



**ENVIRONMENTAL STRATEGIES CORPORATION**

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Alameda County  
Environmental Health

**GROUNDWATER MONITORING REPORT  
FORMER BOYSEN PAINT FACILITY, 41ST STREET  
EMERYVILLE, CALIFORNIA**

**PREPARED FOR**

**ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH  
HAZARDOUS MATERIALS DIVISION**

**AND**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**PREPARED**

**BY**

**ENVIRONMENTAL STRATEGIES CORPORATION**

**MARCH 7, 1994**



**ENVIRONMENTAL**  

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## Introduction

This report has been prepared by Environmental Strategies Corporation (ESC) on behalf of Grow Group, Inc., for submission to the Alameda County Department of Environmental Health (Alameda DEH) and the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. It presents an evaluation of groundwater sampling and elevation data collected in the vicinity of the former Boysen Paint facility located at 41st Street in Emeryville, California. These activities were performed in accordance with the recommendations outlined in the "Underground Storage Tank Closure and Supplemental Soil and Groundwater Investigation Report," dated, August 16, 1993, for the former Boysen Paint facility.

An underground storage tank formerly owned and used by Boysen Paint Co., was formally closed in-place on May 20, 1993. A total of four groundwater monitoring wells have been installed in the vicinity of the tank to investigate the extent of volatile organic compounds (VOC) and total petroleum hydrocarbon (TPH) compounds in the groundwater beneath the site.

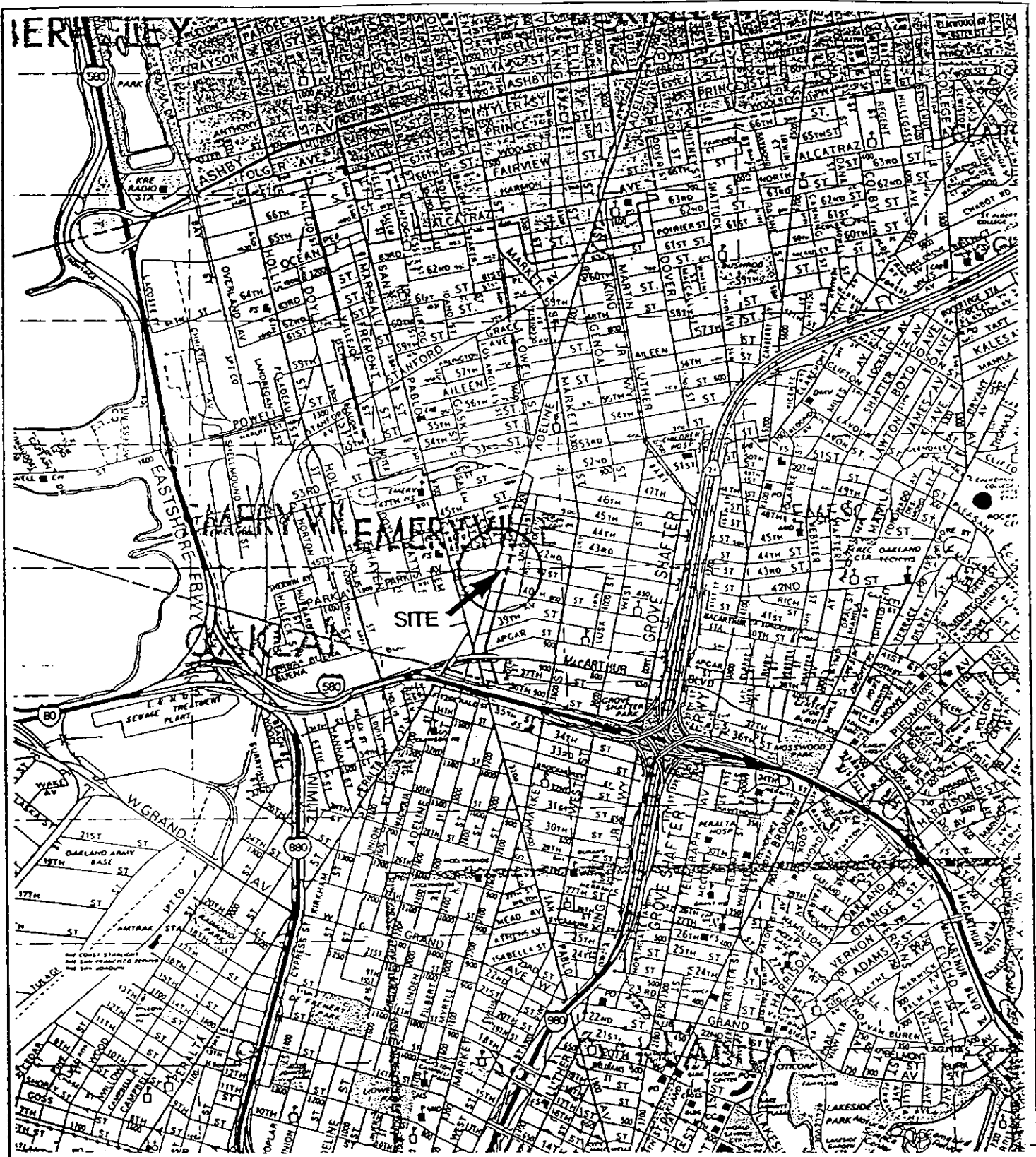
On June 10, 1993, and September 29, 1993, groundwater monitoring in the vicinity of the site was performed by ESC. Groundwater samples were collected from the monitoring wells located on the California Linen property (MW-1 and MW-2), the Oakland National Engravers (ONE) property (MWLD-4), the former Dunne Quality Paint property (MWD-1 and MWD-2), the Grow Group monitoring wells MWB-1, MWB-2, MWB-3, and MWB-4. Laboratory analyses were performed on groundwater samples collected from the nine wells. Analytical results for the June 10, 1993, sampling event were presented in the August 16, 1993, closure report. This report presents the field procedures and results of the groundwater investigation performed on September 29, 1993. It also presents an evaluation of the monthly groundwater elevation data collected from these wells over the last five months.

### Site Description

The site was formerly owned by Boysen Paint Company, which ceased operations in the early 1980s and was subsequently merged into the Ameritone Paint Corporation, a wholly owned subsidiary of

Grow Group, Inc. The site is now owned by Mr. and Mrs. Edward Kozel and operated by ONE. The property also contains a furniture restoration shop known as Rockridge Furniture Refinishing. The closed tank is located on the north side of 41st Street, approximately 125 feet east of its intersection with Adeline Street in Emeryville, California, (Figure 1). The tank was installed under the sidewalk between the rear of the brick building owned by ONE and occupied by Rockridge and the northern curb of 41st Street (Figure 2). Boysen formerly used the tank to store mineral spirits for manufacturing paint.

*former*  
*no*



Source: The Thomas Guide, 1988, Alameda and Contra Costa Counties Street & Directory

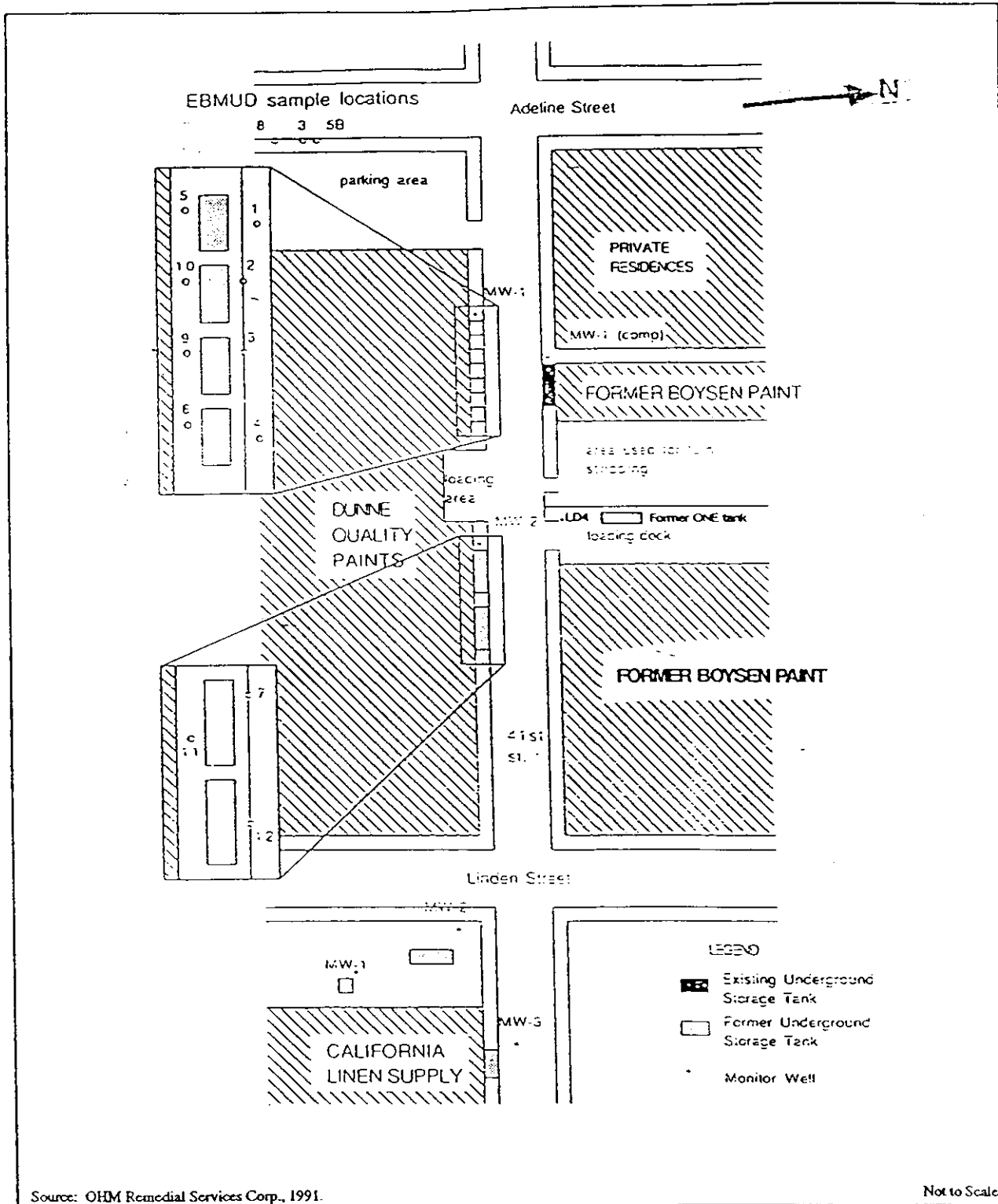


Scale: 1 inch = 2,200 feet



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Figure 1  
 Site Location  
 Former Boysen Paint Company  
 Emeryville, California



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Figure 2  
Site Layout  
Former Boysen Paint Company  
Emeryville, California

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## Groundwater Investigation

### **Groundwater Sampling Procedures**

Groundwater sampling was performed on September 29, 1993. Samples were collected from monitoring wells located on the California Linen property (MW-1 and MW-2), ONE property (MWLD-4), the former Dunne Quality Paint property (MWD-1 and MWD-2), and the Grow Group, Inc. monitoring wells MWB-1, MWB-2, MWB-3, and MWB-4 (Figure 3). All wells were purged of at least three well casing volumes of water before a sample was collected. Well sampling logs are provided in Appendix A. Purged water was collected in 55-gallon Department of Transportation-DOT approved drums stored in a secure area and subsequently disposed in accordance with all EPA and DOT regulations.

The wells were purged with bailers decontaminated in Alcanox and water samples were collected with disposable bailers. Samples to be analyzed for VOCs were collected in volatile organic analysis vials without headspace to avoid volatilization. Sample containers were labeled and placed on ice immediately after collection. All EPA chain-of-custody handling and transporting procedures were followed. The groundwater samples were analyzed for VOCs by EPA Method 8240 and for TPH as mineral spirits by modified EPA Method 8015 at Anametrix Laboratory, San Jose, California, a California State Certified laboratory. Analytical results for groundwater are summarized in Table 1 and provided in Appendix B.

