1140

Lab File ID: 0201002

Init. Calib. Date(s): 09/06/02 09/09/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1111 1119

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
Dibromofluoromethane	46.37	50.00	AVRG	7.3	30.0
Toluene-d8	50.86	50.00	AVRG	1.7	30.0
Bromofluorobenzene	47.13	50.00	AVRG	5.7	30.0
1,2-Dichloroethane-d4	35.79	50.00	AVRG	28.4	30.0

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/04/02

Instrument ID: VOC3

Time Analyzed: 1140

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	529404	7.10	834636	7.65	779821	9.77
UPPER LIMIT	1058808	7.60	1669272	8.15	1559642	10.27
LOWER LIMIT	264702	6.60	417318	7.15	389911	9.27
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V3100411LB	434251	7.10	659230	7.66	559539	9.77
02 021005301	308762	7.10	515741	7.65	432551	9.77
03 021005302	294340	7.10	489061	7.65	409534	9.77
04 021005303	276873	7.10	475043	7.66	403205	9.77
05 021005304	277139	7.10	454596	7.66	390500	9.77
06 021005305	262620*	7.10	430799	7.65	373021*	9.77
07 021005306	255564*	7.10	416863*	7.65	364179*	9.77
08 021005307	253918*	7.09	418791	7.65	362286*	9.77
09 021005308	253335*	7.09	413955*	7.65	356655*	9.77
10 021005309	243611*	7.09	400087*	7.65	346241*	9.76
11 021005310	236072*	7.09	394217*	7.65	344082*	9.76
12 021005311	229175*	7.09	378486*	7.65	335926*	9.76
13 V3100411LCS	341011	7.09	571215	7.65	550136	9.76
14 021005311MS	375461	7.09	593903	7.65	548422	9.76
15 021005311MSD	391011	7.09	610711	7.64	612039	9.76
16						
17						
18						
19						
20						
21						
22						

IS1 = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

719 416

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/04/02

Instrument ID: VOC3

Time Analyzed: 1140

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS4 (DCB)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	277148	11.61				
UPPER LIMIT	554296	12.11				
LOWER LIMIT	138574	11.11				
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V3100411LB	238321	11.60				
02 021005301	194075	11.61				
03 021005302	183171	11.61				
04 021005303	177098	11.60				
05 021005304	173337	11.60				
06 021005305	168999	11.60				
07 021005306	160647	11.60				
08 021005307	160163	11.60				
09 021005308	161576	11.60				
10 021005309	151968	11.60				
11 021005310	151381	11.60				
12 021005311	150390	11.60				
13 V3100411LCS	228565	11.60				
14 021005311MS	216204	11.60				
15 021005311MSD	234155	11.60				
16						
17						
18						
19						
20						
21						
22						

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

ENVIRONMENTAL TESTING & CONSULTING, INC.
GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: V410071 Matrix: H2O HBN: _____
Date: 10-8-02 Analyst: JS
Applicable ETC Order Nos. for this sequence: 0210-053-12-24
Super: My

Validated

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begins until criteria are met. (SOP) ✓

2. Initial Calibration Verification Criteria - Method: V409131.8260B ✓

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
- b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$ ✓
- c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation ✓
- d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99 ✓

3. Calibration Verification - Each 12-Hour Shift

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
- b. CCC - % Difference for Average RF Calibration - $\leq 20\%$ ✓
- c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$ ✓
- d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$ ✓

- e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD ✓
- f. Internal Standards - Areas within (-50% to +100%) from Mid-Point ICAL STD ✓

4. Method Blanks included in this sequence:

Analyze daily or for each analytical batch (20 samples):
List compounds identified in Method Blank w/concentration.
Flag final report "B-Detected in Blank"

MEC 22 4.15 ppb

5. Matrix Spike/Matrix Spike Duplicates included in this sequence:

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix)
Last MS/MSD(s) performed with any failures:

0210-053-20 MS, MSD

6. Laboratory Control Samples included in this sequence:

Must contain all Target Analytes.

2/88

7. Surrogate Recoveries within QC Limits

8. All positive compounds within calibration range

Narrative/Notes

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

719 418

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0101001

BFB Injection Date: 10/07/02

Instrument ID: VOC4

BFB Injection Time: 1132

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.3
75	30.0 - 60.0% of mass 95	47.2
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	72.2
175	5.0 - 9.0% of mass 174	5.4 (7.5)1
176	95.0 - 101.0% of mass 174	70.4 (97.5)1
177	5.0 - 9.0% of mass 176	5.1 (7.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	V4100711LCS	11LCS	0201002LCS	10/07/02	1149
02	DCS100PPB		0201002	10/07/02	1149
03	V4100711LB	11LB	0303005	10/07/02	1405
04	021005312	021005312	0402006	10/07/02	1507
05	021005313	021005313	0501007	10/07/02	1538
06	021005314	021005314	0601008	10/07/02	1609
07	021005315	021005315	0701009	10/07/02	1640
08	021005316	021005316	0801010	10/07/02	1711
09	021005317	021005317	0901011	10/07/02	1741
10	021005318	021005318	1001012	10/07/02	1812
11	021005319	021005319	1101013	10/07/02	1843
12	021005320	021005320	1201014	10/07/02	1914
13	021005321	021005321	1301015	10/07/02	1945
14	021005322	021005322	1401016	10/07/02	2015
15	021005323	021005323	1501017	10/07/02	2046
16	021005324	021005324	1601018	10/07/02	2116
17	021005325	021005325	1701019	10/07/02	2147
18	021005326	021005326	1801020	10/07/02	2217
19	021005320MS	MS	1901021	10/07/02	2248
20	021005320MSD	MSD	2001022	10/07/02	2318
21					
22					

719 419

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC4

Calibration Date: 10/07/02 Time: 1149

Lab File ID: 0201002

Init. Calib. Date(s): 09/13/02 09/16/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1057 1137

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Acetone	112.7	100.0	AVRG	12.7	30.0
Benzene	113.5	100.0	AVRG	13.5	30.0
Bromodichloromethane	79.49	100.0	LINR	20.5	30.0
Bromoform	81.32	100.0	AVRG	18.7	30.0
2-Butanone	117.3	100.0	AVRG	17.3	30.0
Bromomethane	82.03	100.0	AVRG	18.0	30.0
Carbon Disulfide	90.41	100.0	AVRG	9.6	30.0
Carbon Tetrachloride	85.45	100.0	AVRG	14.6	30.0
Chlorobenzene	89.17	100.0	AVRG	10.8	30.0
Chlorodibromomethane	84.09	100.0	AVRG	15.9	30.0
Chloroethane	109.2	100.0	AVRG	9.2	30.0
Chloroform	94.23	100.0	AVRG	5.8	20.0
Chloromethane	88.47	100.0	AVRG	11.5	30.0
1,1-Dichloroethane	106.3	100.0	AVRG	6.3	30.0
1,2-Dichloroethane	87.15	100.0	AVRG	12.8	30.0
1,1-Dichloroethene	93.62	100.0	AVRG	6.4	20.0
cis-1,2-Dichloroethene	101.8	100.0	AVRG	1.8	30.0
trans-1,2-Dichloroethene	90.71	100.0	AVRG	9.3	30.0
1,2-Dichloropropane	100.1	100.0	AVRG	0.1	20.0
cis-1,3-Dichloropropene	97.68	100.0	AVRG	2.3	30.0
trans-1,3-Dichloropropene	92.62	100.0	AVRG	7.4	30.0
Ethylbenzene	86.30	100.0	AVRG	13.7	20.0
2-Hexanone	98.86	100.0	AVRG	1.1	30.0
Methylene Chloride	95.12	100.0	LINR	4.9	30.0
4-Methyl-2-Pentanone	95.84	100.0	AVRG	4.2	30.0
Styrene	88.12	100.0	AVRG	11.9	30.0
1,1,2,2-Tetrachloroethane	97.93	100.0	AVRG	2.1	30.0
Tetrachloroethene	91.07	100.0	AVRG	8.9	30.0
1,1,1-Trichloroethane	87.94	100.0	AVRG	12.1	30.0
Toluene	95.30	100.0	AVRG	4.7	20.0
1,1,2-Trichloroethane	97.97	100.0	AVRG	2.0	30.0
Trichloroethene	91.08	100.0	AVRG	8.9	30.0
Vinyl Acetate	102.1	100.0	AVRG	2.1	30.0
Vinyl Chloride	90.59	100.0	AVRG	9.4	20.0
Xylene-mp	167.0	200.0	AVRG	16.5	30.0
Xylene-o	85.56	100.0	AVRG	14.4	30.0
=====	=====	=====	=====	=====	=====

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

719 420

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC4

Calibration Date: 10/07/02 Time: 1149

Lab File ID: 0201002

Init. Calib. Date(s): 09/13/02 09/16/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1057 1137

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Dibromofluoromethane	43.49	50.00	AVRG	13.0	30.0
Toluene-d8	48.93	50.00	AVRG	2.1	30.0
Bromofluorobenzene	41.94	50.00	AVRG	16.1	30.0
1,2-Dichloroethane-d4	39.66	50.00	AVRG	20.7	30.0

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/07/02

Instrument ID: VOC4

Time Analyzed: 1149

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	902516	6.17	1434656	6.76	1403999	8.97
UPPER LIMIT	1805032	6.67	2869312	7.26	2807998	9.47
LOWER LIMIT	451258	5.67	717328	6.26	702000	8.47
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4100711LB	684595	6.17	1049858	6.76	915970	8.97
02 021005312	617603	6.17	965411	6.76	847731	8.98
03 021005313	538407	6.17	843012	6.76	738517	8.98
04 021005314	518929	6.17	825215	6.76	731183	8.98
05 021005315	541551	6.17	866147	6.76	762342	8.98
06 021005316	541732	6.17	863890	6.76	760075	8.98
07 021005317	506941	6.17	797976	6.76	708015	8.98
08 021005318	504003	6.17	809973	6.76	713105	8.98
09 021005319	544849	6.17	857845	6.76	771437	8.98
10 021005320	494841	6.17	803963	6.76	720153	8.98
11 021005321	508725	6.17	808557	6.76	734883	8.98
12 021005322	498838	6.17	821735	6.76	729880	8.98
13 021005323	552278	6.17	903527	6.76	798174	8.98
14 021005324	518217	6.17	830566	6.76	743677	8.98
15 021005325	515849	6.17	848575	6.76	758275	8.98
16 021005326	509893	6.17	841709	6.76	760049	8.98
17 021005320MS	602124	6.17	1007705	6.76	1010174	8.98
18 021005320MSD	678437	6.17	1122721	6.76	1056477	8.98
19						
20						
21						
22						

IS1 = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

719 422

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/07/02

Instrument ID: VOC4

Time Analyzed: 1149

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS4 (DCB)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	558291	10.78				
UPPER LIMIT	1116582	11.28				
LOWER LIMIT	279146	10.28				
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4100711LB	443802	10.77				
02 021005312	413987	10.78				
03 021005313	364976	10.78				
04 021005314	343974	10.78				
05 021005315	361569	10.78				
06 021005316	363086	10.78				
07 021005317	335691	10.78				
08 021005318	335880	10.78				
09 021005319	359563	10.78				
10 021005320	342842	10.78				
11 021005321	342481	10.78				
12 021005322	337544	10.78				
13 021005323	377329	10.78				
14 021005324	350382	10.78				
15 021005325	359862	10.78				
16 021005326	348116	10.78				
17 021005320MS	428357	10.78				
18 021005320MSD	443095	10.78				
19						
20						
21						
22						

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

719 423

ENVIRONMENTAL TESTING & CONSULTING, INC . GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: V310091 Matrix: H₂O HBN: _____Date: 10-10-02Analyst ESSuper ML

Applicable ETC Order Nos. for this sequence:

0210-053-27-40

Validated

☒

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begins until criteria are met. (SOP)

2. Initial Calibration Verification Criteria - Method: V309061.8260M

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene)
- b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$
- c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation
- d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99

☒☒☒

3. Calibration Verification - Each 12-Hour Shift

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene)
- b. CCC - % Difference for Average RF Calibration - $\leq 20\%$
- c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$
- d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$

2-CEV, Trichloroethene T, MCHL T, Naphtalene T,

- e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD
- f. Internal Standards - Areas within (-50% to +100%) from Mid-Point ICAL STD

☒☒☒

4. Method Blanks included in this sequence :

Analyze daily or for each analytical batch (20 samples):

List compounds identified in Method Blank w/concentration.

Flag final result "B-Detected in Blank"

MCHL 200☒☒☒

5. Matrix Spike/Matrix Spike Duplicates included in this sequence :

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix)

Last MS/MSD(s) performed with any failures :

0210-053-30 MS, MSD1/5 - EPP, 1/10 - recoveries exceed limits.☒

6. Laboratory Control Samples included in this sequence :

Must contain all Target Analytes.

