ENVIRONMENTAL ENGINEERING, INC
2680 Bishop Drive, Suite 203, San Ramon, CA 94583
TEL (925) 244-6600 • FAX (925) 244-6601

May 17, 2000

Ms. Susan Hugo
Alameda County
Department of Environmental Health Services
1131 Harbor Parkway, Suite 250
Alameda, California 94502

Subject: Former Berkeley Farms Site
Located at 4550 San Pablo Avenue
Emeryville, California

Dear Susan:

Enclosed for your review is SOMA's report entitled "Second Quarter 2000 Groundwater Monitoring" for the subject site. We will coordinate the remaining groundwater monitoring activities with the Berkeley Farm's consultant (Geo-Logic) starting from the third quarter of 2000.

If you have any questions or comments, please call me at (925) 244-6600.

Sincerely,

Mansour Sepehr, Ph.D.,P.E.
Principal

MS/jb

Enclosure

cc: Ms. Carol Light, P.E. w/enclosure
Silverman & Light

Mr. Robert Daoust w/enclosure

ENVIRONMENTAL ENGINEERING, INC
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Second Quarter
Groundwater Monitoring Report
Emeryville Farms Property
4550 San Pablo Avenue
Emeryville, California

Project 99-2371

May 15, 2000

Prepared for

Emeryville Farms and Associates
1201 Park Avenue, Suite 100
Emeryville, California 94608

Prepared by

SOMA Environmental Engineering, Inc.
2680 Bishop Drive, Suite 203
San Ramon California 94583

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1.0 Introduction

This groundwater monitoring report has been prepared by SOMA Environmental Engineering, Inc. (SOMA) on behalf of Emeryville Farms and Associates, the current owner of the site. The site is located at 4550 San Pablo Avenue, Emeryville, California (the "Site"). Figure-1 shows the Site vicinity map. The purpose of this monitoring report is to evaluate the current status of groundwater contamination beneath the Site, which reportedly has been impacted by petroleum hydrocarbons.

2.0 Site Background

The former Berkeley Farms operation consisted of an operating dairy facility, a truck shop and a yard located on the opposite side of the Site across San Pablo Avenue between 47th and 45th Streets in Emeryville, California. The property was reportedly purchased in 1946 and operated as a dairy facility since that time. The dairy facility, which is the subject of this report, is located at 4550 San Pablo Avenue (Figure 1). The Site is bounded by San Pablo Avenue to the west, 47th Street to the north and 45th Street to the south, see Figure 2. Currently, a two-story building occupies the northwestern portion of the property. The remainder of the property is entirely paved and enclosed within a concrete block wall. The facility is accessed through secured gates on San Pablo Avenue and 47th Street.

Berkeley Farms suspended operations at 4550 San Pablo Avenue in December of 1997. Two 10,000-gallon underground storage tanks were used by Berkeley Farms to store diesel fuel and unleaded gasoline at the Site. In 1998 the underground storage tanks were removed by Geo-Logic, a consultant firm hired by Berkeley Farms.

Emeryville Farms and Associates purchased the property in December 1999. In December 1999, Emeryville Farms hired SOMA to conduct additional site

investigation and prepare a Site closure report. The result of SOMA's investigation and the closure report (SOMA, February 2000) was submitted to Alameda County Department of Health Services (ACDHS). On April 12, 2000, ACDHS upon concurrence with SOMA's recommendations issued a no further action (NFA) letter to the Site's owners. In the NFA letter, ACDHS required that three additional quarterly groundwater monitoring events should be conducted at the Site. ACDHS specified that the groundwater samples from MW-1 and MW-2 must be analyzed for total petroleum hydrocarbon (TPH) as diesel, TPH as gasoline, benzene, toluene, ethylbenzene, xylene, methyl tertiary butyl ether (MTBE) and semivolatile organic compounds using EPA Method 8270. As it was explained earlier, the former Berkeley Farms operation consisted of an operating dairy facility, a truck shop and a yard located on the opposite side of the Site across San Pablo Avenue between 47th and 45th Streets in Emeryville, California. The truck shop and yard located on the opposite side of San Pablo Avenue still belongs to Berkeley Farms. At this site, still there are two groundwater monitoring wells, which are being monitored by Geo-Logic on a quarterly basis. In order to evaluate the mobility of the groundwater plume and consistency of the groundwater flow direction, ACDHS, in their letter dated April 12, 2000 has requested that Emeryville Farms should coordinate the groundwater sampling program with the Berkeley Farms' consultant (Geo-Logic). Due to the fact that the second quarter groundwater monitoring event was performed by SOMA on April 6, 2000, before receiving the ACDHS's letter, such coordination was not possible. Based on our arrangement with Geo-Logic, the future events (third and fourth quarter groundwater monitoring events) will be coordinated with Geo-Logic.

