



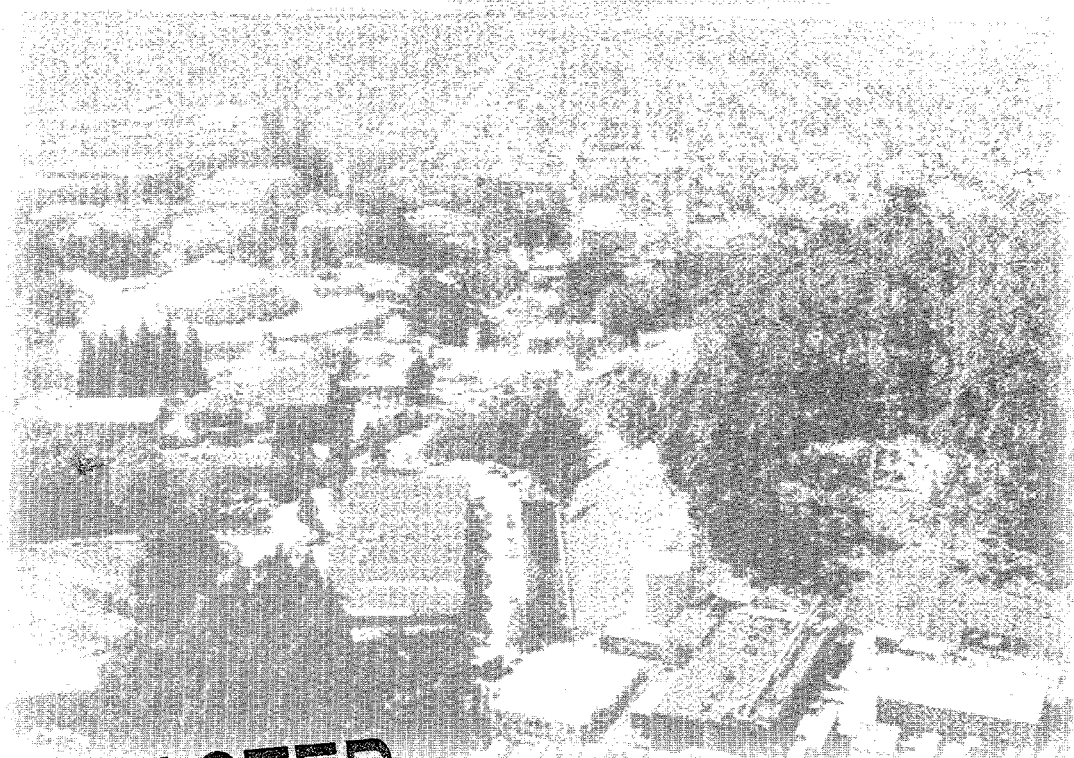
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Monitoring the Data Analysis for the Vadose Zone Monitoring System (VZMS), McClellan AFB Quarterly Status Report

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Earth Sciences Division

May 1997



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**Monitoring and Data Analysis for the
Vadose Zone Monitoring System (VZMS), McClellan AFB**

Quarterly Status Report

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1.0 INTRODUCTION

This report contains information on field and laboratory work performed between January and May 15th 1997 at site S-7 in IC 34, at McClellan AFB. At this location, a Vadose Zone Monitoring System (VZMS) is currently being used to collect subsurface data including hydraulic potential, soil gas pressure, moisture content, water chemistry, gas chemistry, and temperature. Due to delays in the completion of the above-ground installations, data collection did not commence until mid-February. As a result, the data presented in this report is preliminary.

This report describes:

- details of surface completion
- set up of data acquisition system
- testing of instruments prior to data collection
- calibration of pressure transducers
- moisture content changes, based on neutron logging
- gas-phase VOC concentrations
- aqueous-phase VOC concentrations
- temperature profiles
- pressure readings

2.0 SURFACE COMPLETION

Installation of the vadose zone monitoring system (VZMS) was completed by installing two Christy boxes (one per well) in which all wiring and tubing connected to the lysimeters, tensiometers, gas samplers and thermistors have been housed. The Christy boxes were installed such that the top of each box is flush with the ground surface. The boxes are closed at the ground surface with heavy iron lids which provide protection from vehicles accessing the site. On the floor of both Christy boxes, water pumps have been installed and are activated by the presence of ponded water along the bottom of the Christy box.

Within each Christy box, two smaller metal boxes hold pressure transducers which are attached to tensiometers and gas samplers, and are maintained at ground surface. The transducers are grouped by instrument function and instrument depth (or level). Corresponding instrument depth as indicated by level number are written beside each row of instruments. These are arranged in rows of three, with each row representing a specific level of instrumentation in a well. The transducers have been positioned such that the transducers grouped closest to the opening end of the metal box are connected to the upper chamber of the tensiometers; the middle transducers connect to the lower chamber of the tensiometers. The last group of transducers are connected to gas samplers. Tubing connected to each transducer has a diameter of 1/4-in (OD) and is connected with a 1/4-in stainless-steel Swagelok™ fitting. Threads on each stainless steel fitting are wrapped with Teflon tape to create a better seal for vacuum applications.

Also housed within each Christy box are 13 bundles (with three tubes each) of 1/8-in (OD) plastic tubing. Within each bundle, a single tube is fitted with an acrylic sample chamber closed with a septum stopper. This tube accesses the top of the upper chamber of the lysimeter, and is used to apply either negative pressure (vacuum) to extract liquid from the formation or positive pressures during sampling (to push the sample to the surface for sampling). A second tube, which

is numbered and fitted with a 1/8-in Swagelok™ plug, accesses the bottom of the upper chamber of the lysimeter and is used for transporting water samples to the surface. The third 1/8-in tube is connected to the upper chamber of the tensiometer and is used to provide an air or water vent during the purging of tensiometer tubing.

The data acquisition system (DAS) is housed in a 8' X 8' X 20' container located east of the monitoring wells and is equipped with power and a communications line. All electrical connections to the DAS from the Christy boxes are routed to the trailer via 3-in PVC conduit pipe.

3.0 DATA ACQUISITION

The data acquisition system automatically records pressures and temperatures from the subsurface instruments. The system is based on two standard test and measurement instruments manufactured by Keithley Instruments, Inc. A Keithley 2000 Digital Multimeter is connected through a Keithley 7002 switch system to all 26 thermistors and 80 pressure transducers. They are interconnected using an IEEE488 interface which is controlled by a Pentium Pro computer using the Labview 4.0 software package. The digital multimeter has a baseline accuracy of ± 100 ppm + 10 ppm of the range with a resolution of 100 m Ω for resistance measurement. For voltage measurements, the digital multimeter has an accuracy of ± 30 ppm + 5 ppm of the range and a resolution of 10 μ V.

Temperature measurements using the thermistor were detailed in the Installation Report (LBNL, 1996).

Pressure measurements are made using model P155-30A pressure transducers, produced by Kavlico, Inc. With a range of 30 PSIA, the transducers are able to operate from full vacuum up to 1 bar positive pressure. 5-Volt excitation for the pressure transducer is provided using a Hewlett-Packard E3611A power supply. The supply voltage is monitored and logged by the digital multimeter. The pressure transducers have a typical accuracy of $\pm 0.2\%$. Individual calibrations were performed on each transducer using a NIST traceable pressure standard.

Data is saved in an ASCII format and can be remotely accessed using a standard modem connection. Changes in measurement frequency can also be made remotely. Currently, all pressure transducer and thermistors measurements are recorded every 15 minutes.

4.0 INSTRUMENT TESTING

4.1 Preparation of Lysimeters, Tensiometers and Gas Samplers For Sampling

All gas samplers, lysimeters and tensiometers were tested in the field for leaks and performance. Leaks detected in the gas samplers were attributed to incomplete connections and were subsequently stopped by installing stainless steel tubing inserts. Similar repairs were done to tensiometer connections, also at the surface. All lysimeters were subjected to negative pressures ($\approx$ - 600 millibars) to test for leaks. Those that were able to hold pressures over extended periods of time ($>$ 2-3 hours) were then purged to remove accumulated soil water. This was done by the application of 30-60 psi of pressure at the lysimeter inlet while the outlet was vented to the atmosphere. As of the writing of this report, water has been successfully sampled from 11 out of 26 lysimeters.

To fill the tensiometers with water, the lower chamber was first purged (to establish the required air gap) by forcing air through the lower chamber tube at pressures between 30-60 psi. Then, with the lower chamber tube sealed at the surface, the upper chamber tubes were opened, and 150 mL of water was introduced into one of the open tubes. Air was then forced through the inlet tube at pressures between 30-60 psi to remove any residual moisture in either of the upper chamber tubes. These tubes were then sealed off at the surface, with the 1/4-in tube being attached to a pressure transducer and the 1/8-in tube closed off.

4.2 Calibration of Pressure Transducers

There are 80 transducers being used at the site, 52 for tensiometers, 26 for gas samplers and 2 for measuring atmospheric pressure. Each transducer was calibrated against two other transducers which were calibrated in the Standards and Calibration Laboratory, Bechtel Nevada.

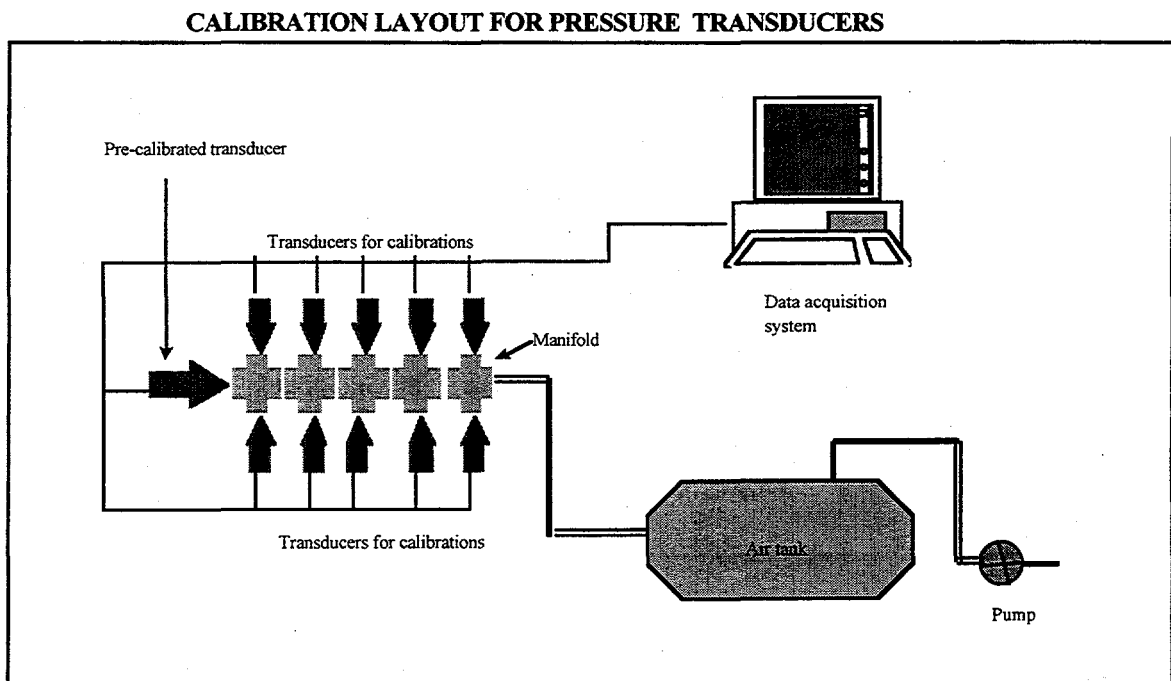


Figure 1

Figure 1. Layout for the calibration of pressure transducers.

In the calibration process, pressure transducers were connected to a manifold, along with a reference pre-calibrated transducer. The manifold was connected to an air-tank fitted with a vacuum pump (Figure 1). The voltage output associated with pressures ranging from 1-15 psi was documented for each of the transducers. A linear regression was then used to determine the calibration constants (i.e. slope and intercept). The calibration coefficients determined for the transducers are summarized in Table 1. Included in this table is the voltage output corresponding to the applied absolute pressure.

Table 1. Calibration of transducers to convert voltage output to pressure head in meters.

Location	A-Ten-U-Pr-L1	A-Ten-L-Pr-L1	A-Gas-Pr-L1	B-Ten-U-Pr-L1	B-Ten-L-Pr-L1	B-Gas-Pr-L1
Slope	5.22	5.13	5.20	5.27	5.28	5.27
Intercept	-2.35	-2.07	-2.24	-2.51	-2.59	-2.55
Location	A-Ten-U-Pr-L2	A-Ten-L-Pr-L2	A-Gas-Pr-L2	B-Ten-U-Pr-L2	B-Ten-L-Pr-L2	B-Gas-Pr-L2
Slope	5.18	5.17	5.18	5.26	5.25	5.27
Intercept	-2.22	-2.12	-2.23	-2.46	-2.42	-2.53
Location	A-Ten-U-Pr-L3	A-Ten-L-Pr-L3	A-Gas-Pr-L3	B-Ten-U-Pr-L3	B-Ten-L-Pr-L3	B-Gas-Pr-L3
Slope	5.22	5.24	5.20	5.26	5.25	5.26
Intercept	-2.37	-2.40	-2.27	-2.50	-2.41	-2.49
Location	A-Ten-U-Pr-L4	A-Ten-L-Pr-L4	A-Gas-Pr-L4	B-Ten-U-Pr-L4	B-Ten-L-Pr-L4	B-Gas-Pr-L4
Slope	5.19	5.19	5.21	5.26	5.27	5.27
Intercept	-2.17	-2.20	-2.32	-2.49	-2.56	-2.52
Location	A-Ten-U-Pr-L5	A-Ten-L-Pr-L5	A-Gas-Pr-L5	B-Ten-U-Pr-L5	B-Ten-L-Pr-L5	B-Gas-Pr-L5
Slope	5.15	5.14	5.18	5.27	5.28	5.29
Intercept	-0.33	-2.07	-2.13	-2.50	-2.57	-2.60
Location	A-Ten-U-Pr-L6	A-Ten-L-Pr-L6	A-Gas-Pr-L6	B-Ten-U-Pr-L6	B-Ten-L-Pr-L6	B-Gas-Pr-L6
Slope	5.20	5.18	5.24	5.29	5.26	5.31
Intercept	-2.28	-2.19	-2.45	-2.64	-2.52	-2.69
Location	A-Ten-U-Pr-L7	A-Ten-L-Pr-L7	A-Gas-Pr-L7	B-Ten-U-Pr-L7	B-Ten-L-Pr-L7	B-Gas-Pr-L7
Slope	5.18	5.18	5.19	5.25	5.26	5.28
Intercept	-2.14	-2.15	-2.20	-2.43	-2.46	-2.52
Location	A-Ten-U-Pr-L8	A-Ten-L-Pr-L8	A-Gas-Pr-L8	B-Ten-U-Pr-L8	B-Ten-L-Pr-L8	B-Gas-Pr-L8
Slope	5.27	5.28	5.29	5.32	5.33	5.36
Intercept	-2.52	-2.50	-2.52	-2.68	-2.60	-2.79
Location	A-Ten-U-Pr-L9	A-Ten-L-Pr-L9	A-Gas-Pr-L9	B-Ten-U-Pr-L9	B-Ten-L-Pr-L9	B-Gas-Pr-L9
Slope	5.31	5.30	5.27	5.30	5.33	5.36
Intercept	-2.68	-2.58	-2.52	-2.55	-2.59	-2.77
Location	A-Ten-U-Pr-L10	A-Ten-L-Pr-L10	A-Gas-Pr-L10	B-Ten-U-Pr-L10	B-Ten-L-Pr-L10	B-Gas-Pr-L10
Slope	5.27	5.30	5.31	5.34	5.32	5.33
Intercept	-2.40	-2.56	-2.60	-2.64	-2.66	-2.62
Location	A-Ten-U-Pr-L11	A-Ten-L-Pr-L11	A-Gas-Pr-L11	B-Ten-U-Pr-L11	B-Ten-L-Pr-L11	B-Gas-Pr-L11
Slope	5.30	5.32	5.33	5.33	5.32	5.32
Intercept	-2.54	-2.67	-2.69	-2.68	-2.61	-2.55
Location	A-Ten-U-Pr-L12	A-Ten-L-Pr-L12	A-Gas-Pr-L12	B-Ten-U-Pr-L12	B-Ten-L-Pr-L12	B-Gas-Pr-L12
Slope	5.32	5.28	5.33	5.33	5.32	5.33
Intercept	-2.63	-2.39	-2.77	-2.61	-2.56	-2.60
Location	A-Ten-U-Pr-L13	A-Ten-L-Pr-L13	A-Gas-Pr-L13	B-Ten-U-Pr-L13	B-Ten-L-Pr-L13	B-Gas-Pr-L13
Slope	5.29	5.29	5.31	5.32	5.38	5.33
Intercept	-2.55	-2.54	-2.66	-2.55	-2.87	-2.67

