



ALISTO ENGINEERING GROUP

May 26, 1995

ENVIRONMENTAL
PROTECTION

95 JUN -1 PM 2:00

Mr. Scott Seery
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

10-190-03-002

Subject: Groundwater Monitoring and Sampling Report
Former Mobil Oil Corporation Station 04-FGN
14994 East 14th Street
San Leandro, California

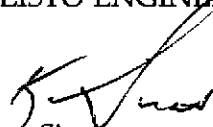
Dear Mr. Seery:

On behalf of Mobil Oil Corporation, Alisto Engineering Group is pleased to submit this report on groundwater monitoring and sampling at former Mobil Oil Corporation Station 04-FGN, 14994 East 14th Street, San Leandro, California.

Please call if you have questions or comments.

Sincerely,

ALISTO ENGINEERING GROUP


Ken Simas
Project Geologist

Enclosure

cc: Mr. Steven Ritchie, California Regional Water Quality Control Board,
San Francisco Bay Region
Mr. Bertram Kubo
Fuk K. Sit and Ying C. Sit
Ms. Cherine Fautch, Mobil Oil Corporation
Mr. Steve Pao, Mobil Oil Corporation

GROUNDWATER MONITORING AND SAMPLING REPORT

**Former Mobil Oil Corporation Station 04-FGN
14994 East 14th Street
San Leandro, California**

Project No. 10-190-03-002

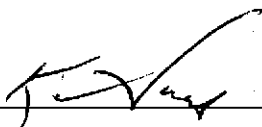
Prepared for:

**Mobil Oil Corporation
3700 W. 190th Street - TPT-2
Torrance, California**

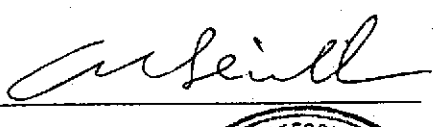
Prepared by:

**Alisto Engineering Group
1777 Oakland Boulevard, Suite 200
Walnut Creek, California**

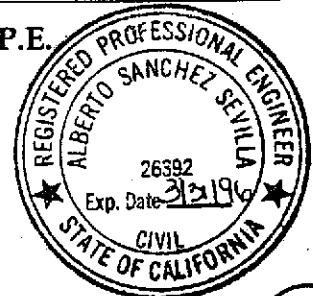
May 26, 1995



**Ken Simas
Project Geologist**



**Al Sevilla, P.E.
Principal**



GROUNDWATER MONITORING AND SAMPLING REPORT

Former Mobil Oil Corporation Station 04-FGN
14994 East 14th Street
San Leandro, California

Project No. 10-190-03-002

May 26, 1995

INTRODUCTION

This report presents the results and findings of the February 28, 1995 groundwater monitoring and sampling conducted by Alisto Engineering Group at former Mobil Oil Corporation Station 04-FGN, 14994 East 14th Street, San Leandro, California. A site vicinity map is shown in Figure 1.

FIELD PROCEDURES

Field activities were performed in accordance with the procedures and guidelines of the Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well in reference to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

Depth to groundwater measurements were collected from the neighboring Unocal Corporation service station, 15008 East 14th Street, San Leandro, California on February 3, 1995. The calculated groundwater elevations are presented in Table 2.

Before sample collection, each well was purged of 3 casing volumes, while recording field readings of pH, temperature, and electrical conductivity. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The samples were transferred from the bailer into laboratory-supplied containers. The water sampling field survey forms are presented in Appendix A.



SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples collected for this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations for the Mobil Oil site, as interpreted from the results of this monitoring event and groundwater elevations collected from the groundwater monitoring wells at the Unocal site on February 3, 1995, are shown in Figure 2. The results of groundwater analysis are shown in Figure 3. The laboratory report and chain of custody record are presented in Appendix B.

SUMMARY OF FINDINGS

The findings of the February 28, 1995 groundwater monitoring and sampling event are summarized as follows:

- Free product was not observed in the groundwater monitoring wells.
- Interpretation of groundwater elevation data at the site indicates a gradient of 0.03 foot per foot in a northwesterly direction.
- Total petroleum hydrocarbons as gasoline (TPH-G) and benzene were detected in all monitoring wells onsite at concentrations of up to 10,000 micrograms per liter (ug/L) TPH-G in MW-1 and 29 ug/L benzene in MW-2.



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
FORMER MOBIL OIL STATION 04-FGN
14994 EAST 14TH STREET, SAN LEANDRO, CALIFORNIA

ALISTO PROJECT NO. 10-190

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	TOG (ug/L)	KEROSENE (ug/L)	1,2-DCA (ug/L)	PURGEABLE HALOCARBONS (ug/L)	LAB
MW-1 (c)	03/31/88	36.35	—	—	29000	ND<10000	ND<5.0	ND<5.0	550	640	ND<20000	ND<10000	ND	—	CTL
MW-1	01/31/89	36.35	—	—	11200	—	260	ND<20	500	500	—	—	—	ND<1.0	CTL
MW-1	02/24/94	36.35	9.42	26.93	11000	2500	70	ND<0.5	260	180	ND<5000	—	ND	ND (d)	SAL
MW-1	08/23/94	36.35	12.00	24.35	13000	7100	61	50	280	230	ND<5000	—	ND	ND (d)	SAL
MW-1	11/23/94	36.35	11.18	25.17	12000	2500	49	ND<0.5	300	190	10000	—	ND	ND (d)	SAL
MW-1	02/28/95	36.35	9.08	27.27	10000	3200 (e)	25	ND<0.50	110	67	8400	—	1.3	ND (f)	SAL
MW-2	02/24/94	36.61	9.52	27.09	6400	4500	31	ND<0.5	58	42	ND<5000	—	—	—	SAL
MW-2	08/23/94	36.61	12.05	24.56	7500	7100	42	21	71	53	ND<5000	—	—	—	SAL
MW-2	11/23/94	36.61	11.25	25.36	7000	1800	33	11	39	ND<0.5	7300	—	—	—	SAL
MW-2	02/28/95	36.61	9.10	27.51	9000	1600 (e)	29	36	96	45	6900	—	—	—	SAL
MW-3	02/24/94	36.92	9.85	27.07	19000	10000	52	30	690	290	ND<5000	—	—	—	SAL
MW-3	08/23/94	36.92	12.33	24.59	14000	11000	44	24	1000	100	ND<5000	—	—	—	SAL
MW-3	11/23/94	36.92	11.58	25.36	13000	2600	30	18	890	52	8500	—	—	—	SAL
MW-3	02/28/95	36.92	9.35	27.57	8500	—	11	ND<0.50	340	24	5500	—	—	—	SAL
MW-1 dup (g)	02/24/94	36.35	—	—	11000	—	88	ND<0.5	230	190	—	—	—	—	SAL
MW-1 dup (g)	08/23/94	—	—	—	13000	—	58	38	310	230	—	—	—	—	SAL
MW-3 dup (g)	11/23/94	—	—	—	13000	—	29	15	710	58	—	—	—	—	SAL
MW-3 dup (g)	02/28/95	—	—	—	9500	—	33	ND<0.50	490	56	—	—	—	—	SAL
QC-2 (h)	02/24/94	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	SAL
QC-2 (h)	08/23/94	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	SAL
QC-2 (h)	11/23/94	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—	SAL
QC-2 (h)	02/28/95	—	—	—	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<0.50	—	—	—	—	SAL

