



ALISTO ENGINEERING GROUP

October 3, 1995

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

10-190-02-005

Subject: Additional Site Investigation 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 additional site investigation report for former Mobil Oil Corporation Station 04-FGN, 14994 East 14th Street, San Leandro, California.

Please call if you have questions or need additional information.

Sincerely,

ALISTO ENGINEERING GROUP

Ken C. Simas
Project Geologist

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 Foutch, Mobil Oil Corporation

ENVIRONMENTAL
PROTECTION
95 OCT --5 PM 1:2

ENVIRONMENTAL
PROTECTION
95 OCT -5 PM 1:21

**ADDITIONAL SITE
INVESTIGATION REPORT**

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

Project No. 10-190

September 1995



ADDITIONAL SITE INVESTIGATION REPORT

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Project No. 10-190-02-005

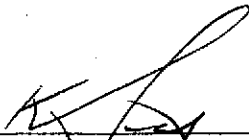
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September 12, 1995



**Ken C. Simas
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CONTENTS

1.0	INTRODUCTION	1
1.1	Purpose and Scope of Work	1
1.2	Site Location and Description	1
1.3	Project Background	2
1.4	Regional Geology	2
2.0	FIELD METHODS	3
2.1	Drilling and Sampling	3
2.2	Monitoring Well Installation and Construction	3
2.3	Monitoring Well Development and Sampling	3
2.4	Groundwater Level Monitoring and Well Surveying	4
3.0	SITE GEOLOGY AND HYDROGEOLOGY	4
4.0	ANALYTICAL METHODS	4
5.0	SUMMARY OF RESULTS	5
6.0	CONCLUSIONS	5

REFERENCES

TABLES

- 1 Summary of Results of Soil Sampling
- 2 Summary of Results of Groundwater Sampling
- 3 Summary of Results of Groundwater Sampling - Unocal Corporation Service Station



CONTENTS
(continued)

FIGURES

- 1 Site Vicinity Map
- 2 Site Plan
- 3 Adjacent Properties Map
- 4 Hydrogeologic Cross Sections A - A' and B - B'
- 5 Potentiometric Groundwater Elevation Contour Map
- 6 Concentrations of Petroleum Hydrocarbons in Groundwater

APPENDICES

- A Permits
- B Field Procedures for Drilling, Sampling, and Groundwater Monitoring Well Installation
- C Boring Logs and Well Construction Details
- D Field Procedures for Groundwater Monitoring Well Development and Sampling, and Elevation Survey Map
- E Well Development and Water Sampling Field Survey Forms
- F Field Procedures for Chain of Custody Documentation, Laboratory Reports, and Chain of Custody Records



1.0 INTRODUCTION

Mobil Oil Corporation retained Alisto Engineering Group to conduct an additional site investigation at former Mobil Oil Station 04-FGN, 14994 East 14th Street, San Leandro, California. A site vicinity map is shown in Figure 1.

1.1 Purpose and Scope of Work

This work was performed to assess the nature and extent of petroleum hydrocarbons in the subsurface soil and groundwater at the site and to determine a course of action to comply with applicable laws and regulations.

The tasks performed during the investigation included the following:

- Drilled and logged eight exploratory soil borings and collected soil samples.
- Installed four groundwater monitoring wells, MW-4A through MW-7A.
- Developed and surveyed the monitoring wells and collected groundwater samples.
- Analyzed the soil and groundwater samples for specific hydrocarbon constituents.
- Evaluated the data and analytical results.
- Prepared this report presenting the results and findings.

The above tasks and related field and sampling activities were performed in accordance with the requirements of the Alameda County Health Care Services Agency (ACHCSA) and the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB).

1.2 Site Location and Description

The former Mobil Oil service station, which is currently a shopping center, is on the northwest corner of East 14th Street and 150th Avenue, San Leandro, California. Figure 2 shows the layout of the site and the former locations of the underground waste oil tank, fuel tanks, and dispenser islands.

