Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Marketing Operations

D. Moller
Manager, Operations
S. L. Patterson
Area Manager, Operations
C. G. Trimbach
Manager, Engineering

December 6, 1989

Ariu Levi
Alameda County
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Former Chevron Bulk Plant #1001067
1520 Powell Street
Emeryville, California

Dear Mr. Levi:

Enclosed are the results of the quarterly ground water sampling conducted by Western Geologic Resources at the above referenced site. As indicated in the report, all water samples were analyzed for total purgeable petroleum hydrocarbons (TPH) and aromatic hydrocarbons (BTEX). In order to track the natural degradation of hydrocarbons in the groundwater beneath the site, Chevron will continue to monitor the site on a quarterly basis.

I declare under penalty of perjury that the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the circumstances, to the best of my knowledge. If you have any questions or require additional information, please contact Lisa Marinaro at (415) 842-9527.

Sincerely,
D. Moller

By Lisa Marinaro
Lisa Marinaro, Engineer

cc: Tom Callaghan
California Regional Water
Quality Control Board
1111 Jackson Street
Oakland, California 94607

WESTERN GEOLOGIC RESOURCES, INC.

2169 E. FRANCISCO BOULEVARD, SUITE B
SAN RAFAEL, CALIFORNIA 94901
415/457-7595 FAX: 415/457-8521

QUARTERLY MONITORING REPORT

Abandoned Chevron Asphalt Plant and Terminal
1520 Powell Street
Emeryville, CA

Prepared For

Chevron USA
2410 Camino Ramon
San Ramon, CA

V.C. MCL .0005 ppm
off-site Chris Alger 457-7595
delineation of western Geologic Resources contaminant plume should be pursued.
Discuss with Reg Board concerning active remediation, Hydrogeo Assessment adequate

NOV 13 '89 H.C.H.

November 1989

QUARTERLY MONITORING REPORT

Abandoned Chevron Asphalt Plant and Terminal
1520 Powell Street
Emeryville, CA

Prepared For

Chevron USA
2410 Camino Ramon
San Ramon, CA

Prepared By

Western Geologic Resources, Inc.
2169 E. Francisco Blvd.
San Rafael, CA

November 1989

Thomas M. Howard
Project Geologist

Sherwood Lovejoy Jr.
President / Principal Hydrogeologist

John E. Crawford
Principal Geologist / Operation Manager
CRG No. 2635

REGISTERED GEOLOGIST
JOHN E. CRAWFORD
No. 002635
Exp. 6-30-90
STATE OF CALIFORNIA

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EXECUTIVE SUMMARY

Western Geologic Resources, Inc. performed quarterly groundwater sampling on 31 July 1989 at the former Chevron Asphalt plant and terminal located at 1520 Powell street in Emeryville, California. Groundwater samples were collected from eight monitor wells at the site: MW-1, MW-2, MW-3, MW-7, MW-8, MW-10, MW-11 and MW-12. Monitor well MW-9 could not be located and monitor wells MW-4, MW-5 and MW-6 were destroyed during site remediation in August 1989. Groundwater samples were analyzed by Environmental Protection Agency (EPA) Method 8260.

Total purgeable petroleum hydrocarbons (TPPH), characterized as gasoline, were detected at a concentration of 7000 parts-per-billion (ppb) in the groundwater sample from MW-1, located adjacent to the loading dock at the southern end of the site . TPPH, characterized as diesel #2, were detected at 160 ppb and 100 ppb (duplicate analysis) for the groundwater sample from MW-7, located off-site, west of the former tank area. Benzene, toluene and total xylenes were detected in the groundwater sample from MW-1 at 57.0 ppb, 1.2 ppb and 1.6 ppb, respectively. Various chlorinated compounds were detected in groundwater samples from all wells, except MW-2; most notably 1,2-dichloroethene (1,2-DCE) and trichloroethene (TCE) at concentrations up to 2654.0 ppb and 57.0 ppb, respectively, in groundwater samples from well MW-1, located adjacent to the loading dock.

1 INTRODUCTION

This report presents the results of the quarterly groundwater sampling performed on 31 July 1989 by Western Geologic Resources, Inc. (WGR) at the abandoned Chevron Asphalt Plant and Terminal located at 1520 Powell Street, Emeryville, California (Figure 1).

The scope of work for this project is:

1. Measure depth-to-water and well-casing volume in all groundwater monitor wells and produce a potentiometric surface contour map based on depth-to-water measurements;

2. Collect water samples from the monitor wells for analysis of total purgeable petroleum hydrocarbons (TPPH), aromatic hydrocarbons and halocarbons by Environmental Protection Agency (EPA) Method 8260;

3. Update the database for water-level measurements and for chemical data;

4. Produce distribution maps of trichloroethene (TCE) and cis- and trans-1,2-dichloroethene (1,2-DCE);

5. Tabulate a summary of groundwater chemical data collected by previous consultants and;

6. Review the results and prepare a report of the investigation.

2 BACKGROUND

The site is located in a mixed commercial and industrial district and is presently abandoned (Figure 1). A brief description of work previously conducted at the site is given below. Analytic results for groundwater samples from previous samplings are included in appendix A and summarized in Table 1. There were originally twelve monitor wells (MW-1 through MW-12) at the site. Eight which could be located are monitor wells MW-1, MW-2, MW-3, MW-7, MW-8, MW-10, MW-11, and MW-12 (Figure 2). MW-9 has not been located since 7 July 1985; monitor wells MW-4, MW-5 and MW-6 were destroyed during soil excavation in 1989.

In March 1985, Harding Lawson Associates (HLA) installed 9 groundwater monitor wells (MW-1 through MW-9) on- and off-site. Fuel hydrocarbons and halocarbons were detected in groundwater samples. Groundwater flow direction was determined to be to the south.

In October 1987, above-ground storage tanks and associated piping were removed.

In July of 1988, HLA installed 3 additional groundwater monitor wells (MW-10 through MW-12) on- and off-site; soil samples from the borings contained total petroleum hydrocarbons (TPH) and trichloroethene (TCE). TPH and halocarbons were present in groundwater samples.

In August and September of 1988, the loading dock and additional underground piping were removed.

In September 1988, Western Geologic Resources, Inc. (WGR) conducted soil sampling in the vicinity and perimeter of the loading dock; soil samples contained fuel hydrocarbons and halocarbons.

In December 1988, Groundwater Technology Inc. (GTI) conducted a subsurface soil investigation for the entire site and a small area off-site which borders the west property line. Soil samples contained fuel hydrocarbons. An area containing fuel hydrocarbons in the vadose zone was defined in the center of the property and an area containing TCE in the vadose zone was defined in the vicinity of the loading dock and office building.

In June 1989, WGR initiated site remediation, beginning with the excavation of the vadose zone in the above mentioned areas. Soil excavation was completed in August 1989. Monitor wells MW-4, MW-5 and MW-6 were destroyed during the excavation of adjacent soils in June and August 1989. Attempts were made to preserve each well, but extensive collapse of the excavation walls adversely impacted the integrity of each well. Casing remnants and filter-pack material were subsequently removed. Each cavity was filled during excavation backfill operations.

3 GROUNDWATER SAMPLING

Groundwater samples were collected on 31 July 1989 from monitor wells MW-1, MW-2, MW-3, MW-7, MW-8, MW-10, MW-11, and MW-12 (Figure 2) according to WGR's standard operating procedure included as Appendix B. Monitor well MW-9 could not be located on 31 July 1989 and wells MW-4, MW-5 and MW-6 were destroyed during soil excavation for remediation. Groundwater samples and a laboratory supplied travel blank, consisting of deionized water, were sent to the laboratory under chain-of-custody. All water, evacuated during the sampling process, was collected and temporarily stored on-site in 55-gallon drums pending analytic results.

4 ANALYTIC RESULTS

Central Coast Analytical Services (CCAS) of San Luis Obispo, California analyzed the groundwater samples collected on 31 July 1989 by EPA Method 8260 for TPPH, aromatic hydrocarbons and halocarbons. Analytic results are presented in Table 2. Appendices C, D and E contain the chain-of-custody forms, the laboratory reports, and the laboratory quality assurance and quality control reports, respectively.

TPPH, characterized as gasoline, were detected at a concentration of 7000 parts-per-billion (ppb) in the groundwater sample from well MW-1, adjacent to the loading dock located at the southern end of the site. TPPH, characterized as diesel #2, were detected at 160 ppb and 100 ppb (duplicate analysis) in the groundwater sample from well MW-7, located west of the former tank area. Benzene was detected in the sample from well MW-1 at 57.0 ppb and was below detection for all other wells. Toluene and total xylenes were detected at 1.2 ppb and 1.6 ppb, respectively, for the sample from MW-1 and below detection limits for all other samples from the remaining wells.

Distribution maps of cis- and trans-1,2-dichloroethene and trichloroethene in shallow groundwater are shown in figures 3 and 4. A variety of chlorinated compounds were detected in the groundwater samples from all wells, except MW-2, including 1,1-dichloroethene (1,1-DCE), 1,2-dichloroethene, 1,1-dichloroethane (1,1-DCA), 1,1,1-trichloroethane (TCA), trichloroethene (EDC) and 1,2-dichlorobenzene (1,2-DCB). The groundwater sample from MW-1, adjacent to the loading dock, contained the greatest variety and highest concentrations (up to 2654.0 ppb 1,2-DCE) of chlorinated compounds. Groundwater samples from monitor wells MW-7, west of the tank area, and MW-8, MW-10 and MW-11, west of the barrel platform and office/lab building, also contained a variety of chlorinated compounds, but at lower concentrations (up to 150.0 ppb 1,2-DCE). The groundwater sample from MW-12, adjacent to the office building, contained 1.7 ppb 1,2-DCE and 0.8 ppb TCE. The groundwater sample from MW-3, adjacent to the storeroom by Landregan Street, was reported to contain 0.5 ppb TCA.

5 GROUNDWATER FLOW

The potentiometric surface map of shallow groundwater based on depth-to-water measurements taken on 31 July 1989 is shown in Figure 2. Potentiometric data for shallow groundwater are tabulated in Table 3. Estimated groundwater flow beneath the site is to south at an average gradient of about 1%. Sample calculation A shows how the gradient was derived.[1]

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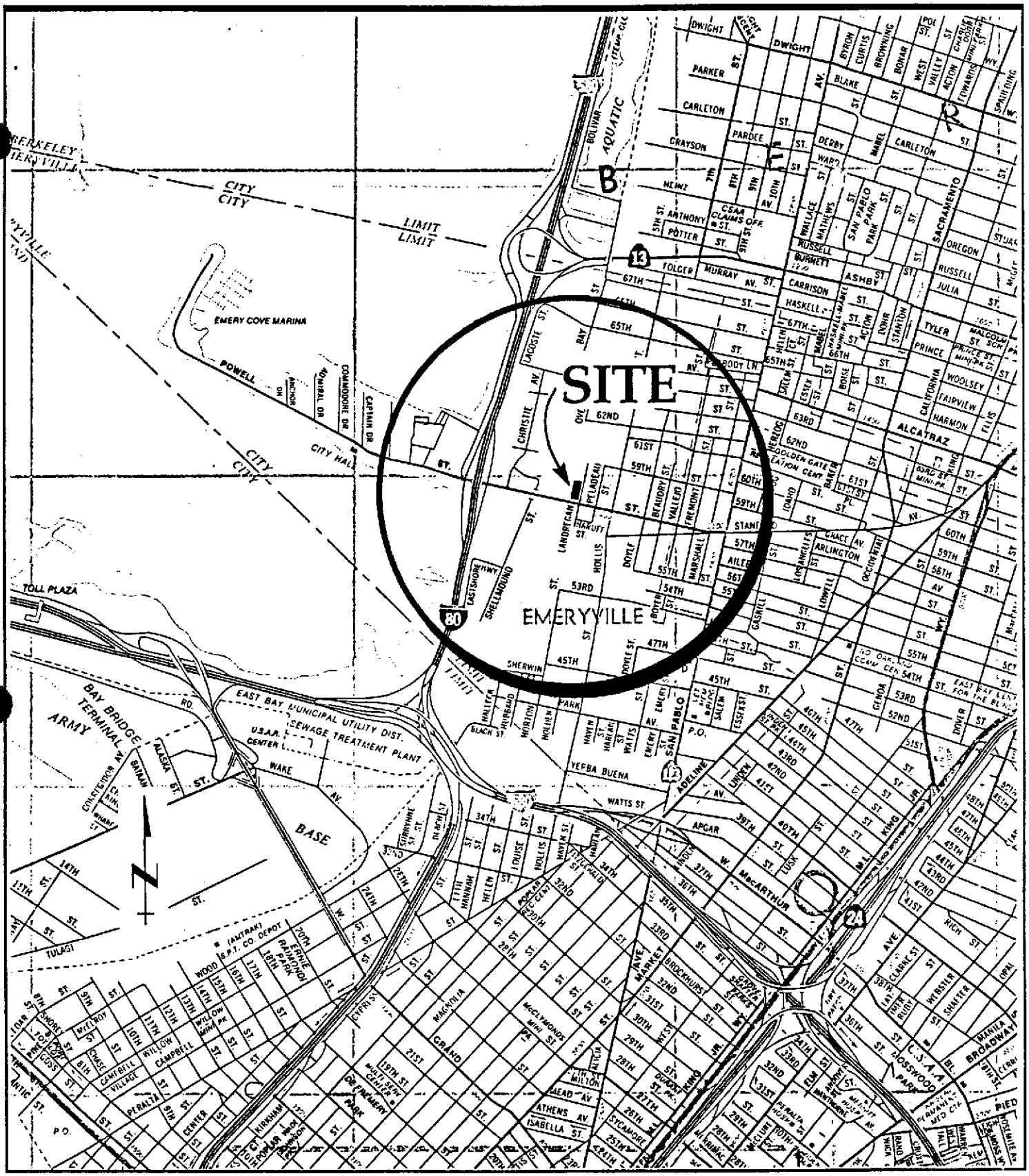
[1] Sample Calculation A: Groundwater Gradient Calculation
From Figure 2; reference line c-c'

h = 94.0ft - 93.0ft = 1.0ft
l = 126ft (distance along c-c')
Gradient = h/l = 1.0ft/126ft = 0.008 or about 0.01 or 1%