5.0 PRELIMINARY RESULTS

5.1 Moisture Content--Neutron Probe Readings

Neutron logging provides a one-dimensional distribution of moisture content in the formation. Due to the presence of casing and backfill material, as well as the spatial variability of geologic properties of the medium, this information is largely qualitative, although relative percentage change in moisture content at any one point can be quantified. Therefore, this tool is best used to measure changes in the moisture distribution, whether due to evaporation or rainfall infiltration. In conjunction with moisture content data from cores, a calibration of neutron counts to moisture content is possible. However, this must be done separately for each lithology.

Neutron logging was performed at the site on 2/19/97, 3/21/97, and 5/8/97, using a CPN 503DR Hydroprobe consisting of a 50 mCi Am-Be neutron source and a He detector of thermal neutrons. An obstruction in Well NP-A at 25 ft has prevented the logging of this hole below that depth. Well NP-B was logged to a depth of 98 ft. Results of measurements in Well NP-B are shown in Fig. 2, where a comparison with data from 12/21/95 is made. The data are presented as ratios of readings taken in the borehole to readings taken in a standard shielded casing. As seen from these results, the relative moisture content in the formation increased significantly between 12/95 and 2/97, with the mean relative increase being almost 15%. The depth intervals which experienced the largest increases were: 5-10 ft, 13-19 ft, 25-30 ft, 32-35 ft, 42-60 ft, and a number of small intervals between 65 and 95 ft. This is not surprising since during this period of time the area had been inundated due to seasonal rainfall. Between 2/19/97 and 3/21/97, the mean moisture content dropped by 2%, but did not change between 3/21/97 and 5/8/97. Further work is needed to correlate these counts with actual moisture contents.

5.2 Gas-Phase VOC Concentrations

The gas phase is being sampled via in-situ gas samplers consisting of a 7.62 cm long, 100 μ m porous metal cylinder with welded top and bottom flanges. A 1/4 in diameter stainless steel tube extends out from the top flange and is connected using Swagelok[®] compression fittings to a 1/4 in Teflon tube that goes up to the ground surface. In order to purge the gas collected in the gas probe, the PID-580 is used. The sampler is purged until the PID reading is stable. The PID is then disconnected and a gas sample is collected by applying a vacuum through an absorbent tube. A calibrated volumetric pump is used for this purpose and the exact time and volume collected are recorded. The absorbent tube is sealed with brass Swagelok[™] compression fittings lined with Teflon gaskets. This sampling method does not require refrigeration and the sample holding time is 25 days. EPA TO14 analyses are performed by the Environmental Measurements Laboratory of LBNL.

Two complete sets of gas samples have been collected at the site, on 4/4/97 and 5/8/97. Presently, data from Well B from the first sampling are available and are presented in Figs. 3, 4, and 5. The volatile organic compounds which occur in concentrations on the order of 1000's of ppbv ("major compounds") are shown in Fig. 3. Cis-1,2-DCE, TCE, and Freon-113 comprise this set, with acetone occurring at a high concentration only at a depth of 6 ft. Based on the observed distribution of these compounds, two sources of contaminants appear likely, one near the soil surface, with acetone, cis-1,2-DCE, and TCE dominating, and one at the water table, with Freon-113 and TCE present. It is therefore possible that there are two separate sources of TCE in this system. VOCs with concentrations below 1000 ppbv but greater than 250 ppbv are shown in Fig. 4. Once more, there are two peaks, one between 10 and 20 ft deep and another at the water

table. 1,1-DCA, 1,2-DCA, methylene chloride, and chloroform dominate in the shallow interval, while 1,2-DCB, xylene, and 1,3,5-TMB form the peak at the water table. VOCs with concentrations below 250 ppbv are shown in Fig. 5. Benzene appears throughout the profile, though at low levels, with peaks both near the surface and at the water table. trans-1,2-DCE peaks in the shallow zone, as does 1,1,2-TCA. 1,3-DCB is present near the water table and only at trace levels above 100 ft.

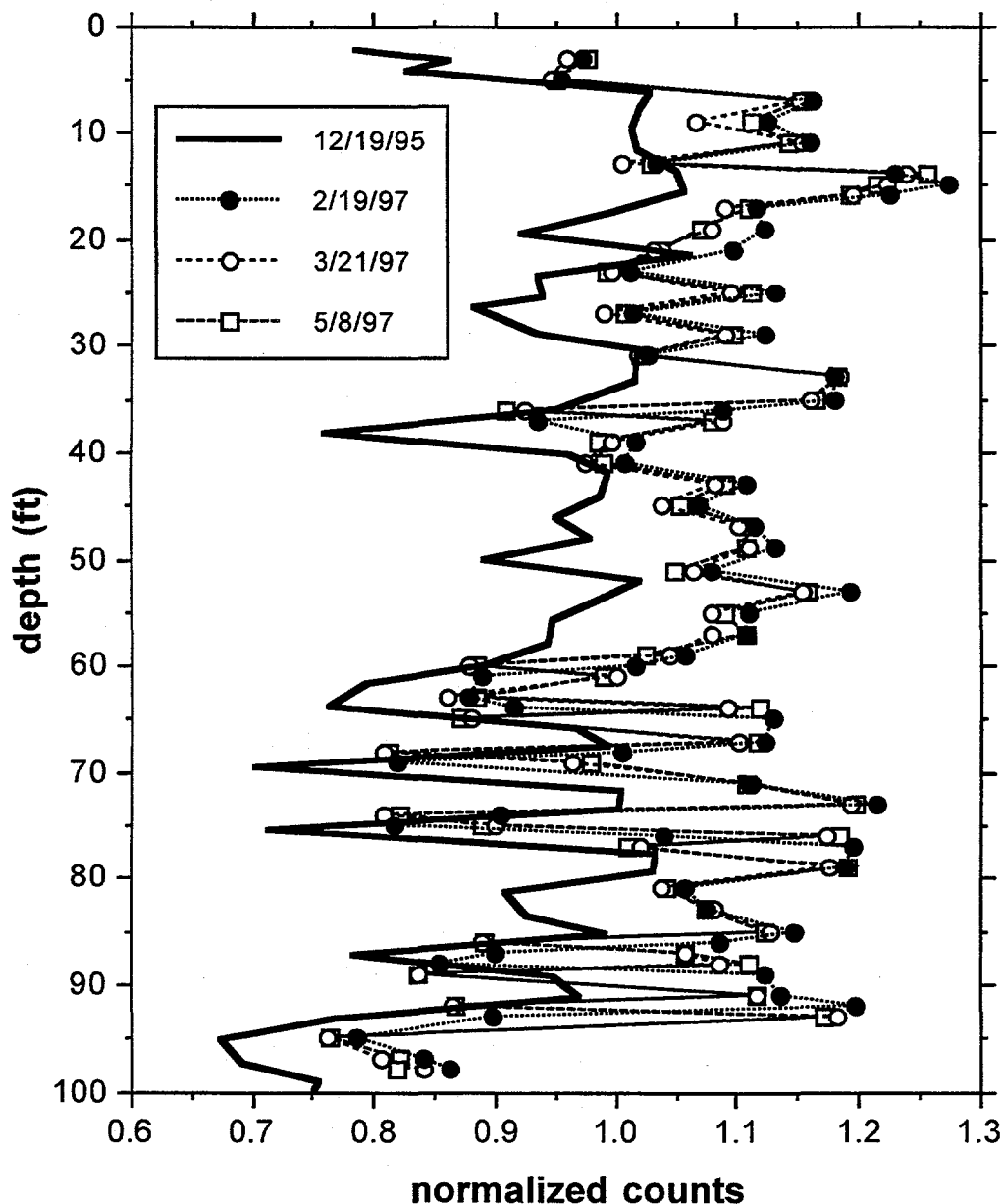


Figure 2. Normalized neutron counts measured in Well NP-B over the period 12/95 to 5/97.

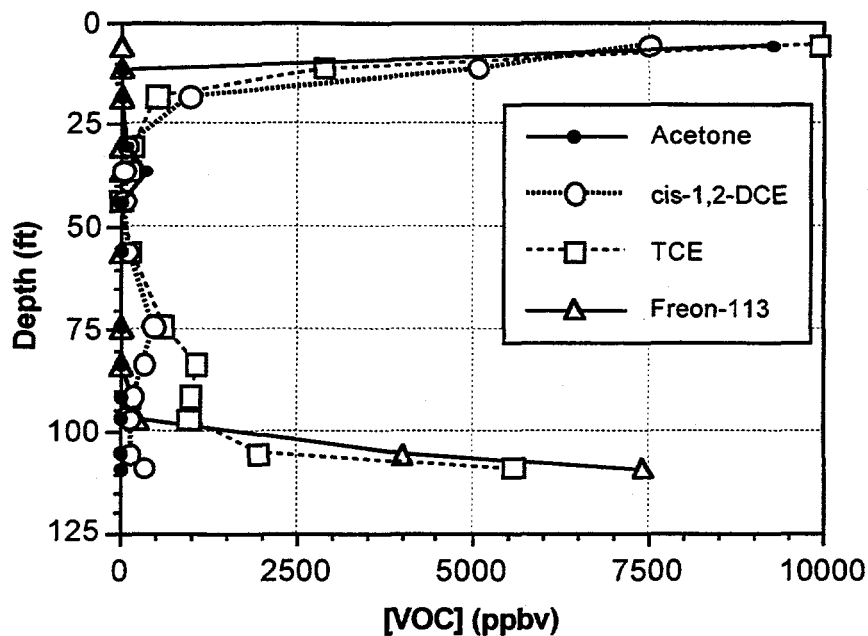


Figure 3. Depth-distribution of major VOCs in the gas phase in Well B.

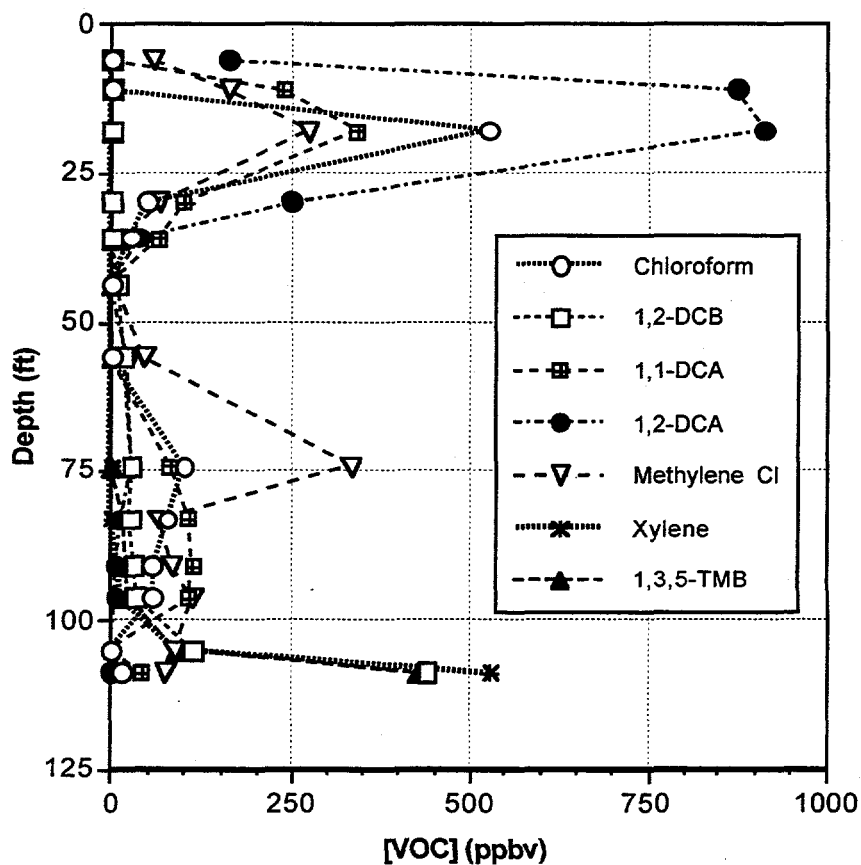


Figure 4. Depth-distribution of intermediate concentration VOCs in the gas phase in Well B.