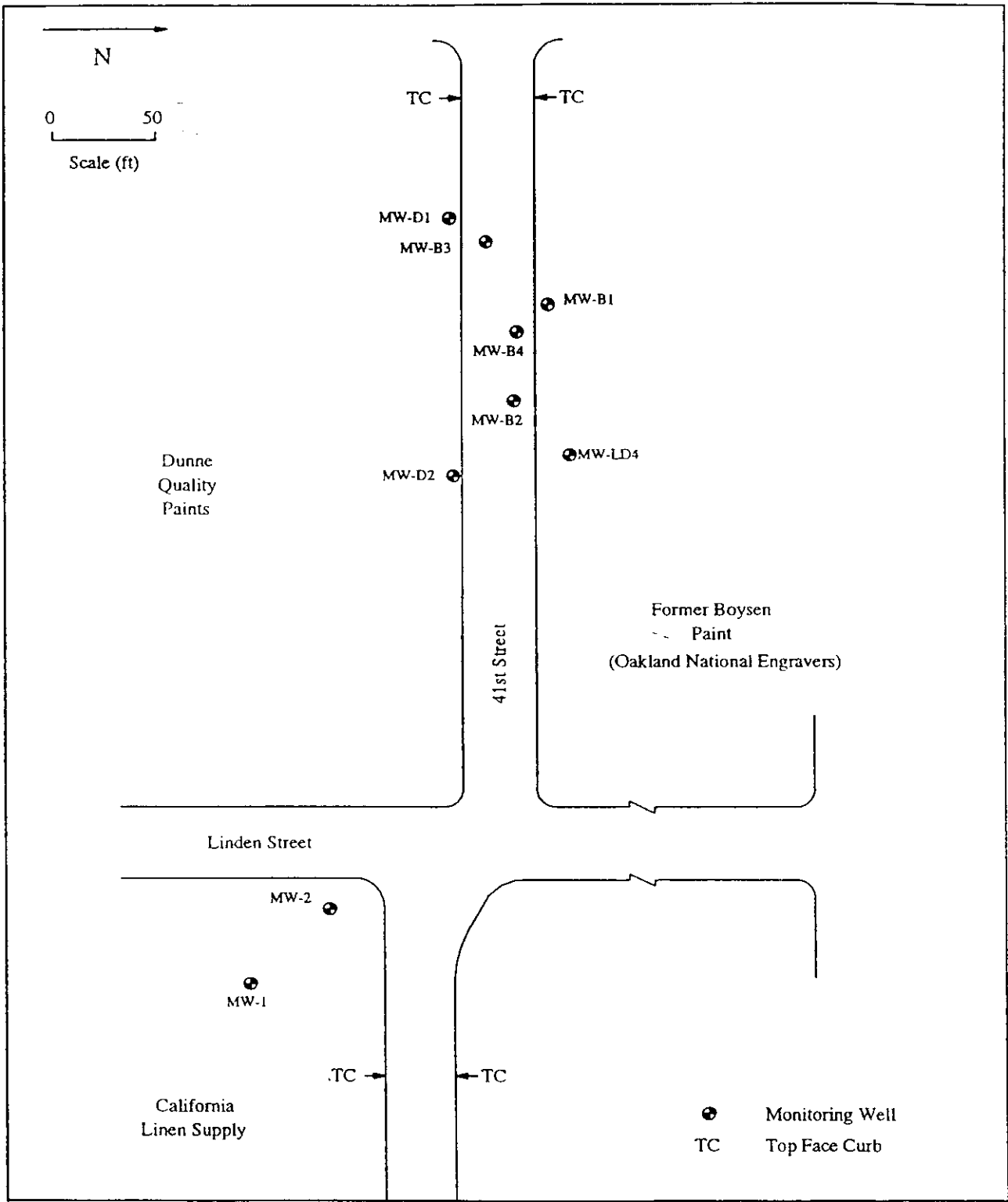
### **Groundwater Gradient**

Groundwater levels in the nine monitoring wells were measured on June 10, July 8, August 2, September 29, October 20, and November 23, 1993, (Table 2). Field measurements are documented on the well sampling forms (Appendix A). Groundwater contour maps for each of the measuring events are presented on figures 4 through 9.

Groundwater levels were measured using an electrically activated audible water level indicator accurate to 0.01 inch. To avoid the possibility of introducing contamination from one well to

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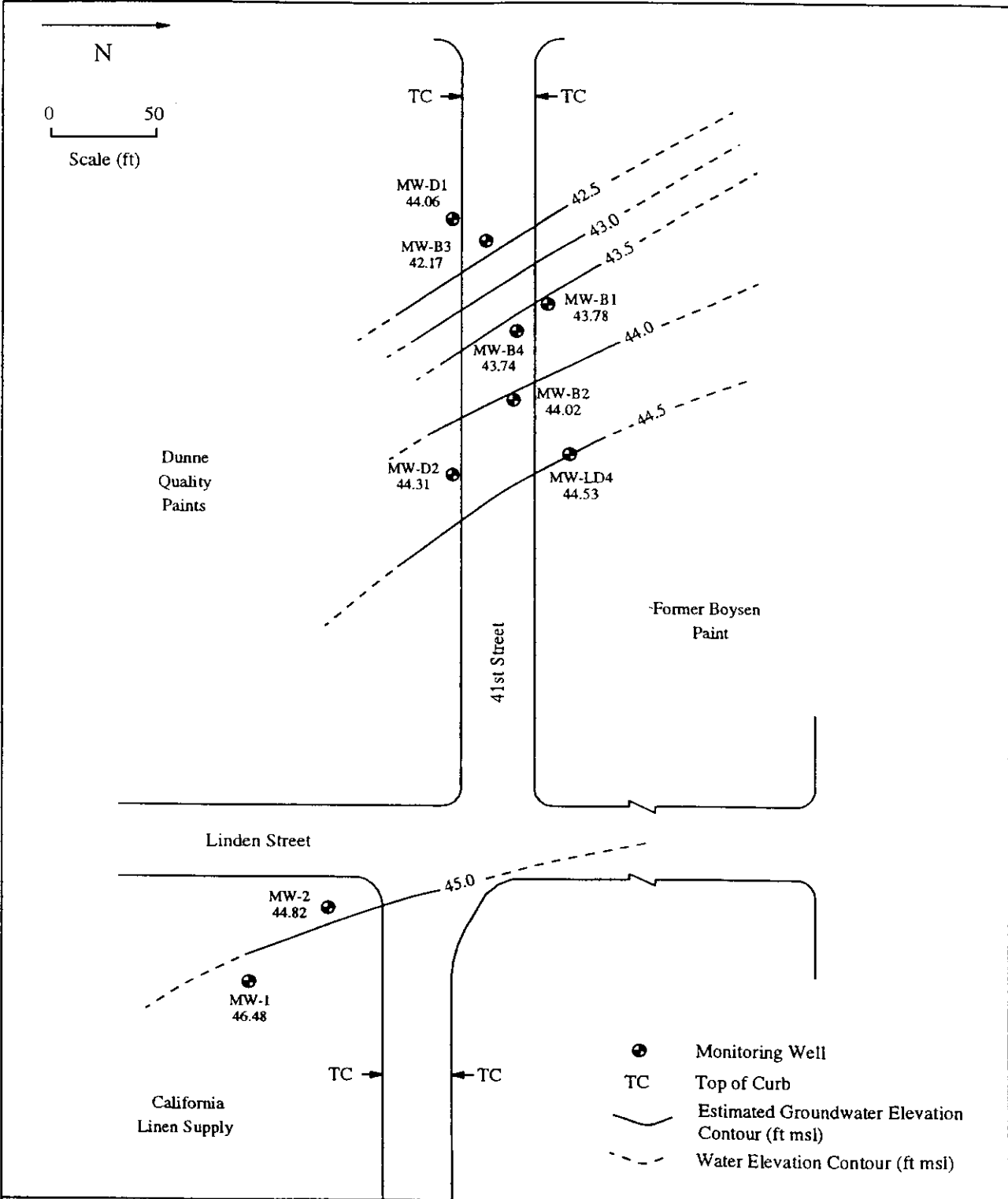





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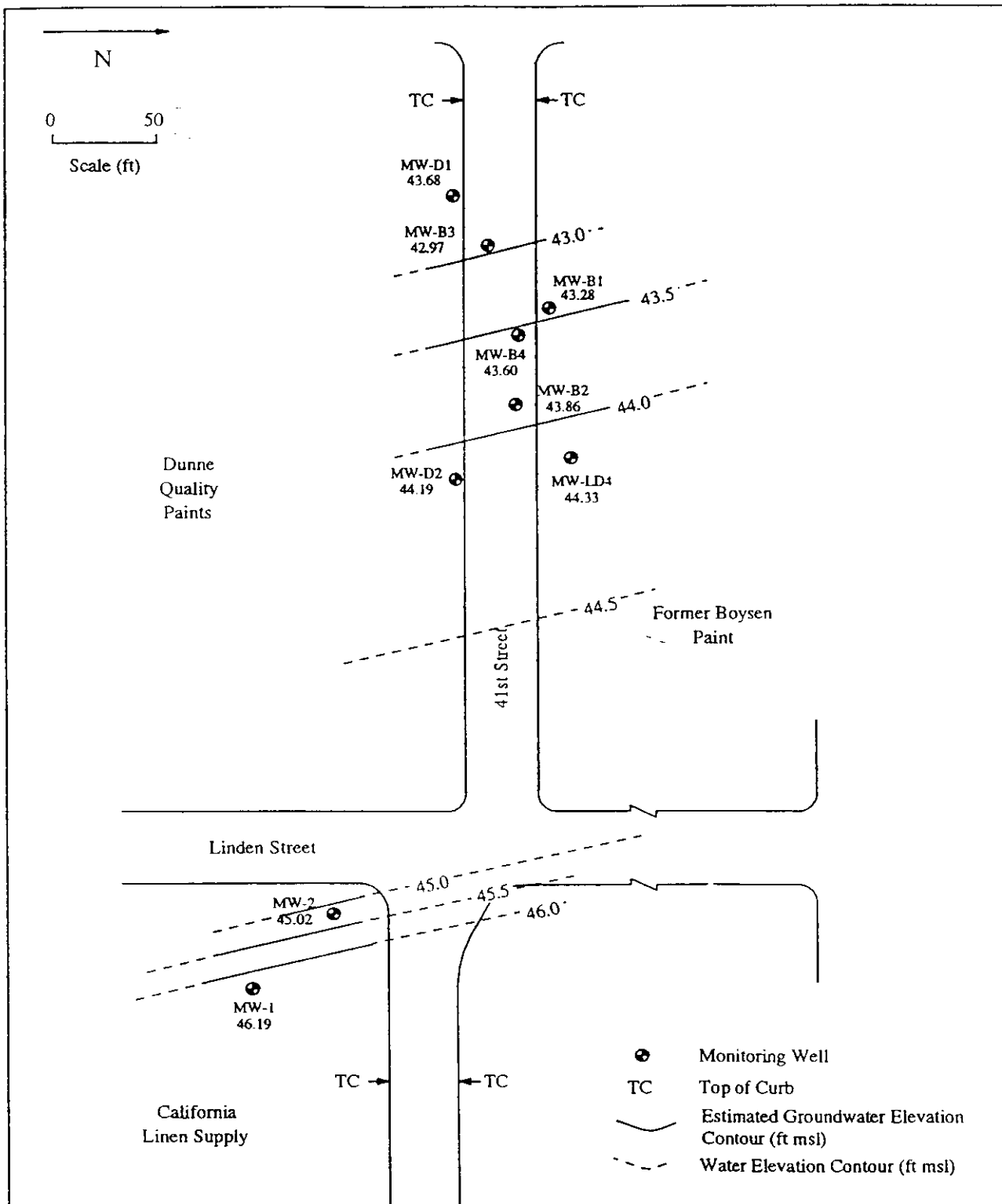
Figure 3  
 Locations of Monitoring Wells  
 Former Boysen Paint Company  
 Emeryville, California