2.1 Hydrogeology

The Site is located at or near the mapped contact between medium-grained and fine-grained alluvium (Helley et al., 1979) deposits. Based on field observations, the soils underlying the Site appear to be fine-grained alluvium, consistent with "Bay Mud."

The alluvium has been described as unconsolidated plastic, moderately to poorly sorted and clay that is rich in organic material (Helley et al., 1979).

The results of previous quarterly groundwater monitoring reports indicate, that the groundwater flow direction beneath the Site is consistently toward the west with an average flow gradient of .009. Figure 3 shows the groundwater elevation contour based on the December 1999 groundwater monitoring data. Based on the available data gathered by Geo-Logic and SOMA, depth to groundwater in MW-1 and MW-2 ranges between 4.35 and 7.8 feet in MW-1 and 4.21 and 7.35 feet in MW-2. Reviewing lithologic logs of the groundwater monitoring wells indicates, that the saturated sediments beneath the Site are comprised of clayey silt with occasional occurrence of fine sand. Assuming that hydraulic conductivity of the saturated material is about 5×10^{-5} cm/sec and its porosity is 0.40, then estimated groundwater flow velocity would be about 1.2 feet per year.

2.0 FIELD ACTIVITIES

On April 6, 2000, SOMA's field crew conducted a groundwater monitoring program in accordance with the procedures and guidelines of the Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. During this groundwater monitoring event two groundwater monitoring wells MW-1 and MW-2 were monitored. Locations of the monitoring wells are shown in Figure 2.

Depths to watertable were measured from the top of the casings to the nearest 0.01 foot using an electric sounder. No free product was detected in the monitoring wells. Before the sample collection, each well was purged by removing at least three casing volumes of groundwater. A battery operated 2-inch diameter pump was used to purge each well. A disposable bailer was used to collect sufficient samples from each monitoring well for laboratory analyses and field measurements. For laboratory

analyses the groundwater samples were transferred into two 40-ml VOA vials. The VOC vials were sealed properly to prevent developing of any air bubbles within the head-space area. For field measurements a sufficient sample was transferred into a 0.5-liter polyethylene container. The VOC vials were placed in an ice chest and delivered to Curtis & Tompkins, Ltd. Laboratory for analyses of TPH-g, TPH-d, BTEX, MTBE (using EPA Methods 8015M and 8021B) and semivolatile organic compounds (SVOCs) using EPA Method 8270B.

Electrical conductivity, pH and temperature were measured with Hydac Model 910 pH meter. The instrument was calibrated for conductance with a standard solution of known concentration (12,000 us/cm) and for pH with 4, 7 and 10 pH units buffer solutions. All measurements were performed according to the instruction manual provided by the manufacturer. Appendix 1 includes field measurements such as electrical conductivity, pH, water level measurements and other field notes during this monitoring event.

3.0 RESULTS

Table-1 presents the measured depth to groundwater and the calculated static water levels at MW-1 and MW-2. At each groundwater monitoring well, depth to watertable and the elevation of the top of casing were used to calculate the static water levels.

Depths to watertable ranged between 6.55 feet in MW-2 and 7.15 feet in MW-1. Therefore, in comparison with the latest groundwater monitoring event (December 1, 1999) the water level elevations rose about 0.5 feet.

In general, the groundwater was found to flow in a westerly direction at an approximate gradient of 0.004 ft/ft, a slightly lower gradient than the previous monitoring events. A groundwater elevation contour map is displayed in Figure 3.

The results of the chemical analyses are shown in Table-2. The concentration of TPH-g ranged between non-detectable (<50µg/L) in MW-2 and 680 µg/L in MW-1. MTBE was detected at a concentration of 47 µg/L in MW-1 and 15 µg/L in MW-2. In the past no MTBE has been reported in the groundwater using EPA Method 8260. In the next monitoring report the presence of MTBE in groundwater will be confirmed using EPA Method 8260.

As Table-2 shows elevated concentrations of TPH-d in groundwater was detected in MW-1 (25,000 µg/L) while, only 150 µg/L of TPH-d was reported in MW-2. As table-2 shows no benzene or ethylbenzene were detected in groundwater samples collected from MW-1 and MW-2. However, low concentrations of toluene and xylenes were detected in MW-2. Low levels of xylenes were detect4ed at MW-1.

