PORT OF OAKLAND

May 6, 1994

Ms. Jennifer Eberle
Hazardous Materials Division
Department of Environmental Health
Alameda County Health Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

SUBJECT: American President Lines (APL), Berth 60-63, Port of Oakland, Oakland, California

Dear Ms. Eberle:

Enclosed, you will find a copy of the letter report of the fifth quarterly groundwater sampling, American President Lines Terminal, 1395 Middle Harbor Road, Port of Oakland, Oakland, California. The fifth quarterly sampling took place on February 24, 1994. The report was completed by Geomatrix Consultants for the Port of Oakland.

Four Underground Storage Tanks (USTs), two diesel, one gasoline and one waste oil, were removed from this site between 6 January and 4 March 1992. The sampling and analysis for this report was conducted in accordance with the workplan prepared by Geomatrix dated October 1992.

Please call me at (510)-272-1184 if you have any comments or questions.

Sincerely,

Jon Amdur
Environmental Scientist

cc w/o report: Neil Werner (Environmental Department)

enclosure\

530 Water Street ■ Jack London's Waterfront ■ P.O. Box 2064 ■ Oakland, California 94604-2064
Telephone (510) 272-1100 ■ Fax (510) 272-1172 ■ Cable address, PORTOFOAK, Oakland

100 Pine Street, 10th Floor
San Francisco, CA 94111
(415) 434-9400 • FAX (415) 434-1365

GEOMATRIX

29 April 1994
Project No. 2026

Mr. Jon Amdur
Port of Oakland
530 Water Street
Oakland, California 94607

Subject: Groundwater Sampling
American President Lines Terminal
1395 Middle Harbor Road
Port of Oakland
Oakland, California

Dear Mr. Amdur:

This letter report presents the results of the fifth quarterly groundwater sampling event performed by Geomatrix Consultants, Inc. (Geomatrix) on 24 February 1994 at the American President Lines Terminal (APL), 1395 Middle Harbor Road, at the Port of Oakland (Port; Figure 1). The work was conducted in accordance with our October 1992 Work Plan and in response to the 13 November 1992 Alameda County Health Care Services Agency letter to the Port.

For the quarterly monitoring program, Geomatrix performed water-level measurements and groundwater sampling. These activities and the results are described below.

WATER-LEVEL MEASUREMENTS

Geomatrix measured water levels in the three shallow groundwater monitoring wells (Figure 2) on 24 February 1994 before groundwater was sampled. Water levels were measured to the nearest 0.01 foot using a steel tape. The measurements were used to calculate water-level elevations at each of the wells; the elevations are shown on Figure 2 and are presented in Table 1.

Water-level elevations measured on 24 February 1994 ranged from 6.54 to 6.86 feet Mean Lower Low Water (MLLW; Port datum). The water-level elevations are higher than those measured during the previous quarter. The horizontal gradient, as in previous quarters, is very flat; horizontal flow direction was southwesterly, toward the Oakland Inner Harbor. The gradient direction has shifted from that measured during the previous two quarters; however this gradient direction is consistent with the gradient measured during the first two quarters of monitoring.

GROUNDWATER SAMPLING

Geomatrix collected groundwater samples from the three on-site monitoring wells on 24 February 1994 (Figure 2). All equipment used in the wells was washed with a laboratory-grade detergent (Alconox) and rinsed with deionized water. Before being sampled, the wells were purged using a stainless steel bailer. To obtain groundwater representative of the aquifer screened by the well, the wells were purged until the temperature, pH, and specific conductance of the purged groundwater stabilized and at least four casing volumes were removed. Groundwater purged from the site was contained in a labeled 55-gallon drum which is being temporarily stored on site.

After the wells were purged, groundwater samples were collected from the approximate mid-point of the screened interval using a disposable bailer. The samples were decanted from the bailer directly into the appropriate containers. The samples were labeled and placed in an ice-cooled chest for delivery under Geomatrix chain-of-custody to Curtis & Tompkins, Ltd. (Curtis & Tompkins), of Berkeley, California, a state-certified analytical laboratory retained by the Port. A copy of the chain-of-custody record is included in Attachment A.

Groundwater samples were analyzed by Curtis & Tompkins for total petroleum hydrocarbons as gasoline (TPHg) by modified U.S. Environmental Protection Agency (EPA) Method 8015; total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015; halogenated volatile organic compounds (VOCs) by EPA Method 8010; and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8020. A copy of the analytical laboratory report is included in Attachment A.