NOT TO SCALE

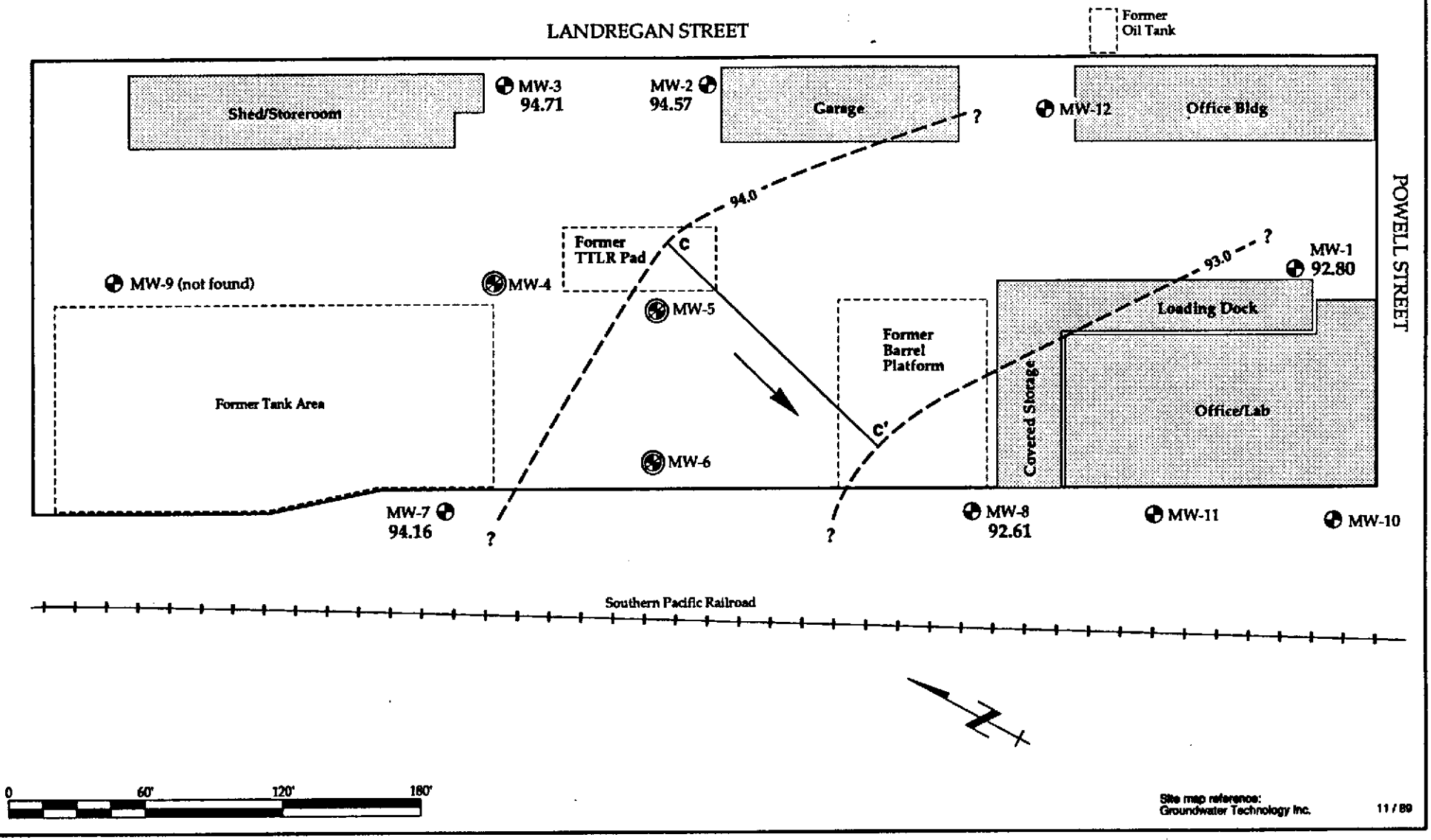
Reference: 1989 CSAA Road Map

Site Location Map
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
1

WESTERN GEOLOGIC RESOURCES, INC.

1-045.07



LEGEND

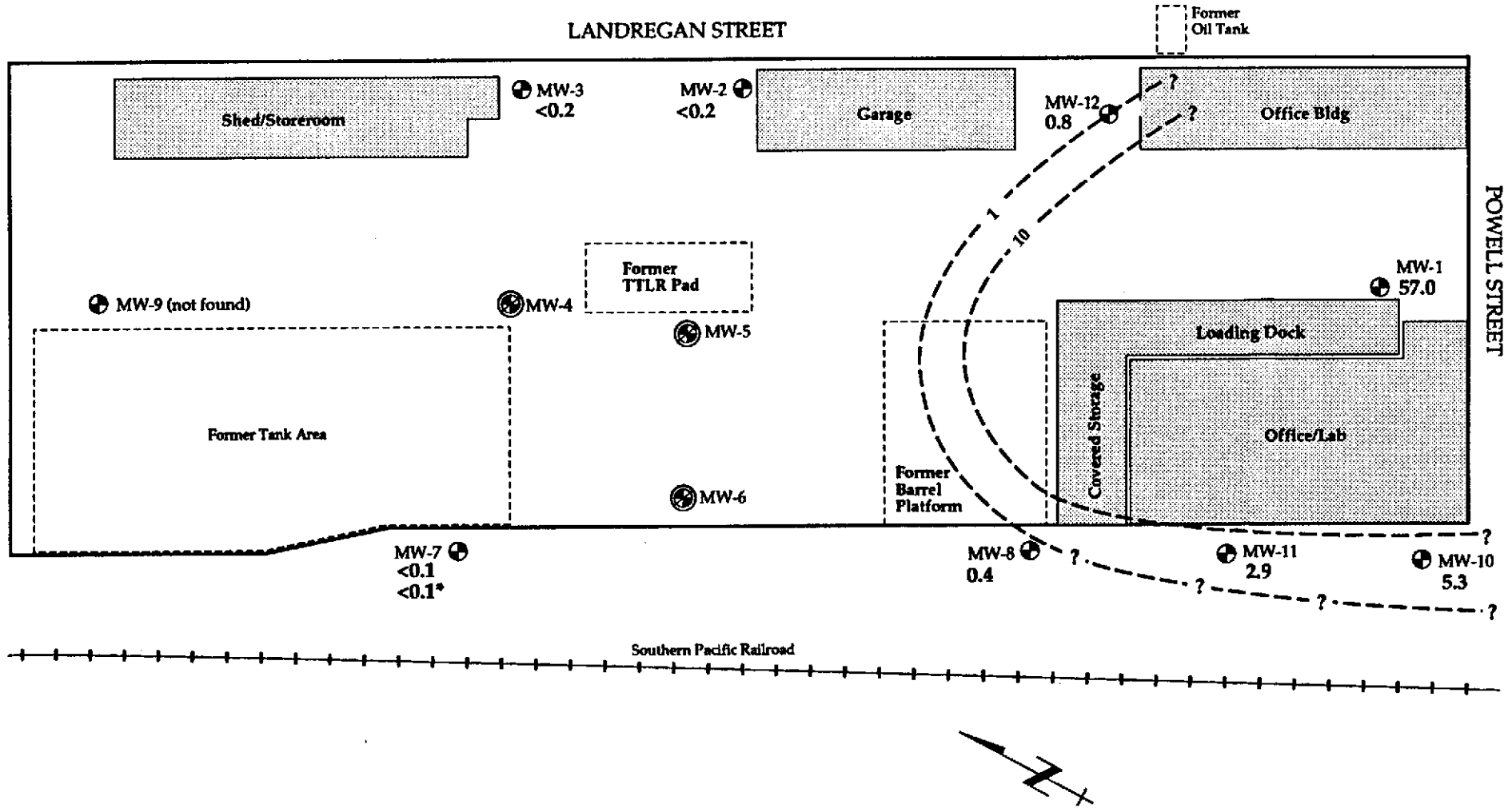
- MW-1 92.80 — Approximate location of Monitor Well and relative groundwater elevation
- MW-4 — Destroyed or Abandoned Monitor Well Locations
- → — Estimated direction of groundwater flow
- — 93.0 — — Relative groundwater elevation contour dashed where inferred, querried where uncertain
- C / C' — Reference line for gradient calculation

Potentiometric Surface of Shallow Groundwater, 31 July 1989
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE 2

WESTERN GEOLOGIC RESOURCES, INC.

1-045.07



LEGEND

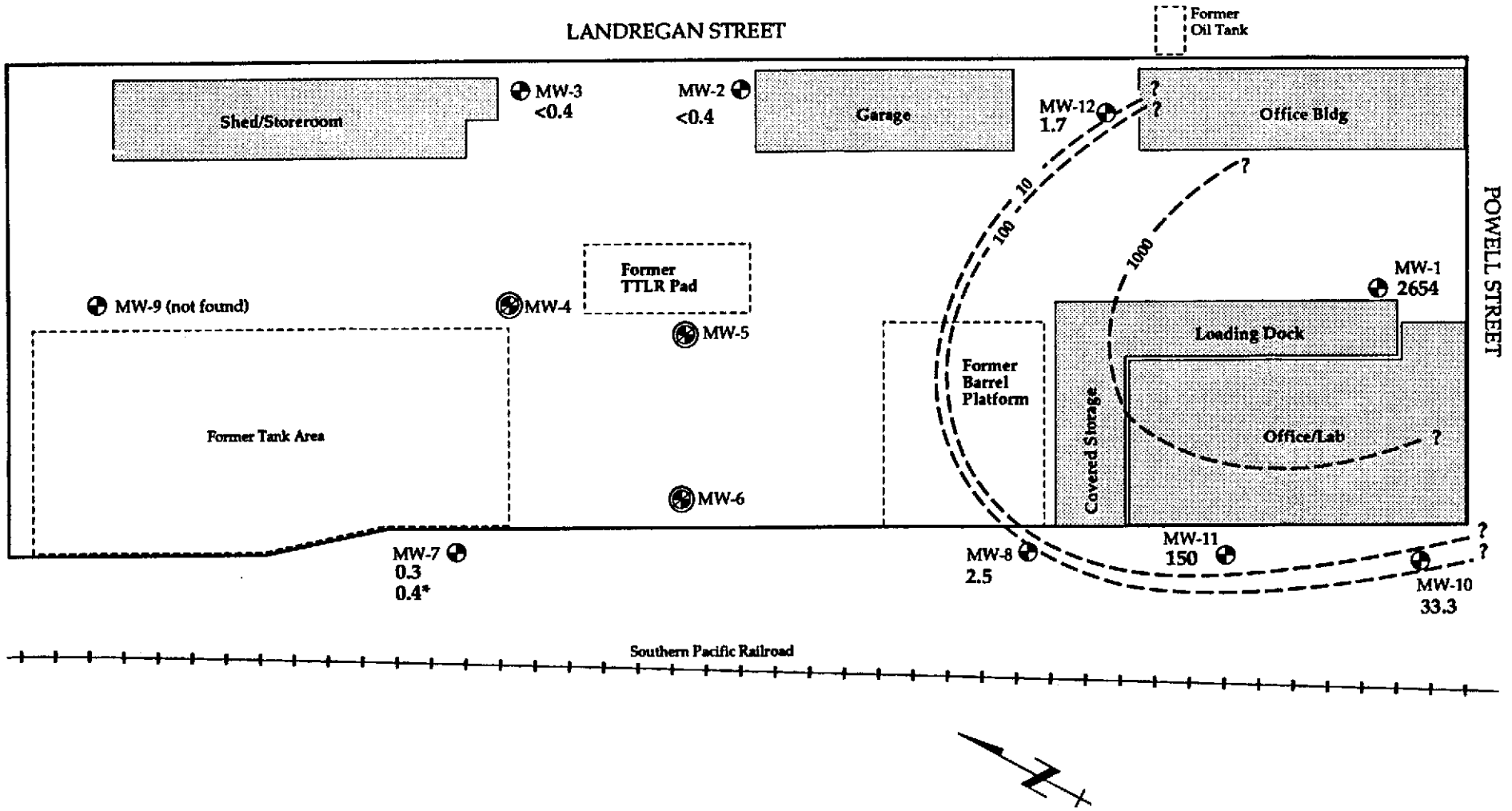
MW-1 57.0	Approximate location of Monitor Well and concentration of TCE in parts-per-billion (ppb)
MW-4	Destroyed or Abandoned Monitor Well Locations
— 10 —	Isoconcentration contour for TCE in ppb, dashed where inferred, querried where uncertain
0.1*	Duplicate result

Distribution of Trichloroethene (TCE)
in Shallow Groundwater, 31 July 1989
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
3

WESTERN GEOLOGIC RESOURCES, INC.

1-045.07



LEGEND

MW-1 2654	Approximate location of Monitor Well and concentration of cis- and trans- 1,2-dichloroethene in parts-per-billion (ppb)
MW-4	Destroyed or Abandoned Monitor Well Locations
— - 100 — —	Isoconcentration contour for 1,2-dichloroethene in ppb, dashed where inferred, querried where uncertain
0.4*	Duplicate result, highest value used

Distribution of cis- and trans- 1,2-dichloroethene in Shallow Groundwater, 31 July 1989
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE 4

WESTERN GEOLOGIC RESOURCES, INC.