To comply with ACDHS's request groundwater samples were also analyzed for semi-volatile organic compounds (SVOCs) using EPA Method 8270B. The results of laboratory analysis did not indicate the presence of SVOCs in MW-2. However, at MW-1 bis(2-ethylhexyl)phthalate at concentration of 18 µg/L was detected.

4.0 CONCLUSIONS and RECOMMENDATIONS

The results of the current groundwater monitoring event indicated that groundwater flow direction is toward the west consistent with the previous monitoring events. The field result of laboratory analyses on the groundwater samples has indicated elevated levels of TPH-d in MW-1. However, in MW-2 located downgradient from MW-1 low levels of TPH-d (150 µg/L) was detected.

As Table-2 indicates, for the first time MTBE at a maximum concentration of 47 µg/L was detected in the groundwater. During the third quarter groundwater monitoring event, a confirmatory analysis using EPA Method 8260 will be conducted to validate the presence of MTBE in the groundwater. The results of the groundwater

monitoring event did not indicate the presence of benzene and ethylbenzene in the groundwater beneath the Site. However, low levels of toluene and xylenes were detected in groundwater.

The result of the groundwater monitoring event did not indicate the presence of SVOCs, except bis (2-ethyhexyl) phthalate in the groundwater. Bis (2-ethyhexyl) phthalate at 18 µg/L was the only SVOCs detected in the groundwater sample collected from MW-1.

TABLES

Table-1

Groundwater Elevation Data

4550 San Pablo Avenue, Emeryville, CA

Well No.	Casing Elevation ft.	Depth to Water ft.	Water Level Elevation (ft)
MW-1	42.93	7.15	35.78
MW-2	42.12	6.55	35.57

Table-2

Laboratory Analysis Results on Groundwater Samples
4550 San Pablo Avenue, Emeryville, CA

Well No.	TPH-g ppb	TPH-d ppb	Benzene ppb	Toluene ppb	Ethylbenzene ppb	Xylene ppb	MTBE ppb	SVOCs* ppb
MW-1	680	25,000	ND	ND	ND	0.65	47	18
MW-2	ND	150	ND	1.1	ND	3.9	15	ND