11/88☒☒☒

7. Surrogate Recoveries within QC Limits

☒☒

8. All positive compounds within calibration range

☒

Narrative/Notes

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

719 424

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0101001

BFB Injection Date: 10/09/02

Instrument ID: VOC3

BFB Injection Time: 0930

GC Column: ID: 2.00 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.5
75	30.0 - 60.0% of mass 95	41.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	91.2
175	5.0 - 9.0% of mass 174	7.1 (7.8)1
176	95.0 - 101.0% of mass 174	90.5 (99.2)1
177	5.0 - 9.0% of mass 176	5.8 (6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DCS100PPB		0201002	10/09/02	1025
02	V3100911LB	11LB	0302003	10/09/02	1201
03	021005327	021005327	0401004	10/09/02	1231
04	021005328	021005328	0501005	10/09/02	1301
05	021005329	021005329	0601006	10/09/02	1332
06	021005330	021005330	0701007	10/09/02	1402
07	021005331	021005331	0801008	10/09/02	1433
08	021005332	021005332	0901009	10/09/02	1503
09	021005333	021005333	1001010	10/09/02	1533
10	021005334	021005334	1101011	10/09/02	1603
11	021005335	021005335	1201012	10/09/02	1634
12	021005336	021005336	1301013	10/09/02	1704
13	021005337	021005337	1401014	10/09/02	1734
14	021005338	021005338	1501015	10/09/02	1805
15	021005339	021005339	1601016	10/09/02	1835
16	021005340	021005340	1701017	10/09/02	1905
17	V3100911LCS	11LCS	1801018LCS	10/09/02	1935
18	021005330MS	MS	1901019	10/09/02	2006
19	021005330MSD	MSD	2001020	10/09/02	2036
20					
21					
22					

719 425

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC3

Calibration Date: 10/09/02

Time: 1025

Lab File ID: 0201002

Init. Calib. Date(s): 09/06/02 09/09/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1111

1119

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
Acetone	93.68	100.0	AVRG	6.3	30.0
Benzene	105.3	100.0	AVRG	5.3	30.0
Bromodichloromethane	106.1	100.0	LINR	6.1	30.0
Bromoform	104.2	100.0	AVRG	4.2	30.0
2-Butanone	115.5	100.0	AVRG	15.5	30.0
Bromomethane	127.7	100.0	AVRG	27.7	30.0
Carbon Disulfide	112.5	100.0	AVRG	12.5	30.0
Carbon Tetrachloride	106.1	100.0	AVRG	6.1	30.0
Chlorobenzene	111.7	100.0	AVRG	11.7	30.0
Chlorodibromomethane	116.7	100.0	AVRG	16.7	30.0
Chloroethane	104.9	100.0	AVRG	4.9	30.0
Chloroform	98.78	100.0	AVRG	1.2	20.0
Chloromethane	70.91	100.0	AVRG	29.1	30.0
1,1-Dichloroethane	116.1	100.0	AVRG	16.1	30.0
1,2-Dichloroethane	104.6	100.0	AVRG	4.6	30.0
1,1-Dichloroethene	108.2	100.0	AVRG	8.2	20.0
cis-1,2-Dichloroethene	111.8	100.0	AVRG	11.8	30.0
trans-1,2-Dichloroethene	111.9	100.0	AVRG	11.9	30.0
1,2-Dichloropropane	104.8	100.0	AVRG	4.8	20.0
cis-1,3-Dichloropropene	118.2	100.0	AVRG	18.2	30.0
trans-1,3-Dichloropropene	115.8	100.0	AVRG	15.8	30.0
Ethylbenzene	110.9	100.0	AVRG	10.9	20.0
2-Hexanone	106.5	100.0	AVRG	6.5	30.0
Methylene Chloride	131.1	100.0	LINR	31.1	30.0
4-Methyl-2-Pentanone	119.5	100.0	AVRG	19.5	30.0
Styrene	111.3	100.0	AVRG	11.3	30.0
1,1,2,2-Tetrachloroethane	101.8	100.0	AVRG	1.8	30.0
Tetrachloroethene	121.3	100.0	AVRG	21.3	30.0
1,1,1-Trichloroethane	99.79	100.0	AVRG	0.2	30.0
Toluene	118.7	100.0	AVRG	18.7	20.0
1,1,2-Trichloroethane	122.6	100.0	AVRG	22.6	30.0
Trichloroethene	118.7	100.0	AVRG	18.7	30.0
Vinyl Acetate	92.50	100.0	AVRG	7.5	30.0
Vinyl Chloride	87.51	100.0	AVRG	12.5	20.0
Xylene-mp	209.2	200.0	AVRG	4.6	30.0
Xylene-o	106.0	100.0	AVRG	6.0	30.0

<-

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

719 426

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC3

Calibration Date: 10/09/02 Time: 1025

Lab File ID: 0201002

Init. Calib. Date(s): 09/06/02 09/09/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1111 1119

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
Dibromofluoromethane	45.08	50.00	AVRG	9.8	30.0
Toluene-d8	49.11	50.00	AVRG	1.8	30.0
Bromofluorobenzene	50.98	50.00	AVRG	2.0	30.0
1,2-Dichloroethane-d4	35.08	50.00	AVRG	29.8	30.0

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/09/02

Instrument ID: VOC3

Time Analyzed: 1025

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	528333	7.08	830454	7.64	746183	9.75
UPPER LIMIT	1056666	7.58	1660908	8.14	1492366	10.25
LOWER LIMIT	264167	6.58	415227	7.14	373092	9.25
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V3100911LB	454476	7.08	701279	7.64	608538	9.75
02 021005327	394804	7.08	625654	7.64	553241	9.75
03 021005328	367617	7.08	583730	7.64	517599	9.76
04 021005329	344189	7.08	582853	7.64	489992	9.75
05 021005330	336741	7.08	539695	7.64	479728	9.75
06 021005331	317684	7.09	524978	7.64	453321	9.76
07 021005332	326012	7.09	522780	7.64	466816	9.76
08 021005333	283907	7.09	471399	7.65	422917	9.76
09 021005334	278558	7.09	464099	7.64	396084	9.76
10 021005335	271598	7.09	457855	7.64	395967	9.76
11 021005336	264716	7.09	449866	7.64	394643	9.76
12 021005337	254508*	7.09	430366	7.64	382158	9.76
13 021005338	238196*	7.09	407672*	7.65	355926*	9.76
14 021005339	241089*	7.09	421035	7.64	377164	9.76
15 021005340	243505*	7.09	394083*	7.64	360442*	9.76
16 V3100911LCS	355404	7.08	634521	7.64	585875	9.76
17 021005330MS	372521	7.08	599845	7.65	551315	9.76
18 021005330MSD	458385	7.08	740486	7.64	659611	9.75
19						
20						
21						
22						

IS1 = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

719 428

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/09/02

Instrument ID: VOC3

Time Analyzed: 1025

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS4 (DCB)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	267421	11.59				
UPPER LIMIT	534842	12.09				
LOWER LIMIT	133711	11.09				
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V3100911LB	261959	11.59				
02 021005327	244210	11.59				
03 021005328	219214	11.59				
04 021005329	210891	11.59				
05 021005330	205653	11.59				
06 021005331	200589	11.59				
07 021005332	206873	11.59				
08 021005333	186811	11.59				
09 021005334	181797	11.59				
10 021005335	172118	11.59				
11 021005336	177736	11.59				
12 021005337	172236	11.59				
13 021005338	161649	11.59				
14 021005339	172603	11.59				
15 021005340	166297	11.59				
16 V3100911LCS	252574	11.59				
17 021005330MS	225899	11.59				
18 021005330MSD	264703	11.59				
19						
20						
21						
22						

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

719 429

ENVIRONMENTAL TESTING & CONSULTING, INC.
GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: V310101 Matrix: H₂O IIBN: _____

Date: 10-11-07

Analyst ES

Super ML

Applicable ETC Order Nos. for this sequence:

0210-053-41-55

Validated

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begins until criteria are met. (SOP) ✓

2. Initial Calibration Verification Criteria - Method: V309061.826014 ✓

a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓

b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$ ✓

c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation ✓

d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99 ✓

3. Calibration Verification - Each 12-Hour Shift

a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓

b. CCC - % Difference for Average RF Calibration - $\leq 20\%$ ✓

c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$ ✓

d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$ ✓

Chloromethane

e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD ✓

f. Internal Standards - Areas within $(-50\% \text{ to } +100\%)$ from Mid-Point ICAL STD ✓

4. Method Blanks included in this sequence:

Analyze daily or for each analytical batch (20 samples): ✓

List compounds identified in Method Blank w/concentration

Flag final result "Not Detected in Blank"

V310101 C BDL

5. Matrix Spike/Matrix Spike Duplicates included in this sequence:

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix)

List MS/MSD(s) performed with any failures:

0210-053-50 MS, MSD

* 6/10 recoveries exceed limits

6. Laboratory Control Samples included in this sequence:

Must contain all Target Analytes.

0/36

7. Surrogate Recoveries within QC Limits ✓

8. All positive compounds within calibration range ✓

Narrative/Notes

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

719 430

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0101001

BFB Injection Date: 10/10/02

Instrument ID: VOC3

BFB Injection Time: 1102

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.1
75	30.0 - 60.0% of mass 95	42.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	96.2
175	5.0 - 9.0% of mass 174	8.0 (8.3)1
176	95.0 - 101.0% of mass 174	96.2 (100.0)1
177	5.0 - 9.0% of mass 176	6.3 (6.5)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	V3101011LCS	11LCS	0201002LCS	10/10/02	1201
02	DCS100PPB		0201002	10/10/02	1201
03	V3101011LB	11LB	0302004	10/10/02	1407
04	021005349	021005349	0401005	10/10/02	1438
05	021005341	021005341	0501006	10/10/02	1508
06	021005342	021005342	0601007	10/10/02	1539
07	021005343	021005343	0701008	10/10/02	1610
08	021005344	021005344	0801009	10/10/02	1640
09	021005345	021005345	0901010	10/10/02	1710
10	021005346	021005346	1001011	10/10/02	1741
11	021005347	021005347	1101012	10/10/02	1812
12	021005348	021005348	1201013	10/10/02	1842
13	021005350	021005350	1301014	10/10/02	1913
14	021005351	021005351	1401015	10/10/02	1944
15	021005353	021005353	1601017	10/10/02	2045
16	021005354	021005354	1701018	10/10/02	2115
17	021005355	021005355	1801019	10/10/02	2146
18	021005350MS	MS	1901020	10/10/02	2216
19	021005350MSD	MSD	2001021	10/10/02	2247
20					
21					
22					

719 431

FORM 7

VOA-GCMS CONTINUING CALIBRATION CHECK

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC3

Calibration Date: 10/10/02

Time: 1201

Lab File ID: 0201002

Init. Calib. Date(s): 09/06/02

09/09/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1111

1119

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Acetone	94.56	100.0	AVRG	5.4	30.0
Benzene	90.44	100.0	AVRG	9.6	30.0
Bromodichloromethane	96.95	100.0	LINR	3.0	30.0
Bromoform	104.6	100.0	AVRG	4.6	30.0
2-Butanone	98.37	100.0	AVRG	1.6	30.0
Bromomethane	107.5	100.0	AVRG	7.5	30.0
Carbon Disulfide	98.96	100.0	AVRG	1.0	30.0
Carbon Tetrachloride	92.66	100.0	AVRG	7.3	30.0
Chlorobenzene	111.6	100.0	AVRG	11.6	30.0
Chlorodibromomethane	110.5	100.0	AVRG	10.5	30.0
Chloroethane	90.60	100.0	AVRG	9.4	30.0
Chloroform	86.89	100.0	AVRG	13.1	20.0
Chloromethane	60.72	100.0	AVRG	39.3	30.0
1,1-Dichloroethane	95.98	100.0	AVRG	4.0	30.0
1,2-Dichloroethane	86.95	100.0	AVRG	13.0	30.0
1,1-Dichloroethene	99.00	100.0	AVRG	1.0	20.0
cis-1,2-Dichloroethene	94.78	100.0	AVRG	5.2	30.0
trans-1,2-Dichloroethene	96.36	100.0	AVRG	3.6	30.0
1,2-Dichloropropane	94.89	100.0	AVRG	5.1	20.0
cis-1,3-Dichloropropene	106.7	100.0	AVRG	6.7	30.0
trans-1,3-Dichloropropene	107.2	100.0	AVRG	7.2	30.0
Ethylbenzene	111.1	100.0	AVRG	11.1	20.0
2-Hexanone	100.0	100.0	AVRG	0.0	30.0
Methylene Chloride	94.42	100.0	LINR	5.6	30.0
4-Methyl-2-Pentanone	105.9	100.0	AVRG	5.9	30.0
Styrene	110.9	100.0	AVRG	10.9	30.0
1,1,2,2-Tetrachloroethane	111.1	100.0	AVRG	11.1	30.0
Tetrachloroethene	115.2	100.0	AVRG	15.2	30.0
1,1,1-Trichloroethane	88.57	100.0	AVRG	11.4	30.0
Toluene	113.1	100.0	AVRG	13.1	20.0
1,1,2-Trichloroethane	114.1	100.0	AVRG	14.1	30.0
Trichloroethene	108.3	100.0	AVRG	8.3	30.0
Vinyl Acetate	88.41	100.0	AVRG	11.6	30.0
Vinyl Chloride	80.09	100.0	AVRG	19.9	20.0
Xylene-mp	208.9	200.0	AVRG	4.4	30.0
Xylene-o	105.7	100.0	AVRG	5.7	30.0
=====	=====	=====	=====	=====	=====