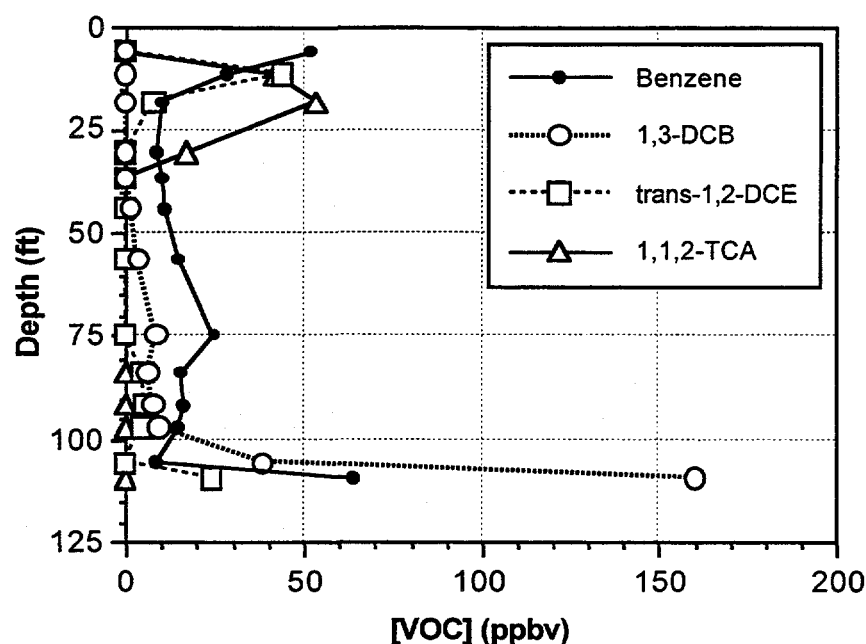


Figure 5. Depth-distribution of minor VOCs in the gas phase in Well B.

The gas-VOC data shown here is strongly suggestive of two distinct sources of VOCs in this system, one near the soil surface, between 10 and 20 ft, and another at the water table. The dominant VOCs in each zone are shown in Table 2.

Table 2. Volatile organic compounds observed within two contaminated zones at Site S-7.

<i>VOCs present in shallow source (10-20 ft depth)</i>	<i>VOCs present in the deep source (below 100 ft depth)</i>
cis-1,2-DCE	Freon-113
TCE	TCE
acetone (semi-volatile)	1,2-DCB
1,2-DCA	xylene
chloroform	1,3,5-TMB
1,1-DCA	1,3-DCB
methylene chloride	
trans-1,2-DCE	
1,1,2-TCA	

5.3 Liquid-Phase VOC Concentrations

The liquid-phase VOCs are sampled using two-chamber suction lysimeters designed for use at depths greater than 7-8 m. One 1/4-in and one 1/8-in tube connect the lysimeter to the surface. A miniature check valve separates the lower chamber from the upper chamber. A 0.5 μ m porous stainless steel cylinder permits the collection of the sample which is drawn by vacuum through the check valve into the upper chamber. To withdraw a water sample from the soils into the suction lysimeter, a vacuum is applied to the tube connected to the top of the upper chamber. In order to bring the water sample to the surface, dry, purified gas, either N₂ or Ar, is used to pressurize the upper chamber, forcing the water sample up through the second tube that connects the bottom of the upper chamber to ground surface. The check valve closes, preventing liquid from being forced back into the lower chamber.

Lysimeter samples were extracted on 3/21, 3/25, 4/2, 4/11, and 5/7/97. Some of these samples were removed as part of the instrument testing process and were not analyzed. Samples from Well A from 3/25/97 and samples from both wells from 4/2/97 and 5/7/97 have been analyzed. Due to the relative dryness of the formation, extracting water has been difficult. Generally, small, less than 50 mL samples, are collected over a period of a week. In many cases, samples are no greater than 5 mL. Therefore, 4- and 6-mL vials have been used to collect the samples in order to prevent or minimize headspace. Unfortunately, some samples are smaller than 4 mL and a headspace cannot be prevented. Overall, samples have been extracted from 11 out of 26 suction lysimeter. It is assumed that more of the lysimeters will provide samples under wetter conditions present after winter rain events. Also, further "conditioning" of the lysimeters may improve contact with the formation. Nonetheless, it appears that a few of the lysimeters are in a part of the formation where the pressure is lower than the air-entry value for the stainless-steel porous cups (approximately -650 mbar).

Data from Well A are shown in Figs. 6, 7, and 8, while data from Well B is presented in Figs. 9 and 10. The only compounds consistently present in high concentrations are TCE and cis-1,2-DCE, which is in qualitative agreement with the gas-phase data, in that those two compounds were present in the gas-phase in highest concentrations. The distribution from 3/25/97 in Well A (Fig. 6) is not entirely consistent with subsequent measurements, probably an artifact of the instrument conditioning process. Samples taken on 4/2 and 5/7/97 show a trend similar to that seen in the gas phase, in there being two peaks of TCE, one near the surface and one at the water table. Also consistent is the absence of cis-1,2-DCE at greater depths. The relative concentrations detected on 4/2/97 are substantially higher than on 5/7/97. This may either be an effect of the instrument-backfill-formation system coming into equilibrium or the length of the sampling interval. Vacuum was set on the lysimeters for one week prior to the 4/2/97 sample being taken, but for nearly one month prior to the 5/7/97 sample being taken.

The vacuum extraction method inherently causes some partitioning of VOCs from the sampled water into the headspace. By allowing the system to equilibrate for a longer time, it is possible that a greater fraction of the liquid-phase VOCs will partition into the evacuated headspace. An effort will be made to evaluate the optimal sampling interval. Due to the low unsaturated permeability and low moisture content of the system, a one-week interval appears to be the minimum time required to obtain a satisfactory volume of sample. Whatever the final choice of interval may be, it will be used consistently at each sampling.

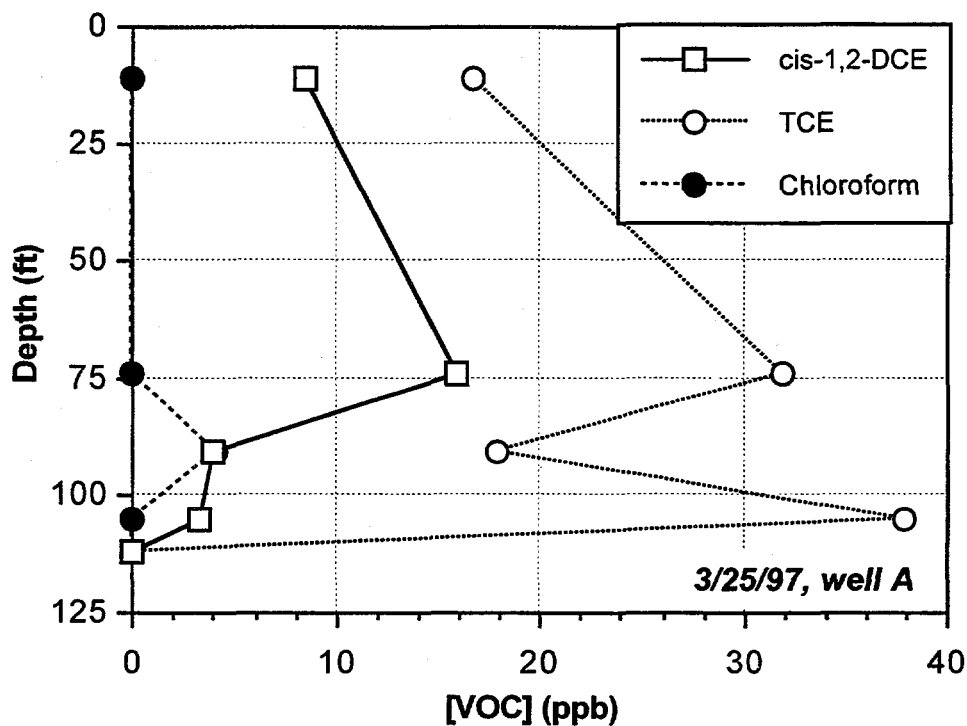


Figure 6. Depth-distribution of liquid-phase VOCs in Well A on 3/25/97.

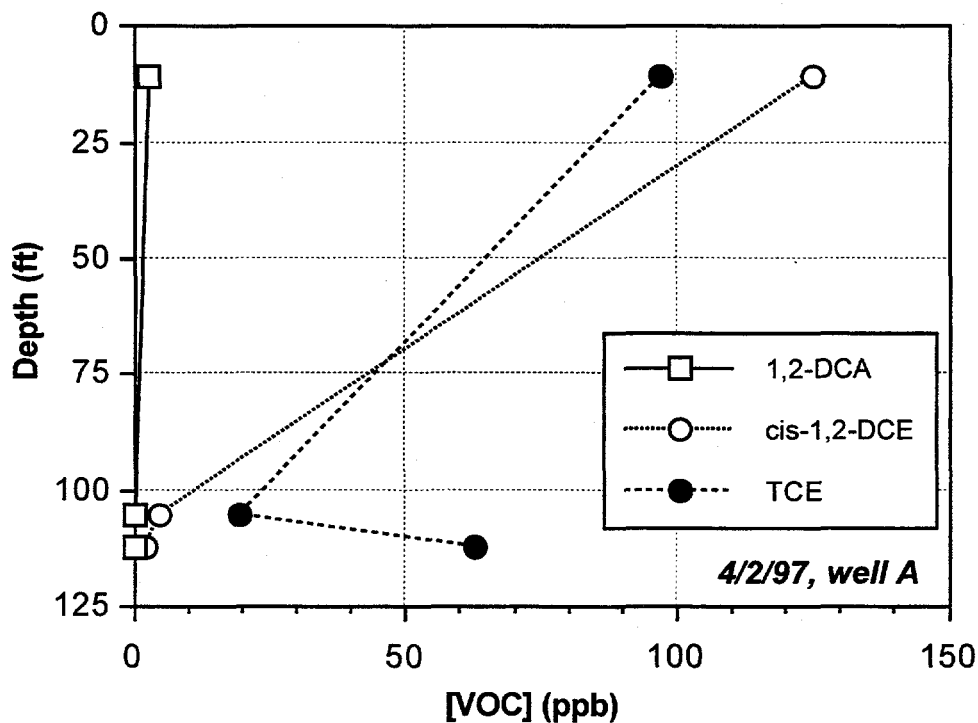


Figure 7. Depth-distribution of liquid-phase VOCs in Well A on 4/2/97.

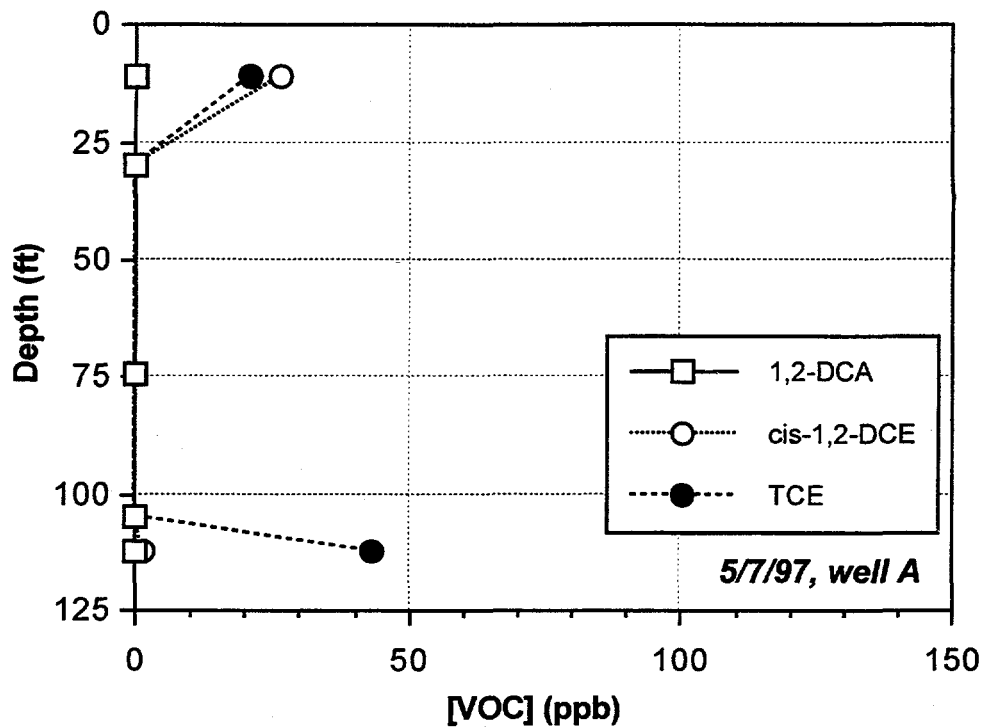


Figure 8. Depth-distribution of liquid-phase VOCs in Well A on 5/7/97.

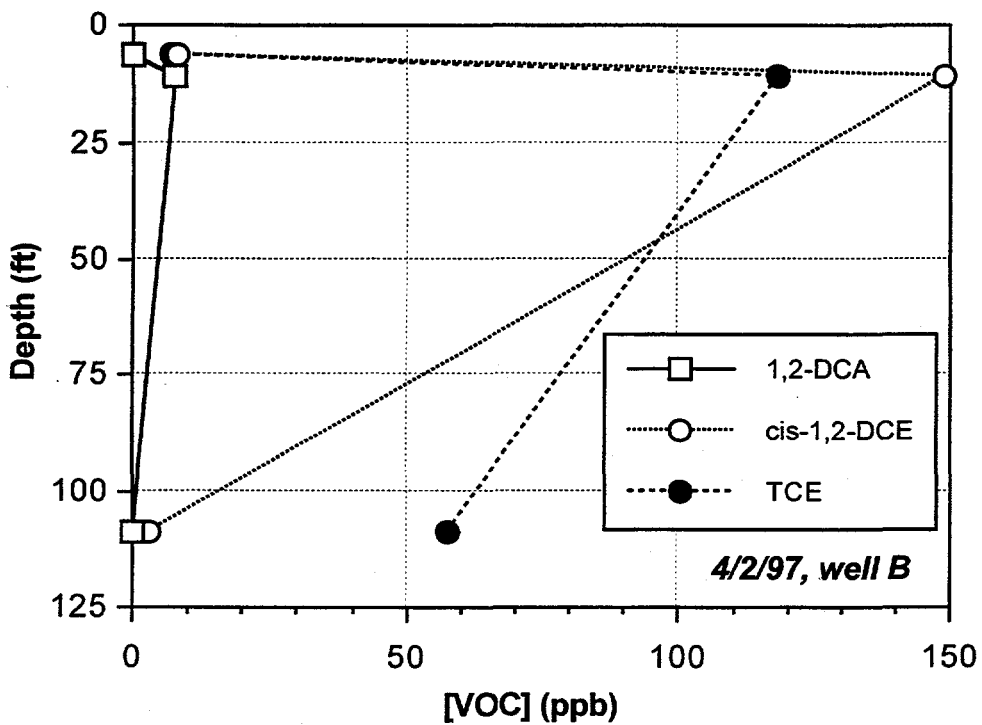


Figure 9. Depth-distribution of liquid-phase VOCs in Well B on 4/2/97.