Properties neighboring the site are predominantly commercial developments. To the northeast is an automotive service shop and a restaurant to the northwest. To the southwest, across 150th Avenue, is a Unocal Corporation service station, where monitoring wells MW-1 through MW-11 had been installed as part of an ongoing environmental assessment. To the south, across the intersection of East 14th Street and 150th Avenue, is a restaurant and Chevron U.S.A. service station. Across East 14th Street to the southwest is Quality Tune-up, formerly a Phillips Petroleum service station. A map of adjacent properties is shown in Figure 3.



1.3 Project Background

A brief description of previous investigative work performed at the site is presented below. The results of soil and groundwater analysis from these previous activities are presented in Tables 1 and 2.

September 1987: Alameda County Environmental Health Department collected and analyzed soil samples from a Pacific Gas and Electric Company (PG&E) excavation in the sidewalk to the southeast of the site. Laboratory analysis detected 45000 milligrams per kilogram (mg/kg) total oil and grease (TOG) (Subsurface, 1987).

September 1987: Six soil borings were drilled to depths ranging from 9.5 to 13.5 feet near the PG&E excavation, as shown in Figure 2. A soil sample was collected from the excavation at 3 feet below grade. Up to 320 mg/kg total petroleum hydrocarbons as gasoline (TPH-G) and 8000 mg/kg TOG were detected in the samples. Tetrachloroethylene at 6.6 mg/kg, trichloroethylene at 15 mg/kg, and trans-1,2-dichloroethylene at 8 mg/kg were detected in the sample collected at 5 feet below grade in Boring SCB-6 (Subsurface, 1987).

March 1988: A soil boring was drilled to 24 feet below grade and converted into groundwater Monitoring Well MW-1A. Groundwater was encountered at 12 feet below grade. Up to 29000 micrograms per liter (ug/l) dissolved-phase TPH-G, ethylbenzene, and total xylenes were detected in the water samples collected from the well. An analytical search of 70000 compounds in the Wiley/NBS spectral data library detected up to 240 ug/l propylbenzene, ethylcyclobutane, 2-methylpentane, 2-methylbutane, 2,3-dimethylpentene, 2-methylhexane, 3-methylhexane, and 2,5,6-trimethyloctane. The area around the PG&E excavation was subsequently overexcavated, as shown in Figure 2. The depth of the overexcavation and laboratory results of soil sampling were not documented in the report (Subsurface, 1988).

January 1989: Samples were collected from Monitoring Well MW-1A for laboratory analysis. Dissolved-phase TPH-G, benzene, ethylbenzene, and total xylenes were detected in the samples. Purgeable halocarbons were not detected above the reported detection limits (Subsurface, 1989).

February 1994: Borings B-1 through B-4 were drilled to depths ranging from 11.5 to 25 feet. Analysis of soil samples collected from the borings detected up to 4100 mg/kg TPH-G and 650 mg/kg TPH as diesel (TPH-D). TOG was detected at concentrations of up to 160 mg/kg in the samples collected from B-1, B-3, and B-4. Borings B-2 and B-3 were converted into groundwater Monitoring Wells MW-2A and MW-3A. Groundwater samples collected from the monitoring wells detected up to 19000 ug/l TPH-G, 10000 TPH-D, and 70 ug/l benzene. TOG was not detected above the reported detection limit in any of the monitoring wells. (Alisto, 1994)



1.4 Regional Geology

The site is in the Coast Range Geomorphic Province, on the eastern side of San Francisco Bay, approximately 1 mile to the west of the Hayward Fault. The uppermost geologic member consists primarily of Quaternary alluvial deposits. The Quaternary alluvium, composed of unconsolidated to semi-consolidated bay mud, silt, sand, and gravel, may be up to 200 feet thick. The units generally overlie Franciscan bedrock in the upland coastal area and Tertiary sediments of the bay basin.

The site is approximately 40 feet above mean sea level, as shown in Figure 1. The topography of the area slopes gently to the southwest, toward San Francisco Bay.