<-

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

719 432,

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC3

Calibration Date: 10/10/02 Time: 1201

Lab File ID: 0201002

Init. Calib. Date(s): 09/06/02 09/09/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1111 1119

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
Dibromofluoromethane	42.86	50.00	AVRG	14.3	30.0
Toluene-d8	49.54	50.00	AVRG	0.9	30.0
Bromofluorobenzene	47.63	50.00	AVRG	4.7	30.0
1,2-Dichloroethane-d4	36.51	50.00	AVRG	27.0	30.0

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/10/02

Instrument ID: VOC3

Time Analyzed: 1201

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	597525	7.09	873627	7.64	730568	9.76
UPPER LIMIT	1195050	7.59	1747254	8.14	1461136	10.26
LOWER LIMIT	298763	6.59	436814	7.14	365284	9.26
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V3101011LB	556356	7.09	788605	7.64	629233	9.76
02 021005349	461808	7.09	713750	7.64	542358	9.76
03 021005341	427326	7.09	659757	7.65	508907	9.76
04 021005342	400635	7.09	635986	7.65	480036	9.76
05 021005343	383516	7.09	602711	7.65	474499	9.76
06 021005344	378603	7.09	581458	7.64	476884	9.76
07 021005345	339976	7.09	536342	7.64	419148	9.76
08 021005346	338161	7.09	547754	7.64	422641	9.76
09 021005347	311981	7.09	509393	7.64	380666	9.76
10 021005348	294117*	7.08	482599	7.65	381929	9.76
11 021005350	286974*	7.09	460525	7.65	365236*	9.76
12 021005351	276635*	7.09	461382	7.64	360767*	9.76
13 021005353	275628*	7.09	458808	7.64	360482*	9.76
14 021005354	261393*	7.09	426797*	7.65	334552*	9.76
15 021005355	257093*	7.09	426893*	7.64	327986*	9.76
16 021005350MS	301289	7.09	510051	7.64	414771	9.75
17 021005350MSD	411436	7.09	612762	7.64	524185	9.76
18						
19						
20						
21						
22						

IS1 = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

719 434

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/10/02

Instrument ID: VOC3

Time Analyzed: 1201

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS4 (DCB)						
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
=====	=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	244412	11.59					
UPPER LIMIT	488824	12.09					
LOWER LIMIT	122206	11.09					
=====	=====	=====	=====	=====	=====	=====	=====
CLIENT							
SAMPLE NO.							
=====	=====	=====	=====	=====	=====	=====	=====
01 V3101011LB	253375	11.60					
02 021005349	227175	11.59					
03 021005341	214235	11.60					
04 021005342	204330	11.60					
05 021005343	196042	11.59					
06 021005344	198703	11.59					
07 021005345	176504	11.60					
08 021005346	174299	11.59					
09 021005347	162577	11.59					
10 021005348	162069	11.59					
11 021005350	154517	11.59					
12 021005351	147054	11.59					
13 021005353	153736	11.59					
14 021005354	142169	11.59					
15 021005355	137048	11.59					
16 021005350MS	182469	11.60					
17 021005350MSD	195640	11.59					
18							
19							
20							
21							
22							

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

719 435

ENVIRONMENTAL TESTING & CONSULTING, INC.

GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: V310111 Matrix: H2O HBN: _____ Analyst: ES
 Date: 10-14-02 Super: M

Applicable ETC Order Nos. for this sequence:

0210-225-1 0210-284-1 0210-223-1
0210-053-92, 51, 52, 53 0210-176-1

Validated

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begins until criteria are met. (SOP) ☒

2. Initial Calibration Verification Criteria - Method V309061.8260M ☒

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ☒
- b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$ ☒
- c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation ☒
- d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99 ☒

3. Calibration Verification - Each 12-Hour Shift ☒

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ☒
- b. CCC - % Difference for Average RF Calibration - $\leq 20\%$ ☒
- c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$ ☒
- d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$ ☒

Acetone T, Isobutane T, Naphthalene T,
1,2,3-TCB, 1,2,4-TCB
 e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD ☒
 f. Internal Standards - Areas within $(-50\% \text{ to } +100\%)$ from Mid-Point ICAL STD ☒

4. Method Blanks included in this sequence:

Analyze daily or for each analytical batch (20 samples):

Last compounds identified in Method Blank w/concentration:

Flag final result "B Detected in Blank"

TECP BLK
1010-1

5. Matrix Spike/Matrix Spike Duplicates included in this sequence:

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix)

Last MS/MSD(s) performed with any failures:

0210-053-52 MS, MS D
4/10 recoveries exceed limits

6. Laboratory Control Samples included in this sequence:

Must contain all Target Analytes.

4/88

7. Surrogate Recoveries within QC Limits ☒

8. All positive compounds within calibration range ☒

Narrative/Notes

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

719 436

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0101001

BFB Injection Date: 10/11/02

Instrument ID: VOC3

BFB Injection Time: 0901

GC Column: ID: 2.00 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.1
75	30.0 - 60.0% of mass 95	41.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	Greater than 50.0% of mass 95	90.2
175	5.0 - 9.0% of mass 174	6.9 (7.6)1
176	95.0 - 101.0% of mass 174	90.6 (100.4)1
177	5.0 - 9.0% of mass 176	5.8 (6.4)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	V3101111LCS	11LCS	0201002LCS	10/11/02	0920
02	DCS100PPB		0201002	10/11/02	0920
03	V3101111LB	11LB	0302003	10/11/02	1035
04	021005352	021005352	0701006	10/11/02	1301
05	021005352MS	MS	0801007	10/11/02	1331
06	021005352MSD	MSD	0901008	10/11/02	1401
07	021005342	021005342	1001008	10/11/02	1500
08	021005351	021005351	1101009	10/11/02	1530
09	021005353	021005353	1201010	10/11/02	1600
10					
11					
12					
13					
14					
15					
16					
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18					
19					
20					
21					
22					

719 437

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC3

Calibration Date: 10/11/02 Time: 0920

Lab File ID: 0201002

Init. Calib. Date(s): 09/06/02 09/09/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1111 1119

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Acetone	132.3	100.0	AVRG	32.3	30.0
Benzene	92.41	100.0	AVRG	7.6	30.0
Bromodichloromethane	94.34	100.0	LINR	5.7	30.0
Bromoform	95.25	100.0	AVRG	4.8	30.0
2-Butanone	121.6	100.0	AVRG	21.6	30.0
Bromomethane	96.65	100.0	AVRG	3.4	30.0
Carbon Disulfide	106.5	100.0	AVRG	6.5	30.0
Carbon Tetrachloride	85.18	100.0	AVRG	14.8	30.0
Chlorobenzene	106.1	100.0	AVRG	6.1	30.0
Chlorodibromomethane	103.4	100.0	AVRG	3.4	30.0
Chloroethane	120.0	100.0	AVRG	20.0	30.0
Chloroform	85.05	100.0	AVRG	15.0	20.0
Chloromethane	76.05	100.0	AVRG	24.0	30.0
1,1-Dichloroethane	105.6	100.0	AVRG	5.6	30.0
1,2-Dichloroethane	84.83	100.0	AVRG	15.2	30.0
1,1-Dichloroethene	103.0	100.0	AVRG	3.0	20.0
cis-1,2-Dichloroethene	100.1	100.0	AVRG	0.1	30.0
trans-1,2-Dichloroethene	98.84	100.0	AVRG	1.2	30.0
1,2-Dichloropropane	106.0	100.0	AVRG	6.0	20.0
cis-1,3-Dichloropropene	109.5	100.0	AVRG	9.5	30.0
trans-1,3-Dichloropropene	103.9	100.0	AVRG	3.9	30.0
Ethylbenzene	105.2	100.0	AVRG	5.2	20.0
2-Hexanone	118.3	100.0	AVRG	18.3	30.0
Methylene Chloride	103.2	100.0	LINR	3.2	30.0
4-Methyl-2-Pentanone	116.9	100.0	AVRG	16.9	30.0
Styrene	105.2	100.0	AVRG	5.2	30.0
1,1,2,2-Tetrachloroethane	104.2	100.0	AVRG	4.2	30.0
Tetrachloroethene	110.2	100.0	AVRG	10.2	30.0
1,1,1-Trichloroethane	83.08	100.0	AVRG	16.9	30.0
Toluene	113.0	100.0	AVRG	13.0	20.0
1,1,2-Trichloroethane	110.9	100.0	AVRG	10.9	30.0
Trichloroethene	111.1	100.0	AVRG	11.1	30.0
Vinyl Acetate	98.48	100.0	AVRG	1.5	30.0
Vinyl Chloride	105.5	100.0	AVRG	5.5	20.0
Xylene-mp	200.2	200.0	AVRG	0.1	30.0
Xylene-o	102.9	100.0	AVRG	2.9	30.0
=====	=====	=====	=====	=====	=====

<-

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

719 438

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC3

Calibration Date: 10/11/02 Time: 0920

Lab File ID: 0201002

Init. Calib. Date(s): 09/06/02 09/09/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1111 1119

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Dibromofluoromethane	44.99	50.00	AVRG	10.0	30.0
Toluene-d8	53.73	50.00	AVRG	7.5	30.0
Bromofluorobenzene	47.76	50.00	AVRG	4.5	30.0
1,2-Dichloroethane-d4	36.57	50.00	AVRG	26.9	30.0

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/11/02

Instrument ID: VOC3

Time Analyzed: 0920

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	585826	7.08	865593	7.64	737940	9.75
UPPER LIMIT	1171652	7.58	1731186	8.14	1475880	10.25
LOWER LIMIT	292913	6.58	432797	7.14	368970	9.25
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V3101111LB	463898	7.08	696371	7.64	536727	9.75
02 021005352	472731	7.09	773692	7.65	589283	9.75
03 021005352MS	428693	7.09	658930	7.64	549752	9.76
04 021005352MSD	460300	7.08	710484	7.64	549505	9.76
05 021005342	562056	7.08	903482	7.65	661879	9.75
06 021005351	462922	7.08	710449	7.64	550074	9.76
07 021005353	404692	7.09	634199	7.65	480590	9.76
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22						

IS1 = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

719.440

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201002

Date Analyzed: 10/11/02

Instrument ID: VOC3

Time Analyzed: 0920

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS4 (DCB)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	257219	11.59				
UPPER LIMIT	514438	12.09				
LOWER LIMIT	128610	11.09				
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V3101111LB	222457	11.59				
02 021005352	232285	11.59				
03 021005352MS	203448	11.59				
04 021005352MSD	197275	11.59				
05 021005342	269767	11.59				
06 021005351	222659	11.59				
07 021005353	194757	11.59				
08						
09						
10						
11						
12						
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14						
15						
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17						
18						
19						
20						
21						
22						

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

719 441

ENVIRONMENTAL TESTING & CONSULTING, INC.

GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: V410111 Matrix: H₂O HBN: _____ Analyst: ES
 Date: 10-14-02 Super: AM

Applicable ETC Order Nos. for this sequence:

0210-053-56,57
0210-054-58-70

Validated

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begins until criteria are met. (SOP) ☒

2. Initial Calibration Verification Criteria - Method: V409131.8260M ☒

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ☒
- b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$ ☒
- c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation ☒
- d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99 ☒

3. Calibration Verification - Each 12-Hour Shift

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ☒
- b. CCC - % Difference for Average RF Calibration - $\leq 20\%$ ☒
- c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$ ☒
- d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$ ☒

- e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD ☒
- f. Internal Standards - Areas within (-50% to +100%) from Mid-Point ICAL STD ☒

4. Method Blanks included in this sequence:

Analyze daily or for each analytical batch (20 samples): ☒

List compounds identified in Method Blank w/concentration.