ANALYTICAL RESULTS

The analytical results for the groundwater samples are summarized in Tables 2 and 3 (attached). TPHd was reported in the groundwater samples from monitoring wells MW-1 and MW-3 at concentrations of 2000 and 890 micrograms per liter (μg/l), respectively. TPHg was reported only in the sample from well MW-1 at a concentration of 360 μg/l. Benzene and ethylbenzene were reported only in the groundwater sample from MW-1 at concentrations of 12 and 2 μg/l, respectively. 1,1-dichloroethane (1,1-DCA), was also reported in the groundwater sample from MW-1 at a concentration of 2.0 μg/l. Only 1,4-dichlorobenzene (1,4-DCB) was reported in the groundwater sample from MW-2 at a concentration of 1.0 μg/l.

The analytical data of the groundwater samples are consistent with the previous results which indicated generally higher concentrations in the upgradient well (MW-1).

The next quarterly sampling event will be performed in May 1994. We appreciate the opportunity to continue working with you on this project. Please contact either of the undersigned if you have any questions.

Sincerely yours,

GEOMATRIX CONSULTANTS, INC.

Elizabeth K. Wells

Elizabeth K. Wells, P.E.
Project Engineer

Sally E. Goodin

Sally E. Goodin, R.G.
Senior Geologist

2026\QTR1-94.LTR
EKW/SEG/lam

Attachments: Tables (3)
Figures (2)
Attachment A - Chain-of-Custody Record and Analytical Laboratory Report

GEOMATRIX

TABLE 1

WATER-LEVEL ELEVATIONS

American President Lines Terminal
1395 Middle Harbor Road
Port of Oakland
Oakland, California

Water-Level Elevations in Feet (MLLW)

Measuring Date	MW-1	MW-2	MW-3
8 March 1993	7.07	6.58	6.76
11 May 1993	7.08	6.79	6.95
19 August 1993	6.27	6.30	6.34
24 November 1993	5.89	6.02	6.05
24 February 1994	6.86	6.54	6.76

GEOMATRIX

TABLE 2

SUMMARY OF COMPOUNDS DETECTED IN GROUNDWATER SAMPLES

American President Lines Terminal
1395 Middle Harbor Road
Port of Oakland
Oakland, California

Concentrations in parts per billion (ppb)

Well No.	Date	TPH as Gasoline	TPH as Diesel	Total Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	EPA Method 8010
MW-1	2/5/93	1800	4700	5000	9.2	1.6	8.9	2.7	1,1-DCA 0.8
	5/11/93	260	4800	7000	3.2	2.3	0.7	0.5	1,1-DCA 0.6
	8/19/93	60	2300	ND	9.0	ND	ND	ND	1,1-DCA 2.0 1,1-DCE 2.0
	11/24/93	50	280	ND	8.8	1.5	ND	3.0	1,1-DCA 0.7
	2/24/94	360	2000	NA	12	ND	2	ND	1,1-DCA 2.0
MW-2	2/5/93	ND	840	2000	ND	ND	ND	ND	ND
	5/11/93	ND	3700	ND	ND	ND	ND	ND	ND
	8/19/93	ND	620	ND	ND	ND	ND	ND	1,4-DCB 3.0 1,2-DCB 1.0
	11/24/93	ND	80	ND	ND	ND	ND	ND	ND
	2/2/94	ND	ND	NA	ND	ND	ND	ND	1,4-DCB 1.0
MW-3	2/5/93	ND	3400	2000	2.1	0.9	1.7	3.1	Cis-1,2-DCE 0.4
	5/11/93	ND	3300	ND	ND	ND	ND	ND	ND
	8/19/93	ND	ND	840	ND	ND	ND	ND	1,4-DCB 1.0
	11/24/93	ND	100	ND	ND	ND	ND	ND	ND
	2/2/94	ND	890	NA	ND	ND	ND	ND	ND