1-045.07

Table 1. Summary of Analytic Results for Groundwater Samples
to Date for Fuel Hydrocarbons, Benzene, 1,2-DCE, TCE and Vinyl Chloride
Former Chevron Asphalt Plant
Emeryville, California

Well ID #	Date	Lab	FC	TH	TPH	TPPH	BENZENE	1,2DCE	TCE	VC
				<--------			ppb			-------->
MW-1	26 Apr 85	MCKSSN	---	NA	NA	NA	99	1200	160	1500
MW-1	11 Sep 87	SEQ	---	NA	NA	NA	63	700	<10	990
MW-1	07 Jul 88	C&T	---	---	<100	---	55	1050	45	560
MW-1	14 Apr 89	CCAS	---	---	---	<5000	34	739	11	340
MW-1	31 Jul 89	CCAS	GAS	---	---	7000	57	2654	57	760
MW-2	26 Apr 85	MCKSSN	---	NA	NA	NA	ND'	ND'	ND'	ND'
MW-2	11 Sep 87	SEQ	---	NS	NS	NS	NS	NS	NS	NS
MW-2	07 Jul 88	C&T	---	---	<100	---	<5	<5	<5	<5
MW-2	14 Apr 89	CCAS	---	---	---	<100	<0.2	<0.2	<0.2	<0.2
MW-2	31 Jul 89	CCAS	---	---	---	<100	<0.2	<0.4	<0.2	<0.2
MW-3	26 Apr 85	MCKSSN	---	NA	NA	NA	ND'	ND'	ND'	ND'
MW-3	11 Sep 87	SEQ	---	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
MW-3	07 Jul 88	C&T	---	---	<100	---	<5	<5	<5	<5
MW-3	14 Apr 89	CCAS	---	---	---	<100	<0.2	<0.2	<0.2	<0.2
MW-3	31 Jul 89	CCAS	---	---	---	<100	<0.2	<0.4	<0.2	<0.2
MW-4	26 Apr 85	MCKSSN	---	3100	---	---	ND'	ND'	ND'	ND'
MW-4	11 Sep 87	SEQ	---	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
MW-4	07 Jul 88	C&T	---	---	<100	---	<5	<5	<5	<5
MW-4	14 Apr 89	CCAS	GAS	---	---	380	<0.5	<1.0	<1.0	<1.0
MW-5	26 Apr 85	MCKSSN	---	1600	---	---	ND"	ND"	ND"	ND"
MW-5	11 Sep 87	SEQ	---	NA	NA	NA	<10	<10	<10	<10
MW-5	07 Jul 88	C&T	---	---	<100	---	<5	<5	<5	<5
MW-5	14 Apr 89	CCAS	DSL2	---	---	4300	<0.5	<1.0	<1.0	<1.0
MW-6	26 Apr 85	MCKSSN	---	580	---	---	ND"	ND"	ND"	ND"
MW-6	11 Sep 87	SEQ	---	NA	NA	NA	<10	<10	<10	<10
MW-6	07 Jul 88	C&T	other*	---	8000	---	<5	<5	<5	<5
MW-6	14 Apr 89	CCAS	DSL2	---	---	3300	<0.5	<1.0	<1.0	<1.0
MW-7	26 Apr 85	MCKSSN	---	700	---	---	ND	ND	ND	ND
MW-7	11 Sep 87	SEQ	---	NA	NA	NA	<10	<10	<10	<10
MW-7	07 Jul 88	C&T	other*	---	17000	---	<5	<5	<5	<5
MW-7	14 Apr 89	CCAS	---	---	---	<50	<0.5	<1.0	<1.0	<1.0
MW-7	31 Jul 89	CCAS	DSL2	---	---	160	<0.1	0.3	<0.1	<0.1
MW-7dup	31 Jul 89	CCAS	DSL2	---	---	100	<0.1	0.4	<0.1	<0.1

Table 1. Continued

Well ID #	Date	Lab	FC	TH	TPH	TPPH	BENZENE	1,2DCE	TCE	VC
				<--------			ppb			-------->
MW-8	26 Apr 85	MCKSSN	---	ND**	---	---	ND	ND	ND	ND
MW-8	11 Sep 87	SEQ	---	NA	NA	NA	<10	<10	<10	<10
MW-8	07 Jul 88	C&T	other*	---	20000	---	<5	<5	<5	<5
MW-8	14 Apr 89	CCAS	---	---	---	---	<50	<0.5	<1.0	<1.0
MW-8	31 Jul 89	CCAS	---	---	---	---	<50	<0.1	2.5	0.4	1.2
MW-9	26 Apr 85	MCKSSN	---	NA	NA	NA	ND	ND	ND	ND
MW-9	11 Sep 87	---	---	NS	NS	NS	NS	NS	NS	NS
MW-9	07 Jul 88	C&T	GAS	---	400	---	NA	NA	NA	NA
MW-9	14 Apr 89	---	---	NS	NS	NS	NS	NS	NS	NS
MW-9	31 Jul 89	---	---	NS	NS	NS	NS	NS	NS	NS
MW-10	07 Jul 88	C&T	---	NA	NA	NA	<5	<5	<5	<5
MW-10	24 Aug 88	C&T	---	NA	NA	NA	<5	21	5	<10
MW-10	14 Apr 89	CCAS	---	---	---	---	<50	<0.5	15.0	5.0	<1.0
MW-10	31 Jul 89	CCAS	---	---	---	---	<50	<0.1	33.3	5.3	<0.1
MW-11	07 Jul 88	C&T	---	NA	NA	NA	NA	NA	NA	NA
MW-11	24 Aug 88	C&T	---	NA	NA	NA	<5	180	Trace	<10
MW-11	14 Apr 89	CCAS	---	---	---	---	<50	<0.5	120.0	4.0	10.0
MW-11	31 Jul 89	CCAS	---	---	---	---	<100	<0.2	150.0	2.9	<0.2
MW-12	07 Jul 88	C&T	---	---	<100	---	<5'''	<5'''	<5'''	<5'''
MW-12	24 Aug 88	C&T	---	NA	NA	NA	<5	Trace	<5	<10
MW-12	14 Apr 89	CCAS	---	---	---	---	<50	<0.5	1.0	<1.0	<1.0
MW-12	31 Jul 89	CCAS	---	---	---	---	<100	<0.1	1.7	0.8	<0.1

Notes:

MCKSSN = McKesson Environmental Services
SEQ = Sequoia Analytical Laboratory
C&T = Curtis & Tompkins, Ltd.
CCAS = Central Coast Analytical Services
FC = Fuel Characterization
GAS = Gasoline
DSL2 = Diesel #2
other* = C11-C15 Boiling Range
TH = Total hydrocarbons
TPH = Total petroleum hydrocarbons
TPPH = Total purgeable petroleum hydrocarbons
1,2 DCE = 1,2-dichloroethene
TCE = trichloroethene
VC = vinyl chloride

ND = Not detected
ND' = Detection limits 1-10 ppb
ND'' = Detection limits 10-100 ppb
ND** = Detection limit not given
NA = Not analyzed
NS = Not sampled
dup = Duplicate sample
ppb = Parts-per-billion
''' = sample identified as 8807013
All other samples accounted for by last digits of ID #

TABLE 2. Analytic Results of Groundwater Sampling
Former Chevron Asphalt Plant
Emeryville, California

Well #	Date	O & G	FC	TPPH	B	T	E-B	X	1,1 DCE	1,2 DCE	1,1 DCA	TCA	TCE	VC	Other
		ppm		ppb											
MW-1	14 Apr 89	NA	---	<5000	34.0	<5.0	<5.0	<10.0	<5.0	739.0	<5.0	<5.0	11.0	340.0	*
MW-1	31 Jul 89	NA	GAS	7000	57.0	1.2	<0.2	1.6	6.8	2654.0	2.7	7.2	57.0	760.0	+
MW-2	14 Apr 89	<3.0	---	<100	<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	---
MW-2	31 Jul 89	NA	---	<100	<0.2	<1.0	<0.2	<0.4	<0.2	<0.4	<0.2	<0.2	<0.2	<0.2	---
MW-3	14 Apr 89	<3.0	---	<100	<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	---
MW-3	31 Jul 89	NA	---	<100	<0.2	<1.0	<0.2	<0.4	<0.2	<0.2	<0.4	0.5	<0.2	<0.2	---
MW-4	14 Apr 89	<3.0	GAS	380	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	2.0	<1.0	<1.0	<1.0	---
MW-5	14 Apr 89	<3.0	DSL 2	4300	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
MW-6	14 Apr 89	<3.0	DSL 2	3300	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
MW-7	14 Apr 89	<3.0	---	<50	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	---
MW-7	31 Jul 89	NA	DSL 2	160.0	<0.1	<0.5	<0.1	<0.2	<0.1	0.3	<0.1	4.5	<0.1	<0.1	+
MW-7D	31 Jul 89	NA	DSL 2	100.0	<0.1	<0.5	<0.1	<0.1	<0.1	0.4	0.2	2.6	<0.1	<0.1	+
MW-8	14 Apr 89	<3.0	---	<50	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
MW-8	31 Jul 89	NA	---	<50	<0.1	<0.5	<0.1	<0.2	<0.1	2.5	1.7	1.7	0.4	1.2	---
MW-10	14 Apr 89	<3.0	---	<50	<0.5	<1.0	<1.0	<1.0	<1.0	15.0	2.0	<1.0	5.0	<1.0	---
MW-10	31 Jul 89	NA	---	<50	<0.1	<0.5	<0.1	<0.2	0.7	33.3	2.9	<0.1	5.3	<0.1	---
MW-11	14 Apr 89	<3.0	---	<50	<0.5	<1.0	<1.0	<1.0	1.0	120.0	<1.0	<1.0	4.0	10.0	---
MW-11	31 Jul 89	NA	---	<100	<0.2	<0.2	<0.2	<0.2	0.9	150.0	2.2	1.4	2.9	<0.2	---
MW-12	14 Apr 89	<3.0	---	<50	<0.5	<1.0	<1.0	<1.0	<1.0	1.0	<1.0	<1.0	<1.0	<1.0	---
MW-12	31 Jul 89	NA	---	<100	<0.1	<0.5	<0.1	<0.2	<0.1	1.7	<0.1	<0.1	0.8	<0.1	---
TB	14 Apr 89	---	---	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	---
TB	31 Jul 89	NA	---	<50	<0.1	<0.5	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	---

Table 2. Continued.

Notes:

ppm = parts-per-million
ppb = parts-per-billion
O&G = Oil and gas
FC = Fuel characterization
GAS = Gasoline
DSL 2 = Diesel #2
TPPH = Total purgeable petroleum hydrocarbons
B = benzene
T = toluene
E-B = ethylbenzene
X = total xylenes
TB = Travel Blank
Samples analyzed by Central Coast Analytical Services

1,1 DCE = 1,1-dichloroethene
1,2 DCE = cis- and trans-1,2-dichloroethene
1,1 DCA = 1,1-dichloroethane
TCA = trichloroethane
TCE = trichloroethene
VC = vinyl chloride
Other =
* = MW-1 6 ppb 1,2-dichloropropane
+ = MW-1 0.6 ppb 1,2-dichloroethane
+ = MW-7/MW-7D 0.1 ppb 1,2-dichlorobenzene

TABLE 3. Groundwater Elevation Data
Former Chevron Asphalt Plant
Emeryville, Calfornia

Monitor Well	DATE	TOC*	DTW feet	RWE
MW-1	13 Apr 89	98.56	3.72	94.84
MW-1	31 Jul 89	98.56	5.72	92.80
MW-2	13 Apr 89	99.20	2.62	96.58
MW-2	31 Jul 89	99.20	4.63	94.57
MW-3	13 Apr 89	99.50	2.34	97.16
MW-3	31 Jul 89	99.50	4.79	94.71
MW-4	13 Apr 89	98.86	2.12	96.74
MW-5	13 Apr 89	98.53	2.79	95.74
MW-6	13 Apr 89	99.03	1.90	95.84
MW-7	13 Apr 89	98.40	1.90	96.50
MW-7	31 Jul 89	98.40	4.24	94.16
MW-8	13 Apr 89	98.31	2.80	95.51
MW-8	31 Jul 89	98.31	5.70	92.61

Notes:
TOC* = Top-of-casing elevations surveyed to temporary bench mark established at southwest corner of former totalizer arbitrarily set at 100.00 ft above mean sea level
DTW = Depth to water
RWE = Relative water elevation

APPENDIX A

ANALYTIC RESULTS FOR PREVIOUS SAMPLINGS

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21986
Sample I.D.: MW #1
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-ZS
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	99
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	20
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	ND
1,2-dichloroethane	ND
1,1-dichloroethene	3
trans-1,2-dichloroethene	1200
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	160
vinyl chloride	1500

OTHER COMPOUNDS FOUND	CONCENTRATION µg/L
o-,p-xylene	6
C_3-C_6 cycloalkanes	~ 560
C_6-alkane	~ 11

M. W. Flynn

M. W. Flynn, Laboratory Manager

~ = Estimated value based upon response to nearest internal standard.

Detection Limits: 1-10 µg/L

ND = Not detected.

* = Compound detected; concentration below level for accurate quantitation.

** = Estimated value; compound saturated detector.

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21987
Sample I.D.: MW#2
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-ZS
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	ND
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	ND
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	ND
1,2-dichloroethane	ND
1,1-dichloroethene	ND
trans-1,2-dichloroethene	ND
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	ND
vinyl chloride	ND

OTHER COMPOUNDS FOUND	CONCENTRATION

N. W. Flynn, Laboratory Manager

Detection Limits: 1-10 µg/L
ND = Not detected.
* = Compound detected; concentration below level for accurate quantitation.
** = Estimated value; compound saturated detector.

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

Analytical Results
CHEVRON USA

7280-ZS

Lab No.:	21887
Sample I.D.:	MW #2

Compound	Concentration in ug/L	Detection Limits
PCB 1016	ND	0.5
PCB 1221	ND	0.5
PCB 1232	ND	0.5
PCB 1242	ND	0.5
PCB 1248	ND	0.5
PCB 1254	ND	0.5
PCB 1260	ND	0.5

ND = Not Detected

N. W. Flynn, Laboratory Manager

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21988
Sample I.D.: MW#3
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-ZS
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	ND
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	ND
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	ND
1,2-dichloroethane	ND
1,1-dichloroethene	ND
trans-1,2-dichloroethene	ND
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	ND
vinyl chloride	ND

OTHER COMPOUNDS FOUND	CONCENTRATION

N. W. Flynn, Laboratory Manager

Detection Limits: 1-10 µg/L
ND = Not detected.
* = Compound detected; concentration below level for accurate quantitation.
** = Estimated value; compound saturated detector.