Flag final result "Not Detected in Blank"

MEC 1.60 ppb

5. Matrix Spike/Matrix Spike Duplicates included in this sequence:

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix)

List MS/MSD(s) performed with any failures:

0210-054-70 MS, MSD

6. Laboratory Control Samples included in this sequence:

Must contain all Target Analytes

0/36

7. Surrogate Recoveries within QC Limits

8. All positive compounds within calibration range

Narrative/Notes

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

719 442

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID: 0101001

BFB Injection Date: 10/11/02

Instrument ID: VOC4

BFB Injection Time: 0728

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 60.0% of mass 95	47.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	74.3
175	5.0 - 9.0% of mass 174	5.3 (7.1)1
176	95.0 - 101.0% of mass 174	71.5 (96.3)1
177	5.0 - 9.0% of mass 176	4.4 (6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DCS100PPB		0201001	10/11/02	0854
02	V4101111LCS	11LCS	0202002LCS	10/11/02	0930
03	V4101111LB	11LB	0302004	10/11/02	1152
04	021005356	021005356	0401005	10/11/02	1223
05	021005357	021003557	0501006	10/11/02	1254
06	021005470	021005470	1801019	10/11/02	1930
07	021005470MS	MS	1901020	10/11/02	2000
08	021005470MSD	MSD	2001021	10/11/02	2030
09					
10					
11					
12					
13					
14					
15					
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20					
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719 443

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC4

Calibration Date: 10/11/02

Time: 0854

Lab File ID: 0201001

Init. Calib. Date(s): 09/13/02

09/16/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1057

1137

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d	
=====	=====	=====	=====	=====	=====	
Acetone	132.3	100.0	AVRG	32.3	30.0	<-
Benzene	123.8	100.0	AVRG	23.8	30.0	
Bromodichloromethane	84.35	100.0	LINR	15.6	30.0	
Bromoform	95.12	100.0	AVRG	4.9	30.0	
2-Butanone	149.7	100.0	AVRG	49.7	30.0	<-
Bromomethane	55.25	100.0	AVRG	44.8	30.0	<-
Carbon Disulfide	96.32	100.0	AVRG	3.7	30.0	
Carbon Tetrachloride	88.19	100.0	AVRG	11.8	30.0	
Chlorobenzene	104.8	100.0	AVRG	4.8	30.0	
Chlorodibromomethane	88.61	100.0	AVRG	11.4	30.0	
Chloroethane	102.1	100.0	AVRG	2.1	30.0	
Chloroform	101.4	100.0	AVRG	1.4	20.0	
Chloromethane	99.80	100.0	AVRG	0.2	30.0	
1,1-Dichloroethane	109.4	100.0	AVRG	9.4	30.0	
1,2-Dichloroethane	92.73	100.0	AVRG	7.3	30.0	
1,1-Dichloroethene	99.24	100.0	AVRG	0.8	20.0	
cis-1,2-Dichloroethene	115.4	100.0	AVRG	15.4	30.0	
trans-1,2-Dichloroethene	93.26	100.0	AVRG	6.7	30.0	
1,2-Dichloropropane	107.4	100.0	AVRG	7.4	20.0	
cis-1,3-Dichloropropene	104.7	100.0	AVRG	4.7	30.0	
trans-1,3-Dichloropropene	100.5	100.0	AVRG	0.5	30.0	
Ethylbenzene	99.28	100.0	AVRG	0.7	20.0	
2-Hexanone	121.0	100.0	AVRG	21.0	30.0	
Methylene Chloride	98.85	100.0	LINR	1.2	30.0	
4-Methyl-2-Pentanone	116.1	100.0	AVRG	16.1	30.0	
Styrene	105.0	100.0	AVRG	5.0	30.0	
1,1,2,2-Tetrachloroethane	118.3	100.0	AVRG	18.3	30.0	
Tetrachloroethene	99.39	100.0	AVRG	0.6	30.0	
1,1,1-Trichloroethane	92.63	100.0	AVRG	7.4	30.0	
Toluene	103.7	100.0	AVRG	3.7	20.0	
1,1,2-Trichloroethane	111.9	100.0	AVRG	11.9	30.0	
Trichloroethene	99.39	100.0	AVRG	0.6	30.0	
Vinyl Acetate	94.74	100.0	AVRG	5.3	30.0	
Vinyl Chloride	80.34	100.0	AVRG	19.7	20.0	
Xylene-mp	192.2	200.0	AVRG	3.9	30.0	
Xylene-o	98.14	100.0	AVRG	1.9	30.0	
=====	=====	=====	=====	=====	=====	

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

719 444

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Instrument ID: VOC4

Calibration Date: 10/11/02 Time: 0854

Lab File ID: 0201001

Init. Calib. Date(s): 09/13/02 09/16/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1057 1137

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Dibromofluoromethane	43.11	50.00	AVRG	13.8	30.0
Toluene-d8	49.04	50.00	AVRG	1.9	30.0
Bromofluorobenzene	43.10	50.00	AVRG	13.8	30.0
1,2-Dichloroethane-d4	38.57	50.00	AVRG	22.9	30.0

VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201001

Date Analyzed: 10/11/02

Instrument ID: VOC4

Time Analyzed: 0854

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	785870	6.17	1255892	6.76	1157847	8.98
UPPER LIMIT	1571740	6.67	2511784	7.26	2315694	9.48
LOWER LIMIT	392935	5.67	627946	6.26	578924	8.48
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4101111LCS	972276	6.17	1565890	6.76	1409907	8.98
02 V4101111LB	679965	6.17	1078258	6.76	907798	8.97
03 021005356	581698	6.18	902290	6.76	758938	8.98
04 021005357	546143	6.18	844344	6.76	724822	8.98
05 021005470	441889	6.18	756838	6.76	658721	8.98
06 021005470MS	523621	6.18	859240	6.76	787522	8.98
07 021005470MSD	600896	6.18	987226	6.76	940993	8.98
08						
09						
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19						
20						
21						
22						

IS1 = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

719 446

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210053

Lab File ID (Standard): 0201001

Date Analyzed: 10/11/02

Instrument ID: VOC4

Time Analyzed: 0854

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS4 (DCB)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	465733	10.78				
UPPER LIMIT	931466	11.28				
LOWER LIMIT	232867	10.28				
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4101111LCS	553432	10.78				
02 V4101111LB	436308	10.78				
03 021005356	363859	10.78				
04 021005357	340934	10.78				
05 021005470	306095	10.78				
06 021005470MS	345828	10.78				
07 021005470MSD	371769	10.79				
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

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Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

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 Integrator : HP RTE
 Method file : \\ETCBDC\DD\chem\voc3.i\V309101.B\V309061.8260.m
 Cal Date : 09-Sep-2002 14:22 lisa

Calibration File Names:

Level 1: \\ETCBDC\DD\chem\voc3.i\V309061.B\0301005.D
 Level 2: \\ETCBDC\DD\chem\voc3.i\V309061.B\0401003.D
 Level 3: \\ETCBDC\DD\chem\voc3.i\V309061.B\0601008.D
 Level 4: \\ETCBDC\DD\chem\voc3.i\V309061.B\0701009.D
 Level 5: \\ETCBDC\DD\chem\voc3.i\V309061.B\0801010.D
 Level 6: \\ETCBDC\DD\chem\voc3.i\V309061.B\0901011.D
 Level 7: \\ETCBDC\DD\chem\voc3.i\V309061.B\1001012.D
 Level 8: \\ETCBDC\DD\chem\voc3.i\V309061.B\1101004.D
 Level 9: \\ETCBDC\DD\chem\voc3.i\V309061.B\1201014.D
 Level 10: \\ETCBDC\DD\chem\voc3.i\V309061.B\1301015.D

Compound	0.5000000	1.0000	5.0000	20.0000	50.0000	100.0000	Curve	b	ml	m2	or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	120.0000	150.0000	170.0000	200.0000							
	Level 7	Level 8	Level 9	Level 10							
1 Dichlorodifluoromethane	0.89141	0.59903	0.86619	0.74322	0.90183	0.74770	AVRG		0.79156		14.84363

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Compound	C 500000	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients	m1	m2	RSD or R ²
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients	m1	m2	RSD or R ²
2 Chloromethane	0.48661	0.54235	0.64522	0.61526	0.62608	0.48345	AVRG	AVRG	0.56649	12.72620			
3 Vinyl Chloride	0.57325	0.51036	0.55884	0.56130	0.62290	0.43626	AVRG	AVRG	0.53600	11.52856			
4 Bromomethane	0.39611	0.34739	0.40474	0.38260	0.49456	0.41104	AVRG	AVRG	0.39454	13.17975			
5 Chloroethane	0.28270	0.26940	0.32108	0.28917	0.33280	0.24717	AVRG	AVRG	0.27806	13.46543			
6 Acrolein	0.01497	0.01370	0.01462	0.01559	0.01385	0.01240	AVRG	AVRG	0.01418	7.24188			

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Compound	0 500000	1 0000	5 0000	20 0000	50.0000	100 0000	Curve	b	Coefficients	m2	RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1		or R^2
7 Trichlorofluoromethane	0 92110	0 84728	1 10774	1.00072	1 09627	0 93337	AVRG		0 95144		11 07708
	1 04846	0 82847	0 88470	0 84632							
8 Acetonitrile	0 02338	0 03084	0 02712	0 02862	0 02256		AVRG		0 02650		13 19415
	0 14180	0 12305	0 13106	0 12326			AVRG		0 13684		9 16536
10 Furan	0 90963	0 78767	0 94715	0 92314	0 98226	0 81977	AVRG		0 85538		10 35741
	0 46290	0 44837	0 50198	0 46989	0 48840	0 41896	AVRG		0 43730		11 01449
11 1,1-Dichloroethene											

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INITIAL CALIBRATION DATA

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 Cal Date : 09-Sep-2002 14:22 lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	TRSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
	-----	-----	-----	-----	-----	-----	-----					
	120 0000	150 0000	170 0000	200.0000								
	Level 7	Level 8	Level 9	Level 10								
	-----	-----	-----	-----	-----	-----	-----					
12 Acrylonitrile	-----	-----	-----	-----	-----	-----	-----					
	0.09274	0.07328	0.07961	0.10755	0.10318	0.08499	AVRG		0.09022			14 88231
	-----	-----	-----	-----	-----	-----	-----					
13 Iodomethane	-----	-----	-----	-----	-----	-----	-----					
	0.50535	0.40746	0.46568	0.50775	0.59714	0.47535	AVRG		0.50685			13 35792
	-----	-----	-----	-----	-----	-----	-----					
14 Methylene Chloride	-----	-----	-----	-----	-----	-----	-----					
	22034	77371	12804	94882	223835	448865	LINR	-0.21333	0.40448			0 99218
	590624	718498	849962	983934								
	-----	-----	-----	-----	-----	-----	-----					
15 1,1,2-trichloro-1,2,2-trifluoroethane	-----	-----	-----	-----	-----	-----	-----					
	0.60439	0.45574	0.63245	0.58819	0.64661	0.54533	AVRG		0.55752			12 22093
	0.60522	0.46940	0.53311	0.49470								
	-----	-----	-----	-----	-----	-----	-----					
16 Allyl chloride	-----	-----	-----	-----	-----	-----	-----					
	0.62817	0.53645	0.69381	0.62778	0.63027	0.50264	AVRG		0.58927			12 56084
	0.50578	-----	-----	-----	-----	-----						

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Compound	0 5000000	1 0000	Level 2	5 0000	Level 3	20 0000	Level 4	50 0000	Level 5	100 0000	Level 6	Curve	b	Coefficients	m1	m2	RSD or R^2
17 Carbon Disulfide	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10							
	120 0000	150 0000	170 0000	200 0000													
	1 89854	2 06052	2 19312	2 00018	2 22195	1 98168											
	2 22297	1 78452	1 84878	1 82059											2.00329		8 35200
18 trans-1,2-Dichloroethane	0 73730	0 59232	0 66518	0 66344	0 68188	0 60083											
	0 69657	0 58146	0 63232	0 58937											0 64407		8 23152
19 Methyl-tertbutyl-Ether	1 34479	1 09973	1 35870	1 33716	1 37916	1 25172											
	1 39885	1 17790	1 26999	1 20402											1 28220		7 67519
20 Propionitrile	0 04365	0 04586	0 06289	0 05885	0 06227	0 05678											
	0 05947	0 04651	0 05176	0 04693											0 05350		13 79917
21 1,1-Dichloroethane	1 08040	0 93883	1 16391	1 09142	1 14576	0 99467											
	1 09283	0 93547	0 96580	0 89179											1 03009		9 34046

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Compound	0 500000	1 0000	Level 2	5 0000	Level 3	20 0000	Level 4	50 0000	Level 5	100 0000	Curve	b	m1	m2	SRSD or R ²
22 Vinyl Acetate	0 96954	0 80414	0 80414	1 09773	1 07867	1 10420	0 93850	AVRG	0 97170	13 31808					
23 Chloroprene	0 95201	0 89947	1 08994	1 01149	1 02025	0 89167	AVRG	0 93134	10 19527						
24 2-Butanone	0 06447	0 05398	0 04340	0 05696	0 05460	0 06497	0 05768	AVRG	0 05677	11 91580					
25 Hexane	932067	14050	41522	153808	382863	749277	LINR	-0 09440	0 64293	0 99115					
26 Di isopropyl ether	2 01457	1 55717	2 19437	2 11854	2 00499	1 63062	AVRG	1 87754	14 12709						

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Compound	0.500000	1.0000	5.0000	20.0000	50.0000	100.0000	Curve	b	ml	m2	MSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	120.0000	150.0000	170.0000	200.0000							
	Level 7	Level 8	Level 9	Level 10							
27 Methacrylonitrile	0.28931	0.24648	0.32444	0.31349	0.29942	0.23268	AVRG		0.27675		14.15271
	0.23147	****	****	****							
28 cis-1,2-Dichloroethene	0.60392	0.61535	0.68386	0.72682	0.72086	0.64745	AVRG		0.66127		7.79121
	0.72643	0.60253	0.67066	0.61384							
29 Ethyl Acetate	****	****	0.58676	0.53345	0.52813	0.46888	AVRG		0.48373		13.07042
	0.49263	0.41336	0.43707	0.40960							
30 Bromochloromethane	0.19972	0.32277	0.31898	0.31189	0.33255	0.30120	AVRG		0.29997		12.94117
	0.33060	0.28115	0.30858	0.29224							
31 Chloroform	****	1.01585	0.97974	0.84963	0.81287	0.72638	AVRG		0.80870		14.89405
	0.78612	0.69702	0.72854	0.68214							