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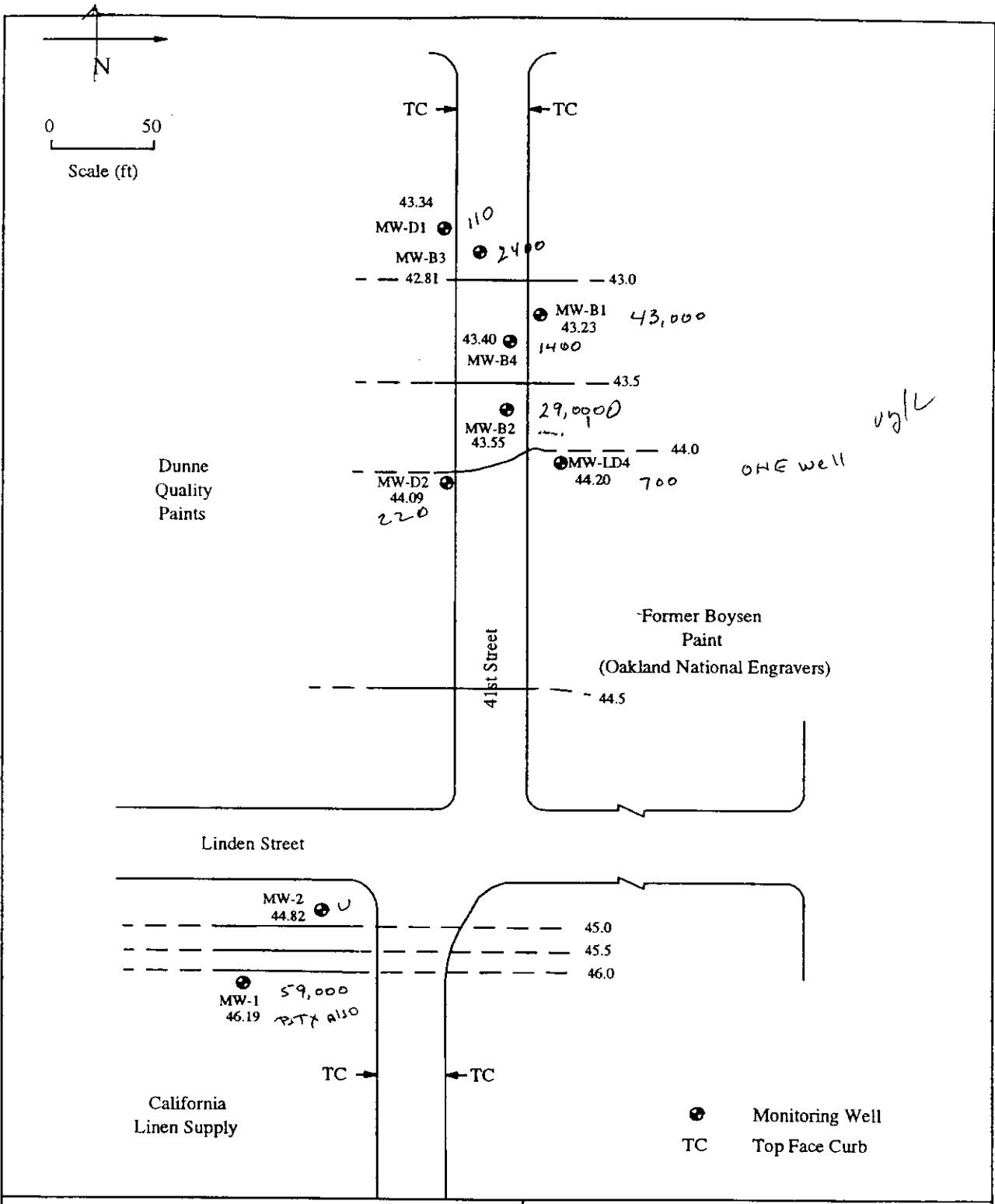
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**Figure 4**  
 Groundwater Elevation Contour, June 10, 1993  
 Former Boysen Paint Company  
 Emeryville, California



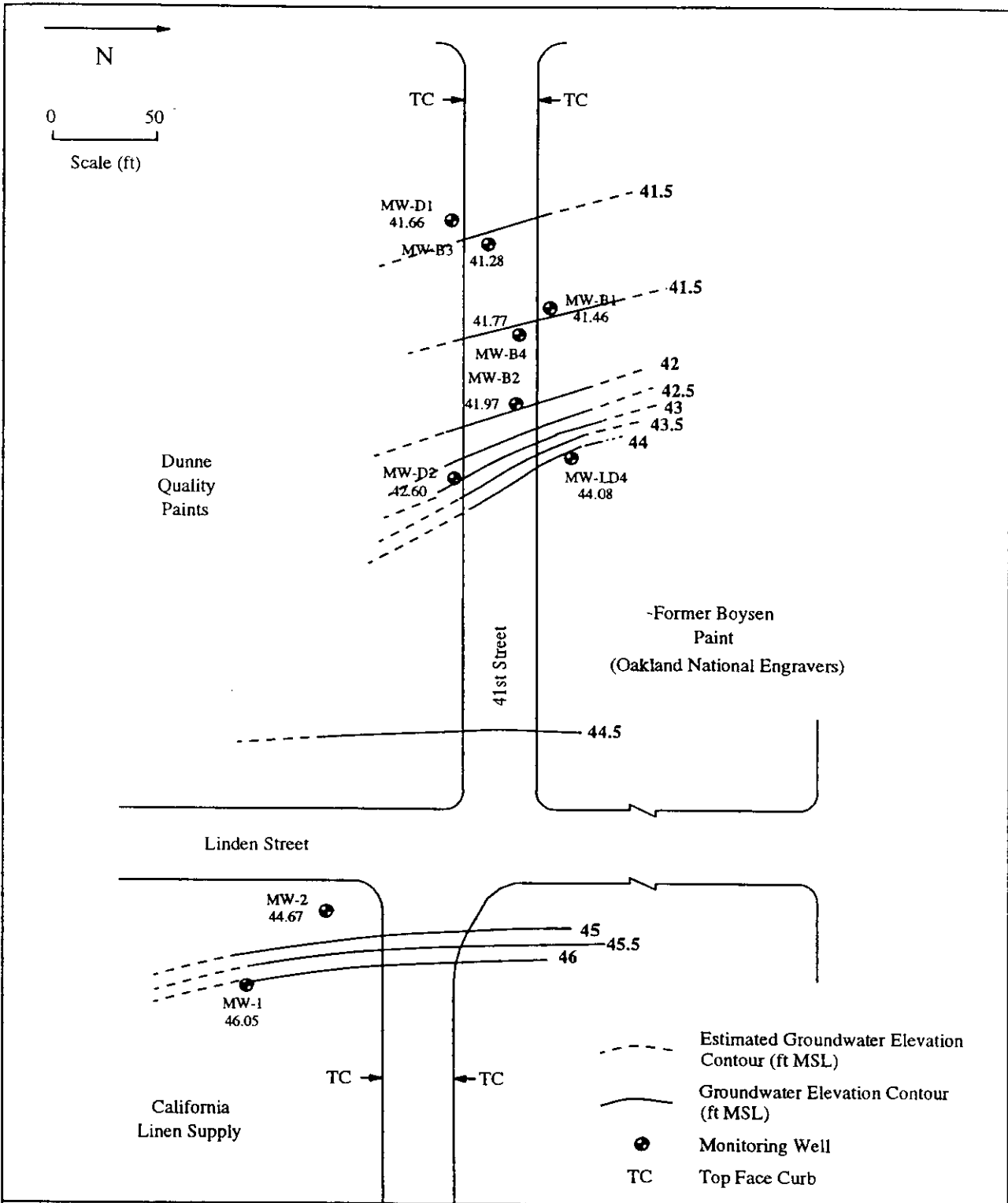
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Figure 5  
 Groundwater Elevation Contour, July 8, 1993  
 Former Boysen Paint Company  
 Emeryville, California



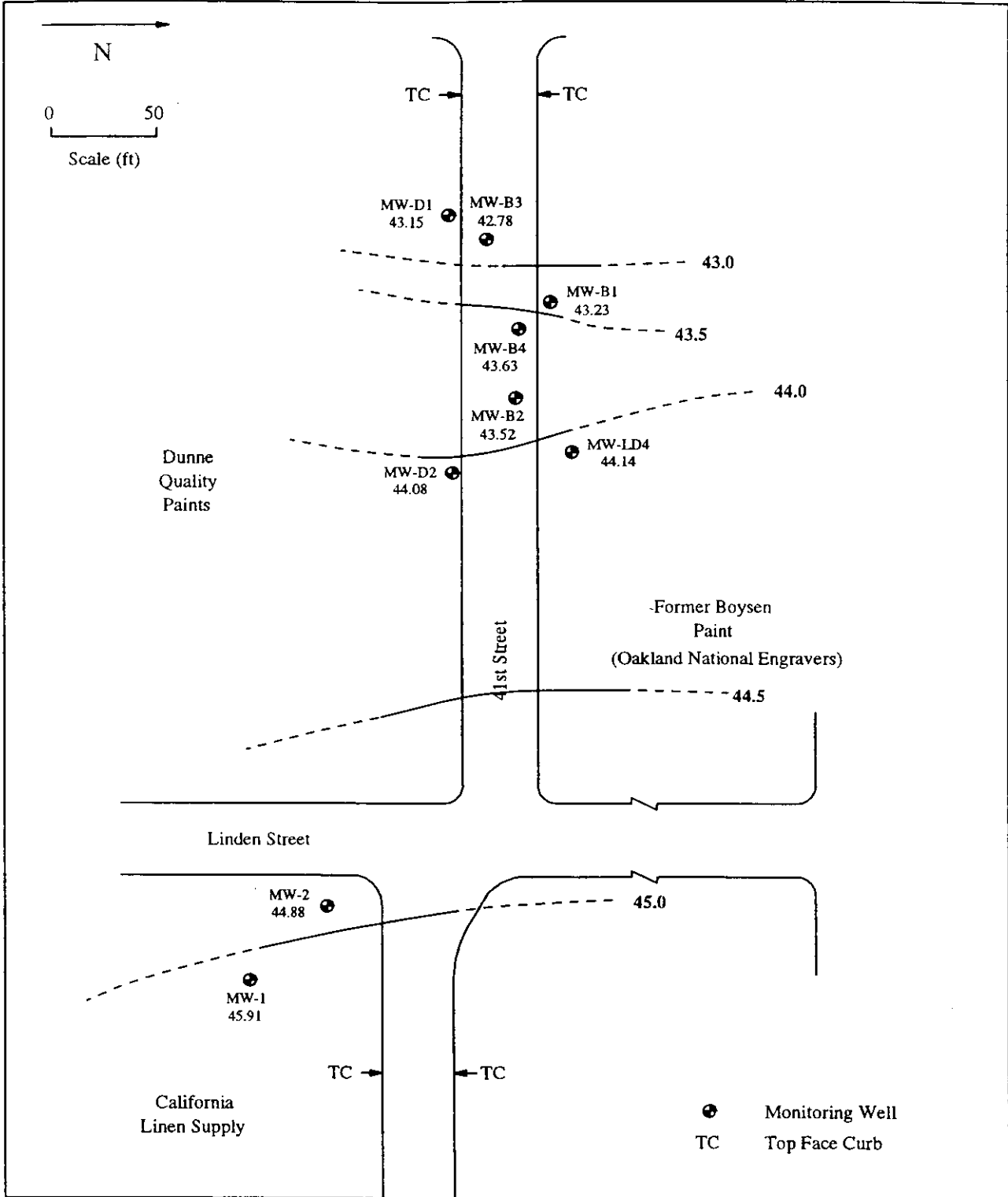
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Figure 6  
 Groundwater Elevation Contour, August 24, 1993  
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 Emeryville, California



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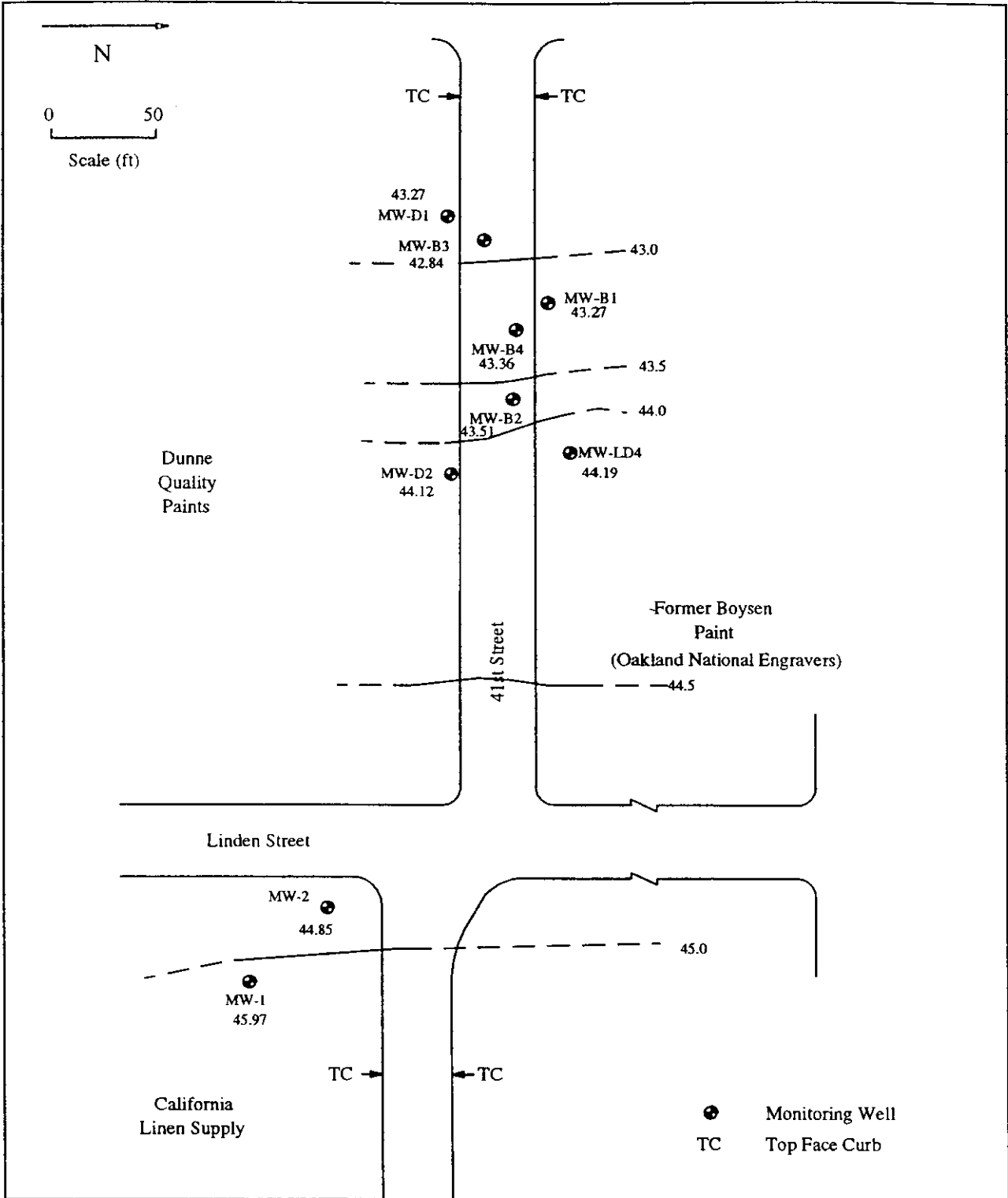
Figure 7  
 Groundwater Elevation Contour,  
 September 29, 1993  
 Former Boysen Paint Company  
 Emeryville, California