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 TPH-D Total petroleum hydrocarbons as diesel
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 TOG Total oil and grease
 1,2-DCA 1,2-Dichloroethane
 ug/L Micrograms per liter
 — Not measured/analyzed/applicable
 ND Not detected above reported detection limit
 CTL Curtis Thompkins Laboratories
 SAL Sequoia Analytical Laboratory

NOTES:

- (a) Top of casing elevations surveyed in reference to Unocal datum, MW-7, elevation at 36.09 feet, on the southeast corner at the intersection of East 14th Street and 150th Avenue.
- (b) Groundwater elevations in feet above mean sea level.
- (c) A search of 70000 compounds within the Wiley/NBS spectral data library also detected the following: propylbenzene at 240 ppb, ethylcyclobutane at 98 ppb, 2-methylpentane at 94 ppb, 2-methylbutane at 88 ppb, 2,3-dimethylpentane at 73 ppb, 2-methylhexane at 58 ppb, 3-methylhexane at 57 ppb, and 2,5,6-trimethyloctane at 57 ppb.
- (d) Various detection limits; see laboratory report.
- (e) Diesel and unidentified hydrocarbons <C13.
- (f) Analysis of sample using EPA Method 8240 detected ethylbenzene and total xylene concentrations of 200 and 120 ug/L.
- (g) Blind duplicate; QC-1.
- (h) Travel blank.

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 UNOCAL CORPORATION SERVICE STATION
 15008 EAST 14TH STREET, SAN LEANDRO, CALIFORNIA

ALISTO PROJECT NO. 10-190

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	LAB
MW-1	08/23/93	--	--	--	24000	160	110	840	810	--
MW-1	11/23/93	--	--	--	18000	210	63	900	620	--
MW-1	02/24/94	36.37	9.45	26.92	18000	74	30	940	480	--
MW-1	08/23/94	36.37	11.98	24.39	24000	130	57	970	320	SAL
MW-1	11/23/94	36.37	11.17	25.20	--	--	--	--	--	--
MW-1	02/03/95	36.37	8.01	28.36	--	--	--	--	--	--
MW-2	08/23/93	--	--	--	15000	110	ND	590	64	--
MW-2	11/23/93	--	--	--	11000	80	10	480	20	--
MW-2	02/24/94	36.34	9.27	27.07	11000	44	ND	580	32	--
MW-2	08/23/94	36.34	11.82	24.52	12000	45	10	360	20	SAL
MW-2	11/23/94	36.34	10.97	25.37	--	--	--	--	--	--
MW-2	02/03/95	36.34	7.87	28.47	--	--	--	--	--	--
MW-3	08/23/93	--	--	--	2900	25	ND	50	18	--
MW-3	11/23/93	--	--	--	2300	34	ND	24	5.6	--
MW-3	02/24/94	36.42	9.21	27.21	3400	46	ND	53	11	--
MW-3	08/23/94	36.42	11.88	24.54	2900	37	49	14	2.9	SAL
MW-3	11/23/94	36.42	10.98	25.44	--	--	--	--	--	--
MW-3	02/03/95	36.42	7.89	28.53	--	--	--	--	--	--
MW-4	08/23/93	--	--	--	1200	5	ND	16	ND	--
MW-4	11/23/93	--	--	--	720	10	ND	8.7	ND	--
MW-4	02/24/94	37.04	9.89	27.15	1300	8.9	ND	20	ND	--
MW-4	08/23/94	37.04	12.57	24.47	690	9.2	1.3	7.1	1.9	SAL
MW-4	11/23/94	37.04	11.65	25.39	--	--	--	--	--	--
MW-4	02/03/95	37.04	8.52	28.52	--	--	--	--	--	--

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 UNOCAL CORPORATION SERVICE STATION
 15008 EAST 14TH STREET, SAN LEANDRO, CALIFORNIA

ALISTO PROJECT NO. 10-190

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	LAB
MW-5	08/23/93	--	--	--	61000	340	380	3600	14000	--
MW-5	11/23/93	--	--	--	46000	290	310	4100	15000	--
MW-5	02/24/94	35.94	9.02	26.92	57000	140	400	4400	16000	--
MW-5	08/23/94	35.94	11.57	24.37	61000	360	380	4800	17000	SAL
MW-5	11/23/94	35.94	10.71	25.23	--	--	--	--	--	--
MW-5	02/03/95	35.94	7.69	28.25	--	--	--	--	--	--
MW-6	08/23/93	--	--	--	1000	9.4	2.3	5	2.3	--
MW-6	11/23/93	--	--	--	520	ND	1.7	1.9	0.82	--
MW-6	02/24/94	35.67	8.39	27.28	810	12	ND	2.6	0.77	--
MW-6	08/23/94	35.67	10.97	24.70	570	6.8	2.5	3.2	2.6	SAL
MW-6	11/23/94	35.67	10.21	25.46	--	--	--	--	--	--
MW-6	02/03/95	35.67	6.99	28.68	--	--	--	--	--	--
MW-7	08/23/93	--	--	--	33000	360	ND	2500	4300	--
MW-7	11/23/93	--	--	--	19000	310	30	2500	2300	--
MW-7	02/24/94	36.09	8.95	27.14	16000	220	19	2400	3200	--
MW-7	08/23/94	36.09	11.43	24.66	19000	210	50	2000	2800	SAL
MW-7	11/23/94	36.09	10.69	25.40	--	--	--	--	--	--
MW-7	02/03/95	36.09	7.49	28.60	--	--	--	--	--	--
MW-8	08/23/93	--	--	--	280	49	4.5	ND	ND	--
MW-8	11/23/93	--	--	--	1800	ND	3.4	ND	ND	--
MW-8	02/24/94	36.89	10.44	26.45	1200	10	2.3	ND	3.2	--
MW-8	08/23/94	36.89	12.61	24.28	3200	45	18	2	7.2	SAL
MW-8	11/23/94	36.89	11.98	24.91	--	--	--	--	--	--
MW-8	02/03/95	36.89	9.16	27.73	--	--	--	--	--	--