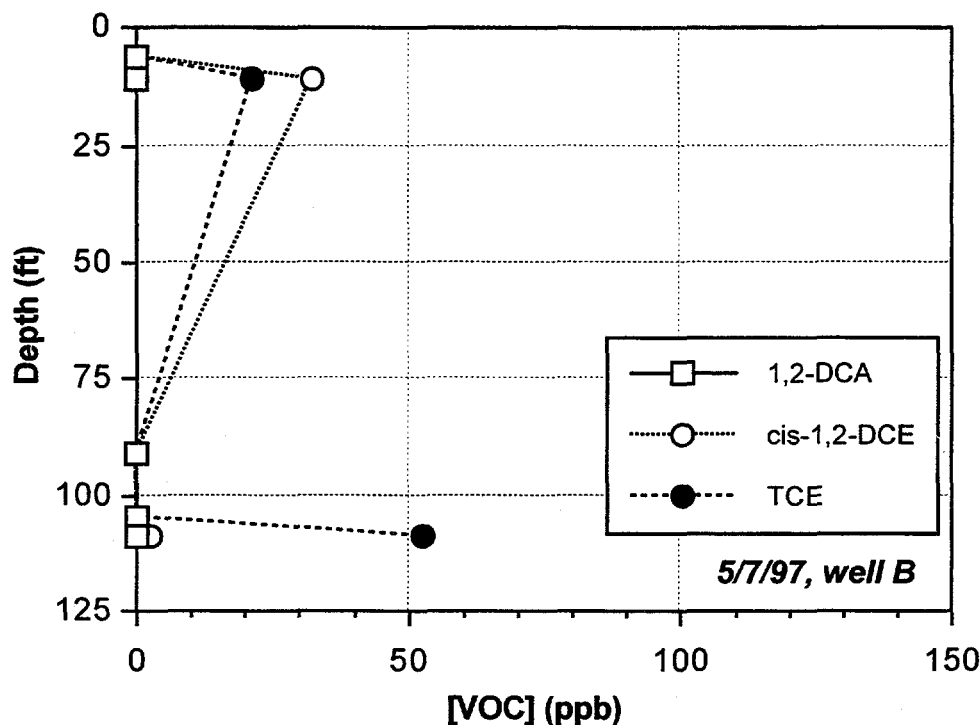


Figure 10. Depth-distribution of liquid-phase VOCs in Well B on 5/7/97.

5.4 Temperature Distribution

Formation temperature is being measured using in-situ thermistors. The data is collected electronically in real time and the measured resistance is converted to temperature in °C using calibrations generated in the laboratory prior to installation. A sample of the results from 3/97 and 5/97 is shown in Fig. 11 and 12, for Wells A and B, respectively. Temperature did not fluctuate significantly below a depth of 25 ft in either well. The largest fluctuation was observed at the shallowest instrumented point, at a depth of 6 ft. However, even at the 6-ft depth, diurnal temperature effects were not observed.

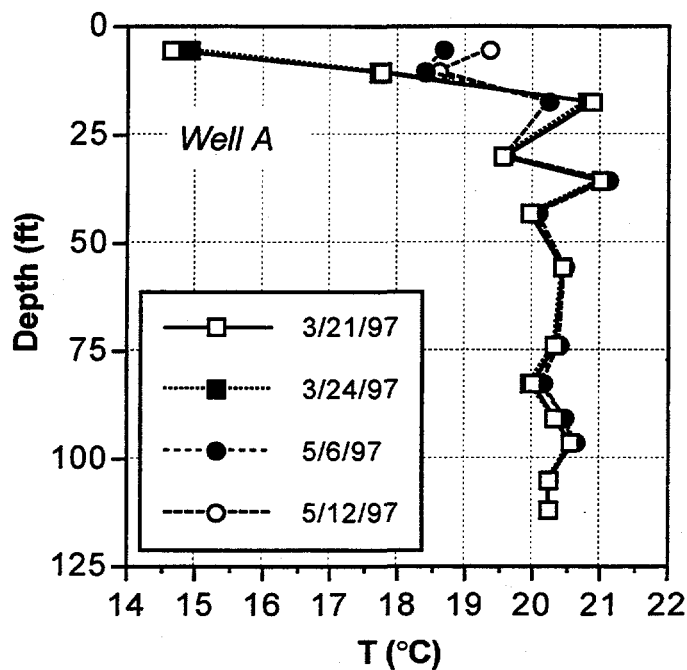


Figure 11. Temperature profile in Well A.

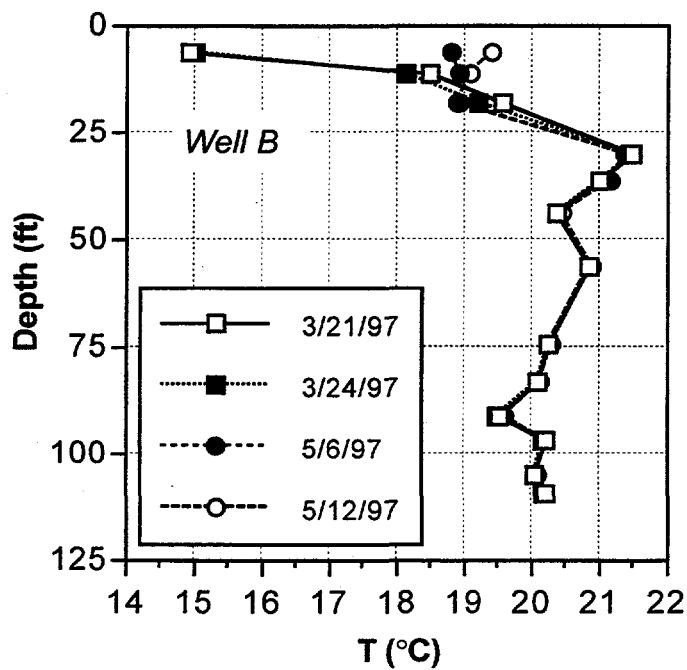


Figure 12. Temperature profile in Well B.

5.5 Gas-Phase and Liquid-Phase Pressure Distribution

Gas-phase pressure is being measured using the same probes as used for gas sampling. These are allowed to equilibrate with the subsurface environment and the pressure is measured using dedicated pressure transducers. An example of these results, taken during a period of several days in early May 1997 is shown in Figs. 13 and 14 for Well A and B, respectively. Overall, gas-phase pressures are close to, but slightly below atmospheric pressure, suggesting a net downward gradient. However, there are zones of increased pressure at depth and the direction and magnitude of soil gas flow are parameters which require long-term monitoring and modeling. The response to diurnal pressure fluctuations is apparent. The possibility that some of the soil gas probes may be leaking at surface connections is currently being investigated.

Liquid-phase pressure measurements are being performed using a new design of an air-pocket tensiometer in which a porous tip is connected to a two-cell transducer with a constant water level above the porous tip (Faybishenko, 1996). The tensiometer consists of three parts: (1) a porous tip of cylindrical shape, (2) a two-cell stainless steel transducer, and (3) a module consisting of three air-filled tubes that provide a means for measurements and maintenance. The porous tip was fabricated from a stainless steel porous tube and is filled with water and connected through a coupling to the two-cell transducer. Polyethylene tubing is used to connect the body of the tensiometer with pressure transducers at land surface.

Although liquid-phase pressure data have been collected since the end of February, the operation of these instruments under relatively dry conditions requires some iterative adjustments which are currently underway. In general, it appears that the matric potential in the formation is in the -150 to -450 mbar range, although some tensiometers may be in areas in which the matric potential is outside the range of the instrument, which is limited by the air-entry value of -650 mbar of the porous stainless steel tip. Detailed tensiometer data will be presented in a subsequent report.

6.0 SUMMARY

The VZMS system is now operational and has provided data on gas-phase and liquid-phase concentrations and gradients. The observed distribution of compounds in both phases is indicative of two distinct sources of contamination, one within 20 ft of the surface and one at the water table. cis-1,2-DCE and TCE are the two primary contaminants in this system. High concentrations of Freon-113 are seen only in the gas phase and only near the water table. Moisture content, as measured using neutron logging, has increased by approximately 15% between 12/95 and the present time. Pressure gradients are being measured in both phases, though the currently available data are too preliminary to merit an in-depth analysis.

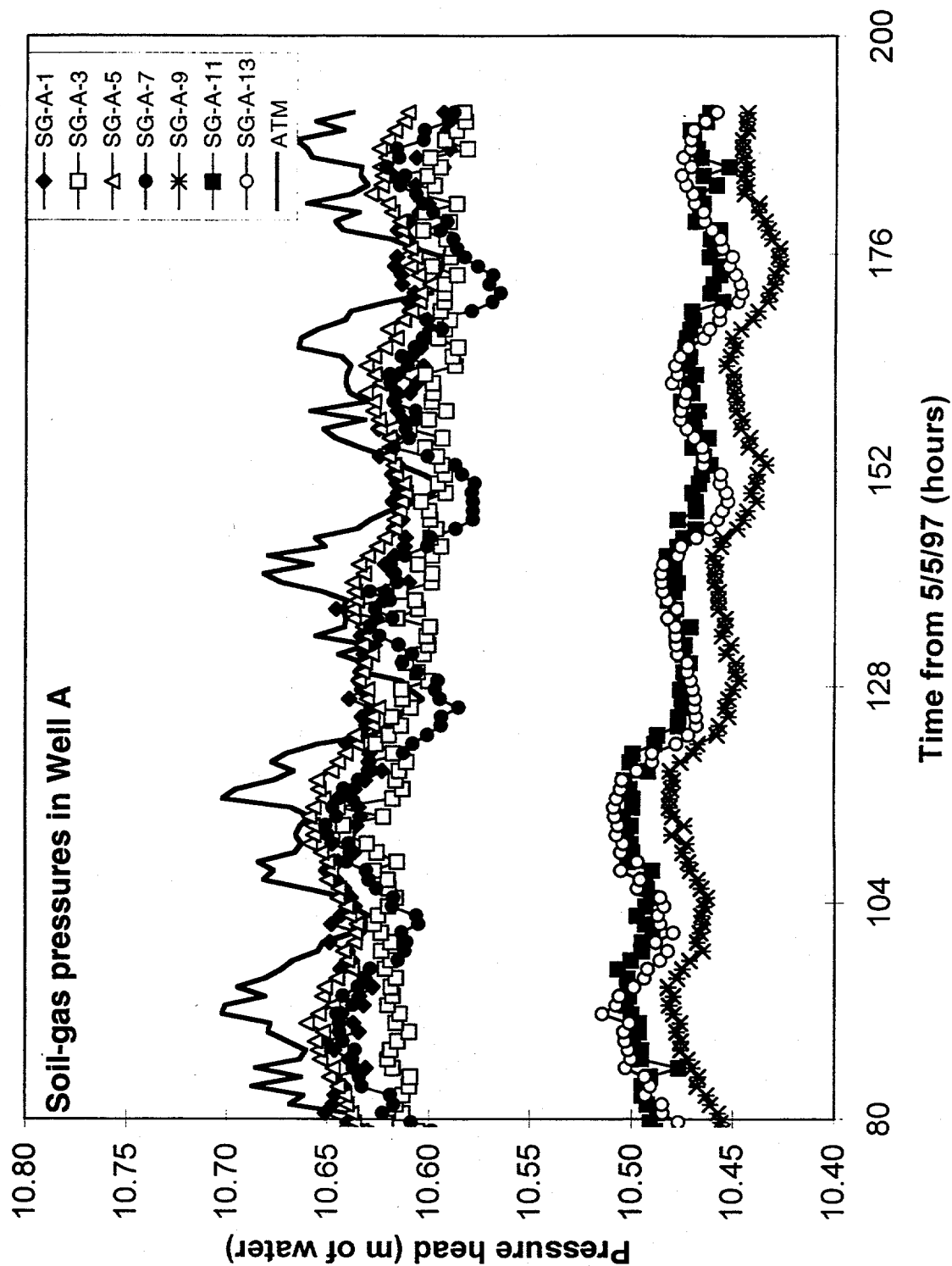


Figure 13. Gas-phase pressures (absolute) at levels 1, 3, 5, 7, 9, 11, and 13 in Well A and atmospheric pressure (ATM), expressed in terms of an equivalent water column.

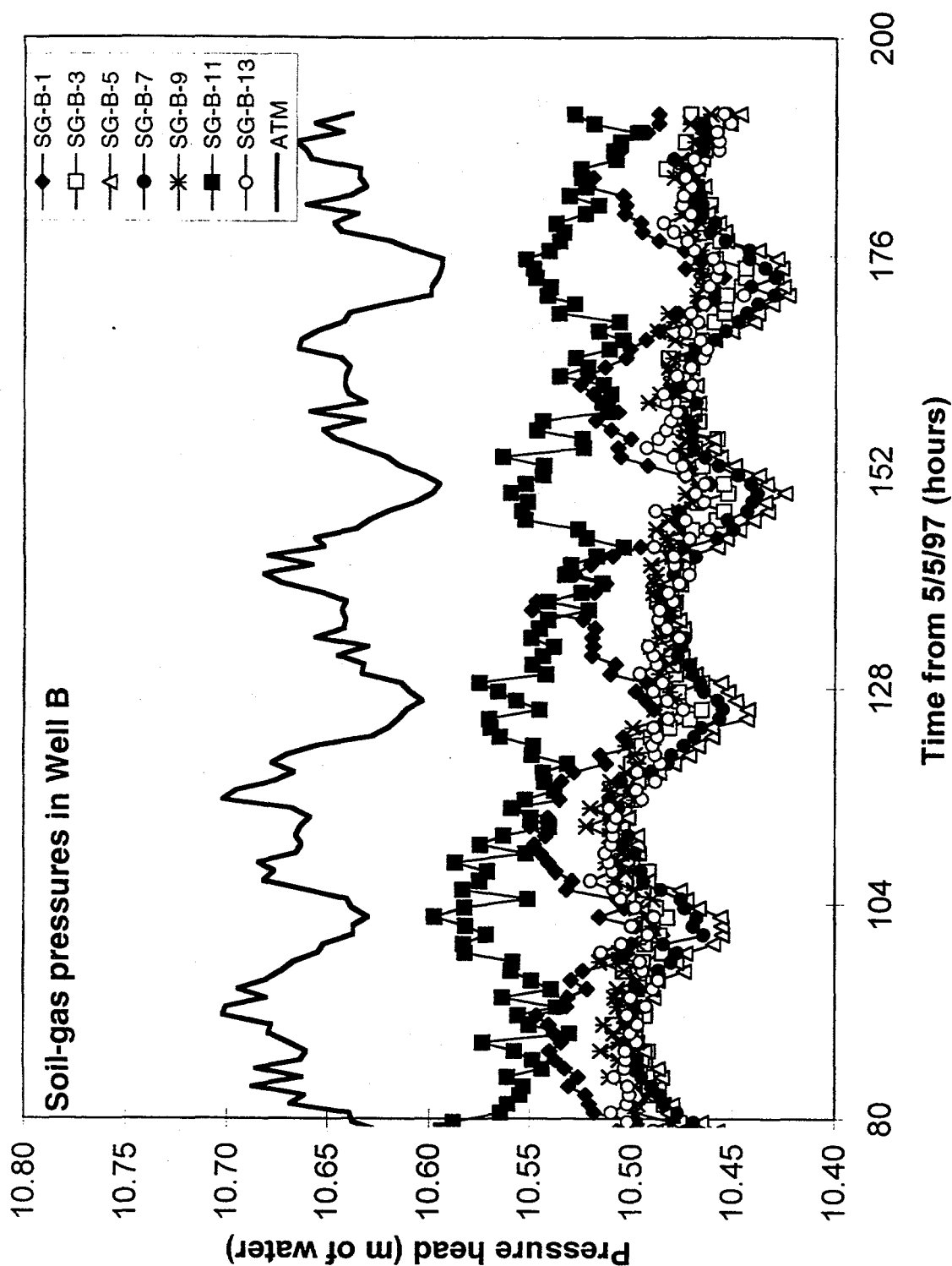


Figure 14. Gas-phase pressures (absolute) at levels 1, 3, 5, 7, 9, 11, and 13 in Well B and atmospheric pressure (ATM), expressed in terms of an equivalent water column.