*) Bis (2-ethylhexyl)phthalate was the only SVOCs detected in MW-1

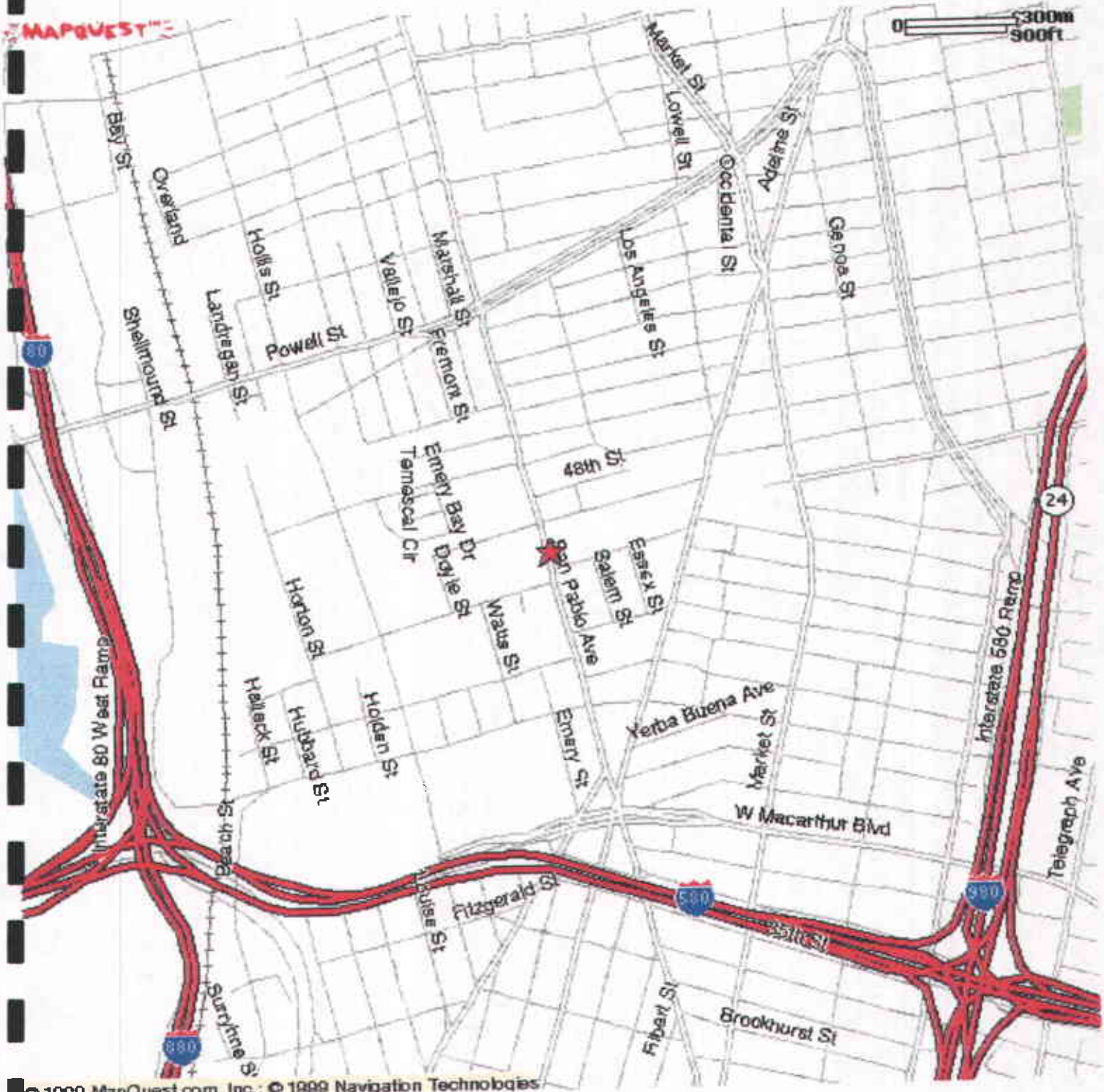

Figure 1: Site Vicinity Map

ENVIRONMENTAL ENGINEERING, INC