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Figure 8  
 Groundwater Elevation Contour, October 20, 1993  
 Former Boysen Paint Company  
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Figure 9  
 Groundwater Elevation Contour,  
 November 23, 1993  
 Former Boysen Paint Company  
 Emeryville, California

**Table 1**  
**Groundwater Sampling Results**  
**Grow Group**  
**Emeryville Regional Area**  
**Emeryville, California**  
**September 29, 1993 (ug/l) (a)**

<u>Analyte</u>	<u>MW-1</u>	<u>MW-2</u>	<u>MWB-1</u>	<u>MWB-2</u>	<u>MWB-3</u>	<u>MWB-4</u>	<u>MWD-1</u>	<u>MWD-2</u>	<u>MWLD-4</u>
Volatiles									
Benzene	7100	5U	25U	500U	5U	5U	5U	5U	5U
Toluene	5700	5U	25U	500U	5U	5U	5U	5U	5U
Ethylbenzene	1800	5U	25U	500U	5U	5U	5U	5U	5U
Xylenes	7900	5U	25U	500U	5U	5U	5U	5U	5U
<b>TPH (mineral spirits)</b>	59000	50U	43000	290000	2400	1400	110	220	700

a\U=undetected; NA=not analyzed



Table 1 (cont)

Groundwater Sampling Results  
 Grow Group  
 Emeryville Regional Area  
 Emeryville, California  
 September 29, 1993 (ug/l) (a)

<u>Analyte</u>	<u>200</u> <u>(Dup MWB-1)</u>	<u>201</u> <u>(EB)</u>
Volatiles		
Benzene	50U	5U
Toluene	50U	5U
Ethylbenzene	50U	5U
Xylenes	50U	5U
TPH (mineral spirits)	25000	NA

a\U=undetected; NA=not analyzed

Table 2

**Groundwater Elevations at the  
Grow Group Regional Study Area in  
Emeryville, California  
1993**

<u>Well No.</u>	<u>Date</u>	<u>Bottom of Well (ft)</u>	<u>Top of Casing Elevation (ft MSL)</u>	<u>Depth to Water (ft)</u>	<u>Groundwater Elevation (ft MSL)</u>
MWB-1	June 10, 1993	19.88	49.92	6.14	43.78
MWB-1	July 8, 1993		49.92	6.64	43.28
MWB-1	August 24, 1993		49.92	6.69	43.23
MWB-1	September 29, 1993		49.92	8.46	41.46
MWB-1	October 20, 1993		49.92	6.69	43.23
MWB-1	November 23, 1993		49.92	6.65	43.27
MWB-2	June 10, 1993	23.35	50.77	6.75	44.02
MWB-2	July 8, 1993		50.77	6.91	43.86
MWB-2	August 24, 1993		50.77	7.22	43.55
MWB-2	September 29, 1993		50.77	8.80	41.97
MWB-2	October 20, 1993		50.77	7.25	43.52
MWB-2	November 23, 1993		50.77	7.26	43.51
MWB-3	June 10, 1993	20.88	49.02	6.85	42.17
MWB-3	July 8, 1993		49.02	6.05	42.97
MWB-3	August 24, 1993		49.02	6.21	42.81
MWB-3	September 29, 1993		49.02	7.74	41.28
MWB-3	October 20, 1993		49.02	6.24	42.78
MWB-3	November 23, 1993		49.02	6.18	42.84
MWB-4	June 10, 1993	21.50	49.74	6.00	43.74
MWB-4	July 8, 1993		49.74	6.14	43.60
MWB-4	August 24, 1993		49.74	6.34	43.40
MWB-4	September 29, 1993		49.74	7.97	41.77
MWB-4	October 20, 1993		49.74	6.11	43.63
MWB-4	November 23, 1993		49.74	6.38	43.36
MWD-1	June 10, 1993	12.50	49.35	5.29	44.06
MWD-1	July 8, 1993		49.35	5.67	43.68
MWD-1	August 24, 1993		49.35	6.01	43.34
MWD-1	September 29, 1993		49.35	7.69	41.66
MWD-1	October 20, 1993		49.35	6.20	43.15
MWD-1	November 23, 1993		49.35	6.08	43.27
MWD-2	June 10, 1993	12.55	50.56	6.25	44.31
MWD-2	July 8, 1993		50.56	6.37	44.19
MWD-2	August 24, 1993		50.56	6.47	44.09
MWD-2	September 29, 1993		50.56	7.96	42.60
MWD-2	October 20, 1993		50.56	6.48	44.08
MWD-2	November 23, 1993		50.56	6.44	44.12

Table 2 (cont)

Groundwater Elevations at the  
Grow Group Regional Study Area in  
Emeryville, California  
1993

<u>Well No.</u>	<u>Date</u>	<u>Bottom of Well (ft)</u>	<u>Top of Casing Elevation (ft MSL)</u>	<u>Depth to Water (ft)</u>	<u>Groundwater Elevation (ft MSL)</u>
MW-1	June 10, 1993	22.00	53.89	7.41	46.48
MW-1	July 8, 1993		53.89	7.70	46.19
MW-1	August 24, 1993		53.89	7.70	46.19
MW-1	September 29, 1993		53.89	7.84	46.05
MW-1	October 20, 1993		53.89	7.98	45.91
MW-1	November 23, 1993		53.89	7.92	45.97
MW-2	June 10, 1993	22.60	54.06	9.24	44.82
MW-2	July 8, 1993		54.06	9.04	45.02
MW-2	August 24, 1993		54.06	9.24	44.82
MW-2	September 29, 1993		54.06	9.39	44.67
MW-2	October 20, 1993		54.06	9.18	44.88
MW-2	November 23, 1993		54.06	9.21	44.85
LD-4	June 10, 1993	10.60	51.51	6.98	44.53
LD-4	July 8, 1993		51.51	7.18	44.33
LD-4	August 24, 1993		51.51	7.31	44.20
LD-4	September 29, 1993		51.51	7.43	44.08
LD-4	October 20, 1993		51.51	7.37	44.14
LD-4	November 23, 1993		51.51	7.32	44.19

after each well was sounded and the data were recorded, the instrument's tape and probe were decontaminated using a deionized water rinse. In general, it appears that groundwater at the site flows in a westerly direction (Figures 4, 5, 6, 7, 8, and 9).

A groundwater well survey was conducted by ESC on August 20, 1993. ESC reviewed the Alameda County well inventory reports, attempting to locate any wells within a one mile radius of the site. The inventory included domestic wells, inactive wells, industrial wells, irrigation wells, monitoring wells, municipal wells, stock wells, piezometers and cathodic protection wells. Additional wells located near the Emeryville site may assist in developing the north-south component for the groundwater gradient. The groundwater well survey did not present any helpful information that could be used in determining the north-south component of the groundwater gradient. The survey did not reveal any wells within a 1-mile radius of the site.

Groundwater elevations ranged from 5.29 feet below the ground surface (bgs) to 9.39 feet bgs, declined during the months of June through September. Groundwater elevations declined an average of 1.25 feet over this four month period. This drop in groundwater elevation can be attributed to the seasonal variation in rainfall. Water elevation readings collected in October and November indicate an increase in groundwater elevation of approximately 1.5 feet. The increase in groundwater elevation for the month of October and November may be attributed to recharge in the regional aquifer caused by rain between mid September and mid October.

The validity of the groundwater elevations and sampling data appear to be compromised due to the construction of three wells. Information from site personnel at ONE and from correspondence from James D. Parker of Hunter Environmental Services, Inc., indicates that MWLD-4, MWD-1, and MWD-2 were constructed directly in the excavations of the former ONE and former Dunne Quality Paint underground storage tank removals. The wells are screened within the non-native fill material used to backfill the excavations. As a result, the groundwater elevations and groundwater quality data from these

wells are not likely to be representative of actual groundwater conditions in the surficial aquifer. Data from these wells was not used to plot the groundwater gradient contours on Figures 4 through 9 in this report.

## **Groundwater Sampling Results**

### Monitoring Well MW-1

MW-1 is located upgradient of the Boysen tank on the California Linen property. The sample from MW-1 contained benzene at 7,100 µg/l, which is well above the California state maximum contaminant level (MCL) of 1 µg/l. Ethylbenzene was detected at 1,800 µg/l, above the state MCL of 680 µg/l. Total xylenes were detected at 7,900 µg/l, above the state MCL of 1,750 µg/l. Toluene was detected at 5,700 µg/l, above the state action level of 100 µg/l. TPH were detected in well MW-1 at 59,000 µg/l as mineral spirits.

### Monitoring Well MW-2

MW-2 is located upgradient from the former Boysen tank and west of well MW-1 on the California Linen property. The sample collected from MW-2 contained no VOCs at concentrations above the state MCLs. Benzene was not detected at a detection limit of 2.0 µg/l. No TPH were detected.

### Monitoring Well MWD-1

MWD-1 is located on the south side of 41st Street, downgradient from the former underground storage tanks on the former Dunne Quality Paint property. The sample collected from MWD-1 contained no VOCs at concentrations above the state MCLs. Benzene was not detected at a detection limit of 5.0 µg/l. TPH were detected in the monitoring well at a concentration of 110 µg/l as mineral spirits.

### Monitoring Well MWD-2

MWD-2 is located on the south side of 41st Street upgradient of MWD-1 and the former underground storage tanks on the Dunne Quality Paint property. The sample collected from MWD-2 contained no VOCs at concentrations above the state MCLs. Benzene was not detected at a detection limit of 5.0 µg/l. TPH were detected in the monitoring well at a concentration of 220 µg/l as mineral spirits.

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#### Monitoring Well MWLD-4

MWLD-4 is located on the north side of 41st Street, upgradient from the former underground storage tank on the ONE property. The sample collected from MWLD-4 contained no VOCs at concentrations above the state MCLs. Benzene was not detected at a detection limit of 5.0 µg/l. TPH were detected at a concentration of 700 µg/l as mineral spirits.

#### Monitoring Well MWB-1

MWB-1 is located adjacent to and generally downgradient of the former Boysen tank on the sidewalk next to the former Boysen Paint Company. The sample collected from MWB-1 contained no VOCs at concentrations above the state MCLs. Benzene was not detected at the detection limit of 25 µg/l. TPH were detected at a concentration of 43,000 µg/l as mineral spirits.

#### Monitoring Well MWB-2

MWB-2 is located generally upgradient of the former Boysen tank. The sample collected from MWB-2 contained no VOCs at concentrations above the state MCLs. Benzene was not detected at a detection limit of 500 µg/l. TPH were detected at 290,000 µg/l as mineral spirits.

#### Monitoring Well MWB-3

MWB-3 is located between the former Boysen tank and the former Dunne Quality Paint former tanks on 41st Street. The sample collected from MWB-3 contained no VOCs at concentrations above the state MCLs. Benzene was not detected at a detection limit of 5 µg/l. TPH were detected at 2,400 µg/l as mineral spirits.

#### Monitoring Well MWB-4

MWB-4 is located south of the former Boysen tank and between the former Dunne Quality Paint tanks on 41st Street. The sample collected from MWB-4 contained no VOCs at concentrations above the state MCLs. Benzene was not detected at a detection limit of 5 µg/l. TPH were detected at 1,400 µg/l as mineral spirits.