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Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	ml	m2	SRSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					or R ²
120.0000	150 0000	170 0000	200 0000								
Level 7	Level 8	Level 9	Level 10								
32 Isobutyl Alcohol	1103	5372	18771	64323	171205	345477	LINR	-0.93919	0.01737		0.99324
	422267	*****	*****	*****							
33 2,2-Dichloropropane	0.94487	0.79679	0.96558	0.95121	0.99327	0.88136	AVRG		0.91226		7.10454
	0.97949	0.87368	0.89683	0.83956							
35 Tetrahydrofuran	*****	*****	0.16327	0.22259	0.21888	0.19376	AVRG		0.18957		12.50839
	0.20245	0.17183	0.18114	0.16263							
38 1,2-Dichloroethane	0.86736	0.73171	0.88796	0.90614	0.94518	0.85040	AVRG		0.86278		7.45307
	0.94337	0.81918	0.86017	0.81638							
39 1,1 1-Trichloroethane	0.98719	0.75537	1.08046	1.03352	1.11439	1.03034	AVRG		1.01767		10.80765
	1.14443	0.94629	1.08139	1.00330							

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 Cal Date : 09-Sep-2002 14:22 lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	MSD	or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6							
40 1,1-Dichloropropene	0 76750	0 74645	0 87825	0 86158	0 90699	0 81724	AVRG			0 82434		6 86800	
	0 88418	0 77793	0 83001	0 77325									
41 Carbon Tetrachloride	0 68951	0 72809	0 93961	0 88930	0 99326	0 92931	AVRG			0 90578		12 64321	
	1 04000	0 89026	1 00183	0 95663									
42 Benzene	2 15224	1 94148	2 29523	2 30391	2 23205	1 84446	AVRG			2 00322		12 97687	
	1 97006	1 60443	1 68508	++++									
44 Dibromomethane	0 20842	0 25710	0 25901	0 26615	0 25731	0 24241	AVRG			0 24249		8 92800	
	0 24762	0 25689	0 21971	0 21025									
45 1,2-Dichloropropane	0 36732	0 37239	0 39529	0 38144	0 36431	0 32969	AVRG			0 35095		11 23109	
	0 30966	0 28353	++++	++++									

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Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m2	SRSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1		or R^2
46 Trichloroethene	0 36308	0 42745	0 37087	0 37822	0 37342	0 35944	AVRG		0 36947		6 84580
	0 36464	0 35413	0 33394	*****							
47 Bromodichloromethane	*****	16139	41433	159378	413178	883862	LINE	-0 04000	0.53804		0 99814
	1215276	1449473	1760868	2089799							
48 n-Propyl Acetate	*****	0 59572	0 68933	0 69653	0 63497	0 54027	AVRG		0 60915		13 13181
	0 49806	*****	*****	*****							
49 Methyl methacrylate	*****	0 14214	0 18764	0 20513	0 19411	0 18008	AVRG		0 17217		12 86162
	0 17916	0 15877	0 15625	0 14628							
50 1,4-Dioxane	*****	*****	2439	11553	33648	78338	LINE	1 30422	0 00256		0 99856
	106566	*****	*****	*****							

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Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	RSR or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
51 2-Chloroethyl vinyl ether	++++	0.13937	0.18230	0.17058	0.19153	0.19058	AVRG			0.18145		9.68103
	0.19741	0.18816	0.19113	0.18197								
52 cis-1,3-Dichloropropene	0.56924	0.51511	0.53602	0.59040	0.60164	0.59828	AVRG			0.57867		5.87112
	0.61999	0.61676	0.57552	0.56374								
53 4-Methyl-2-Pentanone	++++	0.30640	0.31065	0.31427	0.29648		AVRG			0.28982		7.81520
	0.29494	0.27997	0.26424	0.25159								
54 trans-1,3-Dichloropropene	0.40581	0.42953	0.46266	0.47148	0.49128	0.49124	AVRG			0.47453		7.48902
	0.50910	0.52538	0.48576	0.47304								
55 1,1,2-Trichloroethane	0.20971	0.23125	0.23737	0.26521	0.26197	0.26446	AVRG			0.25005		7.85916
	0.27092	0.26284	0.25487	0.24294								

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Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m2	RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					or R ²
57 Ethyl methacrylate	0 14871	0 19173	0 18981	0 18369	0 19050	0 19279	AVRG		0 18410		7 83253
	0 20157	0 18614	0 18173	0 17429							
58 Toluene	0 71663	0 71849	0 77459	0 74143	0 73295	0 70150	AVRG		0 72289		4 35954
	0 44840	0 50500	0 49053	0 47716	0 47492	0 46171					
59 1,3-Dichloropropane	0 46815	0 46692	0 43648	0 42024			AVRG		0 46495		5 37226
	0 20462	0 22519	0 27783	0 22446	0 21518	0 20979	AVRG		0 21516		14 15624
60 2-Hexanone	0 38360	0 38230	0 37569	0 41038	0 44169	0 44859	AVRG		0 42782		8 59807
	0 46930	0 47309	0 44951	0 44410							

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Compound	0 500000	1 0000	Level 2	5 0000	Level 3	20 0000	Level 4	50 0000	Level 5	100 0000	Level 6	Curve	b	Coefficients m1	m2	RSD or R ²
62 1,2-Dibromoethane	0 24932	0 32516	0 34454	0 36535	0 38300	0 37036	AVRG							0 35101		11 46004
63 Tetrachloroethane	0 32867	0 33050	0 30927	0 29570			AVRG							0 31342		4 24934
64 1,1,1,2-Tetrachloroethane	0 33403	0 38040	0 39942	0 36606	0 41643	0 43786	AVRG							0 42319		12 66900
66 Chlorobenzene	0 94164	1 07674	1 02315	0 92171	0 99364	1 01580	AVRG							1 02740		5 96708
67 Ethylbenzene	1 59961	1 71961	1 66223	1 45780	1 52599	1 52458	AVRG							1 59116		5 42107

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Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients m1	m2	MSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
68 Xylene-mp	0 57588	0 62265	0 60306	0 53944	0 57001	0 56701	AVRG		0 57311		5 19152
	0 61028	0 54266	0 55541	0 54471							
69 Bromoform	++++	0 29044	0 31418	0 28880	0 33168	0 34582	AVRG		0 34079		11 09445
	0 39937	0 37257	0 36597	0 35832							
70 trans-1,4-Dichloro-2-butene	++++	0 11058	0 11460	0 12614	0 13703	0 13812	AVRG		0 13266		10 53080
	0 15577	0 14295	0 13672	0 13208							
71 Styrene	0 94409	0 96159	1 00303	0 90587	0 96784	0 98137	AVRG		0 99398		5 31978
	1 08277	1 05590	1 01783	1 01951							
72 Xylene-o	0 48823	0 56878	0 57352	0 53885	0 55884	0 52895	AVRG		0 54212		5 21033
	0 57910	0 53035	0 53656	0 51805							

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Compound	0 500000	1 0000	Level 2	5 0000	Level 3	20 0000	Level 4	50 0000	Level 5	100 0000	Level 6	Curve	b	Coefficients	m1	m2	VRSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11	Level 12	Level 13	Level 14	Level 15	Level 16	Level 17
73 1,1,2,2-Tetrachloroethane	0 84239	0 91936	0 98540	1 02212	1 04213	1 06131	1 08049	1 09967	1 11885	1 13803	1 15721	AVRG	0 04506	0 12405	0 14323	0 16241	7 85050
74 cis-1,4-Dichloro-2-butene	0 12765	0 11696	0 10628	0 11453	0 11022	0 10591	0 10159	0 09728	0 09296	0 08864	0 08432	AVRG	0 11099	0 11099	0 11099	0 11099	13 48222
75 1,2,3-Trichloropropane	0 21323	0 24166	0 31528	0 3716	0 4280	0 4844	0 5408	0 5972	0 6536	0 7100	0 7664	AVRG	0 04506	0 12405	0 14323	0 16241	0 99393
76 Isopropylbenzene	1 26940	1 47233	1 54791	1 54791	1 37687	1 39414	1 41141	1 42868	1 44595	1 46322	1 48049	AVRG	0 04506	0 12405	0 14323	0 16241	6 16895
78 Bromobenzene	0 31640	0 42343	0 40974	0 40974	0 37709	0 40181	0 42653	0 45127	0 47601	0 50075	0 52549	AVRG	0 04506	0 12405	0 14323	0 16241	10 80176

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-SEP-2002 11:11
 End Cal Date : 09-SEP-2002 11:19
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCBDC\DD\chem\voc3.i\V309101.B\V309061.8260.m
 Cal Date : 09-Sep-2002 14:22 Lisa

Compound	0 5000000	1 0200	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m ²	MSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
79 n-Propylbenzene	1 020000	150 0000	170 0000	200 0000							
	Level 7	Level 8	Level 9	Level 10							
	1 02510	1 83340	1 83318	1 63211	1 67880	1 63946	AVRG		1 71395		5 62959
80 2-Chlorotoluene	1 02366	1 02148	0 97080	0 92840	0 95536	0 93295	AVRG		0 97405		4 51892
81 4-Chlorotoluene	1 16611	1 19566	1 22630	1 03983	1 12240	1 03911	AVRG		1 11158		6 68684
82 1,3,5-Trimethylbenzene	1 13466	1 22968	1 07590	0 97533	0 99351	0 93936	AVRG		1 05291		8 50231
83 1,2,4-Trimethylbenzene	1 07225	1 10316	1 06811	0 94589	0 95304	0 95873	AVRG		1 03449		7 58223

Report Date : 10-Sep-2002 08:55

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-SEP-2002 11:11
 End Cal Date : 09-SEP-2002 11:19
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc3.i\V309101.B\V309061.8260.m
 Cal Date : 09-Sep-2002 14:22 lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m2	SRSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	120 0000	150 0000	170 0000	200 0000							
	Level 7	Level 8	Level 9	Level 10							
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
85 tert-Butylbenzene	0 84918	0 93708	0 99295	0 92383	0 92198	0 92596	AVRG		0 95494		5 85111
	1 03926	1 02446	0 96847	0 96624							
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
86 sec-Butylbenzene	1 38996	1 58439	1 67096	1 44812	1 47528	1 49005	AVRG		1 52646		5 72564
	1 61870	1 61242	1 50521	1 48948							
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
87 4-isopropyltoluene	***	1 17454	1 14547	1 01439	1 01357	1 01430	AVRG		1 08032		6 52154
	1 10655	1 17658	1 04149	1 03600							
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
89 1,3-Dichlorobenzene	1 88464	1 88264	1 77519	1 72290	1 76066	1 85011	AVRG		1 83019		3 43735
	1 92413	1 85411	1 80566	1 84185							
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
90 1,4-Dichlorobenzene	1 84775	1 87323	1 77519	1 66782	1 75485	1 81533	AVRG		1 85920		5 76574
	1 93722	1 95476	2 01714	1 93876							
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

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 End Cal Date : 09-SEP-2002 11:19
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc3.i\309101.B\309061.8260.m
 Cal Date : 09-Sep-2002 14:22 lisa

Compound	0 5000000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	SRSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						or R^2
91 1,2-Dichlorobenzene	1 47045	1 48020	1 70780	1 54829	1 50864	1 68276	AVRG			1 63168		6 07445
	1 72040	1 66878	1 73125	1 69819								
92 n-Butylbenzene	2 55379	2 99851	2 45021	2 49762	2 56714	2 67690	AVRG			2 72913		9 14262
	2 80130	3 26422	2 78996	2 69160								
93 1,2-Dibromo-3-chloropropane	0 20142	0 18067	0 19886	0 20020	0 16312	0 17779	AVRG			0 17624		13 57852
94 1,2,4-Trichlorobenzene	1060	6876	15947	71462	192538	458670	LINR	0 04210	0 98108			0 99319
	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000						
95 Naphthalene	3040	13704	22111	101984	289996	650731	LINR	0 03195	1 39408			0 99609
	0 0000	0 0000	0 0000	0 0000	0 0000	0 0000						

Environmental Testing and Consulting, Inc.

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 Method file : \\ETC\BDC\DD\chem\voc3.i\V309101.B\V309061.8260.m
 Cal Date : 09-Sep-2002 14:22 lisa

Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	Coefficients m1	m2	RSR or R ²
96 Hexachlorobutadiene	0.78737	0.75314	0.77748	0.76889	0.67393	0.74414	AVRG		0.70971		12.43473
97 1,2,3-Trichlorobenzene	0.5923	0.5923	1.3587	0.60567	1.71071	3.94690	LINR	0.05218	0.85331		0.99477
98 3,4-Dibromofluoromethane	0.61721	0.60984	0.71947	0.63513	0.69971	0.67662	AVRG		0.66115		5.56465
99 1,2-Dichloroethane-d4	0.63887	0.54978	0.77636	0.69714	0.77545	0.72785	AVRG		0.68307		11.19346
56 Toluene-d8	0.97306	1.02009	1.00660	0.92174	0.94752	0.94599	AVRG		0.94575		4.56424

Environmental Testing and Consulting, Inc.