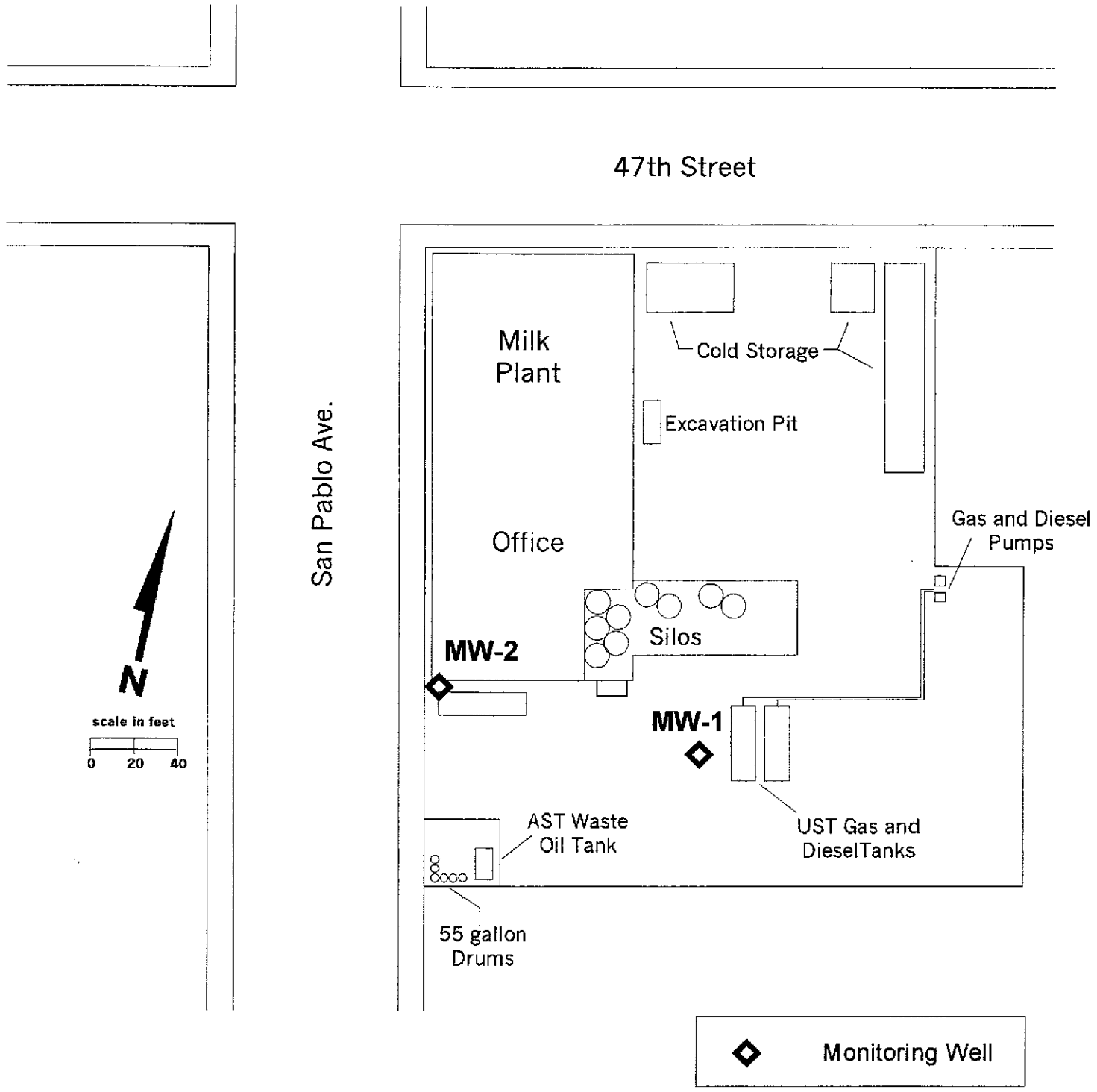

Figure 2: Site Map

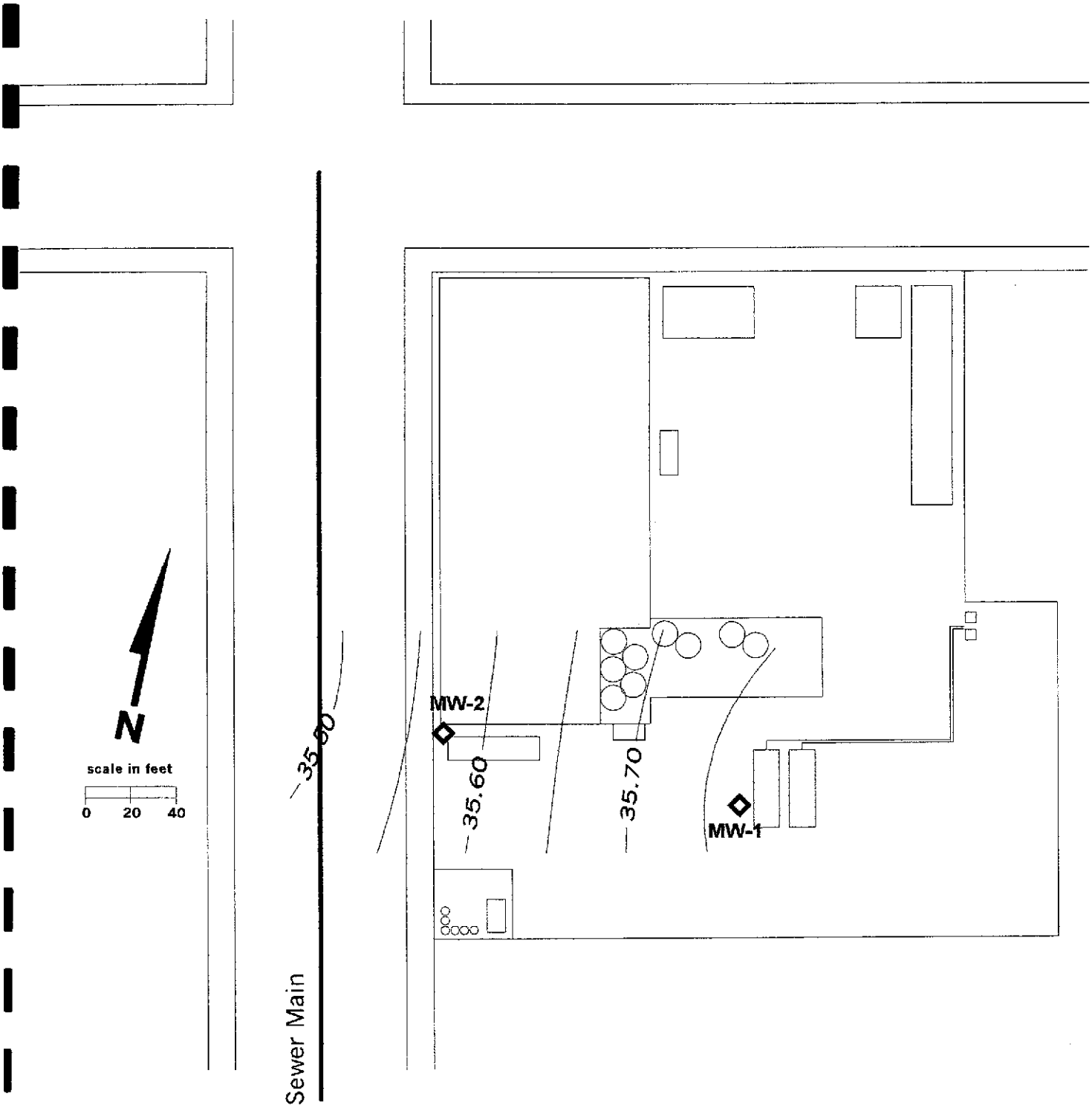

Figure 3: Groundwater Elevations Contour Map Based on April 6, 2000 Monitoring Data