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

7280-ZS
CHEVRON USA

ANALYTICAL RESULTS

Tentative Identification of Non-Priority Pollutants

Lab No. 21989 Sample I.D. MW #4

Scan Number	Compound	Approximate Concentration, µg/L
	Total Hydrocarbons	3100

Estimated concentration = $\frac{\text{peak height (area) compound} \times \text{I.S. conc.}}{\text{peak height (area) I.S.} \times (\text{RRF}=1)} \times \text{D.F.}$

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21989
Sample I.D.: MW #4
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-2S
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	ND
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	ND
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	21
1,2-dichloroethane	ND
1,1-dichloroethene	ND
trans-1,2-dichloroethene	ND
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	ND
vinyl chloride	ND

OTHER COMPOUNDS FOUND	CONCENTRATION µg/L
C_3-C_7 alkanes	~ 64
C_3-C_{10} cycloalkanes	~ 250
C_3-alkylbenzene	~ 15

N. W. Flynn

N. W. Flynn, Laboratory Manager

~ = Estimated value based upon response to nearest internal standard.

Detection Limits: 1-10 µg/L

ND = Not detected.

* = Compound detected; concentration below level for accurate quantitation.

** = Estimated value; compound saturated detector.

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21989
Sample I.D.: MW #4
Date Received: 04/26/85
Date Analyzed: 05/22/85

7280-ZS
CHEVRON USA

ACID COMPOUNDS	µg/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	µg/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine(azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	µg/L
41B 4-bromophenyl phenyl ether	ND
42B bis-(2-chloroisopropyl) ether	ND
43B bis-(2-chloroethoxy) methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis-(2-ethylhexyl) phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

N. W. Flynn, Laboratory Manager

ND = Not Detected
* = Compound detected; concentration below level for accurate quantitation.

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21990
Sample I.D.: MW #5
Date Received: 04/26/85
Date Analyzed: 05/22/85

7280-ZS
CHEVRON USA

ACID COMPOUNDS		µg/L
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS		µg/L
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine(azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND
41B	4-bromophenyl phenyl ether	ND
42B	bis-(2-chloroisopropyl) ether	ND
43B	bis-(2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis-(2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	3
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

N. W. Flynn, Laboratory Manager

ND = Not Detected
* = Compound detected; concentration below level for accurate quantitation.

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21990
Sample I.D.: MW#5
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-ZS
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	ND
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	ND
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	ND
1,2-dichloroethane	ND
1,1-dichloroethene	ND
trans-1,2-dichloroethene	ND
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	ND
vinyl chloride	ND

OTHER COMPOUNDS FOUND	CONCENTRATION µg/L
C_5-C_8 cycloalkane	~3600
C_{10}-alkene	~140
C_3-alkylbenzene	~210

N. W. Flynn

N. W. Flynn, Laboratory Manager

~ = Estimated value based upon response to nearest internal standard.

Detection Limits: 10-100 µg/L

ND = Not detected.

* = Compound detected; concentration below level for accurate quantitation.

** = Estimated value; compound saturated detector.

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

7280-ZS
CHEVRON USA

ANALYTICAL RESULTS

Tentative Identification of Non-Priority Pollutants

Lab No. 21990 Sample I.D. MW #5

Scan Number	Compound	Approximate Concentration, ug/L
	Total Hydrocarbons	1600

Estimated concentration = $\frac{\text{peak height (area) compound} \times \text{I.S. conc.}}{\text{peak height (area) I.S.} \times (\text{RRF}=1)} \times \text{D.F.}$

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21991
Sample I.D.: MW #6
Date Received: 04/26/85
Date Analyzed: 05/22/85

7280-ZS
CHEVRON USA

ACID COMPOUNDS		µg/L
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS		µg/L
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine(azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS		µg/L
41B	4-bromophenyl phenyl ether	ND
42B	bis-(2-chloroisopropyl) ether	ND
43B	bis-(2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis-(2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

N. W. Flynn, Laboratory Manager

ND = Not Detected
* = Compound detected; concentration below level for accurate quantitation.

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21991
Sample I.D.: MW#6
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-2S
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	ND
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	ND
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	ND
1,2-dichloroethane	ND
1,1-dichloroethene	ND
trans-1,2-dichloroethene	ND
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	ND
vinyl chloride	ND

OTHER COMPOUNDS FOUND	CONCENTRATION µg/L
C_7-C_8 cycloalkanes	~ 750

~ = Estimated value based upon response to nearest internal standard.

N. W. Flynn

N. W. Flynn, Laboratory Manager

Detection Limits: 10-100 µg/L
ND = Not detected.
* = Compound detected; concentration below level for accurate quantitation.
** = Estimated value; compound saturated detector.

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

7280-2S

CHEVRON USA

ANALYTICAL RESULTS

Tentative Identification of Non-Priority Pollutants

Lab No. 21991 Sample I.D. MW #6

Scan Number	Compound	Approximate Concentration, µg/L
	Total Hydrocarbons	680

Estimated concentration = $\frac{\text{peak height/area compound} \times \text{I.S. conc.}}{\text{peak height/area I.S.} \times (\text{RRF}=1)} \times \text{D.F.}$

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21992
Sample I.D.: MW #7
Date Received: 04/26/85
Date Analyzed: 05/22/85

7280-ZS
CHEVRON USA

ACID COMPOUNDS		µg/L
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS		µg/L
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine(azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS		µg/L
41B	4-bromophenyl phenyl ether	ND
42B	bis-(2-chloroisopropyl) ether	ND
43B	bis-(2-chlproethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis-(2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

N. W. Flynn, Laboratory Manager

ND = Not Detected
* = Compound detected; concentration below level for accurate quantitation.

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21992
Sample I.D.: MW#7
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-2S
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	ND
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	ND
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	ND
1,2-dichloroethane	ND
1,1-dichloroethene	ND
trans-1,2-dichloroethene	ND
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	ND
vinyl chloride	ND

OTHER COMPOUNDS FOUND	CONCENTRATION µg/L
alkanes	~ 6
alkenes	~ 17
C_9-C_{11} cyclopalkanes	~ 19

~ = Estimated value based upon response to nearest internal standard.

N. W. Flynn

N. W. Flynn, Laboratory Manager

Detection Limits: 1 - 10 µg/L
ND = Not detected.
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** = Estimated value; compound saturated detector.

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

• 7280-ZS
CHEVRON USA

ANALYTICAL RESULTS

Tentative Identification of Non-Priority Pollutants

Lab No. 21992 Sample I.D. MW #7

Scan Number	Compound	Approximate Concentration, PPB/L
	Total Hydrocarbons	700

Estimated concentration = $\frac{\text{peak height/area compound} \times \text{I.S. conc.}}{\text{peak height/area I.S.} \times (\text{RRF}=1)} \times \text{D.F.}$

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21993
Sample I.D.: MW #8
Date Received: 04/26/85
Date Analyzed: 05/22/85

7280-2S
CHEVRON USA

ACID COMPOUNDS		µg/L
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS		
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine(azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

N. W. Flynn

N. W. Flynn, Laboratory Manager

BASE/NEUTRAL COMPOUNDS		µg/L
41B	4-bromophenyl phenyl ether	ND
42B	bis-(2-chloroisopropyl) ether	ND
43B	bis-(2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis-(2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

ND = Not Detected
* = Compound detected; concentration below level for accurate quantitation.

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21993
Sample I.D.: WK#8
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-ZS
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	ND
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	ND
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	ND
1,2-dichloroethane	ND
1,1-dichloroethene	ND
trans-1,2-dichloroethene	ND
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	ND
vinyl chloride	ND

OTHER COMPOUNDS FOUND	CONCENTRATION µg/L
C_{10}-cycloalkane	~20

~ = Estimated value based upon response to nearest internal standard.

N. W. Flynn

N. W. Flynn, Laboratory Manager

Detection Limits: 1 - 10 µg/L
ND = Not detected.
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** = Estimated value; compound saturated detector.

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McKESSON ENVIRONMENTAL SERVICES

7280-ZS
CHEVRON USA

ANALYTICAL RESULTS

Tentative Identification of Non-Priority Pollutants

Lab No. 21993 Sample I.D. MW #8

Scan Number	Compound	Approximate Concentration, µg/L
	Total Hydrocarbons	ND

ND = Not Detected

Estimated concentration = $\frac{\text{peak height/(area) compound} \times \text{I.S. conc.}}{\text{peak height/(area) I.S.} \times (\text{RRF}=1)} \times \text{D.F.}$

McKESSON ENVIRONMENTAL SERVICES

PRIORITY POLLUTANT ANALYSIS

Lab Number: 21994
Sample I.D.: MW#9
Date Received: 04/26/85
Date Analyzed: 05/10/85

7280-ZS
CHEVRON USA

VOLATILES	CONCENTRATION µg/L
benzene	ND
bromodichloromethane	ND
bromoform	ND
bromomethane	ND
carbon tetrachloride	ND
chlorobenzene	ND
chloroethane	ND
2-chloroethylvinyl ether	ND
chloroform	ND
chloromethane	ND
dibromochloromethane	ND
1,2-and/or 1,4-dichlorobenzene	ND
1,3-dichlorobenzene	ND
1,1-dichloroethane	ND
1,2-dichloroethane	ND
1,1-dichloroethene	ND
trans-1,2-dichloroethene	ND
1,2-dichloropropane	ND
cis-1,3-dichloropropene	ND
trans-1,3-dichloropropene	ND
ethyl benzene	ND
methylene chloride	ND
1,1,2,2-tetrachloroethane	ND
tetrachloroethene	ND
toluene	ND
1,1,1-trichloroethane	ND
1,1,2-trichloroethane	ND
trichloroethene	ND
vinyl chloride	ND

OTHER COMPOUNDS FOUND	CONCENTRATION µg/L
C_6-C_8 cycloalkanes	~ 260
C_5-C_7 alkanes	~ 23
C_9-alkylbenzene	~ 31

~ = Estimated value based upon response to nearest internal standard.

N. W. Flynn

N. W. Flynn, Laboratory Manager

Detection Limits: 1 - 10 µg/L
ND = Not detected.
* = Compound detected; concentration below level for accurate quantitation.
** = Estimated value; compound saturated detector.

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

McKESSON ENVIRONMENTAL SERVICES

Analytical Results 7280-ZS
CHEVRON USA

Lab No.:	21994
Sample I.D.:	MW #9

Compound	Concentration in UG/L	Detection Limits
PCB 1016	ND	0.5
PCB 1221	ND	0.5
PCB 1232	ND	0.5
PCB 1242	ND	0.5
PCB 1248	ND	0.5
PCB 1254	ND	0.5
PCB 1260	ND	0.5

ND = Not Detected

N. W. Flynn

N. W. Flynn, Laboratory Manager

CERTIFICATION OF REPRESENTATIVE SAMPLE OR SAMPLE INTEGRITY IS NOT MADE BY McKESSON ENVIRONMENTAL SERVICES (MES) FOR SAMPLES NOT TAKEN BY MES.

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
P.O. Box 5745
San Jose, CA 95150
Attn: Richard Blaine

Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number
7090854

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #1

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	< 1000	trans-1,2-Dichloroethene	700
Acrylonitrile	< 1000	1,2-Dichloropropane	< 10
Benzene	63	1,3-Dichloropropene	< 10
Bromomethane	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10	Methylene chloride	< 10
Bromoform	< 10	1,1,2,2-Tetrachloroethane	< 10
Carbon tetrachloride	< 10	Tetrachloroethene	< 10
Chlorobenzene	< 10	1,1,1-Trichloroethane	< 10
Chloroethane	< 10	1,1,2-Trichloroethane	< 10
2-Chloroethylvinyl ether	< 10	Trichloroethene	< 10
Chloroform	< 10	Toluene	< 10
Chloromethane	< 10	Vinyl chloride	990
Dibromochloromethane	< 10	1,2-Dichlorobenzene	< 10
1,1-Dichloroethane	< 10	1,3-Dichlorobenzene	< 10
1,2-Dichloroethane	< 10	1,4-Dichlorobenzene	< 10
1,1-Dichloroethene	< 10		

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 624 of the EPA was used for this analysis.

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Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number
7090855

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #3

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	trans-1,2-Dichloroethene	< 0.5
Acrylonitrile	<100	1,2-Dichloropropane	< 0.5
Benzene	< 0.5	1,3-Dichloropropene	< 0.5
Bromomethane	< 0.5	Ethylbenzene	< 0.5
Bromodichloromethane	< 0.5	Methylene chloride	< 0.5
Bromoform	< 0.5	1,1,2,2-Tetrachloroethane	< 0.5
Carbon tetrachloride	< 0.5	Tetrachloroethene	< 0.5
Chlorobenzene	< 0.5	1,1,1-Trichloroethane	< 0.5
Chloroethane	< 0.5	1,1,2-Trichloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5	Trichloroethene	< 0.5
Chloroform	< 0.5	Toluene	< 0.5
Chloromethane	< 0.5	Vinyl chloride	< 0.5
Dibromochloromethane	< 0.5	1,2-Dichlorobenzene	< 0.5
1,1-Dichloroethane	< 0.5	1,3-Dichlorobenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,4-Dichlorobenzene	< 0.5
1,1-Dichloroethene	< 0.2		

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 624 of the EPA was used for this analysis.

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BTS #87254F1

Sample Number

7090855

Sample Description

Chevron at 1520 Powell
in Emeryville, CA -
Water #3

PRIORITY POLLUTANTS

PESTICIDE AND PCB COMPOUNDS
results in ppb

Aldrin	< 0.05
α-BHC	< 0.1
β-BHC	< 0.1
δ-BHC	< 0.1
γ-BHC	< 0.05
Chlordane	< 0.05
4,4'-DDD	< 0.1
4,4'-DDE	< 0.05
4,4'-DDT	< 0.1
Dieldrin	< 0.05
Endosulfan I	< 0.1
Endosulfan II	< 0.1
Endosulfan Sulfate	< 0.1
Endrin	< 0.05
Endrin Aldehyde	< 0.1
Heptachlor	< 0.02
Heptachlor Epoxide	< 0.1
Toxaphene	< 0.1
PCB-1016	< 1.0
PCB-1221	< 1.0
PCB-1232	< 1.0
PCB-1242	< 1.0
PCB-1248	< 1.0
PCB-1254	< 1.0
PCB-1260	< 1.0

NOTE: Method 608 of the EPA was used for this analysis.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number
7090856

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #4

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<100	trans-1,2-Dichloroethene	< 0.5
Acrylonitrile	<100	1,2-Dichloropropane	< 0.5
Benzene	< 0.5	1,3-Dichloropropene	< 0.5
Bromomethane	< 0.5	Ethylbenzene	< 0.5
Bromodichloromethane	< 0.5	Methylene chloride	< 0.5
Bromoform	< 0.5	1,1,2,2-Tetrachloroethane	< 0.5
Carbon tetrachloride	< 0.5	Tetrachloroethene	< 0.5
Chlorobenzene	< 0.5	1,1,1-Trichloroethane	< 0.5
Chloroethane	16	1,1,2-Trichloroethane	< 0.5
2-Chloroethylvinyl ether	< 0.5	Trichloroethene	< 0.5
Chloroform	< 0.5	Toluene	< 0.5
Chloromethane	< 0.5	Vinyl chloride	< 0.5
Dibromochloromethane	< 0.5	1,2-Dichlorobenzene	< 0.5
1,1-Dichloroethane	9.0	1,3-Dichlorobenzene	< 0.5
1,2-Dichloroethane	< 0.5	1,4-Dichlorobenzene	< 0.5
1,1-Dichloroethene	< 0.2		

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 624 of the EPA was used for this analysis.