2.0 FIELD METHODS

Before drilling, a site inspection and geophysical survey were performed. The inspection and survey along with a review of site drawings revealed that a sewer clean-out had been misidentified as Monitoring Well MW-A.

The procedures and methods used during field activities are described in the following sections:

2.1 Drilling and Sampling

Before drilling, a well installation permit was obtained from the Alameda County Flood Control and Water Conservation District, and encroachment permits from the City of San Leandro and the California Department of Transportation (Caltrans). Copies of the permits are presented in Appendix A.

On June 1 and 2, 1995, Borings B-5 through B-9 and MW-4A through MW-6A were drilled to depths ranging from 15.5 to 26.5 feet. Boring MW-7A was drilled on July 28, 1995, due to revisions in the Caltrans encroachment permit. Drilling was performed by Mitchell Drilling Environmental of Rancho Cordova, California, using a CME 75 drilling rig equipped with 8-inch-diameter, continuous-flight, hollow-stem augers. During drilling, samples were collected beginning at 5 feet below grade and terminating at the total depth of each boring. Drilling and soil sampling procedures are presented in Appendix B.

Boring logs were prepared using the Unified Soils Classification System and include a description of soil characteristics such as color, moisture, and consistency. The boring logs for this investigation are presented in Appendix C.

2.2 Monitoring Well Installation and Construction

Borings MW-4A through MW-7A were converted into groundwater monitoring wells in accordance with the field procedures presented in Appendix B. The wells were constructed using either 2- or 4-inch-diameter, flush-threaded, Schedule 40 PVC blank casing and 0.010-inch slotted casing.



The slotted casing was installed from approximately 9 to 24 feet below grade in all the wells. Well construction details are included on the boring logs presented in Appendix C.

2.3 Monitoring Well Development and Sampling

Well development and sampling were performed in accordance with the guidelines of the ACHCSA and RWQCB. The field procedures for monitoring well development and sampling are presented in Appendix D. The wells were developed on August 2, 1995, by removing at least 10 casing volumes, and until groundwater was relatively free of sediment, by alternately using a surge block and bailer.

*developed
and
sampled
same
day!*

Monitoring Wells MW-1A through MW-7A were sampled on August 2, 1995. To obtain groundwater samples that were representative of the aquifer, the wells were purged of at least 3 casing volumes before sample collection and while monitoring pH, specific conductivity, and temperature. The samples were then transported in an iced cooler to a state-certified laboratory following chain of custody procedures. Field observations during well development and sampling are presented in the sampling forms in Appendix E.

2.4 Groundwater Level Monitoring and Well Surveying

The wells were surveyed to a marked point on top of each well casing in reference to an established benchmark with an elevation of 12.68 feet above mean sea level. On August 2, 1995, the depth to groundwater in the wells was measured from the top of the well casing to the nearest 0.01 foot, using an electronic water level indicator. The survey data and groundwater elevation measurements are presented in Table 2. The well elevation survey map is included in Appendix D.

Groundwater monitoring at the site was performed concurrently at the adjacent Unocal service station. The monitoring results for this site are presented in Table 3.

3.0 SITE GEOLOGY AND HYDROGEOLOGY

Soils encountered during this investigation generally consisted of gravelly and clayey silt to silty clay and clay from immediately below ground surface to approximately 25 feet below grade. Several sandy clay/clayey sand to silty sand layers were encountered at various depths and appear to be contiguous across the site. Gravelly clays were encountered in MW-5A and MW-6A at the total depths of the borings. Hydrogeologic cross sections prepared using boring logs generated during this investigation are shown in Figure 4. The lines of hydrogeologic cross sections are shown in Figure 2.

Soil conditions were encountered at approximately 9 to 14 feet below grade during drilling. The depth to groundwater measured in the monitoring wells during sampling was approximately 9 to 10.5 feet below grade. The groundwater elevations in the wells, measured on August 2, 1995, were used to prepare the groundwater potentiometric surface map shown in Figure 5.



The groundwater gradients as interpreted from these measurements are 0.003 foot per foot in a general southeasterly direction across the site and 0.007 foot per foot in a general southerly direction at the neighboring properties, southeast of 150th Avenue and East 14th Street.