GEOMATRIX

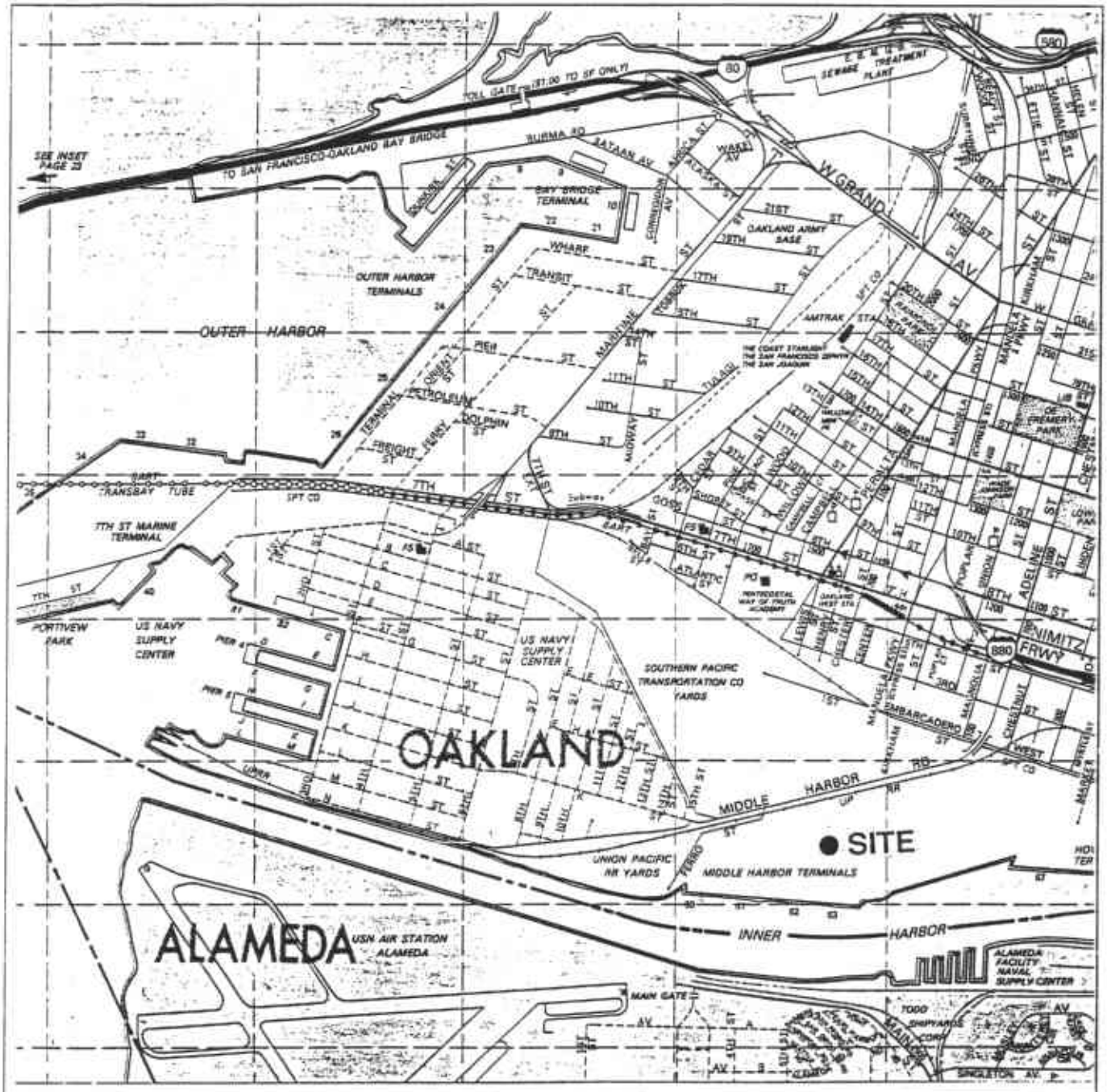
TABLE 2

SUMMARY OF COMPOUNDS DETECTED IN GROUNDWATER SAMPLES

Notes:

1 Samples collected by Geomatrix Consultants, Inc. and analyzed by Curtis & Tomkins, Ltd., of Berkeley, California, and Clayton Environmental, Consultants, Inc. of Pleasanton, California, for TPH as gasoline by modified EPA Method 8015; TPH as diesel by EPA Method 8015; total oil and grease by Standard Method 5520 C and F; benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8020; and halogenated volatile organic compounds by EPA Method 8010.