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
UNOCAL CORPORATION SERVICE STATION
15008 EAST 14TH STREET, SAN LEANDRO, CALIFORNIA

ALISTO PROJECT NO. 10-190

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	LAB
MW-9	08/23/93	---	---	---	3000	29	ND	ND	ND	---
MW-9	11/23/93	---	---	---	2500	23	2.1	ND	ND	---
MW-9	02/24/94	36.29	9.74	26.55	2900	35	ND	ND	ND	---
MW-9	08/23/94	36.29	11.99	24.30	2800	28	32	ND	ND	SAL
MW-9	11/23/94	36.29	11.31	24.98	---	---	---	---	---	---
MW-9	02/03/95	36.29	8.45	27.84	---	---	---	---	---	---
MW-10	08/23/93	---	---	---	20000	230	13	3200	140	---
MW-10	11/23/93	---	---	---	18000	300	10	2800	110	---
MW-10	02/24/94	36.04	9.57	26.47	15000	330	19	2000	83	---
MW-10	08/23/94	36.04	11.81	24.23	16000	250	41	1800	74	SAL
MW-10	11/23/94	36.04	11.10	24.94	---	---	---	---	---	---
MW-10	02/03/95	36.04	8.32	27.72	---	---	---	---	---	---
MW-11	08/23/93	---	---	---	5400	68	ND	230	43	---
MW-11	11/23/93	---	---	---	3400	105	ND	120	43	---
MW-11	02/24/94	35.50	9.20	26.30	4600	170	ND	140	36	---
MW-11	08/23/94	35.50	11.39	24.11	7300	250	13	150	42	SAL
MW-11	11/23/94	35.50	10.67	24.83	---	---	---	---	---	---
MW-11	02/03/95	35.50	8.02	27.48	---	---	---	---	---	---

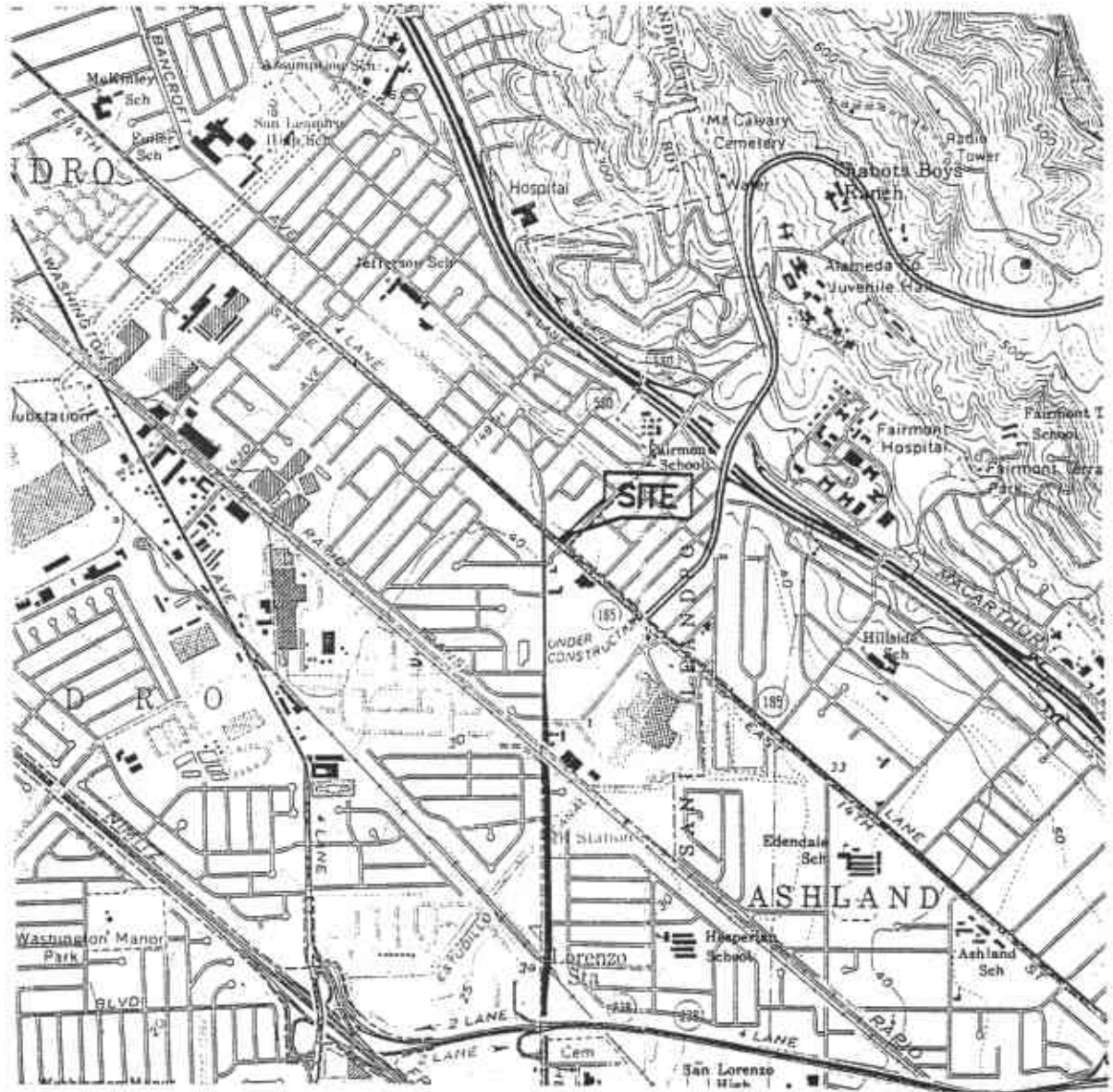
ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 ug/L Micrograms per liter
 --- Not analyzed/measured
 ND Not detected above reported detection limit
 SAL Sequoia Analytical Laboratory

NOTES:

- (a) Top of casing elevations surveyed to the nearest 0.01 foot above mean sea level, relative to benchmark (elevation = 36.88) at the northwest corner of East 14th Street and 150th Avenue.
 (b) Groundwater elevations in feet above mean sea level.

ENV10-190190-3-28.W02



SOURCE:
 USGS MAP, HAYWARD AND SAN LEANDRO QUADRANGLE,
 7.5 MINUTE SERIES, 1959.
 PHOTOREVISED 1980.