4.0 ANALYTICAL METHODS

Sequoia Analytical, a state-certified laboratory, analyzed the soil and groundwater samples using standard test methods of the U.S. Environmental Protection Agency (EPA) and the California Department of Health Services. The samples were analyzed for the following:

- TPH-G using EPA Methods 5030/8015 (modified)
- TPH-D using EPA Methods 5030/8015 (modified)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8020

The laboratory results are presented in Tables 1 and 2 and the laboratory reports and chain of custody records are included in Appendix F. The results of groundwater analysis are shown in Figure 6.

5.0 SUMMARY OF RESULTS

The following are the results of field activities and laboratory analysis of soil and groundwater samples collected during this additional site investigation:

- Saturated soil conditions encountered during drilling ranged from approximately 9 to 14 feet below grade, with the depth to groundwater measured in the monitoring wells at approximately 9 to 10.5 feet below grade.
- Soils encountered while drilling consisted primarily of gravelly and clayey silts to silty clays and clays interbedded with several sandy clay/clayey sand to silty sand units.
- Petroleum hydrocarbons were detected in soil samples collected from Borings B-5 through B-7, B-9, MW-4A, and MW-5A at concentrations of up to 130 mg/kg TPH-G and 8.1 mg/kg TPH-D. Benzene, toluene, ethylbenzene, and total xylenes were also detected at concentrations of up to 0.28 mg/kg, 0.31 mg/kg, 1.4 mg/kg, and 5.3 mg/kg in the samples from B-5 through B-7.
- Groundwater elevation data measured on August 2, 1995 indicate gradients of approximately 0.003 foot per foot in a general southeasterly direction across the site and 0.007 foot per foot in a general southerly direction at the neighboring properties, southeast of 150th Avenue and East 14th Street.
- Free product or sheen was not observed in any of the monitoring wells.



- Analysis of the groundwater samples detected up to 10000 ug/l TPH-G and 36 ug/l benzene in Monitoring Wells MW-1A through MW-3A and MW-5A. Petroleum hydrocarbons were not detected above the reported detection limit in MW-4A, MW-6A, and MW-7A.
- TPH-D was detected at concentrations up to 3800 ug/l in the samples from MW-2A, MW-3A, MW-5A, and MW-6A. TPH-D was not detected above the reported detection limits in the other wells.
- Toluene and xylenes were detected at concentrations of 0.76 and 0.67 ug/l in the laboratory-prepared travel blank, QC-2.

6.0 CONCLUSIONS

Based on the above findings, the following are the conclusions of this additional site investigation:

- The residual absorbed-phase petroleum hydrocarbons in the unsaturated zone appear to be minimal and limited in extent (concentrations of TPH-G and TPH-D are below 5 mg/kg in samples collected at 5 feet below grade). Petroleum hydrocarbons detected in soil samples collected at the capillary fringe are indicative of dissolved-phase hydrocarbon impact in the groundwater.
- Residual absorbed-phase hydrocarbons appear to be limited to the immediate vicinity of Borings B-1 and B-4 extending to the capillary fringe. No further soil investigation is warranted at this time.
- The lateral extent of dissolved-phase petroleum hydrocarbons in the groundwater appears to have been defined. The TPH-D detected in MW-6A and MW-5A will be evaluated during subsequent groundwater monitoring and sampling events to assess offsite impact to the groundwater. Further groundwater investigation is not deemed necessary at this time.



REFERENCES

Subsurface, 1987. Preliminary Geotechnical Services Re Soil Contamination, 150th Avenue and East 14th Street, San Leandro, California. Subsurface Consultants, Inc. October 26.

Subsurface, 1988. Groundwater Monitoring Well Installation and Sample Analysis. 150th Avenue and East 14th Street Project, San Leandro, California. Subsurface Consultants, Inc. April 27.

Subsurface, 1989. Groundwater Monitoring Well Sampling and Analysis, Sampling No. 2. 150th Avenue and East 14th Street Project, San Leandro, California. Subsurface Consultants, Inc. February 13.