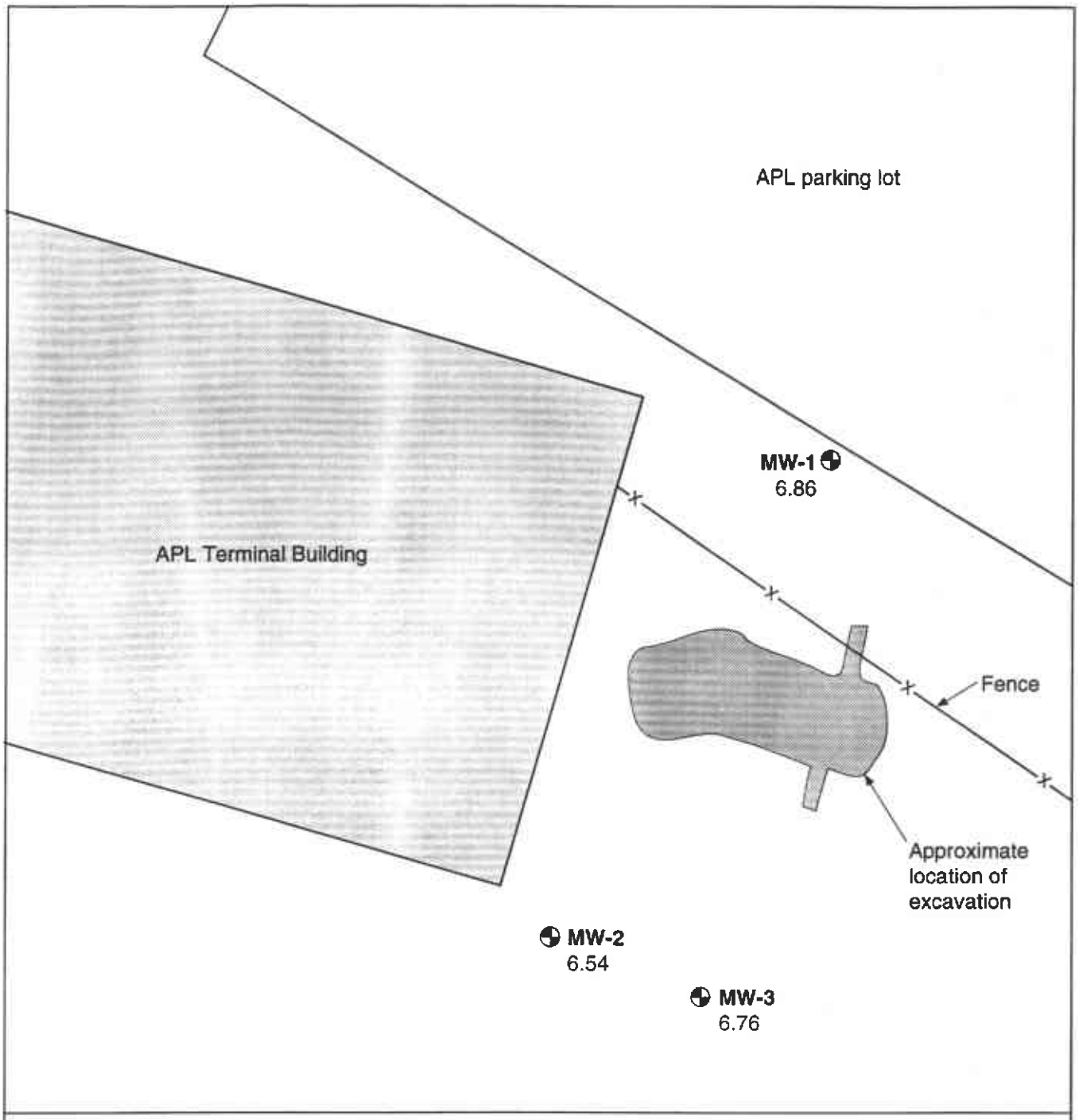
2
- TPH = total petroleum hydrocarbons
- ND = not detected at or above detection limit
- DCA = dichloroethane
- DCE = dichloroethene
- DCB = dichlorobenzene
- NA = not analyzed



Reference: Thomas Brothers Maps
Alameda County
1990

0 2200 Feet

GEOMATRIX	SITE LOCATION MAP American President Lines Terminal 1395 Middle Harbor Road Oakland, California	Figure 1 Project No. 2026



EXPLANATION

MW-2 Monitoring well

6.76 Water-level elevation, in feet

N

0 50 Feet

Based on figure provided by the Port of Oakland.

Elevations referenced to Mean Lower Low Water Port Datum.