REFERENCES

Faybishenko, B., 1996. *Omni-Depth Tensiometer*. Patent pending.

LBNL, 1996. *Vadose Zone Monitoring System Installation Report for McClellan AFB*. Prepared by Zawislanski, P.T., B. Faybishenko, A. James, B. Freifeld, and R. Salve, for Department of the Air Force, McClellan AFB, October, 1996.

APPENDIX - ANALYTICAL REPORTS

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	A-1	Laboratory ID:	OW9703145
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	3/25/97	Date Received:	3/27/97
Date Analyzed:	3/27/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	LT	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW9703145

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	LT	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	99.9	86-115
Dibromofluoromethane	92.0	86-118
Toluene-d8	88.9	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst :

Reviewer:

Rich Dahlgren
H. P. [Signature]

Date:

Date:

5/20/97

5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	A-2	Laboratory ID:	OW9703146
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	3/25/97	Date Received:	3/27/97
Date Analyzed:	3/27/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	3.3	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW9703146

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0

39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	37.8	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	99.9	86-115
Dibromofluoromethane	97.3	86-118
Toluene-d8	91.4	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: Rich Dahlquist
Reviewer: H. G. [Signature]

Date: 5/20/97
Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	A-4	Laboratory ID:	OW9703147
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	3/25/97	Date Received:	3/27/97
Date Analyzed:	3/27/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	4.1	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	4.0	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW9703147

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadiene	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	17.9	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	97.5	86-115
Dibromofluoromethane	98.0	86-118
Toluene-d8	89.2	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlquist
H. J. [Signature]

Date: 5/10/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	A-6	Laboratory ID:	OW9703148
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	3/25/97	Date Received:	3/27/97
Date Analyzed:	3/27/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	15.9	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW9703148

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	31.9	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	96.7	86-115
Dibromofluoromethane	89.5	86-118
Toluene-d8	89.4	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlquist
H. J. [Signature]

Date:

Date:

5/10/97

5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	A-12	Laboratory ID:	OW9703149
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	3/25/97	Date Received:	3/27/97
Date Analyzed:	3/27/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	8.5	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW9703149

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	16.7	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	100.0	86-115
Dibromofluoromethane	96.0	86-118
Toluene-d8	94.2	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlfurst
#87001-2

Date:

Date:

5/20/97
5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	AL-1	Laboratory ID:	OW970401
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	4/2/97	Date Received:	4/3/97
Date Analyzed:	4/4/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	2.0	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970401

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	63.0	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	103.7	86-115
Dibromofluoromethane	97.4	86-118
Toluene-d8	102.8	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlfurst
H. G. [Signature]

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	AL-2	Laboratory ID:	OW970402
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	4/2/97	Date Received:	4/3/97
Date Analyzed:	4/4/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	4.5	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970402

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	19.7	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	103.5	86-115
Dibromofluoromethane	98.6	86-118
Toluene-d8	100.6	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlgren
H. G. J. J. J. J.

Date:

Date:

5/20/97
5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	AL-12	Laboratory ID:	OW970403
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	4/2/97	Date Received:	4/3/97
Date Analyzed:	4/4/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	2.7	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	125	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970403

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	96.8	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	102.8	86-115
Dibromofluoromethane	100.6	86-118
Toluene-d8	99.7	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dehlfest
H. Brown

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	BL-1	Laboratory ID:	OW970404
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	4/2/97	Date Received:	4/3/97
Date Analyzed:	4/4/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	3.1	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970404

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	57.6	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	101.7	86-115
Dibromofluoromethane	98.6	86-118
Toluene-d8	99.9	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlquist
[Signature]

Date: 5/20/97

Date: # 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	BL-12	Laboratory ID:	OW970405
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	4/2/97	Date Received:	4/3/97
Date Analyzed:	4/4/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	7.2	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	149	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970405

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	118	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	103.4	86-115
Dibromofluoromethane	100.6	86-118
Toluene-d8	101.6	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Peter Dahlquist
H. G. Gantner

Date:

Date:

5/10/92
5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	BL-13	Laboratory ID:	OW970406
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	4/2/97	Date Received:	4/3/97
Date Analyzed:	4/4/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	5.0
2	Bromobenzene	108-86-1	LT	5.0
3	Bromochloromethane	74-97-5	LT	10.0
4	Bromodichloromethane	75-27-4	LT	5.0
5	Bromoform	75-25-2	LT	10.0
6	Bromomethane	74-83-9	LT	20.0
7	n-Butylbenzene	104-51-8	LT	5.0
8	sec-Butylbenzene	135-98-8	LT	5.0
9	ter-Butylbenzene	98-06-6	LT	5.0
10	Carbon Tetrachloride	56-23-5	LT	5.0
11	Chlorobenzene	108-90-7	LT	5.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	150.0
13	Chloroethane	75-00-3	LT	150.0
14	Chloroform	67-66-3	LT	5.0
15	Chloromethane	74-87-3	LT	5.0
16	2-Chlorotoluene	95-49-8	LT	10.0
17	4-Chlorotoluene	106-43-4	LT	10.0
18	Dibromochloromethane	124-48-1	LT	10.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	10.0
20	1,2-Dibromoethane	106-93-4	LT	10.0
21	Dibromomethane	74-95-3	LT	5.0
22	1,2-Dichlorobenzene	95-50-1	LT	5.0
23	1,3-Dichlorobenzene	541-73-1	LT	5.0
24	1,4-Dichlorobenzene	106-46-7	LT	5.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	15.0
26	1,1-Dichloroethane	75-34-3	LT	5.0
27	1,2-Dichloroethane	107-06-2	LT	10.0
28	1,1-Dichloroethene	75-35-4	LT	5.0
29	cis-1,2-Dichloroethene	156-69-9	8.1	5.0
30	trans-1,2-Dichloroethene	156-60-5	LT	5.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	15.0
32	1,2-Dichloropropane	78-87-5	LT	5.0
33	1,3-Dichloropropane	142-28-9	LT	5.0
34	2,2-Dichloropropane	594-20-7	LT	5.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970406

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	5.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	5.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	5.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	15.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	5.0
40	Ethylbenzene	100-41-4	LT	5.0
41	Hexachlorobutadien	87-68-3	LT	15.0
42	Isopropylbenzene	98-82-8	LT	10.0
43	p-Isopropyltoluene	99-87-6	LT	5.0
44	Methylene Chloride	75-09-2	LT	5.0
45	Naphthalene	91-20-3	LT	10.0
46	n-Propylbenzene	103-65-1	LT	5.0
47	Styrene	100-42-5	LT	5.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	5.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	10.0
50	Tetrachloroethene	127-18-4	LT	5.0
51	Toluene	108-88-3	LT	5.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	10.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	5.0
54	1,1,1-Trichloroethane	71-55-6	LT	5.0
55	1,1,2-Trichloroethane	79-00-5	LT	5.0
56	Trichloroethene	79-01-6	7.0	5.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	10.0
58	1,2,3-Trichloropropane	96-18-4	LT	5.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	5.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	5.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	5.0
62	Vinyl Chloride	75-01-4	LT	5.0
63	Total-Xylene	1330-20-7	LT	10.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	104.9	86-115
Dibromofluoromethane	102.2	86-118
Toluene-d8	100.2	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Daffert
H. G. Fournier

Date:

Date:

5/20/92

5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	AL-1	Laboratory ID:	OW970565
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	1.3	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970565

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	43.4	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	99.9	86-115
Dibromofluoromethane	101.2	86-118
Toluene-d8	98.7	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlfelt
[Signature]

Date:

Date:

5/20/97
5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	AL-2	Laboratory ID:	OW970566
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	5.0
2	Bromobenzene	108-86-1	LT	5.0
3	Bromochloromethane	74-97-5	LT	10.0
4	Bromodichloromethane	75-27-4	LT	5.0
5	Bromoform	75-25-2	LT	10.0
6	Bromomethane	74-83-9	LT	20.0
7	n-Butylbenzene	104-51-8	LT	5.0
8	sec-Butylbenzene	135-98-8	LT	5.0
9	ter-Butylbenzene	98-06-6	LT	5.0
10	Carbon Tetrachloride	56-23-5	LT	5.0
11	Chlorobenzene	108-90-7	LT	5.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	150.0
13	Chloroethane	75-00-3	LT	150.0
14	Chloroform	67-66-3	LT	5.0
15	Chloromethane	74-87-3	LT	5.0
16	2-Chlorotoluene	95-49-8	LT	10.0
17	4-Chlorotoluene	106-43-4	LT	10.0
18	Dibromochloromethane	124-48-1	LT	10.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	10.0
20	1,2-Dibromoethane	106-93-4	LT	10.0
21	Dibromomethane	74-95-3	LT	5.0
22	1,2-Dichlorobenzene	95-50-1	LT	5.0
23	1,3-Dichlorobenzene	541-73-1	LT	5.0
24	1,4-Dichlorobenzene	106-46-7	LT	5.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	15.0
26	1,1-Dichloroethane	75-34-3	LT	5.0
27	1,2-Dichloroethane	107-06-2	LT	10.0
28	1,1-Dichloroethene	75-35-4	LT	5.0
29	cis-1,2-Dichloroethene	156-69-9	LT	5.0
30	trans-1,2-Dichloroethene	156-60-5	LT	5.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	15.0
32	1,2-Dichloropropane	78-87-5	LT	5.0
33	1,3-Dichloropropane	142-28-9	LT	5.0
34	2,2-Dichloropropane	594-20-7	LT	5.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970566

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	5.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	5.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	5.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	15.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	5.0
40	Ethylbenzene	100-41-4	LT	5.0
41	Hexachlorobutadien	87-68-3	LT	15.0
42	Isopropylbenzene	98-82-8	LT	10.0
43	p-Isopropyltoluene	99-87-6	LT	5.0
44	Methylene Chloride	75-09-2	LT	100.0
45	Naphthalene	91-20-3	LT	10.0
46	n-Propylbenzene	103-65-1	LT	5.0
47	Styrene	100-42-5	LT	5.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	5.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	10.0
50	Tetrachloroethene	127-18-4	LT	5.0
51	Toluene	108-88-3	LT	5.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	10.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	5.0
54	1,1,1-Trichloroethane	71-55-6	LT	5.0
55	1,1,2-Trichloroethane	79-00-5	LT	5.0
56	Trichloroethene	79-01-6	LT	5.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	10.0
58	1,2,3-Trichloropropane	96-18-4	LT	5.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	5.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	5.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	5.0
62	Vinyl Chloride	75-01-4	LT	5.0
63	Total-Xylene	1330-20-7	LT	10.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	102.9	86-115
Dibromofluoromethane	99.7	86-118
Toluene-d8	96.7	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst :

Reviewer:

Lich Dahlquist
H. G. ...

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	AL-6	Laboratory ID:	OW970566
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	5.0
2	Bromobenzene	108-86-1	LT	5.0
3	Bromochloromethane	74-97-5	LT	10.0
4	Bromodichloromethane	75-27-4	LT	5.0
5	Bromoform	75-25-2	LT	10.0
6	Bromomethane	74-83-9	LT	20.0
7	n-Butylbenzene	104-51-8	LT	5.0
8	sec-Butylbenzene	135-98-8	LT	5.0
9	ter-Butylbenzene	98-06-6	LT	5.0
10	Carbon Tetrachloride	56-23-5	LT	5.0
11	Chlorobenzene	108-90-7	LT	5.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	150.0
13	Chloroethane	75-00-3	LT	150.0
14	Chloroform	67-66-3	LT	5.0
15	Chloromethane	74-87-3	LT	5.0
16	2-Chlorotoluene	95-49-8	LT	10.0
17	4-Chlorotoluene	106-43-4	LT	10.0
18	Dibromochloromethane	124-48-1	LT	10.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	10.0
20	1,2-Dibromoethane	106-93-4	LT	10.0
21	Dibromomethane	74-95-3	LT	5.0
22	1,2-Dichlorobenzene	95-50-1	LT	5.0
23	1,3-Dichlorobenzene	541-73-1	LT	5.0
24	1,4-Dichlorobenzene	106-46-7	LT	5.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	15.0
26	1,1-Dichloroethane	75-34-3	LT	5.0
27	1,2-Dichloroethane	107-06-2	LT	10.0
28	1,1-Dichloroethene	75-35-4	LT	5.0
29	cis-1,2-Dichloroethene	156-69-9	LT	5.0
30	trans-1,2-Dichloroethene	156-60-5	LT	5.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	15.0
32	1,2-Dichloropropane	78-87-5	LT	5.0
33	1,3-Dichloropropane	142-28-9	LT	5.0
34	2,2-Dichloropropane	594-20-7	LT	5.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970567

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	5.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	5.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	5.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	15.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	5.0
40	Ethylbenzene	100-41-4	LT	5.0
41	Hexachlorobutadien	87-68-3	LT	15.0
42	Isopropylbenzene	98-82-8	LT	10.0
43	p-Isopropyltoluene	99-87-6	LT	5.0
44	Methylene Chloride	75-09-2	LT	100.0
45	Naphthalene	91-20-3	LT	10.0
46	n-Propylbenzene	103-65-1	LT	5.0
47	Styrene	100-42-5	LT	5.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	5.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	10.0
50	Tetrachloroethene	127-18-4	LT	5.0
51	Toluene	108-88-3	LT	5.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	10.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	5.0
54	1,1,1-Trichloroethane	71-55-6	LT	5.0
55	1,1,2-Trichloroethane	79-00-5	LT	5.0
56	Trichloroethene	79-01-6	LT	5.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	10.0
58	1,2,3-Trichloropropane	96-18-4	LT	5.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	5.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	5.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	5.0
62	Vinyl Chloride	75-01-4	LT	5.0
63	Total-Xylene	1330-20-7	LT	10.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	101.4	86-115
Dibromofluoromethane	103.4	86-118
Toluene-d8	96.0	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

John Dahlquist
H. G. Fournier

Date:

Date:

5/10/97
5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	AL-10	Laboratory ID:	OW970568
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	5.0
2	Bromobenzene	108-86-1	LT	5.0
3	Bromochloromethane	74-97-5	LT	10.0
4	Bromodichloromethane	75-27-4	LT	5.0
5	Bromoform	75-25-2	LT	10.0
6	Bromomethane	74-83-9	LT	20.0
7	n-Butylbenzene	104-51-8	LT	5.0
8	sec-Butylbenzene	135-98-8	LT	5.0
9	ter-Butylbenzene	98-06-6	LT	5.0
10	Carbon Tetrachloride	56-23-5	LT	5.0
11	Chlorobenzene	108-90-7	LT	5.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	150.0
13	Chloroethane	75-00-3	LT	150.0
14	Chloroform	67-66-3	LT	5.0
15	Chloromethane	74-87-3	LT	5.0
16	2-Chlorotoluene	95-49-8	LT	10.0
17	4-Chlorotoluene	106-43-4	LT	10.0
18	Dibromochloromethane	124-48-1	LT	10.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	10.0
20	1,2-Dibromoethane	106-93-4	LT	10.0
21	Dibromomethane	74-95-3	LT	5.0
22	1,2-Dichlorobenzene	95-50-1	LT	5.0
23	1,3-Dichlorobenzene	541-73-1	LT	5.0
24	1,4-Dichlorobenzene	106-46-7	LT	5.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	15.0
26	1,1-Dichloroethane	75-34-3	LT	5.0
27	1,2-Dichloroethane	107-06-2	LT	10.0
28	1,1-Dichloroethene	75-35-4	LT	5.0
29	cis-1,2-Dichloroethene	156-69-9	LT	5.0
30	trans-1,2-Dichloroethene	156-60-5	LT	5.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	15.0
32	1,2-Dichloropropane	78-87-5	LT	5.0
33	1,3-Dichloropropane	142-28-9	LT	5.0
34	2,2-Dichloropropane	594-20-7	LT	5.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970568

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	5.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	5.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	5.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	15.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	5.0
40	Ethylbenzene	100-41-4	LT	5.0
41	Hexachlorobutadien	87-68-3	LT	15.0
42	Isopropylbenzene	98-82-8	LT	10.0
43	p-Isopropyltoluene	99-87-6	LT	5.0
44	Methylene Chloride	75-09-2	LT	100.0
45	Naphthalene	91-20-3	LT	10.0
46	n-Propylbenzene	103-65-1	LT	5.0
47	Styrene	100-42-5	LT	5.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	5.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	10.0
50	Tetrachloroethene	127-18-4	LT	5.0
51	Toluene	108-88-3	LT	5.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	10.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	5.0
54	1,1,1-Trichloroethane	71-55-6	LT	5.0
55	1,1,2-Trichloroethane	79-00-5	LT	5.0
56	Trichloroethene	79-01-6	LT	5.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	10.0
58	1,2,3-Trichloropropane	96-18-4	LT	5.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	5.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	5.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	5.0
62	Vinyl Chloride	75-01-4	LT	5.0
63	Total-Xylene	1330-20-7	LT	10.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	98.3	86-115
Dibromofluoromethane	101.7	86-118
Toluene-d8	98.2	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Date:

Date:

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	AL-12	Laboratory ID:	OW970569
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	5.0
2	Bromobenzene	108-86-1	LT	5.0
3	Bromochloromethane	74-97-5	LT	10.0
4	Bromodichloromethane	75-27-4	LT	5.0
5	Bromoform	75-25-2	LT	10.0
6	Bromomethane	74-83-9	LT	20.0
7	n-Butylbenzene	104-51-8	LT	5.0
8	sec-Butylbenzene	135-98-8	LT	5.0
9	ter-Butylbenzene	98-06-6	LT	5.0
10	Carbon Tetrachloride	56-23-5	LT	5.0
11	Chlorobenzene	108-90-7	LT	5.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	150.0
13	Chloroethane	75-00-3	LT	150.0
14	Chloroform	67-66-3	LT	5.0
15	Chloromethane	74-87-3	LT	5.0
16	2-Chlorotoluene	95-49-8	LT	10.0
17	4-Chlorotoluene	106-43-4	LT	10.0
18	Dibromochloromethane	124-48-1	LT	10.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	10.0
20	1,2-Dibromoethane	106-93-4	LT	10.0
21	Dibromomethane	74-95-3	LT	5.0
22	1,2-Dichlorobenzene	95-50-1	LT	5.0
23	1,3-Dichlorobenzene	541-73-1	LT	5.0
24	1,4-Dichlorobenzene	106-46-7	LT	5.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	15.0
26	1,1-Dichloroethane	75-34-3	LT	5.0
27	1,2-Dichloroethane	107-06-2	LT	10.0
28	1,1-Dichloroethene	75-35-4	LT	5.0
29	cis-1,2-Dichloroethene	156-69-9	26.2	5.0
30	trans-1,2-Dichloroethene	156-60-5	LT	5.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	15.0
32	1,2-Dichloropropane	78-87-5	LT	5.0
33	1,3-Dichloropropane	142-28-9	LT	5.0
34	2,2-Dichloropropane	594-20-7	LT	5.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970569

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	5.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	5.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	5.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	15.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	5.0
40	Ethylbenzene	100-41-4	LT	5.0
41	Hexachlorobutadien	87-68-3	LT	15.0
42	Isopropylbenzene	98-82-8	LT	10.0
43	p-Isopropyltoluene	99-87-6	LT	5.0
44	Methylene Chloride	75-09-2	LT	100.0
45	Naphthalene	91-20-3	LT	10.0
46	n-Propylbenzene	103-65-1	LT	5.0
47	Styrene	100-42-5	LT	5.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	5.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	10.0
50	Tetrachloroethene	127-18-4	LT	5.0
51	Toluene	108-88-3	LT	5.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	10.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	5.0
54	1,1,1-Trichloroethane	71-55-6	LT	5.0
55	1,1,2-Trichloroethane	79-00-5	LT	5.0
56	Trichloroethene	79-01-6	20.6	5.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	10.0
58	1,2,3-Trichloropropane	96-18-4	LT	5.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	5.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	5.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	5.0
62	Vinyl Chloride	75-01-4	LT	5.0
63	Total-Xylene	1330-20-7	LT	10.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	106.4	86-115
Dibromofluoromethane	99.6	86-118
Toluene-d8	97.0	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dehman
11/1/97

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	BL-1	Laboratory ID:	OW970570
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	1.0
2	Bromobenzene	108-86-1	LT	1.0
3	Bromochloromethane	74-97-5	LT	2.0
4	Bromodichloromethane	75-27-4	LT	1.0
5	Bromoform	75-25-2	LT	2.0
6	Bromomethane	74-83-9	LT	4.0
7	n-Butylbenzene	104-51-8	LT	1.0
8	sec-Butylbenzene	135-98-8	LT	1.0
9	ter-Butylbenzene	98-06-6	LT	1.0
10	Carbon Tetrachloride	56-23-5	LT	1.0
11	Chlorobenzene	108-90-7	LT	1.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	30.0
13	Chloroethane	75-00-3	LT	30.0
14	Chloroform	67-66-3	LT	1.0
15	Chloromethane	74-87-3	LT	1.0
16	2-Chlorotoluene	95-49-8	LT	2.0
17	4-Chlorotoluene	106-43-4	LT	2.0
18	Dibromochloromethane	124-48-1	LT	2.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	2.0
20	1,2-Dibromoethane	106-93-4	LT	2.0
21	Dibromomethane	74-95-3	LT	1.0
22	1,2-Dichlorobenzene	95-50-1	LT	1.0
23	1,3-Dichlorobenzene	541-73-1	LT	1.0
24	1,4-Dichlorobenzene	106-46-7	LT	1.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	3.0
26	1,1-Dichloroethane	75-34-3	LT	1.0
27	1,2-Dichloroethane	107-06-2	LT	2.0
28	1,1-Dichloroethene	75-35-4	LT	1.0
29	cis-1,2-Dichloroethene	156-69-9	2.5	1.0
30	trans-1,2-Dichloroethene	156-60-5	LT	1.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	3.0
32	1,2-Dichloropropane	78-87-5	LT	1.0
33	1,3-Dichloropropane	142-28-9	LT	1.0
34	2,2-Dichloropropane	594-20-7	LT	1.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970570

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	1.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	1.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	1.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	3.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	1.0
40	Ethylbenzene	100-41-4	LT	1.0
41	Hexachlorobutadien	87-68-3	LT	3.0
42	Isopropylbenzene	98-82-8	LT	2.0
43	p-Isopropyltoluene	99-87-6	LT	1.0
44	Methylene Chloride	75-09-2	LT	1.0
45	Naphthalene	91-20-3	LT	2.0
46	n-Propylbenzene	103-65-1	LT	1.0
47	Styrene	100-42-5	LT	1.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	1.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	2.0
50	Tetrachloroethene	127-18-4	LT	1.0
51	Toluene	108-88-3	LT	1.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	2.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	1.0
54	1,1,1-Trichloroethane	71-55-6	LT	1.0
55	1,1,2-Trichloroethane	79-00-5	LT	1.0
56	Trichloroethene	79-01-6	52.7	1.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	2.0
58	1,2,3-Trichloropropane	96-18-4	LT	1.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	1.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	1.0
62	Vinyl Chloride	75-01-4	LT	1.0
63	Total-Xylene	1330-20-7	LT	2.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	99.2	86-115
Dibromofluoromethane	105.0	86-118
Toluene-d8	95.8	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

John Dahlfors
11/8/97

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	BL-2	Laboratory ID:	OW970571
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	5.0
2	Bromobenzene	108-86-1	LT	5.0
3	Bromochloromethane	74-97-5	LT	10.0
4	Bromodichloromethane	75-27-4	LT	5.0
5	Bromoform	75-25-2	LT	10.0
6	Bromomethane	74-83-9	LT	20.0
7	n-Butylbenzene	104-51-8	LT	5.0
8	sec-Butylbenzene	135-98-8	LT	5.0
9	ter-Butylbenzene	98-06-6	LT	5.0
10	Carbon Tetrachloride	56-23-5	LT	5.0
11	Chlorobenzene	108-90-7	LT	5.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	150.0
13	Chloroethane	75-00-3	LT	150.0
14	Chloroform	67-66-3	LT	5.0
15	Chloromethane	74-87-3	LT	5.0
16	2-Chlorotoluene	95-49-8	LT	10.0
17	4-Chlorotoluene	106-43-4	LT	10.0
18	Dibromochloromethane	124-48-1	LT	10.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	10.0
20	1,2-Dibromoethane	106-93-4	LT	10.0
21	Dibromomethane	74-95-3	LT	5.0
22	1,2-Dichlorobenzene	95-50-1	LT	5.0
23	1,3-Dichlorobenzene	541-73-1	LT	5.0
24	1,4-Dichlorobenzene	106-46-7	LT	5.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	15.0
26	1,1-Dichloroethane	75-34-3	LT	5.0
27	1,2-Dichloroethane	107-06-2	LT	10.0
28	1,1-Dichloroethene	75-35-4	LT	5.0
29	cis-1,2-Dichloroethene	156-69-9	LT	5.0
30	trans-1,2-Dichloroethene	156-60-5	LT	5.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	15.0
32	1,2-Dichloropropane	78-87-5	LT	5.0
33	1,3-Dichloropropane	142-28-9	LT	5.0
34	2,2-Dichloropropane	594-20-7	LT	5.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970571

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	5.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	5.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	5.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	15.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	5.0
40	Ethylbenzene	100-41-4	LT	5.0
41	Hexachlorobutadien	87-68-3	LT	15.0
42	Isopropylbenzene	98-82-8	LT	10.0
43	p-Isopropyltoluene	99-87-6	LT	5.0
44	Methylene Chloride	75-09-2	LT	100.0
45	Naphthalene	91-20-3	LT	10.0
46	n-Propylbenzene	103-65-1	LT	5.0
47	Styrene	100-42-5	LT	5.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	5.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	10.0
50	Tetrachloroethene	127-18-4	LT	5.0
51	Toluene	108-88-3	LT	5.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	10.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	5.0
54	1,1,1-Trichloroethane	71-55-6	LT	5.0
55	1,1,2-Trichloroethane	79-00-5	LT	5.0
56	Trichloroethene	79-01-6	LT	5.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	10.0
58	1,2,3-Trichloropropane	96-18-4	LT	5.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	5.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	5.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	5.0
62	Vinyl Chloride	75-01-4	LT	5.0
63	Total-Xylene	1330-20-7	LT	10.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	107.1	86-115
Dibromofluoromethane	106.0	86-118
Toluene-d8	94.9	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

John D. H. Hunt
John D. H. Hunt

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	BL-4	Laboratory ID:	OW970572
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	10.0
2	Bromobenzene	108-86-1	LT	10.0
3	Bromochloromethane	74-97-5	LT	20.0
4	Bromodichloromethane	75-27-4	LT	10.0
5	Bromoform	75-25-2	LT	20.0
6	Bromomethane	74-83-9	LT	40.0
7	n-Butylbenzene	104-51-8	LT	10.0
8	sec-Butylbenzene	135-98-8	LT	10.0
9	ter-Butylbenzene	98-06-6	LT	10.0
10	Carbon Tetrachloride	56-23-5	LT	10.0
11	Chlorobenzene	108-90-7	LT	10.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	300.0
13	Chloroethane	75-00-3	LT	300.0
14	Chloroform	67-66-3	LT	10.0
15	Chloromethane	74-87-3	LT	10.0
16	2-Chlorotoluene	95-49-8	LT	20.0
17	4-Chlorotoluene	106-43-4	LT	20.0
18	Dibromochloromethane	124-48-1	LT	20.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	20.0
20	1,2-Dibromoethane	106-93-4	LT	20.0
21	Dibromomethane	74-95-3	LT	10.0
22	1,2-Dichlorobenzene	95-50-1	LT	10.0
23	1,3-Dichlorobenzene	541-73-1	LT	10.0
24	1,4-Dichlorobenzene	106-46-7	LT	10.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	30.0
26	1,1-Dichloroethane	75-34-3	LT	10.0
27	1,2-Dichloroethane	107-06-2	LT	20.0
28	1,1-Dichloroethene	75-35-4	LT	10.0
29	cis-1,2-Dichloroethene	156-69-9	LT	10.0
30	trans-1,2-Dichloroethene	156-60-5	LT	10.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	30.0
32	1,2-Dichloropropane	78-87-5	LT	10.0
33	1,3-Dichloropropane	142-28-9	LT	10.0
34	2,2-Dichloropropane	594-20-7	LT	10.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970572