Alisto, 1994. Preliminary Site Investigation Report. Former Mobil Oil Corporation Station 04-FGN, 14994 East 14th Street, San Leandro, California. Alisto Engineering Group. April 12.



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

ALISTO PROJECT NO. 10-190

BORING ID	SAMPLE DEPTH (Feet)	DATE OF SAMPLING	TPH-G (mg/kg)	TPH-D (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	PCE (mg/kg)	TCE (mg/kg)	TRANS-1, 2-DCE (mg/kg)	LAB
SCB-1	(a) 4.0	09/29/87	72	200	---	---	---	---	200	---	---	---	BCL
SCB-1	(a) 8.6	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-2	(a) 2.6	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-2	(a) 7.1	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-3	(a) 5.0	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-3	(a) 8.5	09/29/87	320	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-4	(a) 4.5	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-4	(a) 10.5	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-5	(a) 4.0	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-5	(a) 8.0	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
SCB-6	(a) 5.0	09/29/87	ND<10	ND<50	---	6.6	15.0	8.0	ND<50	6.6	15.0	8.0	BCL
SCB-6	(a) 9.1	09/29/87	ND<10	ND<50	---	---	---	---	ND<50	---	---	---	BCL
PG&E Excavation	3.0	09/29/87	---	8000	---	---	---	---	8000	---	---	---	BCL
B-1	6.5	02/10/94	1500	160	160	ND<0.005	2.9	18	85	---	---	---	SEQ
B-1	11.5	02/10/94	580	120	ND<30	1.2	1.1	5.5	18	---	---	---	SEQ
B-2	7.5	02/10/94	1.4	1.6	ND<30	ND<0.005	0.0065	ND<0.005	ND<0.005	---	---	---	SEQ
B-2	11.5	02/10/94	49	12	ND<30	0.094	ND<0.005	0.18	0.33	---	---	---	SEQ
B-3	6.5	02/10/94	10	2.4	100	ND<0.005	0.028	0.027	0.049	---	---	---	SEQ
B-3	11.5	02/10/94	190	31	ND<30	0.70	0.11	2.5	0.52	---	---	---	SEQ
B-4	6.5	02/10/94	4100	650	130	ND<0.005	15	57	390	---	---	---	SEQ
B-4	11.5	02/10/94	460	62	ND<30	ND<0.005	1.0	4.7	23	---	---	---	SEQ

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

ALISTO PROJECT NO. 10-190

BORING ID	SAMPLE DEPTH (Feet)	DATE OF SAMPLING	TPH-G (mg/kg)	TPH-D (mg/kg)	TOG (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	PCE (mg/kg)	TCE (mg/kg)	TRANS-1, 2-DCE (mg/kg)	LAB
B-5	6.5	06/01/95	2.5	ND<1.0	---	ND<0.0050	ND<0.0050	0.0076	0.17	--	---	---	SEQ
B-5	11.5	06/01/95	8.6	2.1	---	0.025	0.025	0.020	0.11	---	---	---	SEQ
B-6	6.5	06/01/95	3.3	4.3	---	ND<0.0050	ND<0.0050	0.068	0.16	---	---	---	SEQ
B-6	11.5	06/01/95	44	2.7	---	0.053	0.078	1.4	5.3	---	---	---	SEQ
B-7	6.5	06/01/95	ND<1.0	ND<1.0	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
B-7	11.5	06/01/95	130	8.1	---	0.28	0.31	0.92	1.2	---	---	---	SEQ
B-8	6.5	06/01/95	ND<1.0	ND<1.0	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
B-8	11.5	06/01/95	ND<1.0	ND<1.0	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
B-9	6.5	06/01/95	ND<1.0	1.4	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
B-9	11.5	06/01/95	2.5	1.7	---	ND<0.0050	0.0053	0.0059	0.0052	---	---	---	SEQ
MW-4A	6.5	06/01/95	ND<1.0	2.2	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
MW-4A	11.5	06/01/95	ND<1.0	ND<1.0	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
MW-5A	6.5	06/01/95	ND<1.0	1.6	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
MW-5A	11.5	06/01/95	ND<1.0	ND<1.0	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
MW-6A	6.5	06/02/95	ND<1.0	ND<1.0	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
MW-6A	11.5	06/02/95	ND<1.0	ND<1.0	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
MW-7A	6.5	07/21/95	ND<1.0	---	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ
MW-7A	11.5	07/21/95	ND<1.0	---	---	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	---	---	---	SEQ