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 Integrator : HP RTE
 Method file : \\ETCBDC\DD\chem\voc3.i\V309101.B\V309061.8260.m
 Cal Date : 09-Sep-2002 14:22 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100.0000	Curve	b	Coefficients	m2	MSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	120 0000	150 0000	170 0000	200 0000							
	Level 7	Level 8	Level 9	Level 10							
\$ 77 Bromofluorobenzene	0 42151	0 41638	0 41389	0 34375	0 35873	0 37309					
	0 40716	0 40501	0 37454	0 41944		AVRG		0 39335			7 17859

Curve	Formula	Units
Averaged	Ant = Rsp/ml	Response
Linear	Ant = b + Rsp/ml	Response

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\409161.B\409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
	120 0000	150 0000	170 0000	200 0000								
	Level 7	Level 8	Level 9	Level 10								
2 Chloromethane	0 31793	0 30969	0 26917	0 22148	0 25360	0 23720	AVRG			0 27487		11 28335
	0 30021	0 28613	0 27111	0 28218								
3 Vinyl Chloride	0 44707	0 36976	0 42554	0 35496	0 38324	0 34289	AVRG			0 38172		10 77096
	0 40262	0 32871	+++++									
4 Bromomethane	+++++	0 38289	0 47988	0 37253	0 37788	0 33938	AVRG			0 37869		12 78462
	0 42382	0 37213	0 33532	0 32437								
5 Chloroethane	0 17891	0 21067	0 21687	0 19422	0 20040	0 17267	AVRG			0 19029		10 28806
	0 21272	0 18583	0 16579	0 16485								
6 Acrolein	+++++	+++++	+++++	0 01888	0 01608	0 01489	AVRG			0 01616		7 84104
	0 01556	0 01585	0 01575	0 01613								

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

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 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m2	TRSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6			m1		
7 Trichlorofluoromethane	1 20109	0 94571	1 32380	1 18705	1 18705	1 00814	AVRG		1 08451		12 87827
	1 18849	1 05358	0 93637	0 91385							
8 Acetonitrile	++++	++++	0 02875	0 02497	0 02454	0 02184	AVRG		0 02552		8 23630
	0 02764	0 02633	0 02479	0 02532							
9 Acetone	++++	++++	++++	0 21233	0 18537	0 16530	AVRG		0 18050		11 30458
	0 19830	0 18370	0 15962	0 15888							
10 Furan	++++	0 75492	0 99434	0 91102	0 92385	0 81398	AVRG		0 88890		9 79677
	0 99203	0 90768	0 81338	++++							
11 1,1-Dichloroethene	0 42441	0 34677	0 42393	0 37545	0 37753	0 33059	AVRG		0 37700		9 37703
	0 41845	0 38183	0 34721	0 34386							

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDDC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients m1	m2	TRSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
12 Acrylonitrile	0 08439	0 08153	0 08187	0 08261	0 08152	0 07710	AVRG		0 08278		4 87741
13 Iodomethane	0 85355	0 53464	0 65445	0 66057	0 75456	0 67815	AVRG		0 68055		13 46685
14 Methylene Chloride	18242	20574	45707	134467	332038	678338	LINR	-0 02514	0 44510		0 99193
15 1,1,2-trichloro-1,2,2-trifluoroethane	0 61635	0 48986	0 61182	0 58876	0 58525	0 50974	AVRG		0 55223		9 38458
16 Allyl chloride	0 63346	0 55401	0 63210	0 61080	0 59954	0 52248	AVRG		0 57285		8 74299

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

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 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\409161.B\409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 5000000	1 0000	5 0000	20.0000	50.0000	100 0000	Curve	b	Coefficients ml	m2	WSTD or R^2
17 Carbon Disulfide	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	1 34389	1 23581	1 10325	1 10638			AVRG		1 18352		8 55565
18 trans-1,2-Dichloroethene	0 39647	0 36654	0 43027	0 44560	0 44655	0 39408	AVRG		0 42051		8 22039
	0 48070	0 44571	0 39569	0 40353							
19 Methyl-tertbutyl-Ether	1 72143	1 27522	1 93080	1 86472	1 79822	1 58438	AVRG		1 71496		12 50371
	1 99936	1 80840	1 54305	1 62406							
20 Propionitrile	0 04147	0 03931	0 03830	0 03985	0 03657	0 03304	AVRG		0 03808		6 83493
	0 04118	0 03865	0 03586	0 03657							
21 1,1-Dichloroethane	0 83103	0 83824	0 95022	0 91480	0 85054	0 78541	AVRG		0 86249		7 56823
	0 95910	0 90536	0 79435	0 79589							

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETC\BDC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1.0000	5.0000	20 0000	50 0000	100.0000	Curve	b	Coefficients	m1	m2	MSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
	120 0000	150 0000	170 0000	200 0000								
	Level 7	Level 8	Level 9	Level 10								
22 Vinyl Acetate	0.95557	0.89570	0.82390	0.82789	0.83676	0.76108	AVRG			0.85683		6.77804
23 Chloroprene	1.10768	0.98571	1.14397	1.12815	1.09249	0.93922	AVRG			1.05386		7.89278
24 2-Butanone	0.05609	0.05138	0.04665	0.04550	0.05226	0.04581	AVRG			0.05069		9.56264
25 Hexane	0.53938	0.50132	0.44859	0.45085	0.52176	0.45336	AVRG			0.51455		13.26186
26 Di isopropyl ether	1.50637	1.36820	1.54380	1.49491	1.40707	1.24314	AVRG			1.41333		7.62788
	1.53380	1.43743	1.30701	1.29157								

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 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	RSR or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
27 Methacrylonitrile	0 25812	0 25707	0 25816	0 25331	0 22637	0 19719	AVRG			0 23449		9 82224
	0 24630	0 22709	0 21092	0 21032								
28 cis-1,2-Dichloroethene	0 42136	0 53233	0 50902	0 51319	0 48287	0 42033	AVRG			0 47394		9 10850
	0 51217	0 48206	0 43292	0 43317								
29 Ethyl Acetate	+++++	+++++	0 43655	0 42275	0 38899	0 35034						
	0 42297	0 38800	0 36170	0 36354			AVRG			0 39185		8 28532
30 Bromochloromethane	0 28818	0 27437	0 31849	0 30015	0 29292	0 25654	AVRG			0 28738		7 27184
	0 31510	0 29410	0 26723	0 26669								
31 Chloroform	+++++	1 56901	1 18944	1 05782	1 59688	1 40726	AVRG			1 42361		14 81033
	1 63931	1 56760	1 36158	+++++								

Environmental Testing and Consulting, Inc.

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 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 5000000 Level 1	1 0000 Level 2	5 0000 Level 3	20 0000 Level 4	50 0000 Level 5	100 0000 Level 6	Curve	b	Coefficients m1	m2	SRSD or R ²
32 Isobutyl Alcohol	0 01636 0 01636	0 01541 0 01541	0 01820 0 01820	0 01672 0 01672	0 01564 0 01564	0 01341 0 01341	AVRG		0 01542		10 87291
33 2,2-Dichloropropane	1 46230 1 31778	1 17892 1 20799	1 39604 1 05486	1 33138 1 03980	1 26939 1 0576	1 10576 1 0576	AVRG		1 23642		11 62826
35 Tetrahydrofuran	0 18023 0 18023	0 16862 0 16862	0 15802 0 15802	0 15553 0 15553	0 15689 0 15689	0 14851 0 14851	AVRG		0 15378		14 57978
38 1,2-Dichloroethane	1 10629 1 36788	1 04282 1 19236	1 23953 1 06751	1 25271 1 04460	1 17612 1 06973	1 06973 1 06973	AVRG		1 15596		9 38456
39 1,1,1-Trichloroethane	1 51930 1 69731	1 31220 1 61158	1 68655 1 41710	1 68320 1 42194	1 63423 1 41719	1 41719 1 41719	AVRG		1 54006		9 11061

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 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5.0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m2	WRSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
40 1,1-Dichloropropene	0.83076	0.86003	0.91615	0.89872	0.87301	0.76701	AVRG		0.85183		6.83514
	0.93615	0.86502	0.78494	0.78654							
41 Carbon Tetrachloride	1.43061	1.23673	1.62794	1.66035	1.59311	1.37271	AVRG		1.48200		9.88886
	1.62708	1.54434	1.37133	1.35582							
42 Benzene	1.65915	1.68649	1.71434	1.66290	1.61150	1.40970	AVRG		1.61125		6.61780
	1.73494	1.63199	1.48854	1.51294							
44 Dibromomethane	0.28264	0.28497	0.30859	0.33135	0.31075	0.26604	AVRG		0.29770		7.87457
	0.33265	0.30578	0.27771	0.27656							
45 1,2-Dichloropropane	0.32896	0.28415	0.31469	0.30704	0.28502	0.24052	AVRG		0.28164		10.86024
	0.29096	0.27356	0.24643	0.24501							

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 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m2	SRSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
46 Trichloroethene	0 42334	0 45578	0 43848	0 45037	0 42839	0 36128	AVRG		0 42294		7 36460
	0 45470	0 42996	0 38903	0 39807							
47 Bromodichloromethane	16315	25251	66022	239702	596153	1377947	LINE	-0 04774	0 53505		0 99029
	1718851	2065619	2247871	****							
48 n-Propyl Acetate	****	0 79054	0 79373	0 78698	0 73135	0 61574	AVRG		0 72050		9 57389
	0 76510	0 70032	0 65336	0 64726							
49 Methyl methacrylate	0 19662	0 20856	0 21676	0 22012	0 20176	0 17123	AVRG		0 19623		9 36071
	0 20899	0 19120	0 17565	0 17128							
50 1,4-Dioxane	****	****	0 00283	0 00257	0 00240	0 00210	AVRG		0 00253		8 54150
	0 00268	0 00258	0 00261	0 00246							

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Environmental Testing and Consulting, Inc.

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 Method file : \\ETCDBC\DD\chem\voc4.i\409161.B\409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0.500000	1.0000	5.0000	20.0000	50.0000	100.0000	Curve	b	ml	m2	RSR	or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
51 2-Chloroethyl vinyl ether	329	614	5336	15593	52397	132515	LINE	0.03161	0.05401		0.99706	
52 cis-1,3-Dichloropropene	0.59386	0.62201	0.70952	0.70914	0.66240	0.58274	AVRG		0.64846		8.08594	
53 4-Methyl-2-Pentanone	0.35740	0.32866	0.31056	0.30781	0.31713	0.28056	AVRG		0.32229		7.32980	
54 trans-1,3-Dichloropropene	0.61228	0.57445	0.69280	0.73738	0.69055	0.60258	AVRG		0.66587		9.00490	
55 1,1,2-Trichloroethane	0.25638	0.23737	0.27157	0.28399	0.26376	0.23377	AVRG		0.26047		7.35324	

Environmental Testing and Consulting, Inc.

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 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0.5000000		1.0000		5.0000		20.0000		50.0000		100.0000		Curve		Coefficients		m2	or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11	Level 12	Level 13	Level 14	b	m1		
57 Ethyl methacrylate	0.23945	0.22450	0.23789	0.23645	0.21740	0.18344							AVRG			0.21438		10 27379
58 Toluene	0.80929	0.79151	0.80147	0.81255	0.76605	0.65315							AVRG			0.76340		6 93681
59 1,3-Dichloropropane	0.58484	0.53073	0.55304	0.57165	0.52589	0.46075							AVRG			0.52340		8.59316
60 2-Hexanone	0.26961	0.24415	0.22940	0.22559	0.24757	0.22010							AVRG			0.25174		13 09258
61 Chlorodibromomethane	0.65854	0.54944	0.65134	0.68142	0.65750	0.57311							AVRG			0.63667		8 10602

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20.0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	WRS	or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6							
62 1,2-Dibromoethane	0 35025	0 35896	0 41092	0 43633	0 41341	0 36891	AVRG			0 40146			8 79976
	0 45984	0 42898	0 39500	0 39203									
63 Tetrachloroethene	0 33383	0 33967	0 34562	0 36844	0 35142	0 30750	AVRG			0 34608			6 02593
	0 38000	0 36384	0 33376	0 33671									
64 1,1,1,2-Tetrachloroethane	0 64352	0 56280	0 63008	0 59352	0 61630	0 53193	AVRG			0 59923			6 21463
	0 61835	0 64313	0 57146	0 58122									
66 Chlorobenzene	1 01046	1 11690	1 06673	1 01956	1 04936	0 91655	AVRG			1 04000			5 74445
	1 07188	1 11768	0 99784	1 03309									
67 Ethylbenzene	2 14391	2 11580	2 12860	1 96222	2 07565	1 76957	AVRG			2 00642			6 71080
	2 02664	2 11762	1 85500	1 86922									

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	WRSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
68 Xylene-mp	0 71687	0 72301	0 68334	0 62496	0 61675	0 53947	AVRG			0 64974		9 32909
69 Bromoform	0 41715	0 39088	0 43413	0 42414	0 44137	0 39932	AVRG			0 41366		11 41538
70 trans-1,4-Dichloro-2-butene	0 14565	0 14783	0 16059	0 13917			AVRG			0 14240		6 43291
71 Styrene	1 05625	1 20070	1 13045	1 04402	1 09684	0 92787	AVRG			1 06475		6 91798
72 Xylene-o	0 61144	0 68546	0 62708	0 59185	0 59671	0 49115	AVRG			0 59476		9 21602