ENVIRONMENTAL ENGINEERING, INC

Well NO: MW-1
Project NO: 2371
Casing Diameter: 2-inch
Address: 4550 San Pablo Ave
Depth of Well: 22 ft
Emeryville, CA
Elevation of the Casing: 42.93'
Depth to Water Table: 7.15'
Date: April 6, 2000
Elevation of Water Table: 35.78'
Sampler: Naser Fakrou
Height of Water: 14.85'
Purged Volume: 10 Gallon

Purging Method:	Bailer	☐		Pump	☑
Sampling Method:	Bailer	☑		Pump	☐
Color:	Yes	☐	No ☑	Describe	Cloudy
Sheen:	Yes	☐	No ☑	Describe	
Odor:	Yes	☑	No ☐	Describe	Minor Petroleum odor

Field Measurements

Time	Vol	D.O.	Turbidity	Redox	Vol. Free	pH	Temp	EC
	L	mg/L		mv	Product		°C	µs/cm
10:30	10G.	NM	NM	NM	None	7.28	17.3	414

NM = Not Measured

ENVIRONMENTAL ENGINEERING, INC

Well NO: MW-2
Casing Diameter: 2-inch
Depth of Well: 22'
Elevation of the Casing: 42.12'
Depth to Water Table: 6.55'
Elevation of Water Table: 35.57'
Height of Water: 15.45
Purged Volume: 10 Gallon

Project NO: 2371
Address: 4550 San Pablo Ave
Emeryville, CA
Date: April 6, 2000
Sampler: Naser Parkrou

Purging Method: Bailer ☐ Pump ☑
Sampling Method: Bailer ☑ Pump ☐
Color: Yes ☑ No ☐ Describe Cloudy
Sheen: Yes ☐ No ☑ Describe
Odor: Yes ☑ No ☐ Describe Petroleum odor

Field Measurements

Time	Vol	D.O.	Turbidity	Redox	Vol. Free	pH	Temp	EC
	L	mg/L		mv	Product		°C	µs/cm
10:00		NM	NM	NM	None	6.97	16.2	372

NM = Not Measured

APPENDIX 2

Laboratory Analytical Reports and Chain of Custody Forms

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

SOMA Environmental Engineering Inc.
2680 Bishop Dr.
Suite 203
San Ramon, CA 94583

Date: 28-APR-00
Lab Job Number: 144896
Project ID: N/A
Location: Berkeley Farms

Reviewed by: _____

Reviewed by: _____

CHAIN OF CUSTODY FORM

Page 1 of 1

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

C&T LOGIN # 144096

Project No: 2370
Project Name: Berkeley Farms
Project P.O.:
Turnaround Time: Standard

Sampler: Naser Rahimi
Report To: Naser Rahimi
Company: SOMA
Telephone: 925 244 6600
Fax: 925 244 6601

Laboratory Number	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO	Preservative: HNO_3	Preservative: ICE	Preservative: NO	Field Notes	Analyses: TPH d	Analyses: TPH g, BTEX, MTBE	Analyses: 8270-1 N.D. 4/13/00
1	MW-1	4/6/00		✓		1	✓						✓	✓	
1	MW-1	10:30		✓		2					✓	MTBE Peaks Confir with 8260		✓	✓
2	MW-2	4/6/00		✓		1	✓						✓		✓
2	MW-2	10:00		✓		2					✓	Confirm 8260 MTBE		✓	
For Laboratory Use															

Notes: Hold until further notice.