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 TPH-D Total petroleum hydrocarbons as diesel
 TOG Total oil and grease
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 PCE Tetrachloroethylene
 TCE Trichloroethylene
 Trans-1,2-DCE Trans-1,2-Dichloroethylene
 mg/kg Milligrams per kilogram
 ND Not detected above reported detection limit
 --- Not analyzed/applicable
 BCL Brown and Caldwell Laboratories
 SEQ Sequoia Analytical

NOTES:

(a) Boring drilled by Subsurface Consultants, Inc.

TABLE 2 - 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)	LAB
MW-1A (c)	03/31/88	36.36	—	—	29000	ND<10000	ND<5.0	ND<5.0	550	640	ND<20000	CTL
MW-1A	01/31/89	36.36	—	—	11200	—	260	ND<20	500	500	—	CTL
MW-1A	02/24/94	36.35	9.42	26.93	11000	2500	70	ND<0.5	260	180	ND<5000	SAL
MW-1A	08/23/94	36.35	12.00	24.35	13000	7100	61	50	280	230	ND<5000	SAL
MW-1A	11/23/94	36.35	11.18	25.17	12000	2500	49	ND<0.5	300	190	10000	SAL
MW-1A	02/28/95	36.35	9.08	27.27	10000	3200	25	ND<0.50	110	67	8400	SAL
MW-1A	05/10/95	36.35	8.33	28.02	10000	3600	31	ND<0.50	140	81	7200	SAL
MW-1A	08/02/95	36.63 (d)	9.49	27.14	10000	—	24	18	130	80	—	SAL
MW-2A	02/24/94	36.61	9.52	27.09	6400	4500	31	ND<0.5	58	42	ND<5000	SAL
MW-2A	08/23/94	36.61	12.05	24.56	7500	7100	42	21	71	53	ND<5000	SAL
MW-2A	11/23/94	36.61	11.25	25.36	7000	1800	33	11	39	ND<0.5	7300	SAL
MW-2A	02/28/95	36.61	9.10	27.51	9000	1800	29	36	96	45	6900	SAL
MW-2A	05/10/95	36.61	8.42	28.19	5100	1800	20	27	32	35	3400	SAL
MW-2A	08/02/95	36.62 (d)	8.54	27.08	4300	1800	36	ND<0.50	11	16	—	SAL
MW-3A	02/24/94	36.92	9.85	27.07	19000	10000	52	30	690	290	ND<5000	SAL
MW-3A	08/23/94	36.92	12.33	24.59	14000	11000	44	24	1000	100	ND<5000	SAL
MW-3A	11/23/94	36.92	11.56	25.36	13000	2600	30	18	690	52	8500	SAL
MW-3A	02/28/95	36.92	9.35	27.57	8500	—	11	ND<0.50	340	24	5500	SAL
MW-3A	05/10/95	36.92	8.55	28.37	7800	3800	ND<0.50	ND<0.50	400	45	3900	SAL
MW-3A	08/02/95	36.93 (d)	9.75	27.18	9200	3800	17	13	340	34	—	SAL
MW-4A	08/02/95	37.18	9.63	27.55	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	—	SAL
MW-5A	08/02/95	36.91	8.74	27.17	1300	220	16	0.68	1.3	4.3	—	SAL
MW-6A	08/02/95	37.10	9.88	27.42	ND<50	3800	ND<0.50	ND<0.50	ND<0.50	ND<0.50	—	SAL
MW-7A	08/02/95	37.39	10.40	26.99	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	—	SAL
MW-1A dup (e)	02/24/94	36.36	—	—	11000	—	88	ND<0.5	230	190	—	SAL
MW-1A dup (e)	08/23/94	—	—	—	13000	—	58	38	310	230	—	SAL
MW-1A dup (e)	11/23/94	—	—	—	13000	—	29	16	710	58	—	SAL
MW-1A dup (e)	02/28/95	—	—	—	9500	—	33	ND<0.50	490	56	—	SAL
MW-1A dup (e)	05/10/95	—	—	—	10000	—	32	ND<0.50	130	75	—	SAL
MW-1A dup (e)	08/02/95	—	—	—	11000	—	21	20	120	61	—	SAL
QC-2 (f)	02/24/94	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	SAL
QC-2 (f)	08/23/94	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	SAL
QC-2 (f)	11/23/94	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	SAL
QC-2 (f)	02/28/95	—	—	—	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<0.50	—	SAL
QC-2 (f)	05/10/95	—	—	—	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<0.50	—	SAL
QC-2 (f)	08/02/95	—	—	—	ND<50	—	ND<0.50	0.76	ND<0.50	0.87	—	SAL