FIGURE 1

SITE VICINITY MAP

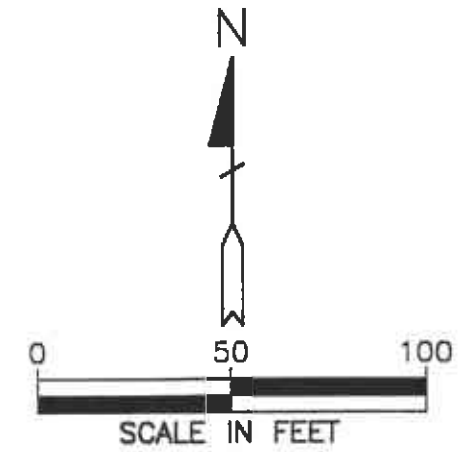
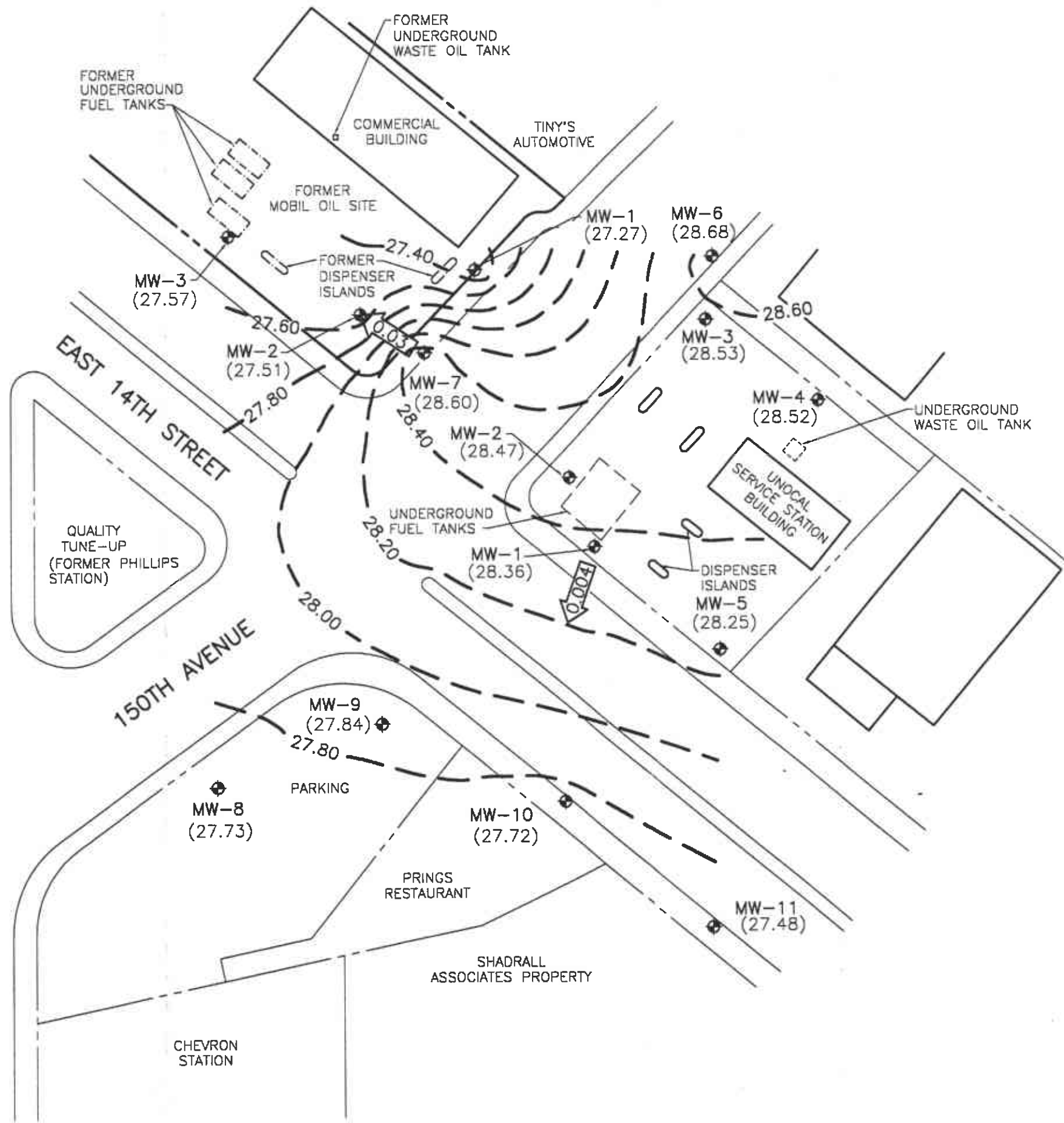
FORMER MOBIL OIL CORPORATION
 STATION 04-FGN
 14994 EAST 14TH STREET
 SAN LEANDRO, CALIFORNIA

PROJECT NO. 10-190



ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA

HESPERIAN BOULEVARD



LEGEND

- ◆ GROUNDWATER MONITORING WELL
- (27.72) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 27.80 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL - 0.20 FOOT)
- ← 0.04 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

NOTE:

Groundwater level measurements from Unocal wells collected on February 3, 1995.

FIGURE 2

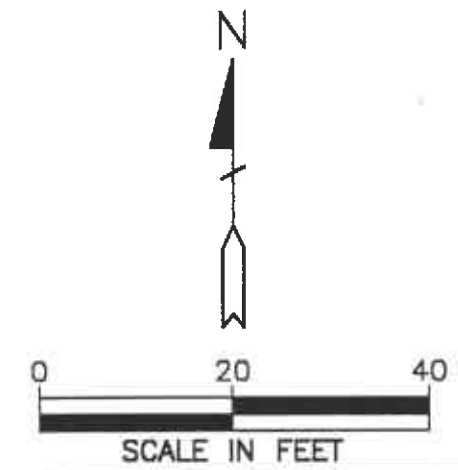
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

FEBRUARY 28, 1995

FORMER MOBIL OIL CORPORATION
STATION 04-FGN
14994 EAST 14TH STREET
SAN LEANDRO, CALIFORNIA

PROJECT NO. 10-190





LEGEND

- GROUNDWATER MONITORING WELL
- | | | |
|-------|---|---|
| TPH-G | B | T |
| E | X | |

 CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER
- | |
|-------|
| TPH-G |
|-------|

 TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- | |
|---|
| B |
|---|

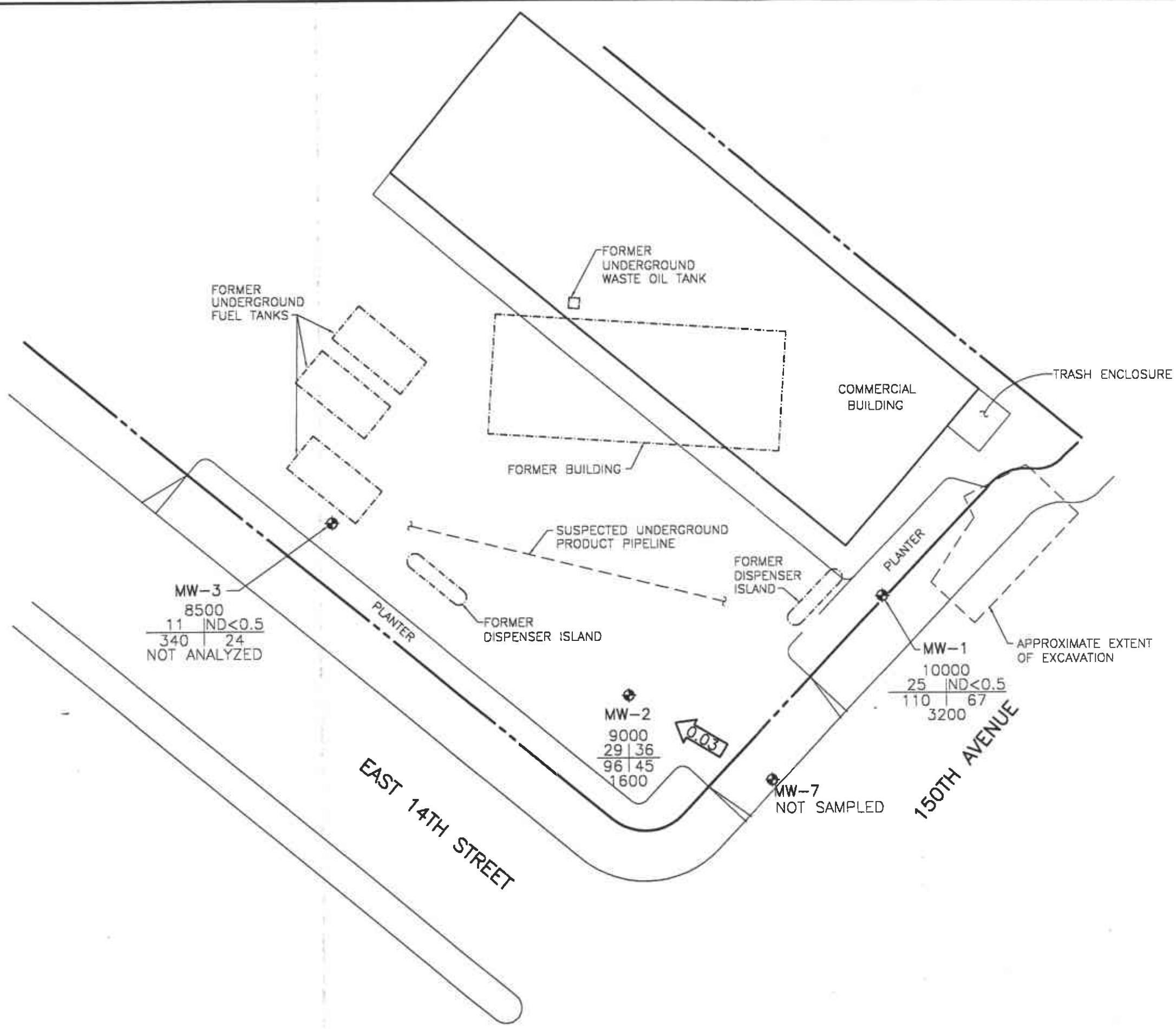
 BENZENE
- | |
|---|
| T |
|---|

 TOLUENE
- | |
|---|
| E |
|---|

 ETHYLBENZENE
- | |
|---|
| X |
|---|

 TOTAL XYLENES
- | |
|-------|
| TPH-D |
|-------|

 TOTAL PETROLEUM HYDROCARBONS AS DIESEL
- ND
 NOT DETECTED ABOVE REPORTED DETECTION LIMIT
- ← 0.03
 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT



MW-3
 8500
 11 | ND<0.5
 340 | 24
 NOT ANALYZED

MW-2
 9000
 29 | 36
 96 | 45
 1600

MW-1
 10000
 25 | ND<0.5
 110 | 67
 3200

MW-7
 NOT SAMPLED

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
FEBRUARY 28, 1995
 FORMER MOBIL OIL CORPORATION
 STATION 04-FGN
 14994 EAST 14TH STREET
 SAN LEANDRO, CALIFORNIA
 PROJECT NO. 10-190

APPENDIX A

**FIELD PROCEDURES FOR
GROUNDWATER MONITORING WELL SAMPLING
AND WATER SAMPLING FIELD SURVEY FORMS**

**FIELD PROCEDURES
FOR
GROUNDWATER MONITORING WELL SAMPLING**

Groundwater Level Measurement

Before commencing groundwater sampling, the groundwater level in each well was measured from the marked survey reference point at the top of the well casing. Groundwater in each well was monitored for free product or sheen. The depth to groundwater was measured to an accuracy of 0.01 foot from the top of the PVC well casing using an electronic sounder.

Groundwater Monitoring Well Sampling

To ensure that the groundwater samples were representative of the aquifer, the wells were purged of 3 well casing volumes before sample collection. This purging was accomplished using a clean bailer or pump.

The samples were collected using a disposable bailer and then transferred into laboratory-supplied containers. Care was taken to avoid turbulence when transferring the samples, and all volatile analysis vials were filled so that no air bubbles were trapped. The sampling technician wore nitrile gloves at all times during purging and well sampling. The samples were labeled with the well number, site identification, date and time of sample collection, and sampler's initials, and transported in an iced cooler maintained at 4 degrees Centigrade to a state-certified laboratory following preservation and chain of custody protocol.