## Summary of Groundwater Sampling Results

The data collected on September 29, 1993, from the nine local groundwater monitoring wells indicate that except in the vicinity of MW-1, there are no VOCs in the area. MW-1 contained levels of VOCs that appear to indicate the presence of a gasoline product. Levels as high as 7,100 µg/l of benzene were detected in MW-1. Sampling results for the September 1993 event are consistent with the concentration of contaminants detected during the June 10, 1993, sampling event.

Groundwater samples collected from the nine local monitoring wells contained TPH as mineral spirits at concentrations from undetectable (detection limit = 50 µg/l) to 290,000 µg/l. Results from the supplemental groundwater investigation indicate that an area wide groundwater quality problem exists.

TPH as mineral spirits are generally the same in concentration when compared to the analytical data collected on June 10, 1993. However, well MWB-2 has gone up two orders of magnitude in concentration, from 3,800 to 290,000 µg/l. Although MWD-2 and LD-4 have decreased in concentration (MWD-2 was 9,100 µg/l in June and is 220 µg/l in September) and (LD-4 was 21,000 µg/l in June and is 700 µg/l in September), the unconventional construction of these wells makes it difficult to determine the actual effects on groundwater that may have resulted from the former Dunne and ONE underground tanks.

## Quality Assurance and Quality Control

ESC's Quality Assurance Officer (QAO) is responsible for establishing data quality requirements and detection limits for the analyses. The QAO is responsible for ensuring that quality assurance goals are met during the investigation. The QAO serves as the overall quality control coordinator for sampling and analysis, and works closely with the contract analytical laboratory to facilitate the planned sampling and analytical activities. The QAO's overall responsibilities include, but are not limited to, sampling quality control, laboratory quality control, data processing quality control, data quality review, performance auditing, systems auditing, and overall quality assurance. The QAO specifies the protocol for duplicate samples, equipment blanks, and field blanks.

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The Quality Assurance Quality Control (QA/QC) program evaluated chemical data using three types of controlled samples, travel blanks, duplicates, and equipment blanks. A discussion of these types of samples are as follows:

- **Travel blanks:** Travel blanks are intended to evaluate whether the laboratory or field procedures represent a possible source of contamination of the field samples. Travel blanks are QA/QC samples prepared by the laboratory that are transferred with the field samples and are submitted from the field to the laboratory for appropriate chemical analyses. The travel blank, identified as trip blank, in the sample batch was analyzed by EPA method 8240 and was free of any analytes. Indicating that the sample batch was not cross contaminated during transit.
- **Equipment blanks:** Equipment blanks are QA/QC samples prepared in the field by pouring organic-free or distilled water over the sampling equipment and submitted to the laboratory for appropriate chemical analyses. The equipment blank identified as 201 was submitted blind, analyzed by EPA method 8240 and was free of any analytes. Indicating that the equipment used to collect samples from the wells were not contaminated.
- **Duplicates:** Duplicate samples are intended to evaluate data precision. Field duplicates are QA/QC samples collected in series from the same location using the same sampling method. Both samples are submitted to the laboratory for appropriate chemical analyses. The duplicate sample identified as 200 was collected from well MWB-1, submitted blind and analyzed by EPA method modified 8015 for mineral spirits. The duplicate sample indicated good laboratory quality precision.

The QAO's report for the investigation are included in Appendix C.



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Appendix A - Well Sampling Logs

# Environmental Strategies Corporation

## Water Sampling Form

Sample Desig. 2010-01 Job / task # CA921-07 Sampled By HL  
 Sample Type MW Site Name Flow 6100-F Date 3/24/07  
(monitoring well, treatment syst., etc.)  
 Sample Method 60'  
 Field Conditions Clear water 70°

### Water Level Information

Measuring Point 70C Instrument Used Soloinst W.L. for 80% recovery \_\_\_\_\_  
(mp, TOC, north point TOC, etc.)  
 W.L. Before Purge 993 W.L. After purge 996 W.L. Time of Sample \_\_\_\_\_  
 Time 15:10 Time \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

### Purge Information

Purge Start \_\_\_\_\_ Purge Device PVC BAILER  
 Well Depth 10.0 Screened Interval \_\_\_\_\_  
 Well Dia. \_\_\_\_\_ Purge Calculation 10.0 - 1.96 = 8.04 Actual Amt. Removed 5 gal  
(well depth - depth to water) X # of casing Vol. = Purge Vol.

#### Purge Volume Multipliers

Casing Dia.	1 Casing Vol.	3 Casing Vol.	5 Casing Vol.
1.0	0.04	0.12	0.20
2.0	0.16	0.49	0.82
3.0	0.37	1.10	1.84
3.5	0.50	1.50	2.50
4.0	0.65	1.96	3.26
4.5	0.83	2.48	4.13
6.0	1.47	4.41	7.34
8.0	2.61	7.83	13.06
10.0	4.08	12.24	20.40

#### QA/QC Information

	X if Present	Sample Designation
Trip blank	X	TRIP BLANK
Duplicate		
Field blank		
Q.C. Spike		
Other	X	201 (EG on bailer)

### Parameter Readings/Notes

Time	Amt. remv'd	Temp.	Cond.	pH	Turb.	Observations/Notes
15:10	5 gal	70°F	950	7.2		odor

### Sample / Lab Information

Sample Time 15:10 Sampling Device DISP  
 Laboratory name and Location : ANAMETRIX, SAN JOSE

Analysis	Container(s)	No.	Volume	Preservative	Filtration
2240	plastic	2	40 ml	HCL	
2245	plastic	2	40 ml	HCL	

### Decon. Information

Purge Device(s) / Equipment STEAM / RINSE (briefly describe) \_\_\_\_\_  
 Sampling Device(s) / Equipment N/A

# Environmental Strategies Corporation

## Water Sampling Form

Sample Desig. MW-2 Job / task # CA821-07 Sampled By EL  
 Sample Type MW Site Name Grow Group Date 9.20.03  
(monitoring well, treatment syst., etc.)  
 Sample Method Bail  
 Field Conditions Clear water 80°F

### Water Level Information

Measuring Point TOC Instrument Used Solinst W.L. for 80% recovery \_\_\_\_\_  
(imp. TOC, north point TOC, etc.)  
 W.L. Before Purge 9.39 W.L. After purge \_\_\_\_\_ W.L. Time of Sample \_\_\_\_\_  
 Time 1040 Time \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

### Purge Information

Purge Start 1230 Purge Device PVC  
 Well Depth 22.5 Screened Interval \_\_\_\_\_  
 Well Dia. 1" Purge Calculation 22.5 - 8.30 = 14.20 Actual Amt. Removed 25 gal  
(well depth - depth to water) X # of casing Vol. = Purge Vol.

### Purge Volume Multipliers

Casing Dia.	1 Casing Vol.	3 Casing Vol.	5 Casing Vol.
1.0	0.04	0.12	0.20
2.0	0.16	0.49	0.82
3.0	0.37	1.10	1.84
3.5	0.50	1.50	2.50
4.0	0.65	<u>1.96</u>	<u>3.26</u>
4.5	0.83	2.48	4.13
6.0	1.47	4.41	7.34
8.0	2.61	7.83	13.06
10.0	4.08	12.24	20.40

### QA/QC Information

	X if Present	Sample Designation
Trip blank	_____	_____
Duplicate	_____	_____
Field blank	_____	_____
Q.C. Spike	_____	_____
Other	<u>X</u>	<u>EB (on bail)</u>

### Parameter Readings/Notes

Time	Amt. rem'd	Temp.	Cond.	pH	Turb.	Observations/Notes
1410	25 gal	71.8	519	7.04		clear, No color No Show

Sample Time 1410 Sample / Lab Information \_\_\_\_\_ Sampling Device DISP

Laboratory name and Location : ANAMETRIX, SAN JOSE

Analysis	Container(s)	No.	Volume	Preservative	Filtration
8240	VOA	3	40 ml	HCl	N/A
MCD 8015	"	"	"	"	"

### Decon. Information

Purge Device(s) / Equipment STEAM / RINSE (briefly describe) \_\_\_\_\_  
 Sampling Device(s) / Equipment N/A

# Environmental Strategies Corporation

## Water Sampling Form

Sample Desig. CRP-1 Job / task # CRP-03 Sampled By RL  
 Sample Type Monitoring well Site Name Empire State 415 Street Date 2/1/07  
 (monitoring well, treatment syst., etc.)  
 Sample Method Grab  
 Field Conditions Clear cool 70°F

### Water Level Information

Measuring Point TCL north Instrument Used Soloinst W.L. for 80% recovery \_\_\_\_\_  
 (mp, TOC, north point TOC, etc.)  
 W.L. Before Purge 9.46 W.L. After purge \_\_\_\_\_ W.L. Time of Sample \_\_\_\_\_  
 Time \_\_\_\_\_ Time \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

### Purge Information

Purge Start 1008 Purge Device PVC  
 Well Depth 9.77 Screened Interval \_\_\_\_\_  
 Well Dia. 5 Purge Calculation 9.77 x 0.15 = 1.46 Actual Amt. Removed 1.46 gal  
(well depth-depth to water) X # of casing Vol. = Purge Vol.

### Purge Volume Multipliers

Casing Dia.	1 Casing Vol.	3 Casing Vol.	5 Casing Vol.
1.0	0.04	0.12	0.20
2.0	0.16	0.49	0.82
3.0	0.37	1.10	1.84
3.5	0.50	1.50	2.50
4.0	0.65	1.96	3.26
4.5	0.83	2.48	4.13
6.0	1.47	4.41	7.34
8.0	2.61	7.83	13.06
10.0	4.08	12.24	20.40

### QA/QC Information

	X if Present	Sample Designation
Trip blank		
Duplicate	X	<u>200 8015 + 8240</u>
Field blank		
Q.C. Spike		
Other	X	<u>CB m bails (201)</u>

### Parameter Readings/Notes

Time	Amt. remv'd	Temp.	Cond.	pH	Turb.	Observations/Notes
<u>10:46</u>	<u>Subs</u>	<u>76°</u>	<u>995</u>	<u>6.70</u>		<u>clear</u>

### Sample / Lab Information

Sample Time 1050 Sampling Device Disposable Bailer  
 Laboratory name and Location: ANAMETRIX SAN JOSE

Analysis	Container(s)	No.	Volume	Preservative	Filtration
<u>8240</u>	<u>3</u>		<u>40 ml</u>	<u>HCL</u>	
<u>mod 8015 mixed spits</u>	<u>3</u>		<u>40 ml</u>	<u>HCL</u>	

### Decon. Information

Purge Device(s) / Equipment STEAM / RINSE (briefly describe)  
 Sampling Device(s) / Equipment N/A

# Environmental Strategies Corporation

## Water Sampling Form

Sample Desig. MWD-2 Job / task # CASZ1-07 Sampled By JWB  
 Sample Type MW Site Name Grain Group Date 9-29-93  
(monitoring well, treatment syst., etc.)  
 Sample Method Bail/Bail  
 Field Conditions clear 78° 10-15 mph

### Water Level Information

Measuring Point No. Point TOC Instrument Used Solinst W.L. for 80% recovery \_\_\_\_\_  
(mp, TOC, north point TOC, etc.)  
 W.L. Before Purge 7.96 W.L. After purge \_\_\_\_\_ W.L. Time of Sample \_\_\_\_\_  
 Time 1007 Time \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

### Purge Information

Purge Start 1516 Purge Device PVC  
 Well Depth 12.55 Screened Interval \_\_\_\_\_  
 Well Dia. 4" Purge Calculation  $(12.55 - 7.96) \cdot 1.96 = 9.0 \text{ gal}$  Actual Amt. Removed 9.5  
(well depth - depth to water) X # of casing Vol. = Purge Vol.