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 TPH-D Total petroleum hydrocarbons as diesel
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylene
 TOG Total oil and grease
 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-7A, elevation at 36.09 feet, on t 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 ug/l, ethylcyclobutene at 88 ug/l, 2-methylpentane at 94 ug/l, 2-methylbutane at 88 ug/l, 2,3-dimethylpentane at 73 ug/l, 2-methylhexane at 58 ug/l, 3-methylhexane at 57 ug/l, and 2,5,8-trimethyloctane at 57 ug/l.
- (d) Re-surveyed by PLS Surveys, Inc. on August 28, 1995.
- (e) Blind duplicate; QC-1.
- (f) Travel blank.

TABLE 3 - 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-1	05/10/95	36.37	8.51	27.86	---	---	---	---	---	---
MW-1	08/02/95	36.37	10.00	26.37	---	---	---	---	---	---
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-2	02/03/95	36.34	8.38	27.96	---	---	---	---	---	---
MW-2	08/02/95	36.34	9.36	27.01	---	---	---	---	---	---
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-3	05/10/95	36.42	8.38	28.04	---	---	---	---	---	---
MW-3	08/02/95	36.42	9.49	26.93	---	---	---	---	---	---
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	---	---	---	---	---	---
MW-4	05/10/95	37.04	9.97	27.07	---	---	---	---	---	---
MW-4	08/02/95	37.04	10.18	26.86	---	---	---	---	---	---
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-5	05/10/95	35.94	8.20	27.74	---	---	---	---	---	---
MW-5	08/02/95	35.94	9.23	26.71	---	---	---	---	---	---

TABLE 3 - 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-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-6	05/10/95	35.67	7.53	28.14	---	---	---	---	---	---
MW-6	08/02/95	35.67	8.68	26.99	---	---	---	---	---	---
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-7	05/10/95	36.09	7.88	28.21	---	---	---	---	---	---
MW-7	08/02/95	36.09	9.02	27.07	---	---	---	---	---	---
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	---	---	---	---	---	---
MW-8	05/10/95	36.89	9.35	27.54	---	---	---	---	---	---
MW-8	08/02/95	36.89	10.40	26.49	---	---	---	---	---	---
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-9	05/10/95	36.29	---	---	---	---	---	---	---	---
MW-9	08/02/95	36.29	9.75	26.54	---	---	---	---	---	---

TABLE 3 - 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-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-10	05/10/95	36.04	---	---	---	---	---	---	---	---
MW-10	08/02/95	36.04	9.55	26.49	---	---	---	---	---	---
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	---	---	---	---	---	---
MW-11	05/10/95	35.50	---	---	---	---	---	---	---	---
MW-11	08/02/95	35.50	9.31	26.19	---	---	---	---	---	---