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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090856

Sample Description

Chevron at 1520 Powell in Emeryville, CA - Water #4

PRIORITY POLLUTANTS

BASE/NEUTRAL EXTRACT ORGANICS

results in ppb

Acenaphthene	< 10	Diethylphthalate	< 100
Acenaphthylene	< 10	Dimethylphthalate	< 10
Anthracene	< 10	Di-n-octylphthalate	< 10
Benzo (a) anthracene	< 10	Dibutylphthalate	< 10
Benzo (b) fluoranthene	< 10	Isophorone	< 10
Benzo (k) fluoranthene	< 10	Benzidine	< 100
Benzo (a) pyrene	< 10	2,4-Dinitrotoluene	< 10
Benzo (g,h,i) perylene	< 10	2,6-Dinitrotoluene	< 10
Chrysene	< 10	1,2-Diphenylhydrazine	< 10
Dibenzo (a,h) anthracene	< 10	Nitrobenzene	< 10
Fluoranthene	< 10	N-Nitrosodimethylamine	< 10
Fluorene	< 10	N-Nitrosodi-n-Propylamine	< 10
Indeno (1,2,3-c,d) pyrene	< 10	N-Nitrosodiphenylamine	< 10
Naphthalene	< 10	2-Chloronaphthalene	< 10
Phenanthrene	< 10	1,3-Dichlorobenzene	< 10
Pyrene	< 10	1,4-Dichlorobenzene	< 10
Bis (2-chloroethyl) ether	< 10	1,2-Dichlorobenzene	< 10
Bis (2-chloroethoxy) methane	< 10	3,3-Dichlorobenzidine	< 100
Bis (2-ethylhexyl) phthalate	< 10	Hexachlorobenzene	< 10
Bis (2-chloroisopropyl) ether	< 10	Hexachlorobutadiene	< 10
4-Bromophenyl phenyl ether	< 10	Hexachloroethane	< 10
Butyl benzyl phthalate	< 10	Hexachlorocyclopentadiene	< 10
4-Chlorophenyl phenyl ether	< 10	2,3,7,8-Tetrachlorodibenzo-p-dioxin	< 10
		1,2,4-Trichlorobenzene	< 10

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 625 of the EPA was used for this analysis.

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Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
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San Jose, CA 95150
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Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090856

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #4

PRIORITY POLLUTANTS

ACID EXTRACT ORGANICS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number
7090857

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #5

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<1000	trans-1,2-Dichloroethene	< 10
Acrylonitrile	<1000	1,2-Dichloropropane	< 10
Benzene	< 10	1,3-Dichloropropene	< 10
Bromomethane	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10	Methylene chloride	< 10
Bromoform	< 10	1,1,2,2-Tetrachloroethane	< 10
Carbon tetrachloride	< 10	Tetrachloroethene	< 10
Chlorobenzene	< 10	1,1,1-Trichloroethane	< 10
Chloroethane	< 10	1,1,2-Trichloroethane	< 10
2-Chloroethylvinyl ether	< 10	Trichloroethene	< 10
Chloroform	< 10	Toluene	< 10
Chloromethane	< 10	Vinyl chloride	< 10
Dibromochloromethane	< 10	1,2-Dichlorobenzene	< 10
1,1-Dichloroethane	< 10	1,3-Dichlorobenzene	< 10
1,2-Dichloroethane	< 10	1,4-Dichlorobenzene	< 10
1,1-Dichloroethene	< 10		

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 624 of the EPA was used for this analysis.

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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090857

Sample Description

Chevron at 1520 Powell in Emeryville, CA - Water #5

PRIORITY POLLUTANTS

BASE/NEUTRAL EXTRACT ORGANICS
results in ppb

Acenaphthene	< 10	Diethylphthalate	< 100
Acenaphthylene	< 10	Dimethylphthalate	< 10
Anthracene	< 10	Di-n-octylphthalate	< 10
Benzo (a) anthracene	< 10	Dibutylphthalate	< 10
Benzo (b) fluoranthene	< 10	Isophorone	< 10
Benzo (k) fluoranthene	< 10	Benzidine	< 100
Benzo (a) pyrene	< 10	2,4-Dinitrotoluene	< 10
Benzo (g,h,i) perylene	< 10	2,6-Dinitrotoluene	< 10
Chrysene	< 10	1,2-Diphenylhydrazine	< 10
Dibenzo (a,h) anthracene	< 10	Nitrobenzene	< 10
Fluoranthene	< 10	N-Nitrosodimethylamine	< 10
Fluorene	< 10	N-Nitrosodi-n-Propylamine	< 10
Indeno (1,2,3-c,d) pyrene	< 10	N-Nitrosodiphenylamine	< 10
Naphthalene	< 10	2-Chloronaphthalene	< 10
Phenanthrene	< 10	1,3-Dichlorobenzene	< 10
Pyrene	< 10	1,4-Dichlorobenzene	< 10
Bis (2-chloroethyl) ether	< 10	1,2-Dichlorobenzene	< 10
Bis (2-chloroethoxy) methane	< 10	3,3-Dichlorobenzidine	< 100
Bis (2-ethylhexyl) phthalate	< 10	Hexachlorobenzene	< 10
Bis (2-chloroisopropyl) ether	< 10	Hexachlorobutadiene	< 10
4-Bromophenyl phenyl ether	< 10	Hexachloroethane	< 10
Butyl benzyl phthalate	< 10	Hexachlorocyclopentadiene	< 10
4-Chlorophenyl phenyl ether	< 10	2,3,7,8-Tetrachlorodibenzo-p-dioxin	< 10
		1,2,4-Trichlorobenzene	< 10

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 625 of the EPA was used for this analysis.

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Date Sampled: 09/11/87
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Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090857

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #5

PRIORITY POLLUTANTS

ACID EXTRACT ORGANICS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 625 of the EPA was used for this analysis.

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
P.O. Box 5745
San Jose, CA 95150
Attn: Richard Blaine

Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090858

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #6

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<1000	trans-1,2-Dichloroethene	< 10
Acrylonitrile	<1000	1,2-Dichloropropane	< 10
Benzene	< 10	1,3-Dichloropropene	< 10
Bromomethane	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10	Methylene chloride	< 10
Bromoform	< 10	1,1,2,2-Tetrachloroethane	< 10
Carbon tetrachloride	< 10	Tetrachloroethene	< 10
Chlorobenzene	< 10	1,1,1-Trichloroethane	< 10
Chloroethane	< 10	1,1,2-Trichloroethane	< 10
2-Chloroethylvinyl ether	< 10	Trichloroethene	< 10
Chloroform	< 10	Toluene	< 10
Chloromethane	< 10	Vinyl chloride	< 10
Dibromochloromethane	< 10	1,2-Dichlorobenzene	< 10
1,1-Dichloroethane	< 10	1,3-Dichlorobenzene	< 10
1,2-Dichloroethane	< 10	1,4-Dichlorobenzene	< 10
1,1-Dichloroethene	< 10		

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 624 of the EPA was used for this analysis.

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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090858

Sample Description

Chevron at 1520 Powell
in Emeryville, CA -
Water #6

PRIORITY POLLUTANTS

BASE/NEUTRAL EXTRACT ORGANICS
results in ppb

Acenaphthene	< 10	Diethylphthalate	< 100
Acenaphthylene	< 10	Dimethylphthalate	< 10
Anthracene	< 10	Di-n-octylphthalate	< 10
Benzo (a) anthracene	< 10	Dibutylphthalate	< 10
Benzo (b) fluoranthene	< 10	Isophorone	< 10
Benzo (k) fluoranthene	< 10	Benzidine	< 100
Benzo (a) pyrene	< 10	2,4-Dinitrotoluene	< 10
Benzo (g,h,i) perylene	< 10	2,6-Dinitrotoluene	< 10
Chrysene	< 10	1,2-Diphenylhydrazine	< 10
Dibenzo (a,h) anthracene	< 10	Nitrobenzene	< 10
Fluoranthene	< 10	N-Nitrosodimethylamine	< 10
Fluorene	< 10	N-Nitrosodi-n-Propylamine	< 10
Indeno (1,2,3-c,d) pyrene	< 10	N-Nitrosodiphenylamine	< 10
Naphthalene	< 10	2-Chloronaphthalene	< 10
Phenanthrene	< 10	1,3-Dichlorobenzene	< 10
Pyrene	< 10	1,4-Dichlorobenzene	< 10
Bis (2-chloroethyl) ether	< 10	1,2-Dichlorobenzene	< 10
Bis (2-chloroethoxy) methane	< 10	3,3-Dichlorobenzidine	< 100
Bis (2-ethylhexyl) phthalate	< 10	Hexachlorobenzene	< 10
Bis (2-chloroisopropyl) ether	< 10	Hexachlorobutadiene	< 10
4-Bromophenyl phenyl ether	< 10	Hexachloroethane	< 10
Butyl benzyl phthalate	< 10	Hexachlorocyclopentadiene	< 10
4-Chlorophenyl phenyl ether	< 10	2,3,7,8-Tetrachlorodibenzo-p-dioxin	< 10
		1,2,4-Trichlorobenzene	< 10

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254P1

Sample Number

7090858

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #6

PRIORITY POLLUTANTS

ACID EXTRACT ORGANICS
results in ppb

4-Chloro-3-methylphenol	< 10
2-Chlorophenol	< 10
2,4-Dichlorophenol	< 10
2,4-Dimethylphenol	< 10
2,4-Dinitrophenol	< 10
2-Methyl-4,6-dinitrophenol	< 10
2-Nitrophenol	< 10
4-Nitrophenol	< 10
Pentachlorophenol	< 10
Phenol	< 10
2,4,6-Trichlorophenol	< 10

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090859

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #7

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	< 1000	trans-1,2-Dichloroethene	< 10
Acrylonitrile	< 1000	1,2-Dichloropropane	< 10
Benzene	< 10	1,3-Dichloropropene	< 10
Bromomethane	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10	Methylene chloride	< 10
Bromoform	< 10	1,1,2,2-Tetrachloroethane	< 10
Carbon tetrachloride	< 10	Tetrachloroethene	< 10
Chlorobenzene	< 10	1,1,1-Trichloroethane	< 10
Chloroethane	< 10	1,1,2-Trichloroethane	< 10
2-Chloroethylvinyl ether	< 10	Trichloroethene	< 10
Chloroform	< 10	Toluene	< 10
Chloromethane	< 10	Vinyl chloride	< 10
Dibromochloromethane	< 10	1,2-Dichlorobenzene	< 10
1,1-Dichloroethane	< 10	1,3-Dichlorobenzene	< 10
1,2-Dichloroethane	< 10	1,4-Dichlorobenzene	< 10
1,1-Dichloroethene	< 10		

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 624 of the EPA was used for this analysis.

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Blaine Tech Services
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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090859

Sample Description

Chevron at 1520 Powell in Emeryville, CA - Water #7

PRIORITY POLLUTANTS

BASE/NEUTRAL EXTRACT ORGANICS
results in ppb

Acenaphthene	< 1	Diethylphthalate	< 10
Acenaphthylene	< 1	Dimethylphthalate	< 1
Anthracene	< 1	Di-n-octylphthalate	< 1
Benzo (a) anthracene	< 1	Dibutylphthalate	< 1
Benzo (b) fluoranthene	< 1	Isophorone	< 1
Benzo (k) fluoranthene	< 1	Benzidine	< 10
Benzo (a) pyrene	< 1	2,4-Dinitrotoluene	< 1
Benzo (g,h,i) perylene	< 1	2,6-Dinitrotoluene	< 1
Chrysene	< 1	1,2-Diphenylhydrazine	< 1
Dibenzo (a,h) anthracene	< 1	Nitrobenzene	< 1
Fluoranthene	< 1	N-Nitrosodimethylamine	< 1
Fluorene	< 1	N-Nitrosodi-n-Propylamine	< 1
Indeno (1,2,3-c,d) pyrene	< 1	N-Nitrosodiphenylamine	< 1
Naphthalene	< 1	2-Chloronaphthalene	< 1
Phenanthrene	< 1	1,3-Dichlorobenzene	< 1
Pyrene	< 1	1,4-Dichlorobenzene	< 1
Bis (2-chloroethyl) ether	< 1	1,2-Dichlorobenzene	< 1
Bis (2-chloroethoxy) methane	< 1	3,3-Dichlorobenzidine	< 10
Bis (2-ethylhexyl) phthalate	< 1	Hexachlorobenzene	< 1
Bis (2-chloroisopropyl) ether	< 1	Hexachlorobutadiene	< 1
4-Bromophenyl phenyl ether	< 1	Hexachloroethane	< 1
Butyl benzyl phthalate	< 1	Hexachlorocyclopentadiene	< 1
4-Chlorophenyl phenyl ether	< 1	2,3,7,8-Tetrachlorodibenzo-p-dioxin	< 1
		1,2,4-Trichlorobenzene	< 1

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090859

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #7

PRIORITY POLLUTANTS

ACID EXTRACT ORGANICS
results in ppb

4-Chloro-3-methylphenol	< 1
2-Chlorophenol	< 1
2,4-Dichlorophenol	< 1
2,4-Dimethylphenol	< 1
2,4-Dinitrophenol	< 1
2-Methyl-4,6-dinitrophenol	< 1
2-Nitrophenol	< 1
4-Nitrophenol	< 1
Pentachlorophenol	< 1
Phenol	< 1
2,4,6-Trichlorophenol	< 1

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 625 of the EPA was used for this analysis.