ALISTO ENGINEERING GROUP GROUNDWATER MONITORING

Client: Mobil 3 2
 Alisto Project No: 10-190-02/00B
 Service Station No: 04-FGN

Date: 2/28/95
 Field Personnel: LB
 Site Address: San Leandro, CA

FIELD ACTIVITY:

- Groundwater Monitoring
- Groundwater Sampling
- Well Development

QUALITY CONTROL SAMPLES:

- MW-3 QC-1 Sample Duplicate (Well ID)
- QC-2 Trip Blank
- QC-3 Rinsate Blank

Well ID	Well Diam	Order Measured/Sampled	Total Depth	Depth to Water	Depth to Product	Product Thickness	Comments
MW-2	2"	1	24.84	9.10	Ø	Ø	
MW-1	↓	2	18.70	9.08	↓	↓	
MW-3	↓	3	22.57	9.35	↓	↓	

Notes:

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING GROUP

1777 OAKLAND BLVD, STE 200
WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Groundwater Sampling

Date: 2/28/95 Project No. 10-190-02/003
 Day: Tue Station No. Mobil # 04-F6N
 Weather: Rain Address San Leandro, Ca
 SAMPLER: LB

3 2

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp *F	pH	E.C.	D.O.	
MW-2	9.10	2"	OK	Ø	Ø	2	1300	67.6	6.91	864		<input type="checkbox"/> EPA 801
Total Depth - Water Level =						5		67.1	7.07	857		<input checked="" type="checkbox"/> TPH-G/BTEX <u>ALL</u>
24.84 - 9.10 = 15.74 X .16 = 2.52 X 3 =						8	1310	66.6	7.01	855		<input checked="" type="checkbox"/> TPH Dissol
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> Sys Port												<input checked="" type="checkbox"/> TOG 5620
Comments:												Time Sampled
												1315
MW-1	9.08	2"	OK	Ø	Ø	2	1318	66.7	7.01	839		<input type="checkbox"/> EPA 801 <u>ALL</u>
Total Depth - Water Level =						4		66.2	7.00	827		<input checked="" type="checkbox"/> TPH-G/BTEX <u>ALL</u>
18.70 - 9.08 = 9.62 X .16 = 1.54 X 3 =						5	1332	66.1	6.95	825		<input checked="" type="checkbox"/> TPH Dissol
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> Sys Port												<input checked="" type="checkbox"/> TOG 5620
Comments:												Time Sampled
												1340
MW-3	9.35	2"	OK	Ø	Ø	2	1400	67.4	7.19	1074		<input type="checkbox"/> EPA 801
Total Depth - Water Level =						4		68.3	7.15	1066		<input checked="" type="checkbox"/> TPH-G/BTEX <u>ALL</u>
22.57 - 9.35 = 13.22 X .16 = 2.12 X 5 =						6.5	1414	68.7	7.10	1060		<input checked="" type="checkbox"/> TPH Dissol
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> Sys Port												<input checked="" type="checkbox"/> TOG 5620
Comments: <u>QC-1 Dup taken from this well</u>												Time Sampled
												1430
												<input type="checkbox"/> EPA 801
Total Depth - Water Level =												<input type="checkbox"/> TPH-G/BTEX
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TPH Dissol
Comments:												<input type="checkbox"/> TOG 5620
												Time Sampled
												<input type="checkbox"/> EPA 801
Total Depth - Water Level =												<input type="checkbox"/> TPH-G/BTEX
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailor(s) <input type="checkbox"/> Sys Port												<input type="checkbox"/> TPH Dissol
Comments:												<input type="checkbox"/> TOG 5620
												Time Sampled

EPA82
VOC X

MPDS-UN. 5/5 # 3292

SAN LEANDRO - 15008 E. 14th Street

TABLE 1

SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet)*	Product Thickness (feet)	Sheen	Water Purged (gallons)	Product Purged (ounces)	Total Well Depth (feet)*
(Monitored and Sampled On Feb. 3, 1995)							
MW1	28.36	8.01	0	NO	7.5	0	18.96
MW2	28.47	7.87	0	NO	8.0	0	19.08
MW3	28.60	7.82	0	NO	10.0	0	22.12
MW4	28.52	8.52	0	NO	8.0	0	19.60
MW5	28.25	7.69	0	NO	9.5	0	22.12
MW6	28.68	6.99	0	NO	9.0	0	20.12
MW7	28.60	7.49	0	NO	9.5	0	21.19
MW8	27.73	9.16	0	NO	7.0	0	19.07
MW9	27.84	8.45	0	NO	7.5	0	19.07
MW10	27.72	8.32	0	NO	8.0	0	19.86
MW11	27.18	8.02	0	NO	7.5	0	18.98

APPENDIX B

**FIELD PROCEDURES FOR CHAIN OF CUSTODY DOCUMENTATION,
LABORATORY REPORTS, AND CHAIN OF CUSTODY RECORDS**

**FIELD PROCEDURES
FOR
CHAIN OF CUSTODY DOCUMENTATION**

The samples collected were handled in accordance with the California Department of Health Services guidelines. The samples were labeled in the field and immediately stored in coolers and preserved with blue ice for transport to a state-certified laboratory for analysis.

A chain of custody record accompanied the samples, and included the site and sample identification, date and time of collection, analysis requested, and the name and signature of the sampling technician. When transferring possession of the samples, the transferee signed and dated the chain of custody record.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well in reference to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.



Alisto Engineering Group 1777 Oakland Blvd., Ste. 200 Walnut Creek, CA 94596 Attention: Ken Simas	Client Project ID: Mobil 04-FGN, 10-190 Sample Matrix: Water Analysis Method: EPA 5030/8015/8020 First Sample #: 503-0173	Sampled: Feb 28, 1995 Received: Mar 2, 1995 Reported: Mar 16, 1995
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 503-0173 MW-1	Sample I.D. 503-0174 MW-2	Sample I.D. 503-0175 MW-3	Sample I.D. 503-0176 QC-1	Sample I.D. 503-0177 QC-2
Purgeable Hydrocarbons	50	10,000	9,000	8,500	9,500	N.D.
Benzene	0.50	25	29	11	33	N.D.
Toluene	0.50	N.D.	36	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	110	96	340	490	N.D.
Total Xylenes	0.50	67	45	24	56	N.D.
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline	--

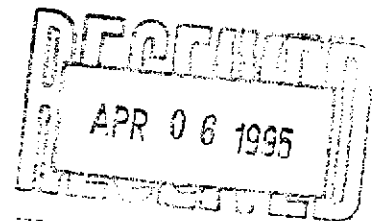
Quality Control Data

Report Limit Multiplication Factor:	20	20	20	50	1.0
Date Analyzed:	-	3/8/95	3/8/95	3/8/95	3/8/95
Instrument Identification:		HP-5	HP-5	HP-5	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)		71	70	70	106

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
 Kevin Van Slambrook
 Project Manager





Alisto Engineering Group 1777 Oakland Blvd., Ste. 200 Walnut Creek, CA 94596 Attention: Ken Simas	Client Project ID: Mobil 04-FGN, 10-190 Sample Matrix: Water Analysis Method: EPA 3510/3520/8015 First Sample #: 503-0173	Sampled: Feb 28, 1995 Received: Mar 2, 1995 Reported: Mar 16, 1995
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TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 503-0173 MW-1	Sample I.D. 503-0174 MW-2
Extractable Hydrocarbons	50	3,200	1,600
Chromatogram Pattern:		Diesel and Unidentified Hydrocarbons <C13	Diesel and Unidentified Hydrocarbons <C13