### Purge Volume Multipliers

Casing Dia.	1 Casing Vol.	3 Casing Vol.	5 Casing Vol.
1.0	0.04	0.12	0.20
2.0	0.16	0.49	0.82
3.0	0.37	1.10	1.84
3.5	0.50	1.50	2.50
4.0	0.65	1.96	3.26
4.5	0.83	2.48	4.13
6.0	1.47	4.41	7.34
8.0	2.61	7.83	13.06
10.0	4.08	12.24	20.40

### QA/QC Information

	X if Present	Sample Designation
Trip blank	_____	_____
Duplicate	_____	_____
Field blank	_____	_____
Q.C. Spike	_____	_____
Other	X	<u>201 (EB on bailer)</u>

### Parameter Readings/Notes

Time	Amt. remv'd	Temp.	Coord.	pH	Turb.	Observations/Notes
<u>1530</u>		<u>73.6</u>	<u>4135</u>	<u>7.21</u>		<u>grayish-tan silty</u>

Sample Time 1530 Sample / Lab Information \_\_\_\_\_ Sampling Device DISP

Laboratory name and Location : Anamatrix, San Jose

Analysis	Container(s)	No.	Volume	Preservative	Filtration
<u>8240</u>	<u>VOA</u>	<u>3</u>	<u>40 ml</u>	<u>HCl</u>	<u>N/A</u>
<u>MCA 8015</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>

### Decon. Information

Purge Device(s) / Equipment STEAM / Dismax (briefly describe) \_\_\_\_\_ Sampling Device(s) / Equipment N/A

# Environmental Strategies Corporation

## Water Sampling Form

Sample Desig. MW-1 Job / task # 1A821-07 Sampled By JWB/BBB  
 Sample Type MW Site Name Grow Group Date 9-29-93  
(monitoring well, treatment syst., etc.)  
 Sample Method Bail / Bail  
 Field Conditions Clear 80° 0-5 mph

### Water Level Information

Measuring Point MP Instrument Used Solinst W.L. for 80% recovery \_\_\_\_\_  
(top, TOC, north point TOC, etc.)  
 W.L. Before Purge 7.54 W.L. After purge \_\_\_\_\_ W.L. Time of Sample \_\_\_\_\_  
 Time 1043 Time \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

### Purge Information

Purge Start 1235 Purge Device \_\_\_\_\_  
 Well Depth 22' Screened Interval \_\_\_\_\_  
 Well Dia. 4" Purge Calculation  $(22 - 7.54) \times 1.96 = 27.8$  Actual Amt. Removed 25 gal  
(well depth - depth to water) X # of casing Vol. = Purge Vol.

### Purge Volume Multipliers

Casing Dia.	1 Casing Vol.	3 Casing Vol.	5 Casing Vol.
1.0	0.04	0.12	0.20
2.0	0.16	0.49	0.82
3.0	0.37	1.10	1.84
3.5	0.50	1.50	2.50
4.0	0.65	1.96	3.26
4.5	0.83	2.48	4.13
6.0	1.47	4.41	7.34
8.0	2.61	7.83	13.06
10.0	4.08	12.24	20.40

### QA/QC Information

	X if Present	Sample Designation
Trip blank	_____	_____
Duplicate	_____	_____
Field blank	_____	_____
Q.C. Spike	_____	_____
Other	<input checked="" type="checkbox"/>	<u>ZOI (EB on bottles)</u>

### Parameter Readings/Notes

Time	Amt. remv'd	Temp.	Cond.	pH	Turb.	Observations/Notes
<u>1418</u>	<u>25 gal</u>	<u>67.1</u>	<u>16950</u>	<u>5.79</u>		<u>Mod petric odor, clear</u> <u>Purge water had shown</u>

Sample Time 1418 Sample / Lab Information \_\_\_\_\_ Sampling Device DISP

Laboratory name and Location : Anamix, San Jose

Analysis	Container(s)	No.	Volume	Preservative	Filtration
<u>8240</u>	<u>VOA</u>	<u>3</u>	<u>40 ml</u>	<u>HCl</u>	<u>N/A</u>
<u>MOD 8DIS</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>

### Decon. Information

Purge Device(s) / Equipment Steam / Rinse (briefly describe) \_\_\_\_\_  
 Sampling Device(s) / Equipment N/A

# Environmental Strategies Corporation

## Water Sampling Form

Sample Desig. MWB-2 Job / task # CA821-07 Sampled By BB/5B  
 Sample Type MW Site Name Grow Group Date 9-29-93  
(monitoring well, treatment syst., etc.)  
 Sample Method Bail / Bail  
 Field Conditions \_\_\_\_\_

### Water Level Information

Measuring Point 70C Instrument Used Solinst W.L. for 80% recovery \_\_\_\_\_  
(mp, TOC, north point TOC, etc.)  
 W.L. Before Purge 8.80 W.L. After purge \_\_\_\_\_ W.L. Time of Sample \_\_\_\_\_  
 Time 1004 Time \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

### Purge Information

Purge Start \_\_\_\_\_ Purge Device PVC  
 Well Depth 23.35 Screened Interval \_\_\_\_\_  
 Well Dia. 2" Purge Calculation (23.35 - 8.80) \* 49 = 7.1 Actual Amt. Removed 7.1 gal  
(well depth - depth to water) X # of casing Vol. = Purge Vol.

### Purge Volume Multipliers

Casing Dia.	1 Casing Vol.	3 Casing Vol.	5 Casing Vol.
1.0	0.04	0.12	0.20
2.0	0.16	0.49	0.82
3.0	0.37	1.10	1.84
3.5	0.50	1.50	2.50
4.0	0.65	1.96	3.26
4.5	0.83	2.48	4.13
6.0	1.47	4.41	7.34
8.0	2.61	7.83	13.06
10.0	4.08	12.24	20.40

### QA/QC Information

X if Present	Sample Designation
_____	Trip blank
_____	Duplicate
_____	Field blank
_____	Q.C. Spike
X	Other <u>201 (EB on bail)</u>

### Parameter Readings/Notes

Time	Amt. rem'v'd	Temp.	Cond.	pH	Turb.	Observations/Notes
<u>1210</u>	<u>7.1</u>	<u>71.8</u>	<u>463</u>	<u>6.60</u>		

### Sample / Lab Information

Sample Time 1210 Sampling Device DSP  
 Laboratory name and Location : Anamatrix, San Jose

Analysis	Container(s)	No.	Volume	Preservative	Filtration
<u>8240</u>	<u>VOA</u>	<u>3</u>	<u>40 ml</u>	<u>HCl</u>	<u>N/A</u>
<u>MCD 8015</u>					

### Decon. Information

Purge Device(s) / Equipment Steam / Rinse (briefly describe) \_\_\_\_\_  
 Sampling Device(s) / Equipment N/A





# Environmental Strategies Corporation

## Water Sampling Form

Sample Desig. 1145 Job / task # 1292407 Sampled By RB  
 Sample Type Monitoring well Site Name Truck Date 8-21-03  
(monitoring well, treatment syst., etc.)  
 Sample Method LCR  
 Field Conditions Under 93°F

### Water Level Information

Measuring Point 700 Instrument Used Solinst W.L. for 80% recovery \_\_\_\_\_  
(mp, TOC, north point TOC, etc.)  
 W.L. Before Purge 1003 W.L. After purge \_\_\_\_\_ W.L. Time of Sample \_\_\_\_\_  
 Time \_\_\_\_\_ Time \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

### Purge Information

Purge Start 1130 Purge Device Roller  
 Well Depth \_\_\_\_\_ Screened Interval \_\_\_\_\_  
 Well Dia. 2" Purge Calculation 21.24 x 2 = 42.48 Actual Amt. Removed 20  
(well depth - depth to water) X # of casing Vol. = Purge Vol.

Purge Volume Multipliers			
Casing Dia.	1 Casing Vol.	3 Casing Vol.	5 Casing Vol.
1.0	0.04	0.12	0.20
2.0	0.16	0.49	0.82
3.0	0.37	1.10	1.84
3.5	0.50	1.50	2.50
4.0	0.65	1.96	3.26
4.5	0.83	2.48	4.13
6.0	1.47	4.41	7.34
8.0	2.61	7.83	13.06
10.0	4.08	12.24	20.40

QA/QC Information	
X if Present	Sample Designation
Trip blank	_____
Duplicate	_____
Field blank	_____
Q.C. Spike	_____
Other	<u>20 201 8240 only</u>

### Parameter Readings/Notes

Time	Amt. remv'd	Temp.	Cond.	pH	Turb.	Observations/Notes
1145	6.6	73.2	569	6.43		

Sample Time 1145 Sample / Lab Information \_\_\_\_\_ Sampling Device LCR

Laboratory name and Location : ANAMETRIX, SAN JOSE

Analysis	Container(s)	No.	Volume	Preservative	Filtration
Pb	200 ml	1	200 ml	HCL	N/A
Cd	200 ml	2	200 ml	HCL	N/A
Cu	200 ml	3	200 ml	HCL	N/A
Zn	200 ml	4	200 ml	HCL	N/A

### Decon. Information

Purge Device(s) / Equipment STEAM / RINSE (briefly describe) \_\_\_\_\_  
 Sampling Device(s) / Equipment N/A

# Environmental Strategies Corporation

## Water Sampling Form

Sample Desig. MWB3 Job / task # PA821-07 Sampled By JWB  
 Sample Type MW Site Name Grow Group Date 9-29-93  
(monitoring well, treatment syst., etc.)  
 Sample Method Bail / Bail  
 Field Conditions clear, 78°, 0-5 mph

### Water Level Information

Measuring Point No Point TOC Instrument Used Solinst W.L. for 80% recovery \_\_\_\_\_  
(mp, TOC, north point TOC, etc.)  
 W.L. Before Purge 7.74 W.L. After purge \_\_\_\_\_ W.L. Time of Sample \_\_\_\_\_  
 Time 1005 Time \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

### Purge Information

Purge Start 1055 Purge Device PVC  
 Well Depth 20.88 Screened Interval \_\_\_\_\_  
 Well Dia. 2" Purge Calculation (20.88 - 7.74) x 1.1 = 6.4 gal Actual Amt. Removed 6.5  
(well depth - depth to water) X # of casing Vol. = Purge Vol.

### Purge Volume Multipliers

Casing Dia.	1 Casing Vol.	3 Casing Vol.	5 Casing Vol.
1.0	0.04	0.12	0.20
2.0	0.16	0.49	0.82
3.0	0.37	1.10	1.84
3.5	0.50	1.50	2.50
4.0	0.65	1.96	3.26
4.5	0.83	2.48	4.13
6.0	1.47	4.41	7.34
8.0	2.61	7.83	13.06
10.0	4.08	12.24	20.40

### QA/QC Information

	X if Present	Sample Designation
Trip blank	_____	_____
Duplicate	_____	_____
Field blank	_____	_____
Q.C. Spike	_____	_____
Other	<input checked="" type="checkbox"/>	<u>ZOI (EB on Bail)</u>

### Parameter Readings/Notes

Time	Amt. rem'v'd	Temp.	Cond.	pH	Turb.	Observations/Notes
<u>1104</u>	<u>5.5</u>	<u>27.9</u>	<u>349</u>	<u>6.67</u>		<u>slty, tan-brown No odor</u>
<u>1106</u>	<u>6.0</u>	<u>68.5</u>	<u>316</u>	<u>6.64</u>		<u>No odor</u>
<u>1110</u>	<u>6.5</u>	<u>68.1</u>	<u>338</u>	<u>6.59</u>		

Sample Time 1115 Sample / Lab Information \_\_\_\_\_ Sampling Device DISP

Laboratory name and Location: ANALYTIX San Jose

Analysis	Container(s)	No.	Volume	Preservative	Filtration
<u>8240</u>	<u>40A</u>	<u>3</u>	<u>410 ml</u>	<u>HCl</u>	<u>N/A</u>
<u>MCD 8015</u>	<u>11</u>	<u>11</u>	<u>11</u>	<u>11</u>	<u>11</u>

### Decon. Information

Purge Device(s) / Equipment Solinst / Purge (briefly describe) Sampling Device(s) / Equipment N/A



Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-94

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. C1A C D U 0 0 8 9 1 2 3 2		Manifest Document No.		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address GROW GROUP PO BOX 7600 LOUISVILLE ATT: HENRY JONES KY 40207				4. Generator's Phone (502) 897-9851		A. State Manifest Document Number AR-636000		B. State Generator's ID			
5. Transporter 1 Company Name J. B. HUNT SPECIAL COMMODITIES		6. US EPA ID Number A R D 9 8 1 9 8 8 5 5 1		C. State Transporter's ID PC 2-4-20		D. Transporter's Phone (800) 848-3622		E. State Transporter's ID PC H			
7. Transporter 2 Company Name		8. US EPA ID Number		F. Transporter's Phone		G. State Facility's ID ARD9E1857870		H. Facility's Phone (501) 778-9089			
9. Designated Facility Name and Site Address KINECO 1007 VULCAN ROAD HASKELL AR 72015				10. US EPA ID Number A R D 9 8 1 9 8 8 5 5 1		11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers			
a. HAZARDOUS WASTE, LIQUID, N.O.S. 9 NA3082 PG. III (TOLUENE, XYLENE)		b.		c.		d.		13. Total Quantity			
J. Additional Descriptions for Materials Listed Above A: ASH44-5042 9308-7479 ERG31		K. Handling Codes for Wastes Listed Above EMERGENCY RESPONSE INFORMATION: A: BONNIE OLSON 801-776-6095		14. Unit Wt/Vol		L. Waste No. 0018, F005 K303					
15. Special Handling Instructions and Additional Information EVERY SPILL, RELEASE OR INCIDENT INVOLVING ASHLAND CHEMICAL, INT. PRODUCTS MUST BE REPORTED TO CHEMTREC, DAY OR NIGHT AT 800-424-9300.				if no alternate TSDF, return to generator							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature						Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature						Month Day Year	
19. Discrepancy Indication Space											
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.				Signature						Month Day Year	