RELINQUISHED BY:	RECEIVED BY:
4/6/00 11:02 DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

Signature

Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8015M
Matrix:	Water	Batch#:	55053
Units:	ug/L	Sampled:	04/06/00
Diln Fac:	1.000	Received:	04/06/00

Field ID: MW-1 Lab ID: 144896-001
Type: SAMPLE Analyzed: 04/12/00

Analyte	Result	RL
Gasoline C7-C12	680 H Y	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	107	59-135
Bromofluorobenzene (FID)	114	60-140

Field ID: MW-2 Lab ID: 144896-002
Type: SAMPLE Analyzed: 04/12/00

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	59-135
Bromofluorobenzene (FID)	102	60-140

Type: BLANK Analyzed: 04/11/00
Lab ID: QC112639

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	59-135
Bromofluorobenzene (FID)	110	60-140

H = Heavier hydrocarbons contributed to the quantitation
Y = Sample exhibits fuel pattern which does not resemble standard
ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	55053
Units:	ug/L	Sampled:	04/06/00
Diln Fac:	1.000	Received:	04/06/00

Field ID:	MW-1	Lab ID:	144896-001
Type:	SAMPLE	Analyzed:	04/12/00

Analyte	Result	RL
MTBE	47	2.0
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	0.65	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	110	56-142
Bromofluorobenzene (PID)	111	55-149

Field ID:	MW-2	Lab ID:	144896-002
Type:	SAMPLE	Analyzed:	04/12/00

Analyte	Result	RL
MTBE	15	2.0
Benzene	ND	0.50
Toluene	1.1	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	2.4	0.50
o-Xylene	1.5	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	106	56-142
Bromofluorobenzene (PID)	104	55-149

Type:	BLANK	Analyzed:	04/11/00
Lab ID:	QC112639		

Analyte	Result	RL
MTBE	ND	2.0
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	106	56-142
Bromofluorobenzene (PID)	106	55-149

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8015M
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC112640	Batch#:	55053
Matrix:	Water	Analyzed:	04/11/00
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,121	106	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	118	59-135
Bromofluorobenzene (FID)	106	60-140

Curtis & Tompkins, Ltd.

Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC112641	Batch#:	55053
Matrix:	Water	Analyzed:	04/11/00
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	18.52	93	51-125
Benzene	20.00	18.23	91	67-117
Toluene	20.00	22.45	112	69-117
Ethylbenzene	20.00	21.27	106	68-124
m,p-Xylenes	40.00	44.28	111	70-125
o-Xylene	20.00	21.28	106	65-129

Surrogate	%REC	Limits
Trifluorotoluene (PID)	98	56-142
Bromofluorobenzene (PID)	93	55-149

Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8015M
Field ID:	ZZZZZZZZZZ	Batch#:	55053
MSS Lab ID:	144812-001	Sampled:	04/03/00
Matrix:	Water	Received:	04/03/00
Units:	ug/L	Analyzed:	04/12/00
Diln Fac:	1.000		

Type: MS Lab ID: QC112642

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	6.176	2,000	1,958	98	65-131

Surrogate	%REC	Limits
Trifluorotoluene (FID)	120	59-135
Bromofluorobenzene (FID)	112	60-140

Type: MSD Lab ID: QC112643

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,983	99	65-131	1	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	119	59-135
Bromofluorobenzene (FID)	112	60-140

RPD= Relative Percent Difference

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Total Extractable Hydrocarbons

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8015M
Matrix:	Water	Sampled:	04/06/00
Units:	ug/L	Received:	04/06/00
Batch#:	54993	Prepared:	04/07/00

Field ID:	MW-1	Diln Fac:	2.000
Type:	SAMPLE	Analyzed:	04/17/00
Lab ID:	144896-001		

Analyte	Result	RL
Diesel C10-C24	25,000	100

Surrogate	%REC	Limits
Hexacosane	93	44-121

Field ID:	MW-2	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	04/15/00
Lab ID:	144896-002		

Analyte	Result	RL
Diesel C10-C24	150	50

Surrogate	%REC	Limits
Hexacosane	85	44-121

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC112402	Analyzed:	04/12/00

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	70	44-121

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8015M
Matrix:	Water	Batch#:	54993
Units:	ug/L	Prepared:	04/07/00
Diln Fac:	1.000	Analyzed:	04/12/00

Type: BS Lab ID: QC112403

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,475	1,537	62	45-110

Surrogate	%REC	Limits
Hexacosane	87	44-121

Type: BSD Lab ID: QC112404

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,475	1,618	65	45-110	5	22

Surrogate	%REC	Limits
Hexacosane	82	44-121

PD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270B
Field ID:	MW-1	Batch#:	55117
Lab ID:	144896-001	Sampled:	04/06/00
Matrix:	Water	Received:	04/06/00
Units:	ug/L	Prepared:	04/13/00
Diln Fac:	1.000	Analyzed:	04/19/00