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	3/3/95	3/3/95
Date Analyzed:	3/6/95	3/6/95
Instrument Identification:	HP-3B	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Kevin Van Slambrook
Project Manager





Alisto Engineering Group
1777 Oakland Blvd., Ste. 200
Walnut Creek, CA 94596
Attention: Ken Simas

Client Project ID: Mobil 04-FGN, 10-190
Matrix Descript: Water
Analysis Method: EPA 413.2 (I.R.)
First Sample #: 503-0173

Sampled: Feb 28, 1995
Received: Mar 2, 1995
Extracted: Mar 15, 1995
Analyzed: Mar 15, 1995
Reported: Mar 16, 1995

TOTAL RECOVERABLE OIL & GREASE

Sample Number	Sample Description	Oil & Grease mg/L (ppm)	Detection Limit Multiplication Factor
503-0173	MW-1	8.4	1.0
503-0174	MW-2	6.9	1.0
503-0175	MW-3	5.5	1.0

Detection Limits:	1.0
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Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Kevin Van Slambrook
Project Manager





Alisto Engineering Group
1777 Oakland Blvd., Ste. 200
Walnut Creek, CA 94596
Attention: Ken Simas

Client Project ID: Mobil 04-FGN, 10-190
Sample Descript: Water, MW-1
Analysis Method: EPA 5030/8010
Lab Number: 503-0173

Sampled: Feb 28, 1995
Received: Mar 2, 1995
Analyzed: Mar 7, 1995
Reported: Mar 16, 1995

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	1.0	N.D.
Bromoform.....	1.0	N.D.
Bromomethane.....	2.0	N.D.
Carbon tetrachloride.....	1.0	N.D.
Chlorobenzene.....	1.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethylvinyl ether.....	2.0	N.D.
Chloroform.....	1.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	1.0	N.D.
1,3-Dichlorobenzene.....	1.0	N.D.
1,4-Dichlorobenzene.....	1.0	N.D.
1,2-Dichlorobenzene.....	1.0	N.D.
1,1-Dichloroethane.....	1.0	N.D.
1,2-Dichloroethane.....	1.0	1.3
1,1-Dichloroethene.....	1.0	N.D.
cis-1,2-Dichloroethene.....	1.0	N.D.
trans-1,2-Dichloroethene.....	1.0	N.D.
1,2-Dichloropropane.....	1.0	N.D.
cis-1,3-Dichloropropene.....	1.0	N.D.
trans-1,3-Dichloropropene.....	1.0	N.D.
Methylene chloride.....	10	N.D.
1,1,2,2-Tetrachloroethane.....	1.0	N.D.
Tetrachloroethene.....	1.0	N.D.
1,1,1-Trichloroethane.....	1.0	N.D.
1,1,2-Trichloroethane.....	1.0	N.D.
Trichloroethene.....	1.0	N.D.
Trichlorofluoromethane.....	1.0	N.D.
Vinyl chloride.....	2.0	N.D.
Surrogates	Control Limit %	% Recovery
Dibromodifluoromethane.....	50	150
4-Bromofluorobenzene.....	50	150

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Kevin Van Slambrook
Project Manager





Alisto Engineering Group
1777 Oakland Blvd., Ste. 200
Walnut Creek, CA 94596
Attention: Ken Simas

Client Project ID: Mobil 04-FGN, 10-190
Sample Descript: Water, MW-1
Analysis Method: EPA 8240
Lab Number: 503-0173

Sampled: Feb 28, 1995
Received: Mar 2, 1995
Analyzed: Mar 7, 1995
Reported: Mar 16, 1995

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	100	N.D.
Benzene.....	20	N.D.
Bromodichloromethane.....	20	N.D.
Bromoform.....	20	N.D.
Bromomethane.....	20	N.D.
2-Butanone.....	100	N.D.
Carbon disulfide.....	20	N.D.
Carbon tetrachloride.....	20	N.D.
Chlorobenzene.....	20	N.D.
Chloroethane.....	20	N.D.
2-Chloroethyl vinyl ether.....	100	N.D.
Chloroform.....	20	N.D.
Chloromethane.....	20	N.D.
Dibromochloromethane.....	20	N.D.
1,1-Dichloroethane.....	20	N.D.
1,2-Dichloroethane.....	20	N.D.
1,1-Dichloroethene.....	20	N.D.
cis-1,2-Dichloroethene.....	20	N.D.
trans-1,2-Dichloroethene.....	20	N.D.
1,2-Dichloropropane.....	20	N.D.
cis-1,3-Dichloropropene.....	20	N.D.
trans-1,3-Dichloropropene.....	20	N.D.
Ethylbenzene.....	20	200
2-Hexanone.....	100	N.D.
Methylene chloride.....	50	N.D.
4-Methyl-2-pentanone.....	100	N.D.
Styrene.....	20	N.D.
1,1,2,2-Tetrachloroethane.....	20	N.D.
Tetrachloroethene.....	20	N.D.
Toluene.....	20	N.D.
1,1,1-Trichloroethane.....	20	N.D.
1,1,2-Trichloroethane.....	20	N.D.
Trichloroethene.....	20	N.D.
Trichlorofluoromethane.....	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.





Alisto Engineering Group 1777 Oakland Blvd., Ste. 200 Walnut Creek, CA 94596 Attention: Ken Simas	Client Project ID: Mobil 04-FGN, 10-190 Sample Descript: Water, MW-1 Analysis Method: EPA 8240 Lab Number: 503-0173	Sampled: Feb 28, 1995 Received: Mar 2, 1995 Analyzed: Mar 7, 1995 Reported: Mar 16, 1995
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VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/kg
Vinyl acetate.....	20	N.D.
Vinyl chloride.....	20	N.D.
Total Xylenes	20	120

Surrogates	Control Limit %		% Recovery
1,2-Dichloroethane-d4.....	50	150.....	97
Toluene-d8.....	50	150.....	98
4-Bromofluorobenzene.....	50	150.....	100

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1210

Kevin Van Slambrook
 Kevin Van Slambrook
 Project Manager





Alisto Engineering Group
 1777 Oakland Blvd., Ste. 200
 Walnut Creek, CA 94596
 Attention: Ken Simas

Client Project ID: Mobil 04-FGN, 10-190
 Matrix: Liquid

QC Sample Group: 5030173-77

Reported: Apr 4, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Oil & Grease
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 M	EPA 413.2
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	J. Dinsay	S. Le