GEOMATRIX

WATER-LEVEL ELEVATIONS – 24 FEBRUARY 1994
American President Lines Terminal
1395 Middle Harbor Road
Oakland, California

Figure 2

Project No. 2026

GEOMATRIX

ATTACHMENT A

CHAIN-OF-CUSTODY RECORD AND ANALYTICAL LABORATORY REPORT

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

A N A L Y T I C A L R E P O R T

Prepared for:

Geomatrix Consultants
100 Pine Street
10th Floor
San Francisco, CA 94111

Date: 09-MAR-94
Lab Job Number: 114496
Project ID: 2026I
Location: Port of Oakland

Reviewed by: _____

Reviewed by: _____

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496-1
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I
SAMPLE ID: MW-2

DATE SAMPLED: 02/24/94
DATE RECEIVED: 02/24/94
DATE ANALYZED: 02/26/94
DATE REPORTED: 03/09/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L		REPORTING LIMIT ug/L
Chloromethane	ND		2
Bromomethane	ND		2
Vinyl chloride	ND		2
Chloroethane	ND		2
Methylene chloride	ND		20
Trichlorofluoromethane	ND		1
1,1-Dichloroethene	ND		1
1,1-Dichloroethane	ND		1
cis-1,2-Dichloroethene	ND		1
trans-1,2-Dichloroethene	ND		1
Chloroform	ND		1
Freon 113	ND		1
1,2-Dichloroethane	ND		1
1,1,1-Trichloroethane	ND		1
Carbon tetrachloride	ND		1
Bromodichloromethane	ND		1
1,2-Dichloropropane	ND		1
cis-1,3-Dichloropropene	ND		1
Trichloroethene	ND		1
1,1,2-Trichloroethane	ND		1
trans-1,3-Dichloropropene	ND		1
Dibromochloromethane	ND		1
Bromoform	ND		2
Tetrachloroethene	ND		1
1,1,2,2-Tetrachloroethane	ND		1
Chlorobenzene	ND		1
1,3-Dichlorobenzene	ND		1
1,4-Dichlorobenzene		1	1
1,2-Dichlorobenzene	ND		1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

SURROGATE RECOVERY, %	100

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496-1
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I
SAMPLE ID: MW-2

DATE SAMPLED: 02/24/94
DATE RECEIVED: 02/24/94
DATE ANALYZED: 02/26/94
DATE REPORTED: 03/09/94

EPA 8020: Volatile Aromatic Hydrocarbons in Water

COMPOUND	RESULT ug/L	REPORTING LIMIT ug/L
Benzene	ND	1
Toluene	ND	1
Ethyl Benzene	ND	1
Total Xylenes	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	1	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

SURROGATE RECOVERY, %	100

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496-2
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I
SAMPLE ID: MW-3

DATE SAMPLED: 02/24/94
DATE RECEIVED: 02/24/94
DATE ANALYZED: 02/26/94
DATE REPORTED: 03/09/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	REPORTING LIMIT ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

SURROGATE RECOVERY, %	103

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496-2
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I
SAMPLE ID: MW-3

DATE SAMPLED: 02/24/94
DATE RECEIVED: 02/24/94
DATE ANALYZED: 02/26/94
DATE REPORTED: 03/09/94

EPA 8020: Volatile Aromatic Hydrocarbons in Water

COMPOUND	RESULT ug/L	REPORTING LIMIT ug/L
Benzene	ND	1
Toluene	ND	1
Ethyl Benzene	ND	1
Total Xylenes	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

SURROGATE RECOVERY, %	100

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496-3
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I
SAMPLE ID: MW-1

DATE SAMPLED: 02/24/94
DATE RECEIVED: 02/24/94
DATE ANALYZED: 02/26/94
DATE REPORTED: 03/09/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	REPORTING LIMIT ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	2	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

SURROGATE RECOVERY, %	101

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496-3
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I
SAMPLE ID: MW-1

DATE SAMPLED: 02/24/94
DATE RECEIVED: 02/24/94
DATE ANALYZED: 02/26/94
DATE REPORTED: 03/09/94

EPA 8020: Volatile Aromatic Hydrocarbons in Water

COMPOUND	RESULT ug/L	REPORTING LIMIT ug/L
Benzene	12	1
Toluene	ND	1
Ethyl Benzene	2	1
Total Xylenes	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

SURROGATE RECOVERY, %	103

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496-METHOD BLANK
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I

DATE ANALYZED: 02/26/94
DATE REPORTED: 03/09/94

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	REPORTING LIMIT ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

SURROGATE RECOVERY, %	98

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496-METHOD BLANK
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I

DATE ANALYZED: 02/26/94
DATE REPORTED: 03/09/94

EPA 8020: Volatile Aromatic Hydrocarbons in Water

COMPOUND	RESULT ug/L	REPORTING LIMIT ug/L
Benzene	ND	1
Toluene	ND	1
Ethyl Benzene	ND	1
Total Xylenes	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

SURROGATE RECOVERY, %	100

Curtis & Tompkins, Ltd.