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Appendix B - Groundwater Analytical Results

ORGANIC ANALYSIS DATA SHEET EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 82107  
Sample ID : MW1  
Matrix : WATER  
Date Sampled : 9/29/93  
Date Analyzed : 10/6/93  
Instrument ID : MSD1

Anamatrix ID : 9309374-01  
Analyst : df  
Supervisor :  
Dilution Factor : 50.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	500.	ND	U
75-01-4	Vinyl chloride	500.	ND	U
74-83-9	Bromomethane	500.	ND	U
75-00-3	Chloroethane	500.	ND	U
75-69-4	Trichlorofluoromethane	250.	ND	U
75-35-4	1,1-Dichloroethene	250.	ND	U
76-13-1	Trichlorotrifluoroethane	250.	ND	U
67-64-1	Acetone	1000.	ND	U
75-15-0	Carbon disulfide	250.	ND	U
75-09-2	Methylene chloride	250.	ND	U
156-60-5	Trans-1,2-dichloroethene	250.	ND	U
75-34-3	1,1-Dichloroethane	250.	ND	U
156-59-2	Cis-1,2-dichloroethene	250.	ND	U
78-93-3	2-Butanone	1000.	ND	U
67-66-3	Chloroform	250.	ND	U
71-55-6	1,1,1-Trichloroethane	250.	ND	U
56-23-5	Carbon tetrachloride	250.	ND	U
108-05-4	Vinyl acetate	500.	ND	U
71-43-2	Benzene	250.	7100.	U
107-06-2	1,2-Dichloroethane	250.	ND	U
79-01-6	Trichloroethene	250.	ND	U
78-87-5	1,2-Dichloropropane	250.	ND	U
75-27-4	Bromodichloromethane	250.	ND	U
10061-01-5	Cis-1,3-dichloropropene	250.	ND	U
108-10-1	4-Methyl-2-pentanone	500.	ND	U
108-88-3	Toluene	250.	5700.	U
10061-02-6	Trans-1,3-dichloropropene	250.	ND	U
79-00-5	1,1,2-Trichloroethane	250.	ND	U
127-18-4	Tetrachloroethene	250.	ND	U
591-78-6	2-Hexanone	500.	ND	U
124-48-1	Dibromochloromethane	250.	ND	U
108-90-7	Chlorobenzene	250.	ND	U
100-41-4	Ethylbenzene	250.	1800.	U
1330-20-7	Xylene (Total)	250.	7900.	U
100-42-5	Styrene	250.	ND	U
75-25-2	Bromoform	250.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	250.	ND	U
541-73-1	1,3-Dichlorobenzene	250.	ND	U
106-46-7	1,4-Dichlorobenzene	250.	ND	U
95-50-1	1,2-Dichlorobenzene	250.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

ject ID : 82107  
 ple ID : MW2  
 ix : WATER  
 e Sampled : 9/29/93  
 e Analyzed : 10/ 5/93  
 rument ID : MSD1

Anamatrix ID : 9309374-02  
 Analyst : bf  
 Supervisor : ~~sa~~  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

ect ID : 82107  
le ID : MWB1  
ix : WATER  
Sampled : 9/29/93  
Analyzed : 10/ 6/93  
rument ID : MSD1

Anametrix ID : 9309374-03  
Analyst : DP  
Supervisor : ~~DP~~  
Dilution Factor : 5.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	50.	ND	U
75-01-4	Vinyl chloride	50.	ND	U
74-83-9	Bromomethane	50.	ND	U
75-00-3	Chloroethane	50.	ND	U
75-69-4	Trichlorofluoromethane	25.	ND	U
75-35-4	1,1-Dichloroethene	25.	ND	U
76-13-1	Trichlorotrifluoroethane	25.	ND	U
67-64-1	Acetone	100.	ND	U
75-15-0	Carbon disulfide	25.	ND	U
75-09-2	Methylene chloride	25.	ND	U
156-60-5	Trans-1,2-dichloroethene	25.	ND	U
75-34-3	1,1-Dichloroethane	25.	ND	U
156-59-2	Cis-1,2-dichloroethene	25.	ND	U
78-93-3	2-Butanone	100.	ND	U
67-66-3	Chloroform	25.	ND	U
71-55-6	1,1,1-Trichloroethane	25.	ND	U
56-23-5	Carbon tetrachloride	25.	ND	U
108-05-4	Vinyl acetate	50.	ND	U
71-43-2	Benzene	25.	ND	U
107-06-2	1,2-Dichloroethane	25.	ND	U
79-01-6	Trichloroethene	25.	ND	U
78-87-5	1,2-Dichloropropane	25.	ND	U
75-27-4	Bromodichloromethane	25.	ND	U
0061-01-5	Cis-1,3-dichloropropene	25.	ND	U
108-10-1	4-Methyl-2-pentanone	50.	ND	U
108-88-3	Toluene	25.	ND	U
0061-02-6	Trans-1,3-dichloropropene	25.	ND	U
79-00-5	1,1,2-Trichloroethane	25.	ND	U
127-18-4	Tetrachloroethene	25.	ND	U
591-78-6	2-Hexanone	50.	ND	U
124-48-1	Dibromochloromethane	25.	ND	U
108-90-7	Chlorobenzene	25.	ND	U
100-41-4	Ethylbenzene	25.	ND	U
1330-20-7	Xylene (Total)	25.	ND	U
100-42-5	Styrene	25.	ND	U
75-25-2	Bromoform	25.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	25.	ND	U
541-73-1	1,3-Dichlorobenzene	25.	ND	U
106-46-7	1,4-Dichlorobenzene	25.	ND	U
95-50-1	1,2-Dichlorobenzene	25.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

ject ID : 82107  
 ple ID : MWB2  
 rix : WATER  
 e Sampled : 9/29/93  
 e Analyzed : 10/ 6/93  
 trument ID : MSD1

Anamatrix ID : 9309374-04  
 Analyst : *[Signature]*  
 Supervisor : *[Signature]*  
 Dilution Factor : 100.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	1000.	ND	U
75-01-4	Vinyl chloride	1000.	ND	U
74-83-9	Bromomethane	1000.	ND	U
75-00-3	Chloroethane	1000.	ND	U
75-69-4	Trichlorofluoromethane	500.	ND	U
75-35-4	1,1-Dichloroethene	500.	ND	U
76-13-1	Trichlorotrifluoroethane	500.	ND	U
67-64-1	Acetone	2000.	ND	U
75-15-0	Carbon disulfide	500.	ND	U
75-09-2	Methylene chloride	500.	ND	U
156-60-5	Trans-1,2-dichloroethene	500.	ND	U
75-34-3	1,1-Dichloroethane	500.	ND	U
156-59-2	Cis-1,2-dichloroethene	500.	ND	U
78-93-3	2-Butanone	2000.	ND	U
67-66-3	Chloroform	500.	ND	U
71-55-6	1,1,1-Trichloroethane	500.	ND	U
56-23-5	Carbon tetrachloride	500.	ND	U
108-05-4	Vinyl acetate	1000.	ND	U
71-43-2	Benzene	500.	ND	U
107-06-2	1,2-Dichloroethane	500.	ND	U
79-01-6	Trichloroethene	500.	ND	U
78-87-5	1,2-Dichloropropane	500.	ND	U
75-27-4	Bromodichloromethane	500.	ND	U
10061-01-5	Cis-1,3-dichloropropene	500.	ND	U
108-10-1	4-Methyl-2-pentanone	1000.	ND	U
108-88-3	Toluene	500.	ND	U
10061-02-6	Trans-1,3-dichloropropene	500.	ND	U
79-00-5	1,1,2-Trichloroethane	500.	ND	U
127-18-4	Tetrachloroethene	500.	ND	U
591-78-6	2-Hexanone	1000.	ND	U
124-48-1	Dibromochloromethane	500.	ND	U
108-90-7	Chlorobenzene	500.	ND	U
100-41-4	Ethylbenzene	500.	ND	U
1330-20-7	Xylene (Total)	500.	ND	U
100-42-5	Styrene	500.	ND	U
75-25-2	Bromoform	500.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	500.	ND	U
541-73-1	1,3-Dichlorobenzene	500.	ND	U
106-46-7	1,4-Dichlorobenzene	500.	ND	U
95-50-1	1,2-Dichlorobenzene	500.	ND	U



ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

ject ID : 82107  
 ple ID : MW3B  
 rix : WATER  
 e Sampled : 9/29/93  
 e Analyzed : 10/ 6/93  
 trument ID : MSD1

Anamatrix ID : 9309374-05  
 Analyst : BP  
 Supervisor : ecj  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

ject ID : 82107  
 ple ID : MWB4  
 rix : WATER  
 e Sampled : 9/29/93  
 e Analyzed : 10/ 6/93  
 trument ID : MSD1

Anamatrix ID : 9309374-06  
 Analyst : DP  
 Supervisor : *DP*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 82107  
 Sample ID : MWD1  
 Matrix : WATER  
 Date Sampled : 9/29/93  
 Date Analyzed : 10/ 5/93  
 Instrument ID : MSD1

Anametrix ID : 9309374-07  
 Analyst : *DP*  
 Supervisor : *Jay*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
0061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
0061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Subject ID : 82107  
Sample ID : MWD2  
Matrix : WATER  
Date Sampled : 9/29/93  
Date Analyzed : 10/ 5/93  
Instrument ID : MSD1

Anamatrix ID : 9309374-08  
Analyst : DP  
Supervisor : *by*  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Subject ID : 82107  
Sample ID : MWLD4  
Matrix : WATER  
Date Sampled : 9/29/93  
Date Analyzed : 10/ 6/93  
Instrument ID : MSD1

Anametrix ID : 9309374-09  
Analyst : DP  
Supervisor : ay  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

ject ID : 82107  
 ple ID : 200  
 rix : WATER  
 e Sampled : 9/29/93  
 e Analyzed : 10/ 5/93  
 trument ID : MSD1

Anamatrix ID : 9309374-10  
 Analyst : DP  
 Supervisor : xy  
 Dilution Factor : 10.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	100.	ND	U
75-01-4	Vinyl chloride	100.	ND	U
74-83-9	Bromomethane	100.	ND	U
75-00-3	Chloroethane	100.	ND	U
75-69-4	Trichlorofluoromethane	50.	ND	U
75-35-4	1,1-Dichloroethene	50.	ND	U
76-13-1	Trichlorotrifluoroethane	50.	ND	U
67-64-1	Acetone	200.	ND	U
75-15-0	Carbon disulfide	50.	ND	U
75-09-2	Methylene chloride	50.	ND	U
156-60-5	Trans-1,2-dichloroethene	50.	ND	U
75-34-3	1,1-Dichloroethane	50.	ND	U
156-59-2	Cis-1,2-dichloroethane	50.	ND	U
78-93-3	2-Butanone	200.	ND	U
67-66-3	Chloroform	50.	ND	U
71-55-6	1,1,1-Trichloroethane	50.	ND	U
56-23-5	Carbon tetrachloride	50.	ND	U
108-05-4	Vinyl acetate	100.	ND	U
71-43-2	Benzene	50.	ND	U
107-06-2	1,2-Dichloroethane	50.	ND	U
79-01-6	Trichloroethene	50.	ND	U
78-87-5	1,2-Dichloropropane	50.	ND	U
75-27-4	Bromodichloromethane	50.	ND	U
10061-01-5	Cis-1,3-dichloropropene	50.	ND	U
108-10-1	4-Methyl-2-pentanone	100.	ND	U
108-88-3	Toluene	50.	ND	U
10061-02-6	Trans-1,3-dichloropropene	50.	ND	U
79-00-5	1,1,2-Trichloroethane	50.	ND	U
127-18-4	Tetrachloroethene	50.	ND	U
591-78-6	2-Hexanone	100.	ND	U
124-48-1	Dibromochloromethane	50.	ND	U
108-90-7	Chlorobenzene	50.	ND	U
100-41-4	Ethylbenzene	50.	ND	U
1330-20-7	Xylene (Total)	50.	ND	U
100-42-5	Styrene	50.	ND	U
75-25-2	Bromoform	50.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	50.	ND	U
541-73-1	1,3-Dichlorobenzene	50.	ND	U
106-46-7	1,4-Dichlorobenzene	50.	ND	U
95-50-1	1,2-Dichlorobenzene	50.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

ject ID : 82107  
 ple ID : 201  
 rix : WATER  
 e Sampled : 9/29/93  
 e Analyzed : 10/ 5/93  
 trument ID : MSD1

Anamatrix ID : 9309374-11  
 Analyst : *df*  
 Supervisor : *[Signature]*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE)  
ANAMETRIX, INC. - (408) 432-8192

anemetrix W.O.: 9309374  
anemetrix : WATER  
Date Sampled : 09/29/93

Project Number : 82107  
Date Released : 10/13/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW1	Sample I.D.# MW2	Sample I.D.# MWB1	Sample I.D.# MWB2	Sample I.D.# MWB3
PH as Mineral spirits	50	59000	ND	43000	290000	2400
Surrogate Recovery		66%	67%	135%	62%	138%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/12/93	10/06/93	10/06/93	10/07/93	10/06/93
RLMF		250	1	100	2500	5

- ND - Not detected at or above the practical quantitation limit for the method.  
Hg - Total Petroleum Hydrocarbons as mineral spirits is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.  
MF - Reporting Limit Multiplication Factor (Dilution).