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	10.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	10.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	10.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	30.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	10.0
40	Ethylbenzene	100-41-4	LT	10.0
41	Hexachlorobutadien	87-68-3	LT	30.0
42	Isopropylbenzene	98-82-8	LT	20.0
43	p-Isopropyltoluene	99-87-6	LT	10.0
44	Methylene Chloride	75-09-2	LT	200.0
45	Naphthalene	91-20-3	LT	20.0
46	n-Propylbenzene	103-65-1	LT	10.0
47	Styrene	100-42-5	LT	10.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	10.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	20.0
50	Tetrachloroethene	127-18-4	LT	10.0
51	Toluene	108-88-3	LT	10.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	20.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	10.0
54	1,1,1-Trichloroethane	71-55-6	LT	10.0
55	1,1,2-Trichloroethane	79-00-5	LT	10.0
56	Trichloroethene	79-01-6	LT	10.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	20.0
58	1,2,3-Trichloropropane	96-18-4	LT	10.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	10.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	10.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	10.0
62	Vinyl Chloride	75-01-4	LT	10.0
63	Total-Xylene	1330-20-7	LT	20.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	105.6	86-115
Dibromofluoromethane	112.6	86-118
Toluene-d8	91.9	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlquist
R. Dahlquist

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	BL-12	Laboratory ID:	OW970573
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	5.0
2	Bromobenzene	108-86-1	LT	5.0
3	Bromochloromethane	74-97-5	LT	10.0
4	Bromodichloromethane	75-27-4	LT	5.0
5	Bromoform	75-25-2	LT	10.0
6	Bromomethane	74-83-9	LT	20.0
7	n-Butylbenzene	104-51-8	LT	5.0
8	sec-Butylbenzene	135-98-8	LT	5.0
9	ter-Butylbenzene	98-06-6	LT	5.0
10	Carbon Tetrachloride	56-23-5	LT	5.0
11	Chlorobenzene	108-90-7	LT	5.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	150.0
13	Chloroethane	75-00-3	LT	150.0
14	Chloroform	67-66-3	LT	5.0
15	Chloromethane	74-87-3	LT	5.0
16	2-Chlorotoluene	95-49-8	LT	10.0
17	4-Chlorotoluene	106-43-4	LT	10.0
18	Dibromochloromethane	124-48-1	LT	10.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	10.0
20	1,2-Dibromoethane	106-93-4	LT	10.0
21	Dibromomethane	74-95-3	LT	5.0
22	1,2-Dichlorobenzene	95-50-1	LT	5.0
23	1,3-Dichlorobenzene	541-73-1	LT	5.0
24	1,4-Dichlorobenzene	106-46-7	LT	5.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	15.0
26	1,1-Dichloroethane	75-34-3	LT	5.0
27	1,2-Dichloroethane	107-06-2	LT	10.0
28	1,1-Dichloroethene	75-35-4	LT	5.0
29	cis-1,2-Dichloroethene	156-69-9	32.3	5.0
30	trans-1,2-Dichloroethene	156-60-5	LT	5.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	15.0
32	1,2-Dichloropropane	78-87-5	LT	5.0
33	1,3-Dichloropropane	142-28-9	LT	5.0
34	2,2-Dichloropropane	594-20-7	LT	5.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970573

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	5.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	5.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	5.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	15.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	5.0
40	Ethylbenzene	100-41-4	LT	5.0
41	Hexachlorobutadiene	87-68-3	LT	15.0
42	Isopropylbenzene	98-82-8	LT	10.0
43	p-Isopropyltoluene	99-87-6	LT	5.0
44	Methylene Chloride	75-09-2	LT	100.0
45	Naphthalene	91-20-3	LT	10.0
46	n-Propylbenzene	103-65-1	LT	5.0
47	Styrene	100-42-5	LT	5.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	5.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	10.0
50	Tetrachloroethene	127-18-4	LT	5.0
51	Toluene	108-88-3	LT	5.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	10.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	5.0
54	1,1,1-Trichloroethane	71-55-6	LT	5.0
55	1,1,2-Trichloroethane	79-00-5	LT	5.0
56	Trichloroethene	79-01-6	21.1	5.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	10.0
58	1,2,3-Trichloropropane	96-18-4	LT	5.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	5.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	5.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	5.0
62	Vinyl Chloride	75-01-4	LT	5.0
63	Total-Xylene	1330-20-7	LT	10.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	107.1	86-115
Dibromofluoromethane	107.8	86-118
Toluene-d8	93.5	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Delfino
[Signature]

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

Volatile Organics Analysis Data Sheet

Sample ID:	BL-13	Laboratory ID:	OW970574
Matrix:	Water	Sample Wt./Vol.:	5.0 ml
Date Sampled:	5/7/97	Date Received:	5/9/97
Date Analyzed:	5/13/97	Method:	EPA 8260(Purge & Trap)

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
1	Benzene	71-43-2	LT	5.0
2	Bromobenzene	108-86-1	LT	5.0
3	Bromochloromethane	74-97-5	LT	10.0
4	Bromodichloromethane	75-27-4	LT	5.0
5	Bromoform	75-25-2	LT	10.0
6	Bromomethane	74-83-9	LT	20.0
7	n-Butylbenzene	104-51-8	LT	5.0
8	sec-Butylbenzene	135-98-8	LT	5.0
9	ter-Butylbenzene	98-06-6	LT	5.0
10	Carbon Tetrachloride	56-23-5	LT	5.0
11	Chlorobenzene	108-90-7	LT	5.0
12	Chlorodifluoromethane(Freon-22)	75-45-6	LT	150.0
13	Chloroethane	75-00-3	LT	150.0
14	Chloroform	67-66-3	LT	5.0
15	Chloromethane	74-87-3	LT	5.0
16	2-Chlorotoluene	95-49-8	LT	10.0
17	4-Chlorotoluene	106-43-4	LT	10.0
18	Dibromochloromethane	124-48-1	LT	10.0
19	1,2-Dibromo-3-chloropropane	96-12-8	LT	10.0
20	1,2-Dibromoethane	106-93-4	LT	10.0
21	Dibromomethane	74-95-3	LT	5.0
22	1,2-Dichlorobenzene	95-50-1	LT	5.0
23	1,3-Dichlorobenzene	541-73-1	LT	5.0
24	1,4-Dichlorobenzene	106-46-7	LT	5.0
25	Dichlorodifluoromethane(Freon-12)	75-71-8	LT	15.0
26	1,1-Dichloroethane	75-34-3	LT	5.0
27	1,2-Dichloroethane	107-06-2	LT	10.0
28	1,1-Dichloroethene	75-35-4	LT	5.0
29	cis-1,2-Dichloroethene	156-69-9	LT	5.0
30	trans-1,2-Dichloroethene	156-60-5	LT	5.0
31	Dichlorofluoromethane(Freon-21)	75-43-4	LT	15.0
32	1,2-Dichloropropane	78-87-5	LT	5.0
33	1,3-Dichloropropane	142-28-9	LT	5.0
34	2,2-Dichloropropane	594-20-7	LT	5.0

Volatile Organics Analysis Data Sheet

(Continued)

Sample I.D. OW970574

	Compound	CAS #	Conc.(ug/L)	PQL(ug/L)
35	1,1-Dichloropropene	563-58-6	LT	5.0
36	cis-1,3-Dichloropropene	10061-01-5	LT	5.0
37	trans-1,3-Dichloropropene	10061-02-6	LT	5.0
38	1,2-Dichlorotetrafluoroethane(Freon-114)	76-14-2	LT	15.0
39	Dichlorotrifluoroethane(Freon-123)	306-83-2	LT	5.0
40	Ethylbenzene	100-41-4	LT	5.0
41	Hexachlorobutadiene	87-68-3	LT	15.0
42	Isopropylbenzene	98-82-8	LT	10.0
43	p-Isopropyltoluene	99-87-6	LT	5.0
44	Methylene Chloride	75-09-2	LT	100.0
45	Naphthalene	91-20-3	LT	10.0
46	n-Propylbenzene	103-65-1	LT	5.0
47	Styrene	100-42-5	LT	5.0
48	1,1,2,2-Tetrachloroethane	79-34-5	LT	5.0
49	1,1,1,2-Tetrachloroethane	79-34-5	LT	10.0
50	Tetrachloroethene	127-18-4	LT	5.0
51	Toluene	108-88-3	LT	5.0
52	1,2,3-Trichlorobenzene	87-61-6	LT	10.0
53	1,2,4-Trichlorobenzene	120-82-1	LT	5.0
54	1,1,1-Trichloroethane	71-55-6	LT	5.0
55	1,1,2-Trichloroethane	79-00-5	LT	5.0
56	Trichloroethene	79-01-6	LT	5.0
57	Trichlorofluoromethane(Freon-11)	75-69-4	LT	10.0
58	1,2,3-Trichloropropane	96-18-4	LT	5.0
59	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	5.0
60	1,2,4-Trimethylbenzene	95-63-6	LT	5.0
61	1,3,5-Trimethylbenzene	108-67-8	LT	5.0
62	Vinyl Chloride	75-01-4	LT	5.0
63	Total-Xylene	1330-20-7	LT	10.0

Surrogate Compounds	% Recovery	QC Limits (%)
4-Bromofluorobenzene	103.4	86-115
Dibromofluoromethane	109.4	86-118
Toluene-d8	92.2	88-110

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits (based on 5 ml water sample volume)

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Paul Dahlquist
[Signature]

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G1	Laboratory ID:	OA970416
Matrix:	Gas Cartridge	Sample Vol.(L):	0.38
Date Sampled:	4/4/97	Date Received:	4/8/97
Date Analyzed:	5/3/97	Method:	TO-14

Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
Benzene	71-43-2	64	8.10
Carbon Tetrachloride	56-23-5	LT	4.12
Chloroform	67-66-3	15	5.31
1,2-Dichlorobenzene	95-50-1	440	4.31
1,3-Dichlorobenzene	541-73-1	160	4.31
1,1-Dichloroethane	75-34-3	41	6.39
1,2-Dichloroethane	107-06-2	LT	6.53
1,1-Dichloroethene	75-35-4	LT	6.53
cis-1,2-Dichloroethene	156-69-9	323	6.53
trans-1,2-Dichloroethene	156-60-5	24	6.53
Ethylbenzene	100-41-4	LT	5.97
Methylene Chloride	75-09-2	74	7.45
Tetrachloroethene	127-18-4	LT	3.82
Toluene	108-88-3	LT	6.87
1,1,1-Trichloroethane	71-55-6	LT	4.82
Trichloroethene	79-01-6	5600	4.82
1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	7400	3.38
1,3,5-Trimethylbenzene	108-67-8	427	6.87
Vinyl Chloride	75-01-4	LT	10.12
Total-Xylene	1330-20-7	530	5.97

Total VOC		15097
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Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	123%	75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Rich Daley*
 Reviewer: *11/8/97*

Date: 5/20/97
 Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G2	Laboratory ID:	OA970417
Matrix:	Gas Cartridge	Sample Vol.(L):	0.94
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
Benzene	71-43-2	8.3	3.27
Carbon Tetrachloride	56-23-5	LT	1.66
Chloroform	67-66-3	LT	2.14
1,2-Dichlorobenzene	95-50-1	112	1.74
1,3-Dichlorobenzene	541-73-1	38	1.74
1,1-Dichloroethane	75-34-3	LT	2.58
1,2-Dichloroethane	107-06-2	LT	2.64
1,1-Dichloroethene	75-35-4	LT	2.64
cis-1,2-Dichloroethene	156-69-9	131	2.64
trans-1,2-Dichloroethene	156-60-5	LT	2.64
Ethylbenzene	100-41-4	LT	2.41
Methylene Chloride	75-09-2	85	3.01
Tetrachloroethene	127-18-4	LT	1.54
Toluene	108-88-3	LT	2.78
1,1,1-Trichloroethane	71-55-6	LT	1.95
Trichloroethene	79-01-6	1950	1.95
1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	4000	1.37
1,3,5-Trimethylbenzene	108-67-8	91	2.78
Vinyl Chloride	75-01-4	LT	4.09
Total-Xylene	1330-20-7	88	2.41

Total VOC		6503
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Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	**	75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Rich Dahlquist*
 Reviewer: *[Signature]*

Date: 5/20/97
 Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G3	Laboratory ID:	OA970418
Matrix:	Gas Cartridge	Sample Vol.(L):	0.94
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Benzene	71-43-2	15	3.27
2	Carbon Tetrachloride	56-23-5	LT	1.66
3	Chloroform	67-66-3	58	2.14
4	1,2-Dichlorobenzene	95-50-1	33	1.74
5	1,3-Dichlorobenzene	541-73-1	8.9	1.74
6	1,1-Dichloroethane	75-34-3	106	2.58
7	1,2-Dichloroethane	107-06-2	6.1	2.64
8	1,1-Dichloroethene	75-35-4	LT	2.64
9	cis-1,2-Dichloroethene	156-69-9	132	2.64
10	trans-1,2-Dichloroethene	156-60-5	4.1	2.64
11	Ethylbenzene	100-41-4	LT	2.41
12	Methylene Chloride	75-09-2	114	3.01
12	Tetrachloroethene	127-18-4	LT	1.54
13	Toluene	108-88-3	LT	2.78
14	1,1,1-Trichloroethane	71-55-6	LT	1.95
15	Trichloroethene	79-01-6	961	1.95
16	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	247	1.37
17	1,3,5-Trimethylbenzene	108-67-8	23	2.78
18	Vinyl Chloride	75-01-4	LT	4.09
19	Total-Xylene	1330-20-7	11	2.41

20	Total VOC	1717
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Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	103%	75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Lich Dalton*
 Reviewer: *H. J. ...*

Date: 5/20/97
 Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G4	Laboratory ID:	OA970419
Matrix:	Gas Cartridge	Sample Vol.(L):	0.94
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Benzene	71-43-2	16	3.27
2	Carbon Tetrachloride	56-23-5	LT	1.66
3	Chloroform	67-66-3	56	2.14
4	1,2-Dichlorobenzene	95-50-1	32	1.74
5	1,3-Dichlorobenzene	541-73-1	7.9	1.74
6	1,1-Dichloroethane	75-34-3	111	2.58
7	1,2-Dichloroethane	107-06-2	6.0	2.64
8	1,1-Dichloroethene	75-35-4	LT	2.64
9	cis-1,2-Dichloroethene	156-69-9	172	2.64
10	trans-1,2-Dichloroethene	156-60-5	5.5	2.64
11	Ethylbenzene	100-41-4	LT	2.41
12	Methylene Chloride	75-09-2	83	3.01
12	Tetrachloroethene	127-18-4	LT	1.54
13	Toluene	108-88-3	LT	2.78
14	1,1,1-Trichloroethane	71-55-6	LT	1.95
15	Trichloroethene	79-01-6	1010	1.95
16	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	126	1.37
17	1,3,5-Trimethylbenzene	108-67-8	18	2.78
18	Vinyl Chloride	75-01-4	LT	4.09
19	Total-Xylene	1330-20-7	7	2.41
19	Total VOC		1643	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene		75-130