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\409161.B\409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000		1 0000		5 0000		20.0000		50 0000		100 0000		Curve	b	Coefficients		m2	RSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10								
73 1,1,2,2-Tetrachloroethane	0 76280	0 85342	0 85611	0 89945	0 84548	0 73756							AVRG			0 84842		7 65352
	0 95254	0 91190	0 82132	0 84360														
74 cis-1,4-Dichloro-2-butene	0 12832	0 16433	0 18873	0 17591	0 18273	0 15489							AVRG			0 16466		10 74512
	0 17266	0 17195	0 15519	0 15192														
75 1,2,3-Trichloropropane	0 16879	0 16227	0 17474	0 17194	0 17336	0 14468							AVRG			0 16261		6 72655
	0 16703	0 16437	0 14941	0 14954														
76 Isopropylbenzene	1 94247	2 05264	2 07048	1 90771	1 99737	1 67893							AVRG			1 89840		6 87874
	1 89169	1 92584	1 75073	1 76618														
78 Bromobenzene	0 57245	0 51366	0 49845	0 48358	0 49991	0 42483							AVRG			0 49045		7 93925
	0 48890	0 49999	0 45474	0 46795														

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000		1 0000		5 0000		20 0000		50 0000		100 0000		Coefficients		m2	RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11	Level 12	b	m1		
79 n-Propylbenzene	2 33843	2 57992	2 30625	2 23759	2 29123	1 93344										
	2 13148	2 16232	1 93076	1 93160										2 18430		9 69669
80 2-Chlorotoluene	*****	1 65458	1 51622	1 43569	1 51693	1 34071										
	1 45034	1 40777	1 28287	1 27069										1 43064		8 60927
81 4-Chlorotoluene	1 74716	1 90015	1 58777	1 52305	1 54593	1 32091										
	1 42790	1 45985	1 32442	1 29911										1 51362		12 83654
82 1,3,5-Trimethylbenzene	1 86607	1 90827	1 77945	1 69675	1 77329	1 48665										
	1 63312	1 66618	1 48311	1 50651										1 67994		9 18412
83 1,2,4-Trimethylbenzene	1 99949	2 00890	1 83086	1 73532	1 77876	1 50412										
	1 64680	1 69652	1 51103	1 52092										1 72327		10 82638

Report Date : 17-Sep-2002 11:16

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\409161.B\409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	VRSD or R^2
85 tert-Butylbenzene	Level 1 1.36555	Level 2 1 66708 1 39932	Level 3 1 50300 1 26017	Level 4 1 44348 1 28503	Level 5 1 45920	Level 6 1 24493	AVRG			1 40308		9 60358
86 sec-Butylbenzene	2 12067 1 87702	2 39768 1 93483	2 13761 1 72815	2 02169 1 75954	2 06055	1 72924	AVRG			1 97670		10 86013
87 4-Isopropyltoluene	Level 1 1 58410	Level 2 2 03869 1 63025	Level 3 1 77831 1 47903	Level 4 1 69211 1 48498	Level 5 1 71361	Level 6 1 45222	AVRG			1 65037		11 20703
89 1,3-Dichlorobenzene	1 82007 2 08954	2 08574 2 09206	1 81266 1 81968	1 93244 1 80358	1 80502	1 66296	AVRG			1 89837		7 59517
90 1,4-Dichlorobenzene	2 04983 2 09551	2 12510 2 05257	1 82032 1 92832	1 87195 1 93362	1 80169	1 64135	AVRG			1 93203		7 90635

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0.500000	1.0000	5.0000	20.0000	50.0000	100.0000	Curve	b	Coefficients	m2	WRSD or R^2
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	120.0000	150.0000	170.0000	200.0000							
	Level 7	Level 8	Level 9	Level 10							
91 1,2-Dichlorobenzene	1.63894	1.96619	1.67435	1.77986	1.73151	1.52496	AVRG			1.75629	7.69731
	1.92792	1.87038	1.70503	1.74380							
92 n-Butylbenzene	3.38792	3.94394	3.34647	3.62449	3.40617	2.99032	AVRG			3.41788	8.05710
	3.63814	3.49107	3.14034	3.20932							
93 1,2-Dibromo-3-chloropropane	0.36467	0.27994	0.26809	0.26712	0.25832	0.24085	AVRG			0.28031	12.08234
	0.30212	0.28658	0.26539	0.27007							
94 1,2,4-Trichlorobenzene	1.14376	1.49824	1.04972	1.13590	1.11403	1.03122	AVRG			1.19551	11.57378
	1.30913	1.27460	1.18600	1.21250							
95 Naphthalene			2.29022	2.49071	2.45973	2.32696	AVRG			2.61899	10.03517
	2.95166	2.92384	2.69097	2.81785							

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\409161.B\409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0 500000	1 0000	5 0000	20 0000	50 0000	100 0000	Curve	b	Coefficients	m1	m2	NRSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6						
96 Hexachlorobutadiene	0 91664	1 03725	0 86440	0 92381	0 88074	0 82605	AVRG			0 93097		7 53223
	1 02515	1 00317	0 90573	0 92674								
97 1,2,3-Trichlorobenzene	1 01853	1 37737	0 95100	1 02363	1 02146	0 96926	AVRG			1 10211		11 97057
	1 20914	1 18863	1 11218	1 13989								
34 Dibromofluoromethane	++++	++++	0 86679	0 78696	0 77205	0 69561	AVRG			0 73084		9 95169
	0 71501	0 69124	0 64425	0 67480								
37 1,2-Dichloroethane-d4	0 94747	0 81711	1 07518	1 01673	0 99461	0 88581	AVRG			0 92189		9 22057
	0 90868	0 88436	0 82523	0 86367								
56 Toluene-d8	1 18319	1 09492	1 17466	1 05376	1 10186	0 97206	AVRG					
	1 06756	1 05347	0 98794	1 05950						1 07489		6 36616

Environmental Testing and Consulting, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2002 10:57
 End Cal Date : 16-SEP-2002 11:37
 Quant Method : ISTD
 Target Version : 4.00
 Integrator : HP RTE
 Method file : \\ETCDBC\DD\chem\voc4.i\V409161.B\V409131.8260.m
 Cal Date : 17-Sep-2002 11:11 Lisa

Compound	0.500000	1.0000	5.0000	20.0000	50.0000	100.0000	Curve	b	Coefficients m1	m2	RSD or R ²
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6					
	120.0000	150.0000	170.0000	200.0000							
	Level 7	Level 8	Level 9	Level 10							
\$ 77 Bromofluorobenzene	++++	0.64613	0.69627	0.55208	0.62496	0.53373					
	0.50940	0.53871	0.48963	0.52934		AVRG			0.56892		12.29638

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b * Rsp/ml	Response

ENVIRONMENTAL TESTING & CONSULTING, INC.
GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: V410111 Matrix: H₂O HBN: _____ Analyst: ES
Date: 10-14-02 Super: AM

Applicable ETC Order Nos. for this sequence:

0210-053-56,57
0210-054-58-70

Validated

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begins until criteria are met. (SOP) ✓

2. Initial Calibration Verification Criteria - Method: V409131.8260M ✓

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
- b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$ ✓
- c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation ✓
- d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99 ✓

3. Calibration Verification - Each 12-Hour Shift

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
- b. CCC - % Difference for Average RF Calibration - $\leq 20\%$ ✓
- c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$ ✓
- d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$ ✓

- e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD ✓
- f. Internal Standards - Areas within (-50% to +100%) from Mid-Point ICAL STD ✓

4. Method Blanks included in this sequence:

Analyze daily or for each analytical batch (20 samples):
List compounds identified in Method Blank w/concentration.
Flag final result "Not Detected in Blank"

MEC 1.60 ppb

5. Matrix Spike/Matrix Spike Duplicates included in this sequence:

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix)
List MS/MSD(s) performed with any failures:

0210-054-70 MS, MSD

6. Laboratory Control Samples included in this sequence:

Must contain all Target Analytes.

0/36

7. Surrogate Recoveries within QC Limits

8. All positive compounds within calibration range

Narrative/Notes

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

719 488

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID: 0101001

BFB Injection Date: 10/11/02

Instrument ID: VOC4

BFB Injection Time: 0728

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 60.0% of mass 95	47.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	Greater than 50.0% of mass 95	74.3
175	5.0 - 9.0% of mass 174	5.3 (7.1)1
176	95.0 - 101.0% of mass 174	71.5 (96.3)1
177	5.0 - 9.0% of mass 176	4.4 (6.2)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	DCS100PPB		0201001	10/11/02	0854
02	V4101111LCS	11LCS	0202002LCS	10/11/02	0930
03	V4101111LB	11LB	0302004	10/11/02	1152
04	021005458	021005458	0601007	10/11/02	1325
05	021005459	021005459	0701008	10/11/02	1356
06	021005460	021005460	0801009	10/11/02	1427
07	021005461	021005461	0901010	10/11/02	1457
08	021005462	021005462	1001011	10/11/02	1527
09	021005463	021005463	1101012	10/11/02	1557
10	021005464	021005464	1201013	10/11/02	1628
11	021005465	021005465	1301014	10/11/02	1658
12	021005466	021005466	1401015	10/11/02	1728
13	021005467	021005467	1501016	10/11/02	1759
14	021005468	021005468	1601017	10/11/02	1829
15	021005469	021005469	1701018	10/11/02	1859
16	021005470	021005470	1801019	10/11/02	1930
17	021005470MS	MS	1901020	10/11/02	2000
18	021005470MSD	MSD	2001021	10/11/02	2030
19					
20					
21					
22					

719 489

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Instrument ID: VOC4

Calibration Date: 10/11/02

Time: 0854

Lab File ID: 0201001

Init. Calib. Date(s): 09/13/02 09/16/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1057

1137

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d	
Acetone	132.3	100.0	AVRG	32.3	30.0	<-
Benzene	123.8	100.0	AVRG	23.8	30.0	
Bromodichloromethane	84.35	100.0	LINR	15.6	30.0	
Bromoform	95.12	100.0	AVRG	4.9	30.0	
2-Butanone	149.7	100.0	AVRG	49.7	30.0	<-
Bromomethane	55.25	100.0	AVRG	44.8	30.0	<-
Carbon Disulfide	96.32	100.0	AVRG	3.7	30.0	
Carbon Tetrachloride	88.19	100.0	AVRG	11.8	30.0	
Chlorobenzene	104.8	100.0	AVRG	4.8	30.0	
Chlorodibromomethane	88.61	100.0	AVRG	11.4	30.0	
Chloroethane	102.1	100.0	AVRG	2.1	30.0	
Chloroform	101.4	100.0	AVRG	1.4	20.0	
Chloromethane	99.80	100.0	AVRG	0.2	30.0	
1,1-Dichloroethane	109.4	100.0	AVRG	9.4	30.0	
1,2-Dichloroethane	92.73	100.0	AVRG	7.3	30.0	
1,1-Dichloroethene	99.24	100.0	AVRG	0.8	20.0	
cis-1,2-Dichloroethene	115.4	100.0	AVRG	15.4	30.0	
trans-1,2-Dichloroethene	93.26	100.0	AVRG	6.7	30.0	
1,2-Dichloropropane	107.4	100.0	AVRG	7.4	20.0	
cis-1,3-Dichloropropene	104.7	100.0	AVRG	4.7	30.0	
trans-1,3-Dichloropropene	100.5	100.0	AVRG	0.5	30.0	
Ethylbenzene	99.28	100.0	AVRG	0.7	20.0	
2-Hexanone	121.0	100.0	AVRG	21.0	30.0	
Methylene Chloride	98.85	100.0	LINR	1.2	30.0	
4-Methyl-2-Pentanone	116.1	100.0	AVRG	16.1	30.0	
Styrene	105.0	100.0	AVRG	5.0	30.0	
1,1,2,2-Tetrachloroethane	118.3	100.0	AVRG	18.3	30.0	
Tetrachloroethene	99.39	100.0	AVRG	0.6	30.0	
1,1,1-Trichloroethane	92.63	100.0	AVRG	7.4	30.0	
Toluene	103.7	100.0	AVRG	3.7	20.0	
1,1,2-Trichloroethane	111.9	100.0	AVRG	11.9	30.0	
Trichloroethene	99.39	100.0	AVRG	0.6	30.0	
Vinyl Acetate	94.74	100.0	AVRG	5.3	30.0	
Vinyl Chloride	80.34	100.0	AVRG	19.7	20.0	
Xylene-mp	192.2	200.0	AVRG	3.9	30.0	
Xylene-o	98.14	100.0	AVRG	1.9	30.0	

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

719 490

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Instrument ID: VOC4

Calibration Date: 10/11/02 Time: 0854

Lab File ID: 0201001

Init. Calib. Date(s): 09/13/02 09/16/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1057 1137