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Attn: Richard Blaine

Date Sampled: 09/11/87
Date Received: 09/11/87
Date Extracted: 09/18/87
Date Reported: 10/14/87
BTS #87254F1

Sample Number

7090860

Sample Description
Chevron at 1520 Powell in Emeryville, CA - Water #8

PRIORITY POLLUTANTS

VOLATILE ORGANIC COMPOUNDS
results in ppb

Acrolein	<1000	trans-1,2-Dichloroethene	< 10
Acrylonitrile	<1000	1,2-Dichloropropane	< 10
Benzene	< 10	1,3-Dichloropropene	< 10
Bromomethane	< 10	Ethylbenzene	< 10
Bromodichloromethane	< 10	Methylene chloride	< 10
Bromoform	< 10	1,1,2,2-Tetrachloroethane	< 10
Carbon tetrachloride	< 10	Tetrachloroethene	< 10
Chlorobenzene	< 10	1,1,1-Trichloroethane	< 10
Chloroethane	< 10	1,1,2-Trichloroethane	< 10
2-Chloroethylvinyl ether	< 10	Trichloroethene	< 10
Chloroform	< 10	Toluene	< 10
Chloromethane	< 10	Vinyl chloride	< 10
Dibromochloromethane	< 10	1,2-Dichlorobenzene	< 10
1,1-Dichloroethane	< 10	1,3-Dichlorobenzene	< 10
1,2-Dichloroethane	< 10	1,4-Dichlorobenzene	< 10
1,1-Dichloroethene	< 10		

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

NOTE: Method 624 of the EPA was used for this analysis.

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878
290 Division Street, San Francisco, CA 94103. Phone (415) 861-1863

JUL 28

LAB NUMBER: 15082
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02
LOCATION: 1520 Powell Street

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-12-88
DATE REPORTED: 07-18-88
PAGE 1 OF 18

Results of Analysis for Petroleum Hydrocarbons in Water

Method References: TPH: Total Petroleum Hydrocarbons, EPA 3510/8015

LAB ID	HLA ID	GASOLINE (mg/L)	KEROSINE (mg/L)	DIESEL (mg/L)	OTHER * (mg/L)
15082-1	88070610	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
15082-2	88070602	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
15082-3	88070603	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
15082-4	88070608	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
15082-5	88070607	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)
15082-6	88070606	ND(0.1)	ND(0.1)	ND(0.1)	8
15082-7	88070605	ND(0.1)	ND(0.1)	ND(0.1)	17
15082-8	88070704	ND(0.1)	ND(0.1)	ND(0.1)	20
15082-9	88070701	0.4	ND(0.1)	ND(0.1)	ND(0.1)
15082-12	88070713	ND(0.1)	ND(0.1)	ND(0.1)	ND(0.1)

* Quantitation based on largest peaks within C11-C15 boiling range.

ND = Not Detected; Limit of detection in parentheses.

QA/QC SUMMARY

Duplicate: Relative % Difference	5
Spike: % Recovery	113

LABORATORY DIRECTOR

Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878
290 Division Street. San Francisco, CA 94103. Phone (415) 861-1863

LABORATORY NUMBER: 15082-4
CLIENT: Harding Lawson Associates
HLA JOB #: 88003,347.02
LOCATION: 1520 Powell St.
SAMPLE ID: 8801S15

DATE RECEIVED: 07/07/88
DATE ANALYZED: 07/21/88
DATE REPORTED: 07/22/88

LIBRARY SEARCH RESULTS

The 70,000 compund Wiley/NBS mass spectral data library was searched using the Hewlett-Packard probability matching search algorithm. The compounds with the highest match probabilities determined by this program are identified and presented with their match probabilities and approximate concentrations below:

TENTATIVELY IDENTIFIED COMPOUND	MATCH PROBABILITY	APPROXIMATE CONCENTRATION (ug/kg)
pentane	79%	1,600
trans-1,3-dimethyl cyclopentane	76%	340
methyl cyclohexane	81%	2,300
1,1-dimethyl cyclohexane	81%	3,400
1,4-dimethyl cyclohexane	83%	4,700
cis-1-ethyl-2-methyl cyclopentane	70%	1,300
1,1,3-trimethyl cyclohexane	70%	11,000

Laboratory Director

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-10
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02
LOCATION: 1520 Powell Street
HLA ID: 88070711

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-08-88
DATE REPORTED: 07-18-88

Title 22 Metals in Aqueous Solutions

METAL	RESULT mg/L	DETECTION LIMIT mg/L	METHOD
Antimony	ND	0.02	EPA 7040
Arsenic	ND	0.1	EPA 6010
Barium	0.64	0.01	EPA 7080
Beryllium	ND	0.01	EPA 7090
Cadmium	ND	0.01	EPA 6010
Chromium (total)	ND	0.02	EPA 6010
Cobalt	ND	0.02	EPA 6010
Copper	ND	0.02	EPA 6010
Lead	ND	0.2	EPA 6010
Mercury	ND	0.002	EPA 7470
Molybdenum	0.03	0.01	EPA 6010
Nickel	0.03	0.02	EPA 6010
Selenium	ND	0.1	EPA 6010
Silver	ND	0.05	EPA 6010
Thallium	ND	0.02	EPA 7840
Vanadium	ND	0.05	EPA 6010
Zinc	0.04	0.02	EPA 6010

ND = None Detected

QA/QC SUMMARY

	%RPD	%SPIKE		%RPD	%SPIKE
Antimony	<1	111	Mercury	<1	91
Arsenic	<1	106	Molybdenum	41	116
Barium	2	103	Nickel	<1	98
Beryllium	<1	100	Selenium	<1	108
Cadmium	<1	100	Silver	<1	63
Chromium	<1	102	Thallium	<1	87
Cobalt	<1	98	Vanadium	<1	98
Copper	<1	101	Zinc	4	102
Lead	<1	98			

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-11
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02
LOCATION: 1520 Powell Street
HLA ID: 88070712

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-08-88
DATE REPORTED: 07-18-88

Title 22 Metals in Aqueous Solutions

METAL	RESULT mg/L	DETECTION LIMIT mg/L	METHOD
Antimony	ND	0.02	EPA 7040
Arsenic	ND	0.1	EPA 6010
Barium	ND	0.01	EPA 7080
Beryllium	ND	0.01	EPA 7090
Cadmium	ND	0.01	EPA 6010
Chromium (total)	ND	0.02	EPA 6010
Cobalt	ND	0.02	EPA 6010
Copper	ND	0.02	EPA 6010
Lead	ND	0.2	EPA 6010
Mercury	ND	0.002	EPA 7470
Molybdenum	0.01	0.01	EPA 6010
Nickel	ND	0.02	EPA 6010
Selenium	ND	0.1	EPA 6010
Silver	ND	0.05	EPA 6010
Thallium	ND	0.02	EPA 7840
Vanadium	ND	0.05	EPA 6010
Zinc	ND	0.02	EPA 6010

ND = None Detected

QA/QC SUMMARY

	%RPD	%SPIKE		%RPD	%SPIKE
Antimony	<1	111	Mercury	<1	91
Arsenic	<1	106	Molybdenum	41	116
Barium	2	103	Nickel	<1	98
Beryllium	<1	100	Selenium	<1	108
Cadmium	<1	100	Silver	<1	63
Chromium	<1	102	Thallium	<1	87
Cobalt	<1	98	Vanadium	<1	98
Copper	<1	101	Zinc	4	102
Lead	<1	98			

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-1
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070610

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	78
Toluene-d8	99
Bromofluorobenzene	106

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-2
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070602

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	75
Toluene-d8	100
Bromofluorobenzene	100

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-3
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070603

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	77
Toluene-d8	100
Bromofluorobenzene	99

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 15082-4
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070608

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	78
Toluene-d8	100
Bromofluorobenzene	102

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-5
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070607

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5
Non-Priority Hazardous Pollutant Substances List Compounds		
acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5
QA/QC SUMMARY: SURROGATE RECOVERIES		
1,2 Dichloroethane-d4		76
Toluene-d8		101
Bromofluorobenzene		101

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-6
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070606

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5
Non-Priority Hazardous Pollutant Substances List Compounds		
acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5
QA/QC SUMMARY: SURROGATE RECOVERIES		
1,2 Dichloroethane-d4		77
Toluene-d8		101
Bromofluorobenzene		101

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-7
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070605

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	78
Toluene-d8	99
Bromofluorobenzene	102

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 15082-B
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070704

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	76
Toluene-d8	80
Bromofluorobenzene	81

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 15082-9
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070701

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	55	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	1,050	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	45	5
vinyl chloride	560	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	97
Toluene-d8	103
Bromofluorobenzene	102

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 15082-12
CLIENT: Harding Lawson Associates
JOB #: 88003,347.02/Powell Street
SAMPLE ID: 88070713

DATE RECEIVED: 07-07-88
DATE ANALYZED: 07-13-88
DATE REPORTED: 07-18-88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	5
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	5
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	5

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	5
4-methyl-2-pentanone	ND	5
styrene	ND	5
vinyl acetate	ND	5
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	75
Toluene-d8	100
Bromofluorobenzene	103

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 15478-1
CLIENT: HARDING LAWSON ASSOCIATES
JOB #: 18452,005.02 1520 POWELL
SAMPLE ID: MW-9 12

DATE RECEIVED: 08/24/88
DATE ANALYZED: 08/25/88
DATE REPORTED: 08/26/88
PAGE 2 OF 4

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	10
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	Trace	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	5
chloromethane	ND	10
bromomethane	ND	10
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	ND	5
vinyl chloride	ND	10

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	10
4-methyl-2-pentanone	ND	10
styrene	ND	5
vinyl acetate	ND	10
total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES

1,2 Dichloroethane-d4	105
Toluene-d8	105
Bromofluorobenzene	112

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 15478-2
CLIENT: HARDING LAWSON ASSOCIATES
JOB #: 18452,005.02 1520 POWELL
SAMPLE ID: MW-10

DATE RECEIVED: 08/24/88
DATE ANALYZED: 08/25/88
DATE REPORTED: 08/26/88
PAGE 3 OF 4

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	5
chloroethane	ND	10
2-chloroethylvinyl ether	ND	10
chloroform	ND	5
1,1-dichloroethene	ND	5
1,2-dichloroethene (total)	21	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	5
chloromethane	ND	10
bromomethane	ND	10
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	ND	5
trichloroethene	5	5
vinyl chloride	ND	10

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	10
4-methyl-2-pentanone	ND	10
styrene	ND	5
vinyl acetate	ND	10
total xylenes	ND	5

QC SUMMARY: SURROGATE RECOVERIES

2 Dichloroethane-d4	104
luene-d8	103
bromofluorobenzene	111

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 15478-3
CLIENT: HARDING LAWSON ASSOCIATES
JOB #: 18452,005.02 1520 POWELL
SAMPLE ID: MW-11

DATE RECEIVED: 08/24/88
DATE ANALYZED: 08/25/88
DATE REPORTED: 08/26/88

EPA METHOD 624: VOLATILE ORGANICS IN WATER

COMPOUND	Result ug/L	Detection Limit ug/L
benzene	ND	5
carbon tetrachloride	ND	5
chlorobenzene	ND	5
1,2-dichloroethane	ND	5
1,1,1-trichloroethane	ND	5
1,1-dichloroethane	ND	5
1,1,2-trichloroethane	ND	5
1,1,2,2-tetrachloroethane	ND	10
chloroethane	ND	10
2-chloroethylvinyl ether	ND	5
chloroform	ND	5
1,1-dichloroethene	180	5
1,2-dichloroethene (total)	ND	5
1,2-dichloropropane	ND	5
1,3-dichloropropene	ND	5
ethylbenzene	ND	5
methylene chloride	ND	10
chloromethane	ND	10
bromomethane	ND	5
bromoform	ND	5
bromodichloromethane	ND	5
fluorotrichloromethane	ND	5
chlorodibromomethane	ND	5
tetrachloroethene	ND	5
toluene	Trace	5
trichloroethene	ND	10
vinyl chloride		

Non-Priority Hazardous Pollutant Substances List Compounds

acetone	ND	10
2-butanone	ND	10
carbon disulfide	ND	5
2-hexanone	ND	10
4-methyl-2-pentanone	ND	10
styrene	ND	5
vinyl acetate	ND	10
total xylenes	ND	5

QA/QC SUMMARY: %SURROGATE RECOVERIES

1,2 Dichloroethane-d4	118
Toluene-d8	104
Bromofluorobenzene	110

APPENDIX B

SOP-4: GROUNDWATER PURGING AND SAMPLING

STANDARD OPERATING PROCEDURES
RE: GROUNDWATER PURGING AND SAMPLING
SOP-4

Prior to water sampling, each well is purged by evacuating a minimum of three well-casing volumes of groundwater or until the discharge water temperature, conductivity, and pH stabilize. The groundwater sample should be taken when the water level in the well recovers to 80% of its static level.

The sampling equipment used consists of either a teflon bailer or a stainless steel bladder pump with a teflon bladder. If the sampling system is dedicated to the well, then the bailer is made of teflon, but the bladder pump is PVC with a polypropylene bladder. Forty milliliter (ml) glass volatile-organic-analysis (VOA) vials, with teflon septa, are used as sample containers.

The groundwater sample is decanted into each VOA vial in such a manner that there is a meniscus at the top of the vial. The cap is quickly placed over the top of the vial and securely tightened. The VOA vial is then inverted and tapped to see if air bubbles are present. If none are present, the sample is labeled and refrigerated for delivery under chain-of-custody to the laboratory. Label information should include a sample identification number, job identification number, date, time, type of analysis requested, and the sampler's name.