Analyte	Result	RL
N-Nitrosodimethylamine	ND	10
Phenol	ND	10
bis(2-Chloroethyl)ether	ND	10
2-Chlorophenol	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Benzyl alcohol	ND	10
1,2-Dichlorobenzene	ND	10
2-Methylphenol	ND	10
bis(2-Chloroisopropyl) ether	ND	10
3-,4-Methylphenol	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
bis(2-Chloroethoxy)methane	ND	10
2,4-Dichlorophenol	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
4-Chloro-3-methylphenol	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	50
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50
Acenaphthene	ND	10
2,4-Dinitrophenol	ND	50

D = Not Detected
L = Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270B
Field ID:	MW-1	Batch#:	55117
Lab ID:	144896-001	Sampled:	04/06/00
Matrix:	Water	Received:	04/06/00
Units:	ug/L	Prepared:	04/13/00
Diln Fac:	1.000	Analyzed:	04/19/00

Analyte	Result	RL
4-Nitrophenol	ND	50
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
Fluorene	ND	10
4-Chlorophenyl-phenylether	ND	10
4-Nitroaniline	ND	50
4,6-Dinitro-2-methylphenol	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Pentachlorophenol	ND	50
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	18	10
Di-n-octylphthalate	ND	10
Benzo(b,k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%REC	Limits
2-Fluorophenol	62	17-119
Phenol-d5	64	18-129
2,4,6-Tribromophenol	61	19-136
Nitrobenzene-d5	68	34-126
2-Fluorobiphenyl	74	30-121
Terphenyl-d14	39	15-142

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270B
Field ID:	MW-2	Batch#:	55117
Lab ID:	144896-002	Sampled:	04/06/00
Matrix:	Water	Received:	04/06/00
Units:	ug/L	Prepared:	04/13/00
Diln Fac:	1.000	Analyzed:	04/19/00

Analyte	Result	RL
N-Nitrosodimethylamine	ND	10
Phenol	ND	10
bis(2-Chloroethyl)ether	ND	10
2-Chlorophenol	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Benzyl alcohol	ND	10
1,2-Dichlorobenzene	ND	10
2-Methylphenol	ND	10
bis(2-Chloroisopropyl) ether	ND	10
3-,4-Methylphenol	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
bis(2-Chloroethoxy)methane	ND	10
2,4-Dichlorophenol	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
4-Chloro-3-methylphenol	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	50
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50
Acenaphthene	ND	10
2,4-Dinitrophenol	ND	50

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270B
Field ID:	MW-2	Batch#:	55117
Lab ID:	144896-002	Sampled:	04/06/00
Matrix:	Water	Received:	04/06/00
Units:	ug/L	Prepared:	04/13/00
Diln Fac:	1.000	Analyzed:	04/19/00

Analyte	Result	RL
4-Nitrophenol	ND	50
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
Fluorene	ND	10
4-Chlorophenyl-phenylether	ND	10
4-Nitroaniline	ND	50
4,6-Dinitro-2-methylphenol	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Pentachlorophenol	ND	50
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b,k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%REC	Limits
2-Fluorophenol	42	17-119
Phenol-d5	47	18-129
2,4,6-Tribromophenol	43	19-136
Nitrobenzene-d5	54	34-126
2-Fluorobiphenyl	66	30-121
Terphenyl-d14	62	15-142

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC112885	Batch#:	55117
Matrix:	Water	Prepared:	04/13/00
Units:	ug/L	Analyzed:	04/19/00

Analyte	Result	RL
N-Nitrosodimethylamine	ND	10
Phenol	ND	10
bis(2-Chloroethyl)ether	ND	10
2-Chlorophenol	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Benzyl alcohol	ND	10
1,2-Dichlorobenzene	ND	10
2-Methylphenol	ND	10
bis(2-Chloroisopropyl) ether	ND	10
3-,4-Methylphenol	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
bis(2-Chloroethoxy)methane	ND	10
2,4-Dichlorophenol	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
4-Chloro-3-methylphenol	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	50
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50
Acenaphthene	ND	10
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	144896	Location:	Berkeley Farms
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC112885	Batch#:	55117
Matrix:	Water	Prepared:	04/13/00
Units:	ug/L	Analyzed:	04/19/00

Analyte	Result	RL
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
Fluorene	ND	10
4-Chlorophenyl-phenylether	ND	10
4-Nitroaniline	ND	50
4,6-Dinitro-2-methylphenol	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Pentachlorophenol	ND	50
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b,k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%REC	Limits
2-Fluorophenol	76	17-119
Phenol-d5	73	18-129
2,4,6-Tribromophenol	69	19-136
Nitrobenzene-d5	71	34-126
2-Fluorobiphenyl	81	30-121
Terphenyl-d14	85	15-142

ND = Not Detected
RL = Reporting Limit