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Dibromofluoromethane	43.11	50.00	AVRG	13.8	30.0
Toluene-d8	49.04	50.00	AVRG	1.9	30.0
Bromofluorobenzene	43.10	50.00	AVRG	13.8	30.0
1,2-Dichloroethane-d4	38.57	50.00	AVRG	22.9	30.0

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID (Standard): 0201001

Date Analyzed: 10/11/02

Instrument ID: VOC4

Time Analyzed: 0854

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	785870	6.17	1255892	6.76	1157847	8.98
UPPER LIMIT	1571740	6.67	2511784	7.26	2315694	9.48
LOWER LIMIT	392935	5.67	627946	6.26	578924	8.48
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4101111LCS	972276	6.17	1565890	6.76	1409907	8.98
02 V4101111LB	679965	6.17	1078258	6.76	907798	8.97
03 021005458	505960	6.18	798452	6.76	692360	8.98
04 021005459	499668	6.18	776856	6.76	673158	8.98
05 021005460	492510	6.18	778716	6.76	683200	8.98
06 021005461	485086	6.18	782535	6.76	672980	8.98
07 021005462	475561	6.18	764938	6.76	674262	8.98
08 021005463	469672	6.18	772843	6.76	670527	8.98
09 021005464	475807	6.18	761802	6.76	672122	8.98
10 021005465	468542	6.18	763863	6.76	674628	8.98
11 021005466	462173	6.18	764212	6.76	666803	8.98
12 021005467	458509	6.18	751033	6.76	661671	8.98
13 021005468	451166	6.18	735273	6.76	655662	8.98
14 021005469	453831	6.17	738796	6.76	651423	8.98
15 021005470	441889	6.18	756838	6.76	658721	8.98
16 021005470MS	523621	6.18	859240	6.76	787522	8.98
17 021005470MSD	600896	6.18	987226	6.76	940993	8.98
18						
19						
20						
21						
22						

IS1 = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

719 492

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID (Standard): 0201001

Date Analyzed: 10/11/02

Instrument ID: VOC4

Time Analyzed: 0854

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS4 (DCB)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	465733	10.78				
UPPER LIMIT	931466	11.28				
LOWER LIMIT	232867	10.28				
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4101111LCS	553432	10.78				
02 V4101111LB	436308	10.78				
03 021005458	322442	10.78				
04 021005459	313361	10.78				
05 021005460	318066	10.78				
06 021005461	313562	10.78				
07 021005462	313920	10.78				
08 021005463	310387	10.78				
09 021005464	310277	10.78				
10 021005465	306879	10.78				
11 021005466	304437	10.78				
12 021005467	309967	10.78				
13 021005468	301263	10.78				
14 021005469	298315	10.78				
15 021005470	306095	10.78				
16 021005470MS	345828	10.78				
17 021005470MSD	371769	10.79				
18						
19						
20						
21						
22						

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

ENVIRONMENTAL TESTING & CONSULTING, INC.
GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: V410112 Matrix: H2O HBN: _____
Date: 10-14-02 Analyst: ES
Applicable ETC Order Nos. for this sequence: 0210-054-72-80, 86
Super: [Signature]

Validated

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begun until criteria are met. (SOP) ✓
2. Initial Calibration Verification Criteria - Method: V407131.8260M
a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$ ✓
c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation ✓
d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99 ✓

3. Calibration Verification - Each 12-Hour Shift

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
b. CCC - % Difference for Average RF Calibration - $\leq 20\%$ ✓
c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$ ✓
d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$
MEK ↑, MIBK ↑
e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD ✓
f. Internal Standards - Areas within $(-50\% \text{ to } +100\%)$ from Mid-Point ICAL STD ✓

4. Method Blanks included in this sequence :

Analyze daily or for each analytical batch (20 samples):
Last compounds identified in Method Blank w/concentration:
Flag final result "Not Detected in Blank"

MEK 1.44 ppb
SS-14-02

5. Matrix Spike/Matrix Spike Duplicates included in this sequence :

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix)
Last MS/MSD(s) performed with any failures:

See LRS

6. Laboratory Control Samples included in this sequence :

Must contain all Target Analytes.

3/36 ↑

7. Surrogate Recoveries within QC Limits

8. All positive compounds within calibration range

Narrative/Notes

System stopped computer error.
MS malfunction.

FORM 5
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

719 494

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID: 2101024

BFB Injection Date: 10/11/02

Instrument ID: VOC4

BFB Injection Time: 2200

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.0
75	30.0 - 60.0% of mass 95	54.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	Greater than 50.0% of mass 95	60.8
175	5.0 - 9.0% of mass 174	4.3 (7.0)1
176	95.0 - 101.0% of mass 174	58.9 (97.0)1
177	5.0 - 9.0% of mass 176	3.9 (6.6)2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	V4101121LCS	21LCS	2201026LCS	10/11/02	2300
02	DCS100PPB		2201026	10/11/02	2300
03	V4101121LB	21LB	2302030	10/12/02	0100
04	021005486	021005486	2401031	10/12/02	0130
05	021005472	021005472	2502032	10/12/02	0200
06	021005473	021005473	2603033	10/12/02	0230
07	021005474	021005474	2701034	10/12/02	0300
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Instrument ID: VOC4

Calibration Date: 10/11/02

Time: 2300

Lab File ID: 2201026

Init. Calib. Date(s): 09/13/02

09/16/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1057

1137

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
Acetone	114.1	100.0	AVRG	14.1	30.0
Benzene	124.0	100.0	AVRG	24.0	30.0
Bromodichloromethane	86.33	100.0	LINR	13.7	30.0
Bromoform	87.01	100.0	AVRG	13.0	30.0
2-Butanone	137.4	100.0	AVRG	37.4	30.0
Bromomethane	87.82	100.0	AVRG	12.2	30.0
Carbon Disulfide	117.5	100.0	AVRG	17.5	30.0
Carbon Tetrachloride	91.66	100.0	AVRG	8.3	30.0
Chlorobenzene	91.43	100.0	AVRG	8.6	30.0
Chlorodibromomethane	86.68	100.0	AVRG	13.3	30.0
Chloroethane	125.1	100.0	AVRG	25.1	30.0
Chloroform	111.2	100.0	AVRG	11.2	20.0
Chloromethane	115.4	100.0	AVRG	15.4	30.0
1,1-Dichloroethane	129.9	100.0	AVRG	29.9	30.0
1,2-Dichloroethane	116.9	100.0	AVRG	16.9	30.0
1,1-Dichloroethene	108.0	100.0	AVRG	8.0	20.0
cis-1,2-Dichloroethene	120.0	100.0	AVRG	20.0	30.0
trans-1,2-Dichloroethene	134.0	100.0	AVRG	34.0	30.0
1,2-Dichloropropane	108.8	100.0	AVRG	8.8	20.0
cis-1,3-Dichloropropene	101.2	100.0	AVRG	1.2	30.0
trans-1,3-Dichloropropene	100.4	100.0	AVRG	0.4	30.0
Ethylbenzene	89.32	100.0	AVRG	10.7	20.0
2-Hexanone	108.5	100.0	AVRG	8.5	30.0
Methylene Chloride	113.4	100.0	LINR	13.4	30.0
4-Methyl-2-Pentanone	115.0	100.0	AVRG	15.0	30.0
Styrene	93.24	100.0	AVRG	6.8	30.0
1,1,2,2-Tetrachloroethane	114.4	100.0	AVRG	14.4	30.0
Tetrachloroethene	81.84	100.0	AVRG	18.2	30.0
1,1,1-Trichloroethane	96.21	100.0	AVRG	3.8	30.0
Toluene	94.40	100.0	AVRG	5.6	20.0
1,1,2-Trichloroethane	107.8	100.0	AVRG	7.8	30.0
Trichloroethene	84.93	100.0	AVRG	15.1	30.0
Vinyl Acetate	124.8	100.0	AVRG	24.8	30.0
Vinyl Chloride	105.3	100.0	AVRG	5.3	20.0
Xylene-m/p	168.0	200.0	AVRG	16.0	30.0
Xylene-o	89.53	100.0	AVRG	10.5	30.0

FORM 7
VOA-GCMS CONTINUING CALIBRATION CHECK

719 496

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Instrument ID: VOC4

Calibration Date: 10/11/02 Time: 2300

Lab File ID: 2201026

Init. Calib. Date(s): 09/13/02 09/16/02

Heated Purge: (Y/N) Y

Init. Calib. Times: 1057 1137

GC Column:

ID: 2.00 (mm)

COMPOUND	SAMPLE AMOUNT	CAL100 AMOUNT	CURVE	%D	MAX %d
=====	=====	=====	=====	=====	=====
Dibromofluoromethane_____	48.71	50.00	AVRG	2.6	30.0
Toluene-d8_____	49.09	50.00	AVRG	1.8	30.0
Bromofluorobenzene_____	45.21	50.00	AVRG	9.6	30.0
1,2-Dichloroethane-d4_____	46.44	50.00	AVRG	7.1	30.0

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID (Standard): 2201026

Date Analyzed: 10/11/02

Instrument ID: VOC4

Time Analyzed: 2300

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS1 AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (CBZ) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	633170	6.18	1057540	6.76	1005412	8.98
UPPER LIMIT	1266340	6.68	2115080	7.26	2010824	9.48
LOWER LIMIT	316585	5.68	528770	6.26	502706	8.48
=====	=====	=====	=====	=====	=====	=====
CLIENT SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4101121LB	686005	6.18	1138589	6.76	952726	8.98
02 021005486	626278	6.17	1046392	6.76	910349	8.98
03 021005472	588335	6.18	978085	6.76	842881	8.98
04 021005473	551747	6.18	931944	6.76	792311	8.98
05 021005474	532133	6.18	893181	6.76	782692	8.98
06						
07						
08						
09						
10						
11						
12						
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14						
15						
16						
17						
18						
19						
20						
21						
22						

IS1 = Pentafluorobenzene
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
 * Values outside of QC limits.

FORM 8
VOA-GCMS INTERNAL STANDARD AREA AND RT SUMMARY

719 498

Lab Name: ETC, INC.

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: 0210054

Lab File ID (Standard): 2201026

Date Analyzed: 10/11/02

Instrument ID: VOC4

Time Analyzed: 2300

GC Column:

ID: 2.00 (mm)

Heated Purge: (Y/N) Y

	IS4 (DCB)					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
12 HOUR STD	398480	10.79				
UPPER LIMIT	796960	11.29				
LOWER LIMIT	199240	10.29				
=====	=====	=====	=====	=====	=====	=====
CLIENT						
SAMPLE NO.						
=====	=====	=====	=====	=====	=====	=====
01 V4101121LB	419626	10.78				
02 021005486	423785	10.78				
03 021005472	386032	10.78				
04 021005473	369666	10.78				
05 021005474	352000	10.78				
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = - 50% of internal standard area

RT UPPER LIMIT = + 0.50 minutes of internal standard RT

RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

ENVIRONMENTAL TESTING & CONSULTING, INC.
GC/MS VOC Method 8260B Sequence Check List (SW-846)

Sequence ID: 141014 Matrix: H₂O HBN: _____
 Date: 10-15-02 Analyst: SS
 Applicable ETC Order Nos. for this sequence: 0210-054-69-85
 Super: [Signature]

Validated

1. BFB Daily 12-Hour Tune Meets Criteria. No analyses begins until criteria are met. (SOP) ✓
2. Initial Calibration Verification Criteria - Method: 1409131.8260m
 - a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
 - b. CCC - RSD of RF for CCCs and Target Analytes MUST BE $\leq 30\%$ ✓
 - c. RSD of analytes $\leq 15\%$ may use Average RF for quantitation ✓
 - d. Analytes w/RSD $> 15\%$ use Linear Regression - correlation coefficient ≥ 0.99 ✓

3. Calibration Verification - Each 12-Hour Shift

- a. SPCC - Mean RF ≥ 0.10 (≥ 0.30 for Chlorobenzene / 1122-Tetrachloroethene) ✓
- b. CCC - % Difference for Average RF Calibration - $\leq 20\%$ ✓
- c. CCC - % Drift for Linear Regression Calibration - $\leq 20\%$ ✓
- d. % Difference/% Drift for all other Target Analytes - $\leq 30\%$ ✓

- Acetone ↑
- e. Internal Standards - Retention Times within ± 30 seconds from Mid-Point ICAL STD ✓
 - f. Internal Standards - Areas within $(-50\% \text{ to } +100\%)$ from Mid-Point ICAL STD ✓

4. Method Blanks included in this sequence :

Analyze daily or for each analytical batch (20 samples): ✓
 List compounds identified in Method Blank w/concentration
 Flag final result "B-Detected in Blank"

MEC/4c 2.14ppb

5. Matrix Spike/Matrix Spike Duplicates included in this sequence :

Analyze daily or for each matrix (ms/msd per 20 samples of same matrix) ✓
 List MS/MSD(s) performed with any failures:

0210-054-80 ms, msd
1/5 RPD, 2/10 recovery outside limits

6. Laboratory Control Samples included in this sequence :

Must contain all Target Analytes. 2/36 T ✓

7. Surrogate Recoveries within QC Limits ✓

8. All positive compounds within calibration range ✓

Narrative/Notes

FINAL PAGE

PART I

ADMINISTRATIVE RECORD

PART I

FINAL PAGE