For quality control purposes, a duplicate water sample is collected from each well. This sample is put on hold at the laboratory. A trip blank is prepared at the laboratory and placed in the transport cooler. It remains with the cooler and is analyzed by the laboratory along with the groundwater samples. A field blank is prepared in the field when sampling equipment is not dedicated. The field blank is prepared after a pump or bailer has been steam-cleaned, prior to use in a second well, and is analyzed along with the other samples. The field blank demonstrates the quality of in-field cleaning procedures to prevent cross-contamination.

To minimize the potential for cross-contamination between wells, all the well-development and water-sampling equipment that is not dedicated to a well is steam-cleaned between each well. As a second precautionary measure, wells will be sampled in order of least to highest concentrations as established by previous analyses.

APPENDIX C

CHAIN-OF-CUSTODY FORMS

CHAIN OF CUSTODY

WESTERN GEOLOGIC RESOURCES, INC.
2169 E. Francisco Boulevard, Suite B
San Rafael, California 94901
415/457-7595 Fax: 415/457-8521

General Remarks
Please analyze with low detection limit - 50ppb Thank you!

Laboratory: Central Coast Analytical Services — Log #:
Address: [redacted] 141 Suburban Rd. Suite C-4, San Luis Obispo, CA 93401
Project #: 1-045.07 | Project Name: Emeryville | Project Mgr/Contact: Tom Howard
Sampler(s): Elizabeth Adams, Dan Beckus

Lab Sample Number	Date Sampled	Sample Type See expl 1	Container Type See expl 2	Preservative	Sample Description		Number of Containers	EPA 8260 Full scan + TPH	Remarks
10111	7-31-89	GW	V	Na_2HSO_4	4501	A,B	2	X	
10112					4502	A,B			* rec'd w/ bubble
10113					4503	A,B			* rec'd w/ bubble
10114					4507	A,B			
10115					4508	A,B			
10116					4510	A,B			* rec'd w/ bubble
10117					4511	A,B			* rec'd w/ bubble
10118					4512	A,B			
X 10110		AQ			45TB	Travel blank	1		* rec'd w/ bubble

Analyses Requested
Turn Around Required See expl 3

Sample Relinquished By	Date/Time	Received By	Date/Time
Elizabeth Adams	7.31.89 19:00	Derek B. Wall	
		rec'd via Greyhound	
		cold, sealed, intact	
		8-1-89 1700	

Explanation

1 SO--Soil, NA--Nonaqueous, GW--Groundwater, SL--Sludge, PE--Petroleum, VP--Vapor, AQ--Aqueous, OT--Other
2 T--Brass Tube, P--Plastic Bottle, V--VOA Bottle, B--Beg, G--Glass Bottle, OT--Other
3 N--Normal (2wks), W--1 Wk, R--24 hr Rush, H--Hold

APPENDIX D

LABORATORY REPORTS

Central Coast Analytical Services

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number : F-10111
Collected : 07/31/89
Received : 08/01/89
Tested : 08/03/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

EXTRACTED BY EPA METHOD 5030 (purge-and-trap)
EPA METHOD 8260
Sample Description:
Project #1-845.07, Emeryville,
4501 A,B, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	0.2	57.
Bromodichloromethane	0.2	not found
Bromoform	0.4	not found
Carbon Tetrachloride	0.2	not found
Chlorobenzene	0.2	not found
2-Chloroethyl Vinyl Ether	2.	not found
Chloroform	1.	not found
Dibromochloromethane	0.2	not found
1,2-Dichlorobenzene	0.2	not found
1,3-Dichlorobenzene	0.2	not found
1,4-Dichlorobenzene	0.2	not found
1,1-Dichloroethane	0.2	2.7
1,2-Dichloroethane (EDC)	0.2	0.6
1,1-Dichloroethene	0.2	6.8
c-1,2-Dichloroethene	0.2	2600.
t-1,2-Dichloroethene	0.2	54.
1,2-Dichloropropane	0.2	not found
c-1,3-Dichloropropene	0.2	not found
t-1,3-Dichloropropene	0.2	not found
Ethylbenzene	0.2	not found
Ethyl Chloride	0.2	1.8
Ethylene Dibromide	0.2	not found
Methyl Bromide	0.2	not found
Methyl Chloride	0.2	not found
Methylene Chloride	2.	not found
1,1,2,2-Tetrachloroethane	1.	not found
Tetrachloroethylene (PCE)	0.2	not found
Toluene	1.	1.2
1,1,1-Trichloroethane (TCA)	0.2	7.2
1,1,2-Trichloroethane	0.2	not found
Trichloroethene (TCE)	0.2	57.
Trichlorotrifluoroethane (f113)	1.	not found
Trichlorofluoromethane(F-11)	1.	not found
Vinyl Chloride	0.2	760.
Xylenes	0.4	1.6
Total Purgeable Petroleum Hydrocarbons (Gasoline)	100.	7000.

Percent Recovery of Sample-Specific Quality Assurance Spike is: 96.

08/15/89/MSD#7
F10111v.wr1/100
MH/ec/jc/tl

Respectfully submitted,

Mary Havlicek, Ph.D., President

Central Coast Analytical Services

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number : F-10112
Collected : 07/31/89
Received : 08/01/89
Tested : 08/03/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

EXTRACTED BY EPA METHOD 5030 (purge-and-trap)
EPA METHOD 8260
Sample Description:
Project #1-045.07, Emeryville,
4502 A,B, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	0.2	not found
Bromodichloromethane	0.2	not found
Bromoform	0.4	not found
Carbon Tetrachloride	0.2	not found
Chlorobenzene	0.2	not found
2-Chloroethyl Vinyl Ether	2.	not found
Chloroform	1.	not found
Dibromochloromethane	0.2	not found
1,2-Dichlorobenzene	0.2	not found
1,3-Dichlorobenzene	0.2	not found
1,4-Dichlorobenzene	0.2	not found
1,1-Dichloroethane	0.2	not found
1,2-Dichloroethane (EDC)	0.2	not found
1,1-Dichloroethene	0.2	not found
c-1,2-Dichloroethene	0.2	not found
t-1,2-Dichloroethene	0.2	not found
1,2-Dichloropropane	0.2	not found
c-1,3-Dichloropropene	0.2	not found
t-1,3-Dichloropropene	0.2	not found
Ethylbenzene	0.2	not found
Ethyl Chloride	0.2	not found
Ethylene Dibromide	0.2	not found
Methyl Bromide	0.2	not found
Methyl Chloride	0.2	not found
Methylene Chloride	2.	not found
1,1,2,2-Tetrachloroethane	1.	not found
Tetrachloroethylene (PCE)	0.2	not found
Toluene	1.	not found
1,1,1-Trichloroethane (TCA)	0.2	not found
1,1,2-Trichloroethane	0.2	not found
Trichloroethene (TCE)	0.2	not found
Trichlorotrifluoroethane (f113)	1.	not found
Trichlorofluoromethane(F-11)	1.	not found
Vinyl Chloride	0.2	not found
Xylenes	0.4	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline)	100.	not found

Percent Recovery of Sample-Specific Quality Assurance Spike is: 100.

08/15/89/MSD#7
F10112v.wr1/100
MH/ec/jc/tl

Respectfully submitted,
Mary Havlicek
Mary Havlicek, Ph.D., President

Central Coast Analytical Services

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number : F-10113
Collected : 07/31/89
Received : 08/01/89
Tested : 08/03/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

EXTRACTED BY EPA METHOD 5030 (purge-and-trap)
EPA METHOD 8260
Sample Description:
Project #1-045.07, Emeryville,
4503 A,B, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	0.2	not found
Bromodichloromethane	0.2	not found
Bromoform	0.4	not found
Carbon Tetrachloride	0.2	not found
Chlorobenzene	0.2	not found
2-Chloroethyl Vinyl Ether	2.	not found
Chloroform	1.	not found
Dibromochloromethane	0.2	not found
1,2-Dichlorobenzene	0.2	not found
1,3-Dichlorobenzene	0.2	not found
1,4-Dichlorobenzene	0.2	not found
1,1-Dichloroethane	0.2	not found
1,2-Dichloroethane (EDC)	0.2	not found
1,1-Dichloroethene	0.2	not found
c-1,2-Dichloroethene	0.2	not found
t-1,2-Dichloroethene	0.2	not found
1,2-Dichloropropane	0.2	not found
c-1,3-Dichloropropene	0.2	not found
t-1,3-Dichloropropene	0.2	not found
Ethylbenzene	0.2	not found
Ethyl Chloride	0.2	not found
Ethylene Dibromide	0.2	not found
Methyl Bromide	0.2	not found
Methyl Chloride	0.2	not found
Methylene Chloride	2.	not found
1,1,2,2-Tetrachloroethane	1.	not found
Tetrachloroethylene (PCE)	0.2	not found
Toluene	1.	not found
1,1,1-Trichloroethane (TCA)	0.2	0.5
1,1,2-Trichloroethane	0.2	not found
Trichloroethene (TCE)	0.2	not found
Trichlorotrifluoroethane (f113)	1.	not found
Trichlorofluoromethane(F-11)	1.	not found
Vinyl Chloride	0.2	not found
Xylenes	0.4	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline)	100.	not found

Percent Recovery of Sample-Specific Quality Assurance Spike is: 97.

08/15/89/MSD#7
F10113v.wr1/100
MH/tz/jc/tl

Respectfully submitted,
Mary Havlicek
Mary Havlicek, Ph.D., President

Central Coast
Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Central Coast Analytical Services

Lab Number : F-10114
Collected : 07/31/89
Received : 08/01/89
Tested : 08/03/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

EXTRACTED BY EPA METHOD 5030 (purge-and-trap)
EPA METHOD 8260
Sample Description:
Project #1-045.07, Emeryville,
4507 A,B, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	0.1	not found
Bromodichloromethane	0.1	not found
Bromoform	0.2	not found
Carbon Tetrachloride	0.1	not found
Chlorobenzene	0.1	not found
2-Chloroethyl Vinyl Ether	1.	not found
Chloroform	0.5	not found
Dibromochloromethane	0.1	not found
1,2-Dichlorobenzene	0.1	0.1
1,3-Dichlorobenzene	0.1	not found
1,4-Dichlorobenzene	0.1	not found
1,1-Dichloroethane	0.1	0.3
1,2-Dichloroethane (EDC)	0.1	not found
1,1-Dichloroethene	0.1	not found
c-1,2-Dichloroethene	0.1	0.3
t-1,2-Dichloroethene	0.1	not found
1,2-Dichloropropane	0.1	not found
c-1,3-Dichloropropene	0.1	not found
t-1,3-Dichloropropene	0.1	not found
Ethylbenzene	0.1	not found
Ethyl Chloride	0.1	not found
Ethylene Dibromide	0.1	not found
Methyl Bromide	0.1	not found
Methyl Chloride	0.1	not found
Methylene Chloride	1.	not found
1,1,2,2-Tetrachloroethane	0.5	not found
Tetrachloroethylene (PCE)	0.1	not found
Toluene	0.5	not found
1,1,1-Trichloroethane (TCA)	0.1	4.5
1,1,2-Trichloroethane	0.1	not found
Trichloroethene (TCE)	0.1	not found
Trichlorotrifluoroethane (f113)	0.5	not found
Trichlorofluoromethane(F-11)	0.5	not found
Vinyl Chloride	0.1	not found
Xylenes	0.2	not found
Total Purgeable Petroleum Hydrocarbons (Diesel #2)	50.	160.

Percent Recovery of Sample-Specific Quality Assurance Spike is: 96.

08/15/89/MSD#7
F10114v.wr1/100
MH/tz/jc/tl

Respectfully submitted,

Mary Havlicek, Ph.D., President

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number : F-10114dup
Collected : 07/31/89
Received : 08/01/89
Tested : 08/03/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

EXTRACTED BY EPA METHOD 5030 (purge-and-trap)
EPA METHOD 8260
Sample Description:
Project #1-845.07, Emeryville,
4507 A,B, Water, Duplicate Analysis

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	0.1	not found
Bromodichloromethane	0.1	not found
Bromoform	0.2	not found
Carbon Tetrachloride	0.1	not found
Chlorobenzene	0.1	not found
2-Chloroethyl Vinyl Ether	1.	not found
Chloroform	0.5	not found
Dibromochloromethane	0.1	not found
1,2-Dichlorobenzene	0.1	0.1
1,3-Dichlorobenzene	0.1	not found
1,4-Dichlorobenzene	0.1	not found
1,1-Dichloroethane	0.1	0.2
1,2-Dichloroethane (EDC)	0.1	not found
1,1-Dichloroethene	0.1	not found
c-1,2-Dichloroethene	0.1	0.4
t-1,2-Dichloroethene	0.1	not found
1,2-Dichloropropane	0.1	not found
c-1,3-Dichloropropene	0.1	not found
t-1,3-Dichloropropene	0.1	not found
Ethylbenzene	0.1	not found
Ethyl Chloride	0.1	not found
Ethylene Dibromide	0.1	not found
Methyl Bromide	0.1	not found
Methyl Chloride	0.1	not found
Methylene Chloride	1.	not found
1,1,2,2-Tetrachloroethane	0.5	not found
Tetrachloroethylene (PCE)	0.1	not found
Toluene	0.5	not found
1,1,1-Trichloroethane (TCA)	0.1	2.6
1,1,2-Trichloroethane	0.1	not found
Trichloroethene (TCE)	0.1	not found
Trichlorotrifluoroethane (f113)	0.5	not found
Trichlorofluoromethane(F-11)	0.5	not found
Vinyl Chloride	0.1	not found
Xylenes	0.2	not found
Total Purgeable Petroleum Hydrocarbons (Diesel #2)	50.	100.

Percent Recoveries of Sample-Specific Quality Assurance Spikes are: 115/108.