MS/MSD SUMMARY SHEET FOR EPA 8010/8020

Laboratory Number: 114496
Sample type: Water
Date Analyzed: 02/26/94
Sample spiked: 114522-002
Spike file: 056W026
Spike dup file: 056W027

8010 MS/MSD DATA (spiked at 20 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	22.45	112 %	OK	61 - 145
Trichloroethene	68.51	86 %	OK	71 - 120
Chlorobenzene	21.87	109 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
1,1-Dichloroethene	22.24	111 %	OK	61 - 145
Trichloroethene	68.51	86 %	OK	71 - 120
Chlorobenzene	21.92	110 %	OK	75 - 130
SURROGATES				
BROMOBENZENE (MS)	99.77	100 %	OK	75 - 125
BROMOBENZENE (MSD)	99.13	99 %	OK	75 - 125

8020 MS/MSD DATA (spiked at 20 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
Benzene	22.79	113 %	OK	76 - 127
Toluene	22.62	111 %	OK	76 - 125
Chlorobenzene	22.63	113 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
Benzene	23.02	114 %	OK	76 - 127
Toluene	22.82	112 %	OK	76 - 125
Chlorobenzene	22.87	114 %	OK	75 - 130
SURROGATES				
BROMOBENZENE (MS)	100.29	100 %	OK	75 - 125
BROMOBENZENE (MSD)	100.25	100 %	OK	75 - 125

MATRIX RESULTS

1,1-Dichloroethene	0
Trichloroethene	51.2154
Chlorobenzene	0
Benzene	0.1745
Toluene	0.4045
Chlorobenzene	0

RPD DATA

8010 COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	22.45	22.24	1 %	OK	<= 14
Trichloroethene	68.51	68.51	0 %	OK	<= 14
Chlorobenzene	21.87	21.92	0 %	OK	<= 13
8020 COMPOUNDS					
Benzene	22.79	23.02	1 %	OK	<= 11
Toluene	22.62	22.82	1 %	OK	<= 13
Chlorobenzene	22.63	22.87	1 %	OK	<= 13

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I

DATE SAMPLED: 02/24/94
DATE RECEIVED: 02/24/94
DATE ANALYZED: 03/01/94
DATE REPORTED: 03/09/94

Total Volatile Hydrocarbons as Gasoline in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	TVH AS GASOLINE (ug/L)	REPORTING LIMIT (ug/L)
114496-1	MW-2	ND	50
114496-2	MW-3	ND	50
114496-3	MW-1	360	50

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	94

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 114496
CLIENT: GEOMATRIX CONSULTANTS
PROJECT ID: 2026I

DATE SAMPLED: 02/24/94
DATE RECEIVED: 02/24/94
DATE EXTRACTED: 03/08/94
DATE ANALYZED: 03/09/94
DATE REPORTED: 03/09/94

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT (ug/L)
114496-1	MW-2	ND	ND	50
114496-2	MW-3	**	890	50
114496-3	MW-1	**	2,000	60

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

** Kerosene range not reported due to overlap of hydrocarbon ranges.

QA/QC SUMMARY:

RPD, %	5
RECOVERY, %	98

Chain-of-Custody Record

No 4115

Date: 2/24/94

Page 1 of 1

Project No.: 2026 I

Samplers (Signatures):

	Date	Time	Sample Number	EPA Method 8010	EPA Method 8020	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	TPH as BTEX	Total Oil & Grease	Total Oil & Grease	Cooled	Soil (S) or water (W)	Acidified	Number of containers
1	2/24	1345	MW-2	X	X			X	X		*	*	X	W		7
2		1430	MW-3	X	X			X	X		*	*	X	W		7
3		1530	MW-1	X	X			X	X		*	*	X	W		7

ANALYSES

REMARKS

Additional comments

* = HOLD

Bill Port of Oakland Directly

Work order # 204716

Turnaround time: 2 WEEKS

Results to: ELIZABETH WELLS

Total No. of containers: 21

Relinquished by:	Date:	Relinquished by:	Date:	Relinquished by:	Date:
Signature:	2/24/94	Signature:		Signature:	
Printed name: JAMES ABID		Printed name:		Printed name:	
Company: GEOMATRIX		Company:		Company:	
Received by:	**Time:**	**Received by:**	**Time:**	**Received by:**	**Time:**
Signature: TERESA MORRISON	1645	Signature:		Signature:	
Printed name: CTL		Printed name:		Printed name:	
Company:		Company:		Company:	

Method of shipment: HAND DELIVERY

Laboratory comments and Log No.: CTL 114496

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