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Oil & Grease
Batch#:	5021677	5021677	5021677	5021677	BLK030395	BLK031595
Date Prepared:	3/8/95	3/8/95	3/8/95	3/8/95	3/3/95	3/15/95
Date Analyzed:	3/8/95	3/8/95	3/8/95	3/8/95	3/6/95	3/15/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3B	Miran-IFF
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L	5.0 mg/L
Matrix Spike % Recovery:	90	90	90	90	113	86
Matrix Spike Duplicate % Recovery:	90	90	95	95	107	86
Relative % Difference:	0.0	0.0	5.4	5.4	5.5	0.0

LCS Batch#:	3LCS030895	3LCS030895	3LCS030895	3LCS030895	BLK030395	LCS031595
Date Prepared:	3/8/95	3/8/95	3/8/95	3/8/95	3/3/95	3/15/95
Date Analyzed:	3/8/95	3/8/95	3/8/95	3/8/95	3/6/95	3/15/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3B	Miran-IFF
LCS % Recovery:	81	83	85	86	113	86

% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122	70-130
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Please Note:
 The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook

Kevin Van Slambrook
 Project Manager





Alisto Engineering Group
1777 Oakland Blvd., Ste. 200
Walnut Creek, CA 94596
Attention: Ken Simas

Client Project ID: Mobil 04-FGN, 10-190
Matrix: Liquid

QC Sample Group: 5030173-77

Reported: Apr 4, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	K. Nill	K. Nill	K. Nill

MS/MSD	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
Batch#:	5030178	5030178	5030178
Date Prepared:	3/7/95	3/7/95	3/7/95
Date Analyzed:	3/7/95	3/7/95	3/7/95
Instrument I.D.#:	HP5890/7	HP5890/7	HP5890/7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L
Matrix Spike % Recovery:	92	101	93
Matrix Spike Duplicate % Recovery:	92	102	94
Relative % Difference:	0.0	0.99	1.1

LCS Batch#:	LCS030795	LCS030795	LCS030795
Date Prepared:	3/7/95	3/7/95	3/7/95
Date Analyzed:	3/7/95	3/7/95	3/7/95
Instrument I.D.#:	HP5890/7	HP5890/7	HP5890/7
LCS % Recovery:	90	99	94

% Recovery Control Limits:	28-167	35-146	38-150
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Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Kevin Van Slambrook
Project Manager





Alisto Engineering Group
1777 Oakland Blvd., Ste. 200
Walnut Creek, CA 94596
Attention: Ken Simas

Client Project ID: Mobil 04-FGN, 10-190
Matrix: Liquid

QC Sample Group: 5030173-77

Reported: Apr 4, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Benzene	Toluene	Chloro-benzene
Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah

MS/MSD Batch#:	950304913	950304913	950304913	950304913	950304913
Date Prepared:	3/5/95	3/5/95	3/5/95	3/5/95	3/5/95
Date Analyzed:	3/5/95	3/5/95	3/5/95	3/5/95	3/5/95
Instrument I.D.#:	F-3	F-3	F-3	F-3	F-3
Conc. Spiked:	50 mg/L	50 mg/L	50 mg/L	50 mg/L	50 mg/L
Matrix Spike % Recovery:	90	98	94	100	96
Matrix Spike Duplicate % Recovery:	88	94	96	100	96
Relative % Difference:	2.2	4.2	2.1	0.0	0.0

LCS Batch#:	-	-	-	-	-
Date Prepared:	-	-	-	-	-
Date Analyzed:	-	-	-	-	-
Instrument I.D.#:	-	-	-	-	-
LCS % Recovery:	-	-	-	-	-

% Recovery Control Limits:	DL-234	71-157	37-151	47-150	37-160
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Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1210

Kevin Van Slambrook
Kevin Van Slambrook
Project Manager





SEQUOIA ANALYTICAL CHAIN OF CUSTODY

- 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600 FAX (415) 364-9233
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
- 1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600 FAX (510) 686-9689

Mobil Oil Consulting Firm: <u>Alisto Engineering</u>	Station No./Site Address: <u>04-FGN 10-190-3-2</u>
Address: <u>1777 Oakland Blvd # 200</u>	Project Contact: <u>Ken Simms</u>
City: <u>Walnut Creek</u> State: <u>Ca</u> Zip: <u>94596</u>	Mobil Oil Engineer: <u>Steve Pgo</u>
Tel: <u>(510) 295-1650</u> Fax: <u>295-1823</u>	Sampler(s) (signature): <u>[Signature]</u>

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	CODING (check one)																							
							BTEX - EPA 602/8020	BTEX - TPH	EPA M602/8015/8020 (GAS)	TPH EPA Modified 8015 Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil & Grease - EPA 413.2	TPH - EPA 418.1	EPA 601/8010	EPA 824/8240	EPA 825/8270	Title 22 Metals EPA 6010/7000 TTLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./DHS <input type="checkbox"/>	Lead Total <input type="checkbox"/>	EDB/DBCD - EPA 504	pH	Bioassay - Title 22 Haz. Waste	Bioassay - Effluent	Code 1 <input type="checkbox"/> Emergency Response	Code 2 <input type="checkbox"/> Site Assessment	Code 3 <input type="checkbox"/> Remediation (Plan Devlpmt.)	Code 4 <input type="checkbox"/> Active Remed. (Install./Start-up)	Code 5 <input type="checkbox"/> Active Remed. (O & M)	Code 6 <input type="checkbox"/> Passive Remed./Monitoring	Code 7 <input type="checkbox"/> Closure	Code 8 <input type="checkbox"/> Construction
MW-1	W	2/2/95		ALL CONTS	8					X	X	X							5030173	AH	X	X								
MW-2	L			ALL CONTS	4														5030174	AD										
MW-3	L			ALL CONTS	4														5030175	AC										
QC-1	W	2/2/95			2														5030176	AB										
QC-2	L				2														5030177											

Relinquished by: <u>[Signature]</u>	Date/Time: <u>3/1/95</u>	Relinquished by: <u>[Signature]</u>	Date/Time: <u>3-2-95 10:20</u>	Turnaround Time: (check one):	Normal <input checked="" type="checkbox"/>	Same day <input type="checkbox"/>
Relinquished by: <u>[Signature]</u>	Date/Time: <u>3-2-95 4:05</u>	Relinquished by: _____	Date/Time: _____	1 day <input type="checkbox"/>	2 day <input type="checkbox"/>	5 day <input type="checkbox"/>
Relinquished by: _____	Date/Time: _____	Relinquished in Lab by: <u>Melissa Creusere</u>	Date/Time: <u>3/2/95 16:05</u>	Sample Integrity:	Intact <input type="checkbox"/>	On Ice <input type="checkbox"/>
Remarks:						