08/15/89/MSD#7
F10114vd.wr1/100
MH/jl/jc/tl

Respectfully submitted,
Mary Havlicek, Ph.D., President

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 934Ø1
(8Ø5) 543-2553

Central Coast Analytical Services

Lab Number : F-1Ø115
Collected : Ø7/31/89
Received : Ø8/Ø1/89
Tested : Ø8/Ø3/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 949Ø1

EXTRACTED BY EPA METHOD 5Ø3Ø (purge-and-trap)
EPA METHOD 826Ø
Sample Description:
Project #1-Ø45.Ø7, Emeryville,
45Ø8 A,B, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	Ø.1	not found
Bromodichloromethane	Ø.1	not found
Bromoform	Ø.2	not found
Carbon Tetrachloride	Ø.1	not found
Chlorobenzene	Ø.1	not found
2-Chloroethyl Vinyl Ether	1.	not found
Chloroform	Ø.5	not found
Dibromochloromethane	Ø.1	not found
1,2-Dichlorobenzene	Ø.1	not found
1,3-Dichlorobenzene	Ø.1	not found
1,4-Dichlorobenzene	Ø.1	not found
1,1-Dichloroethane	Ø.1	1.7
1,2-Dichloroethane (EDC)	Ø.1	not found
1,1-Dichloroethene	Ø.1	not found
c-1,2-Dichloroethene	Ø.1	1.9
t-1,2-Dichloroethene	Ø.1	Ø.6
1,2-Dichloropropane	Ø.1	not found
c-1,3-Dichloropropene	Ø.1	not found
t-1,3-Dichloropropene	Ø.1	not found
Ethylbenzene	Ø.1	not found
Ethyl Chloride	Ø.1	not found
Ethylene Dibromide	Ø.1	not found
Methyl Bromide	Ø.1	not found
Methyl Chloride	Ø.1	not found
Methylene Chloride	1.	not found
1,1,2,2-Tetrachloroethane	Ø.5	not found
Tetrachloroethylene (PCE)	Ø.1	not found
Toluene	Ø.5	not found
1,1,1-Trichloroethane (TCA)	Ø.1	1.7
1,1,2-Trichloroethane	Ø.1	not found
Trichloroethene (TCE)	Ø.1	Ø.4
Trichlorotrifluoroethane (f113)	Ø.5	not found
Trichlorofluoromethane(F-11)	Ø.5	not found
Vinyl Chloride	Ø.1	1.2
Xylenes	Ø.2	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline)	5Ø.	not found

Percent Recovery of Sample-Specific Quality Assurance Spike is: 1Ø1.

Ø8/15/89/MSD#7
F1Ø115v.wr1/1ØØ
MH/tz/jc/tl

Respectfully submitted,
Mary Havlicek
Mary Havlicek, Ph.D., President

Central Coast Analytical Services

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number : F-10116
Collected : 07/31/89
Received : 08/01/89
Tested : 08/04/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

EXTRACTED BY EPA METHOD 5030 (purge-and-trap)
EPA METHOD 8260
Sample Description:
Project #1-045.07, Emeryville,
4510 A,B, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	0.1	not found
Bromodichloromethane	0.1	not found
Bromoform	0.2	not found
Carbon Tetrachloride	0.1	not found
Chlorobenzene	0.1	not found
2-Chloroethyl Vinyl Ether	1.	not found
Chloroform	0.5	not found
Dibromochloromethane	0.1	not found
1,2-Dichlorobenzene	0.1	not found
1,3-Dichlorobenzene	0.1	not found
1,4-Dichlorobenzene	0.1	not found
1,1-Dichloroethane	0.1	2.9
1,2-Dichloroethane (EDC)	0.1	not found
1,1-Dichloroethene	0.1	0.7
c-1,2-Dichloroethene	0.1	27.
t-1,2-Dichloroethene	0.1	6.3
1,2-Dichloropropane	0.1	not found
c-1,3-Dichloropropene	0.1	not found
t-1,3-Dichloropropene	0.1	not found
Ethylbenzene	0.1	not found
Ethyl Chloride	0.1	not found
Ethylene Dibromide	0.1	not found
Methyl Bromide	0.1	not found
Methyl Chloride	0.1	not found
Methylene Chloride	1.	not found
1,1,2,2-Tetrachloroethane	0.5	not found
Tetrachloroethylene (PCE)	0.1	not found
Toluene	0.5	not found
1,1,1-Trichloroethane (TCA)	0.1	not found
1,1,2-Trichloroethane	0.1	not found
Trichloroethene (TCE)	0.1	5.3
Trichlorotrifluoroethane (f113)	0.5	not found
Trichlorofluoromethane(F-11)	0.5	not found
Vinyl Chloride	0.1	not found
Xylenes	0.2	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline)	50.	not found

Percent Recoveries of Sample-Specific Quality Assurance Spikes are: 107/101.

08/16/89/MSD#7
F10116v.wr1/101
MH/ec/jc/tl

Respectfully submitted,

Mary Havlicek, Ph.D., President

Central Coast Analytical Services

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 934Ø1
(8Ø5) 543-2553

Lab Number : F-1Ø117
Collected : Ø7/31/89
Received : Ø8/Ø1/89
Tested : Ø8/Ø4/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 949Ø1

EXTRACTED BY EPA METHOD 5Ø3Ø (purge-and-trap)
EPA METHOD 826Ø
Sample Description:
Project #1-Ø45.Ø7, Emeryville,
4511 A,B, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	Ø.2	not found
Bromodichloromethane	Ø.2	not found
Bromoform	Ø.2	not found
Carbon Tetrachloride	Ø.2	not found
Chlorobenzene	Ø.2	not found
2-Chloroethyl Vinyl Ether	Ø.2	not found
Chloroform	Ø.2	not found
Dibromochloromethane	Ø.2	not found
1,2-Dichlorobenzene	Ø.2	not found
1,3-Dichlorobenzene	Ø.2	not found
1,4-Dichlorobenzene	Ø.2	not found
1,1-Dichloroethane	Ø.2	2.2
1,2-Dichloroethane (EDC)	Ø.2	not found
1,1-Dichloroethene	Ø.2	Ø.9
c-1,2-Dichloroethene	Ø.2	11Ø.
t-1,2-Dichloroethene	Ø.2	4Ø.
1,2-Dichloropropane	Ø.2	not found
c-1,3-Dichloropropene	Ø.2	not found
t-1,3-Dichloropropene	Ø.2	not found
Ethylbenzene	Ø.2	not found
Ethyl Chloride	Ø.2	not found
Ethylene Dibromide	Ø.2	not found
Methyl Bromide	Ø.2	not found
Methyl Chloride	Ø.2	not found
Methylene Chloride	Ø.2	not found
1,1,2,2-Tetrachloroethane	Ø.2	not found
Tetrachloroethylene (PCE)	Ø.2	not found
Toluene	Ø.2	not found
1,1,1-Trichloroethane (TCA)	Ø.2	1.4
1,1,2-Trichloroethane	Ø.2	not found
Trichloroethene (TCE)	Ø.2	2.9
Trichlorotrifluoroethane (f113)	Ø.2	not found
Trichlorofluoromethane(F-11)	Ø.2	not found
Vinyl Chloride	Ø.2	not found
Xylenes	Ø.2	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline)	1ØØ.	not found

Percent Recoveries of Sample-Specific Quality Assurance Spikes are: 126/1Ø3.

Ø8/16/89/MSD#7
F1Ø117v.wr1/1Ø1
MH/ec/jc/tl

Respectfully submitted,
Mary Havlicek, Ph.D., President

Central Coast Analytical Services

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number : F-10118
Collected : 07/31/89
Received : 08/01/89
Tested : 08/04/89
Collected by: Adams/Bockus

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 94901

EXTRACTED BY EPA METHOD 5030 (purge-and-trap)
EPA METHOD 8260
Sample Description:
Project #1-845.07, Emeryville,
4512 A,B, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	0.1	not found
Bromodichloromethane	0.1	not found
Bromoform	0.2	not found
Carbon Tetrachloride	0.1	not found
Chlorobenzene	0.1	not found
2-Chloroethyl Vinyl Ether	1.	not found
Chloroform	0.5	not found
Dibromochloromethane	0.1	not found
1,2-Dichlorobenzene	0.1	not found
1,3-Dichlorobenzene	0.1	not found
1,4-Dichlorobenzene	0.1	not found
1,1-Dichloroethane	0.1	not found
1,2-Dichloroethane (EDC)	0.1	not found
1,1-Dichloroethene	0.1	not found
c-1,2-Dichloroethene	0.1	1.7
t-1,2-Dichloroethene	0.1	not found
1,2-Dichloropropane	0.1	not found
c-1,3-Dichloropropene	0.1	not found
t-1,3-Dichloropropene	0.1	not found
Ethylbenzene	0.1	not found
Ethyl Chloride	0.1	not found
Ethylene Dibromide	0.1	not found
Methyl Bromide	0.1	not found
Methyl Chloride	0.1	not found
Methylene Chloride	1.	not found
1,1,2,2-Tetrachloroethane	0.5	not found
Tetrachloroethylene (PCE)	0.1	not found
Toluene	0.5	not found
1,1,1-Trichloroethane (TCA)	0.1	not found
1,1,2-Trichloroethane	0.1	not found
Trichloroethene (TCE)	0.1	0.8
Trichlorotrifluoroethane (f113)	0.5	not found
Trichlorofluoromethane(F-11)	0.5	not found
Vinyl Chloride	0.1	not found
Xylenes	0.2	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline)	100.	not found

Percent Recoveries of Sample-Specific Quality Assurance Spikes are: 125/100.

08/16/89/MSD#7
F10118v.wr1/101
MH/ec/jc/tl

Respectfully submitted,
Mary Havlicek
Mary Havlicek, Ph.D., President

Central Coast Analytical Services

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 934Ø1
(8Ø5) 543-2553

Lab Number : F-1Ø11Ø
Collected : Ø7/19/89
Received : Ø8/Ø1/89
Tested : Ø8/Ø3/89
Collected by: Don M.

ATTN: Tom Howard
Western Geologic Resources
2169 E. Francisco Blvd.
Suite B
San Rafael, CA 949Ø1

EXTRACTED BY EPA METHOD 5Ø3Ø (purge-and-trap)
EPA METHOD 826Ø
Sample Description:
Project #1-Ø45.Ø7, Emeryville,
TBØ71989DM12, Water

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	Ø.1	not found
Bromodichloromethane	Ø.1	not found
Bromoform	Ø.2	not found
Carbon Tetrachloride	Ø.1	not found
Chlorobenzene	Ø.1	not found
2-Chloroethyl Vinyl Ether	1.	not found
Chloroform	Ø.5	not found
Dibromochloromethane	Ø.1	not found
1,2-Dichlorobenzene	Ø.2	not found
1,3-Dichlorobenzene	Ø.1	not found
1,4-Dichlorobenzene	Ø.2	not found
1,1-Dichloroethane	Ø.1	not found
1,2-Dichloroethane (EDC)	Ø.1	not found
1,1-Dichloroethene	Ø.1	not found
c-1,2-Dichloroethene	Ø.1	not found
t-1,2-Dichloroethene	Ø.1	not found
1,2-Dichloropropane	Ø.1	not found
c-1,3-Dichloropropene	Ø.1	not found
t-1,3-Dichloropropene	Ø.1	not found
Ethylbenzene	Ø.1	not found
Ethyl Chloride	Ø.1	not found
Ethylene Dibromide	Ø.1	not found
Methyl Bromide	Ø.1	not found
Methyl Chloride	Ø.1	not found
Methylene Chloride	1.	not found
1,1,2,2-Tetrachloroethane	Ø.5	not found
Tetrachloroethylene (PCE)	Ø.1	not found
Toluene	Ø.5	not found
1,1,1-Trichloroethane (TCA)	Ø.1	not found
1,1,2-Trichloroethane	Ø.1	not found
Trichloroethene (TCE)	Ø.1	not found
Trichlorotrifluoroethane (f113)	Ø.5	not found
Trichlorofluoromethane(F-11)	Ø.5	not found
Vinyl Chloride	Ø.1	not found
Xylenes	Ø.2	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline)	5Ø.	not found

Percent Recovery of Sample-Specific Quality Assurance Spike is: 97.

Ø8/15/89/MSD#7
F1Ø11Øv.wr1/99
MH/ec/jc/tl

Respectfully submitted,
Mary Havlicek
Mary Havlicek, Ph.D., President

APPENDIX E

LABORATORY QUALITY ASSURANCE & QUALITY CONTROL REPORTS

Central Coast Analytical Services, Inc.
141 Suburban Road, Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Central Coast Analytical Services

Lab Number : B-080039
Collected :
Received :
Tested : 08/03/89
Collected by:

EXTRACTED BY EPA METHOD 5030 (purge-and-trap)
EPA METHOD 8260
Sample Description:
INSTRUMENT BLANK

CCAS

Compound Analyzed	Detection Limit (ug/L) (Practical Quantitation Limit)	Concentration (ug/L)
Benzene	0.1	not found
Bromodichloromethane	0.1	not found
Bromoform	0.2	not found
Carbon Tetrachloride	0.1	not found
Chlorobenzene	0.1	not found
2-Chloroethyl Vinyl Ether	1.	not found
Chloroform	0.5	not found
Dibromochloromethane	0.1	not found
1,2-Dichlorobenzene	0.2	not found
1,3-Dichlorobenzene	0.1	not found
1,4-Dichlorobenzene	0.2	not found
1,1-Dichloroethane	0.1	not found
1,2-Dichloroethane (EDC)	0.1	not found
1,1-Dichloroethene	0.1	not found
c-1,2-Dichloroethene	0.1	not found
t-1,2-Dichloroethene	0.1	not found
1,2-Dichloropropane	0.1	not found
c-1,3-Dichloropropene	0.1	not found
t-1,3-Dichloropropene	0.1	not found
Ethylbenzene	0.1	not found
Ethyl Chloride	0.1	not found
Ethylene Dibromide	0.1	not found
Methyl Bromide	0.1	not found
Methyl Chloride	0.1	not found
Methylene Chloride	1.	not found
1,1,2,2-Tetrachloroethane	0.5	not found
Tetrachloroethylene (PCE)	0.1	not found
Toluene	0.5	not found
1,1,1-Trichloroethane (TCA)	0.1	not found
1,1,2-Trichloroethane	0.1	not found
Trichloroethene (TCE)	0.1	not found
Trichlorotrifluoroethane (f113)	0.5	not found
Trichlorofluoromethane(F-11)	0.5	not found
Vinyl Chloride	0.1	not found
Xylenes	0.2	not found

Percent Recoveries of Sample-Specific Quality Assurance Spikes are: 121/104.

08/15/89/MSD#7
B#8039v.wr1/99
MH/jg/jc/tl

Respectfully submitted,
Mary Havlicek, Ph.D., President