CAS #: Chemical Abstract Services Registry Number
PQL: Practical Quantitation Limits
LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Rich Dahlquist*
Reviewer: *[Signature]*

Date: 5/20/92
Date: 5/20/92

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G5	Laboratory ID:	OA970420
Matrix:	Gas Cartridge	Sample Vol.(L):	0.94
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Benzene	71-43-2	15.7	3.27
2	Carbon Tetrachloride	56-23-5	LT	1.66
3	Chloroform	67-66-3	77.0	2.14
4	1,2-Dichlorobenzene	95-50-1	24	1.74
5	1,3-Dichlorobenzene	541-73-1	6.4	1.74
6	1,1-Dichloroethane	75-34-3	105	2.58
7	1,2-Dichloroethane	107-06-2	13	2.64
8	1,1-Dichloroethene	75-35-4	LT	2.64
9	cis-1,2-Dichloroethene	156-69-9	322	2.64
10	trans-1,2-Dichloroethene	156-60-5	5.0	2.64
11	Ethylbenzene	100-41-4	LT	2.41
12	Methylene Chloride	75-09-2	65	3.01
12	Tetrachloroethene	127-18-4	LT	1.54
13	Toluene	108-88-3	LT	2.78
14	1,1,1-Trichloroethane	71-55-6	LT	1.95
15	Trichloroethene	79-01-6	1053	1.95
16	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	8.1	1.37
17	1,3,5-Trimethylbenzene	108-67-8	15	2.78
18	Vinyl Chloride	75-01-4	LT	4.09
19	Total-Xylene	1330-20-7	LT	2.41
19	Total VOC		1708	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	125%	75-130

CAS #: Chemical Abstract Services Registry Number
PQL: Practical Quantitation Limits
LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Rich Dahlquist*
Reviewer: *H. J. ...*

Date: 5/20/92
Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G6	Laboratory ID:	OA970421
Matrix:	Gas Cartridge	Sample Vol.(L):	0.94
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Benzene	71-43-2	24.3	3.27
2	Carbon Tetrachloride	56-23-5	LT	1.66
3	Chloroform	67-66-3	98	2.14
4	1,2-Dichlorobenzene	95-50-1	29	1.74
5	1,3-Dichlorobenzene	541-73-1	8.4	1.74
6	1,1-Dichloroethane	75-34-3	81	2.58
7	1,2-Dichloroethane	107-06-2	27	2.64
8	1,1-Dichloroethene	75-35-4	LT	2.64
9	cis-1,2-Dichloroethene	156-69-9	456	2.64
10	trans-1,2-Dichloroethene	156-60-5	LT	2.64
11	Ethylbenzene	100-41-4	LT	2.41
12	Methylene Chloride	75-09-2	335	3.01
12	Tetrachloroethene	127-18-4	LT	1.54
13	Toluene	108-88-3	LT	2.78
14	1,1,1-Trichloroethane	71-55-6	LT	1.95
15	Trichloroethene	79-01-6	589	1.95
16	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	4.4	1.37
17	1,3,5-Trimethylbenzene	108-67-8	LT	2.78
18	Vinyl Chloride	75-01-4	LT	4.09
19	Total-Xylene	1330-20-7	LT	2.41
19	Total VOC		1652	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	****	75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: Lick Dahlfurst
 Reviewer: [Signature]

Date: 5/20/97
 Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G7	Laboratory ID:	OA970422
Matrix:	Gas Cartridge	Sample Vol.(L):	0.94
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Benzene	71-43-2	14.9	3.27
2	Carbon Tetrachloride	56-23-5	LT	1.66
3	Chloroform	67-66-3	LT	2.14
4	1,2-Dichlorobenzene	95-50-1	16	1.74
5	1,3-Dichlorobenzene	541-73-1	3.6	1.74
6	1,1-Dichloroethane	75-34-3	LT	2.58
7	1,2-Dichloroethane	107-06-2	19	2.64
8	1,1-Dichloroethene	75-35-4	LT	2.64
9	cis-1,2-Dichloroethene	156-69-9	107	2.64
10	trans-1,2-Dichloroethene	156-60-5	LT	2.64
11	Ethylbenzene	100-41-4	LT	2.41
12	Methylene Chloride	75-09-2	44	3.01
12	Tetrachloroethene	127-18-4	LT	1.54
13	Toluene	108-88-3	LT	2.78
14	1,1,1-Trichloroethane	71-55-6	LT	1.95
15	Trichloroethene	79-01-6	155	1.95
16	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.37
17	1,3,5-Trimethylbenzene	108-67-8	LT	2.78
18	Vinyl Chloride	75-01-4	LT	4.09
19	Total-Xylene	1330-20-7	LT	2.41
19	Total VOC		361	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene		75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst:

Reviewer:

Rich Dahlgren
[Signature]

Date: 5/20/97

Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G8	Laboratory ID:	OA970423
Matrix:	Gas Cartridge	Sample Vol.(L):	1.89
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Benzene	71-43-2	10.6	1.63
2	Carbon Tetrachloride	56-23-5	LT	0.83
3	Chloroform	67-66-3	LT	1.07
4	1,2-Dichlorobenzene	95-50-1	7.8	0.87
5	1,3-Dichlorobenzene	541-73-1	1.5	0.87
6	1,1-Dichloroethane	75-34-3	LT	1.28
7	1,2-Dichloroethane	107-06-2	LT	1.31
8	1,1-Dichloroethene	75-35-4	LT	1.31
9	cis-1,2-Dichloroethene	156-69-9	22	1.31
10	trans-1,2-Dichloroethene	156-60-5	LT	1.31
11	Ethylbenzene	100-41-4	LT	1.20
12	Methylene Chloride	75-09-2	6.5	1.50
13	Tetrachloroethene	127-18-4	LT	0.77
14	Toluene	108-88-3	LT	1.38
15	1,1,1-Trichloroethane	71-55-6	LT	0.97
16	Trichloroethene	79-01-6	11	0.97
17	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	0.68
18	1,3,5-Trimethylbenzene	108-67-8	LT	1.38
19	Vinyl Chloride	75-01-4	LT	2.04
20	Total-Xylene	1330-20-7	LT	1.20
21	Total VOC		60	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene		75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Leh Wakhurst*
 Reviewer: *H. G. ...*

Date: 5/20/97
 Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G9	Laboratory ID:	OA970424
Matrix:	Gas Cartridge	Sample Vol.(L):	1.89
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Acetone	67-64-1	351	2.19
2	Benzene	71-43-2	9.4	1.63
3	Carbon Tetrachloride	56-23-5	LT	0.83
4	Chloroform	67-66-3	25	1.07
5	1,2-Dichlorobenzene	95-50-1	LT	0.87
6	1,3-Dichlorobenzene	541-73-1	LT	0.87
7	1,1-Dichloroethane	75-34-3	65	1.28
8	1,2-Dichloroethane	107-06-2	36	1.31
9	1,1-Dichloroethene	75-35-4	LT	1.31
10	cis-1,2-Dichloroethene	156-69-9	32	1.31
11	trans-1,2-Dichloroethene	156-60-5	LT	1.31
12	Ethylbenzene	100-41-4	LT	1.20
13	Methylene Chloride	75-09-2	21	1.50
13	Tetrachloroethene	127-18-4	LT	0.77
14	Toluene	108-88-3	LT	1.38
15	1,1,2-Trichloroethane	71-55-6	LT	0.95
16	Trichloroethene	79-01-6	128	0.97
17	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	0.68
17	1,3,5-Trimethylbenzene	108-67-8	LT	1.38
18	Vinyl Chloride	75-01-4	LT	2.04
19	Total-Xylene	1330-20-7	LT	1.20
19	Total VOC		318	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	****	75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Rich Dahlquist*
 Reviewer: *Heidi*

Date: 5/20/97

Date: 5/22/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID:	B-G10	Laboratory ID:	OA970425
Matrix:	Gas Cartridge	Sample Vol.(L):	1.89
Date Sampled:		Date Received:	
Date Analyzed:		Method:	TO-14

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Acetone	67-64-1	67.6	2.19
2	Benzene	71-43-2	8.4	1.63
3	Carbon Tetrachloride	56-23-5	LT	0.83
4	Chloroform	67-66-3	46	1.07
5	1,2-Dichlorobenzene	95-50-1	LT	0.87
6	1,3-Dichlorobenzene	541-73-1	LT	0.87
7	1,1-Dichloroethane	75-34-3	100	1.28
8	1,2-Dichloroethane	107-06-2	250	1.31
9	1,1-Dichloroethene	75-35-4	LT	1.31
10	cis-1,2-Dichloroethene	156-69-9	104	1.31
11	trans-1,2-Dichloroethene	156-60-5	LT	1.31
12	Ethylbenzene	100-41-4	LT	1.20
13	Methylene Chloride	75-09-2	65	1.50
13	Tetrachloroethene	127-18-4	LT	0.77
14	Toluene	108-88-3	LT	1.38
15	1,1,2-Trichloroethane	71-55-6	17	0.95
16	Trichloroethene	79-01-6	162	0.97
17	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	0.68
17	1,3,5-Trimethylbenzene	108-67-8	LT	1.38
18	Vinyl Chloride	75-01-4	LT	2.04
19	Total-Xylene	1330-20-7	LT	1.20
19	Total VOC		753	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	****	75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Lick Dahlgrust*
 Reviewer: *H. G. Fournier*

Date: 5/20/97
 Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID: <u>B-G11</u>	Laboratory ID: <u>OA970426</u>
Matrix: <u>Gas Cartridge</u>	Sample Vol.(L): <u>0.94</u>
Date Sampled: _____	Date Received: _____
Date Analyzed: _____	Method: <u>TO-14</u>

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Acetone	67-64-1	LT	4.40
2	Benzene	71-43-2	10.0	3.27
3	Carbon Tetrachloride	56-23-5	LT	1.66
4	Chloroform	67-66-3	526	2.14
5	1,2-Dichlorobenzene	95-50-1	LT	1.74
6	1,3-Dichlorobenzene	541-73-1	LT	1.74
7	1,1-Dichloroethane	75-34-3	340	2.58
8	1,2-Dichloroethane	107-06-2	915	2.64
9	1,1-Dichloroethene	75-35-4	LT	2.64
10	cis-1,2-Dichloroethene	156-69-9	957	2.64
11	trans-1,2-Dichloroethene	156-60-5	7.8	2.64
12	Ethylbenzene	100-41-4	LT	2.41
13	Methylene Chloride	75-09-2	272	3.01
13	Tetrachloroethene	127-18-4	LT	1.54
14	Toluene	108-88-3	LT	2.78
15	1,1,2-Trichloroethane	71-55-6	53	1.92
16	Trichloroethene	79-01-6	483	1.95
17	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	1.37
17	1,3,5-Trimethylbenzene	108-67-8	LT	2.78
18	Vinyl Chloride	75-01-4	LT	4.09
19	Total-Xylene	1330-20-7	LT	2.41
19	Total VOC		3564	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	****	75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: *Rich Dahlquist*
 Reviewer: *H. R. Ponder*

Date: 5/20/97
 Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID: <u>B-G12</u>	Laboratory ID: <u>OA970427</u>
Matrix: <u>Gas Cartridge</u>	Sample Vol.(L): <u>0.38</u>
Date Sampled: _____	Date Received: _____
Date Analyzed: _____	Method: <u>TO-14</u>

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Acetone	67-64-1	LT	10.87
2	Benzene	71-43-2	28	8.10
3	Carbon Tetrachloride	56-23-5	LT	4.12
4	Chloroform	67-66-3	LT	5.31
5	1,2-Dichlorobenzene	95-50-1	LT	4.31
6	1,3-Dichlorobenzene	541-73-1	LT	4.31
7	1,1-Dichloroethane	75-34-3	235	6.39
8	1,2-Dichloroethane	107-06-2	876	6.53
9	1,1-Dichloroethene	75-35-4	LT	6.53
10	cis-1,2-Dichloroethene	156-69-9	5042	6.53
11	trans-1,2-Dichloroethene	156-60-5	44	6.53
12	Ethylbenzene	100-41-4	LT	5.97
13	Methylene Chloride	75-09-2	160	7.45
13	Tetrachloroethene	127-18-4	LT	3.82
14	Toluene	108-88-3	LT	6.87
15	1,1,2-Trichloroethane	71-55-6	42	4.74
16	Trichloroethene	79-01-6	2874	4.82
17	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	3.38
17	1,3,5-Trimethylbenzene	108-67-8	LT	6.87
18	Vinyl Chloride	75-01-4	LT	10.12
19	Total-Xylene	1330-20-7	LT	5.97
19	Total VOC		9302	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	****	75-130

CAS #: Chemical Abstract Services Registry Number

PQL: Practical Quantitation Limits

LT: Less than PQL

California D.O.H.S. Cert. # 1704

Analyst: Lich Dahlquist
 Reviewer: [Signature]

Date: 5/20/97
 Date: 5/20/97

LBL Environmental Measurements Laboratory

TO-14 Analysis Data Sheet

Sample ID: <u>B-G13</u>	Laboratory ID: <u>OA970428</u>
Matrix: <u>Gas Cartridge</u>	Sample Vol.(L): <u>0.19</u>
Date Sampled: _____	Date Received: _____
Date Analyzed: _____	Method: <u>TO-14</u>

	Compound	CAS #	Conc.(ppbv)	PQL(ppbv)
1	Acetone	67-64-1	9288.8	21.75
2	Benzene	71-43-2	52.0	16.19
3	Carbon Tetrachloride	56-23-5	LT	8.24
4	Chloroform	67-66-3	LT	10.61
5	1,2-Dichlorobenzene	95-50-1	LT	8.61
6	1,3-Dichlorobenzene	541-73-1	LT	8.61
7	1,1-Dichloroethane	75-34-3	LT	12.77
8	1,2-Dichloroethane	107-06-2	162	13.06
9	1,1-Dichloroethene	75-35-4	LT	13.06
10	cis-1,2-Dichloroethene	156-69-9	7492	13.06
11	trans-1,2-Dichloroethene	156-60-5	LT	13.06
12	Ethylbenzene	100-41-4	LT	11.93
13	Methylene Chloride	75-09-2	56	14.91
13	Tetrachloroethene	127-18-4	LT	7.64
14	Toluene	108-88-3	LT	13.74
15	1,1,2-Trichloroethane	71-55-6	LT	9.48
16	Trichloroethene	79-01-6	9959	9.64
17	1,1,2-Trichlorotrifluoroethane(Freon-113)	76-13-1	LT	6.76
17	1,3,5-Trimethylbenzene	108-67-8	LT	13.74
18	Vinyl Chloride	75-01-4	LT	20.24
19	Total-Xylene	1330-20-7	LT	11.93
19	Total VOC		17721	

Surrogate Compound	% Recovery	QC Limits (%)
4-Bromofluorobenzene	****	75-130

CAS #: Chemical Abstract Services Registry Number

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Analyst: Lick Dally
 Reviewer: H. G. Fournier

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