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Veronica Sher 10/14/93  
Analyst Date

Christ Balmer 10/14/93  
Supervisor Date



ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE)  
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9309374  
Anamatrix : WATER  
Date Sampled : 09/29/93

Project Number : 82107  
Date Released : 10/13/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MWB4	Sample I.D.# MWD1	Sample I.D.# MWD2	Sample I.D.# MWLD4	Sample I.D.# 200
TPH as Mineral spirits	50	1400	110	220	700	25000
% Surrogate Recovery		78%	85%	66%	101%	73%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		10/08/93	10/06/93	10/09/93	10/08/93	10/06/93
RLMF		10	1	1	1	250

ND - Not detected at or above the practical quantitation limit for the method.

TPH - Total Petroleum Hydrocarbons as mineral spirits is determined by GC/FID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.

RLMF - Reporting Limit Multiplication Factor (Dilution).

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.


Laura Shor 10/14/93  
Analyst Date

Cheryl Balman 10/14/93  
Supervisor Date

No. 005935

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME AND LOCATION:					NO. OF CONTAINERS	8240 MODIFIED 8015 (FUEL FINGER EXPERIMENTAL) FOR MINERAL SPIRITS					REMARKS
CA821-07		Grow Group, Emeryville CA											
SAMPLERS: (Signature)						PRINT NAME:							
<i>[Signature]</i>						JEFF BENSON BOB BEALKOWSKI							
LINE	SAMPLE NO.	DATE	TIME	COMP.	GRAB	SAMPLE LOCATION	MATRIX						
1	MW-1	9-29-93	1418				WATER	6	X	X			
2	MW-2		1410										
3	MWB-1		1050										
4	MWB-2		1210										
5	MWB-3		1115										
6	MWB-4		1145					5					
7	MWD-1		1500					6					
8	MWD-2		1530										
9	MWLD-4		1510										
10	ZOO					Dup MWB-1							
11	ZO1					EB on binder		3					
12	TRIP BLANK	9-24-93						3					
13													

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 9-30-93 1048	Received by: (Signature) <i>[Signature]</i>	LAB NAME: ANAMETRIX	<b>ENVIRONMENTAL STRATEGIES CORPORATION</b> 41944 Freedom Drive 101 METRO DR. STE 650 Reston, Virginia 22090 SAN JOSE CA 95110 703-709-6500 (408) 453-6100
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	CITY: SAN JOSE	
Received for Laboratory by: (Signature)	PRINT NAME:	Date / Time	COURIER: ANAMETRIX	
			AIRBILL NO.:	
			CUSTODY SEAL NOS.:	
			COOLER NO: 106	
ATTENTION LAB: SEND ANALYTICAL RESULTS TO THE FOLLOWING ESC STAFF MEMBER: BOB BEALKOWSKI				

DISTRIBUTION: ORIGINAL ACCOMPANIES SHIPMENT; COPY TO ESC FILES

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Appendix C - QAO Report

## Quality Control Data Review Summary

Site: Grow Group Emeryville Site (Project No. CA821-07)  
Laboratory: Anamatrix  
QA Reviewer: Liz Roman, ESC  
Review Date: October 28, 1993  
Laboratory  
Project No.: 9309374  
Sample No.: MW-1, MW-2, MWB-1, MWB-2, MWB-3, MWB-4, MWD-1, MWD-2, MWLD-4, 200, 201, Tripblank (TB)  
Analyses: Volatile Organic Compounds by EPA SW846 Method 8240 and Total Petroleum Hydrocarbon (TPH) Fingerprinting for mineral spirits by modified SW846 Method 8015  
Collection Dates: September 29, 1993  
Laboratory QC  
Criteria Reviewed: Holding times, laboratory blanks, initial and continuing calibrations, surrogate recoveries, matrix spike/matrix spike duplicates, and laboratory control samples  
Field QC  
Criteria Reviewed: Duplicates, tripblank, and equipment rinsate blank

The data were reviewed according to the EPA document "National Functional Guidelines for Organic Data Review" (June, 1991) and the quality control (QC) criteria established in SW846 Method 8260. The following comments discuss data quality problems. The data qualifiers and the qualified analytical results are presented in Tables 1 and 2 of this appendix.

### Comments

1. Most of the surrogate recoveries for TPH fingerprinting as mineral spirits results exceeded the 75-125 percent recovery criteria. However, these exceedances were relatively marginal and were probably affected by the high mineral spirits concentrations.
2. Sample 201 was the equipment rinsate blank. No target analytes were detected in this sample.
3. Sample 200 was the tripblank. No target analytes were detected in this sample.
4. Sample 200 was a duplicate of sample MWB-1. Volatile compounds were not detected in either sample. TPH as mineral spirits was detected in both samples and the relative percent difference was 53 percent which may have been due to the high concentrations of this analyte.
5. All quality control criteria, other than those discussed above, were met and are considered acceptable. Based upon the QA/QC review of this data package, all results are usable as and considered valid.

**Table 1**  
**Results for Water Samples from the Grow Group Emeryville Site**  
**September 1993 (ug/L) (a)**

**Analyte**

<b>Volatiles</b>	<b>MW-1</b>	<b>MW-2</b>	<b>MWB-1</b>	<b>MWB-2</b>	<b>MWB-3</b>	<b>MWB-4</b>
Chloromethane	500 U	10 U	50 U	1000 U	10 U	10 U
Vinyl chloride	500 U	10 U	50 U	1000 U	10 U	10 U
Bromomethane	500 U	10 U	50 U	1000 U	10 U	10 U
Chloroethane	500 U	10 U	50 U	1000 U	10 U	10 U
Trichlorofluoromethane	250 U	5 U	25 U	500 U	5 U	5 U
1,1-Dichloroethene	250 U	5 U	25 U	500 U	5 U	5 U
Trichlorotrifluoroethane	250 U	5 U	25 U	500 U	5 U	5 U
Acetone	1000 U	20 U	100 U	2000 U	20 U	20 U
Carbon disulfide	250 U	5 U	25 U	500 U	5 U	5 U
Methylene chloride	250 U	5 U	25 U	500 U	5 U	5 U
Trans-1,2-dichloroethene	250 U	5 U	25 U	500 U	5 U	5 U
1,1-Dichloroethane	250 U	5 U	25 U	500 U	5 U	5 U
Cis-1,2-dichloroethene	250 U	5 U	25 U	500 U	5 U	5 U
2-Butanone	1000 U	20 U	100 U	2000 U	20 U	20 U
Chloroform	250 U	5 U	25 U	500 U	5 U	5 U
1,1,1-Trichloroethane	250 U	5 U	25 U	500 U	5 U	5 U
Carbon tetrachloride	250 U	5 U	25 U	500 U	5 U	5 U
Vinyl acetate	500 U	10 U	50 U	1000 U	10 U	10 U
Benzene	7100	5 U	25 U	500 U	5 U	5 U
1,2-Dichloroethane	250 U	5 U	25 U	500 U	5 U	5 U
Trichloroethene	250 U	5 U	25 U	500 U	5 U	5 U
1,2-Dichloropropane	250 U	5 U	25 U	500 U	5 U	5 U
Bromodichloromethane	250 U	5 U	25 U	500 U	5 U	5 U
cis-1,3-Dichloropropene	250 U	5 U	25 U	500 U	5 U	5 U
4-Methyl-2-pentanone	500 U	10 U	50 U	1000 U	10 U	10 U
Toluene	5700	5 U	25 U	500 U	5 U	5 U
trans-1,3-Dichloropropene	250 U	5 U	25 U	500 U	5 U	5 U
1,1,2-Trichloroethane	250 U	5 U	25 U	500 U	5 U	5 U
Tetrachloroethylene	250 U	5 U	25 U	500 U	5 U	5 U
2-Hexanone	500 U	10 U	50 U	1000 U	10 U	10 U
Dibromochloromethane	250 U	5 U	25 U	500 U	5 U	5 U
Chlorobenzene	250 U	5 U	25 U	500 U	5 U	5 U
Ethylbenzene	1800	5 U	25 U	500 U	5 U	5 U
Xylene (Total)	7900	5 U	25 U	500 U	5 U	5 U
Styrene	250 U	5 U	25 U	500 U	5 U	5 U
Bromoform	250 U	5 U	25 U	500 U	5 U	5 U
1,1,2,2-Tetrachloroethane	250 U	5 U	25 U	500 U	5 U	5 U
1,3-Dichlorobenzene	250 U	5 U	25 U	500 U	5 U	5 U
1,4-Dichlorobenzene	250 U	5 U	25 U	500 U	5 U	5 U
1,2-Dichlorobenzene	250 U	5 U	25 U	500 U	5 U	5 U

a\U=undetected

**Table 1 (continued)**  
**Results for Water Samples from the Grow Group Emeryville Site**  
**September 1993 (ug/L) (a)**

Analyte

Volatiles	MWD-1	MWD-2	MWLD-4	200	201	TB
Chloromethane	10 U	10 U	10 U	100 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	100 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	100 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	100 U	10 U	10 U
Trichlorofluoromethane	5 U	5 U	5 U	50 U	5 U	5 U
1,1-Dichloroethene	5 U	5 U	5 U	50 U	5 U	5 U
Trichlorotrifluoroethane	5 U	5 U	5 U	50 U	5 U	5 U
Acetone	20 U	20 U	20 U	200 U	20 U	20 U
Carbon disulfide	5 U	5 U	5 U	50 U	5 U	5 U
Methylene chloride	5 U	5 U	5 U	50 U	5 U	5 U
Trans-1,2-dichloroethene	5 U	5 U	5 U	50 U	5 U	5 U
1,1-Dichloroethane	5 U	5 U	5 U	50 U	5 U	5 U
Cis-1,2-dichloroethene	5 U	5 U	5 U	50 U	5 U	5 U
2-Butanone	20 U	20 U	20 U	200 U	20 U	20 U
Chloroform	5 U	5 U	5 U	50 U	5 U	5 U
1,1,1-Trichloroethane	5 U	5 U	5 U	50 U	5 U	5 U
Carbon tetrachloride	5 U	5 U	5 U	50 U	5 U	5 U
Vinyl acetate	10 U	10 U	10 U	100 U	10 U	10 U
Benzene	5 U	5 U	5 U	50 U	5 U	5 U
1,2-Dichloroethane	5 U	5 U	5 U	50 U	5 U	5 U
Trichloroethene	5 U	5 U	5 U	50 U	5 U	5 U
1,2-Dichloropropane	5 U	5 U	5 U	50 U	5 U	5 U
Bromodichloromethane	5 U	5 U	5 U	50 U	5 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	50 U	5 U	5 U
4-Methyl-2-pentanone	10 U	10 U	10 U	100 U	10 U	10 U
Toluene	5 U	5 U	5 U	50 U	5 U	5 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	50 U	5 U	5 U
1,1,2-Trichloroethane	5 U	5 U	5 U	50 U	5 U	5 U
Tetrachloroethylene	5 U	5 U	5 U	50 U	5 U	5 U
2-Hexanone	10 U	10 U	10 U	100 U	10 U	10 U
Dibromochloromethane	5 U	5 U	5 U	50 U	5 U	5 U
Chlorobenzene	5 U	5 U	5 U	50 U	5 U	5 U
Ethylbenzene	5 U	5 U	5 U	50 U	5 U	5 U
Xylene (Total)	5 U	5 U	5 U	50 U	5 U	5 U
Styrene	5 U	5 U	5 U	50 U	5 U	5 U
Bromoform	5 U	5 U	5 U	50 U	5 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	50 U	5 U	5 U
1,3-Dichlorobenzene	5 U	5 U	5 U	50 U	5 U	5 U
1,4-Dichlorobenzene	5 U	5 U	5 U	50 U	5 U	5 U
1,2-Dichlorobenzene	5 U	5 U	5 U	50 U	5 U	5 U

a\U=undetected