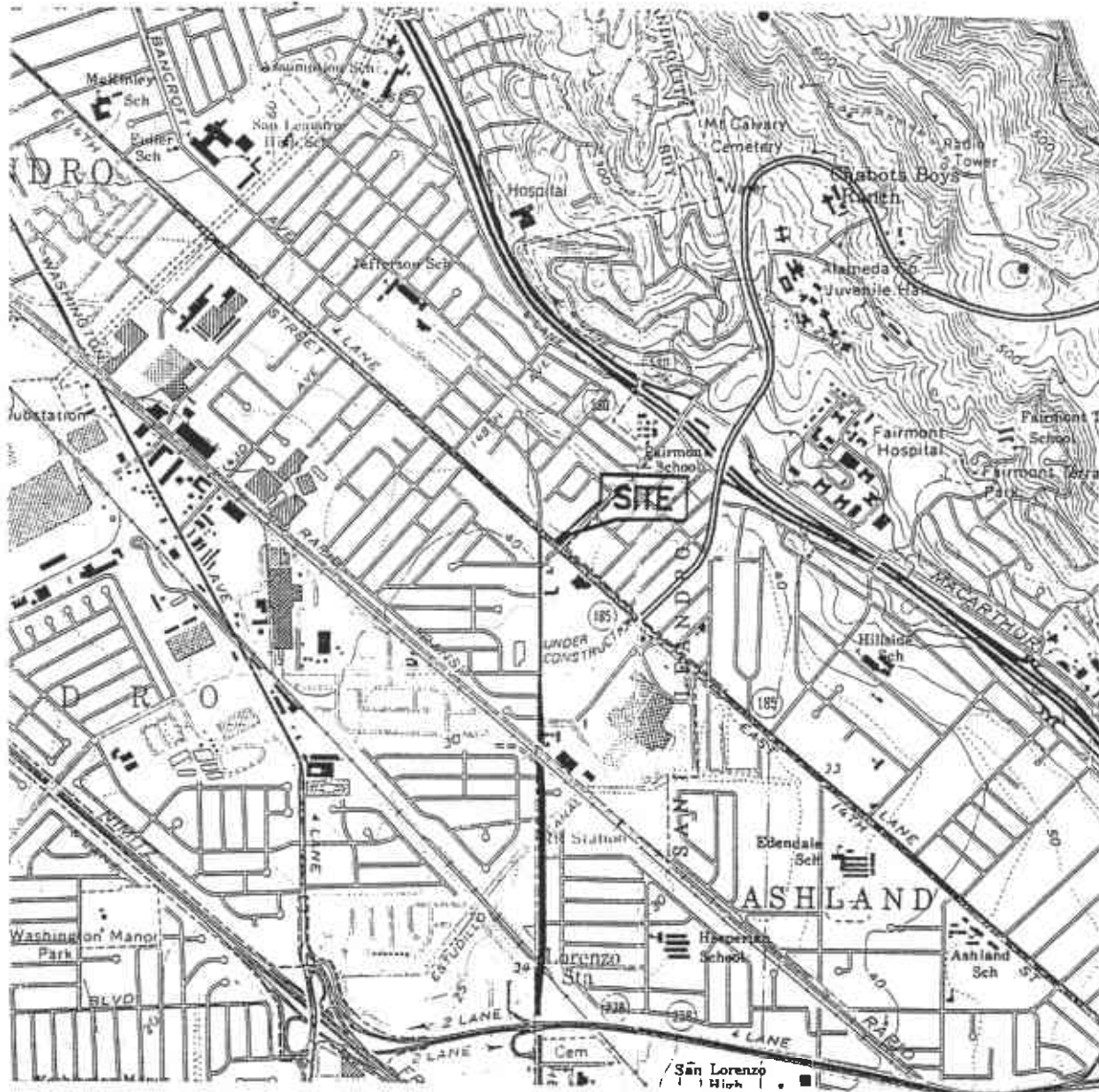
ABBREVIATIONS:

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.

EMX10-190190-3-3B.WQ2



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

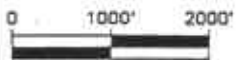


FIGURE 1

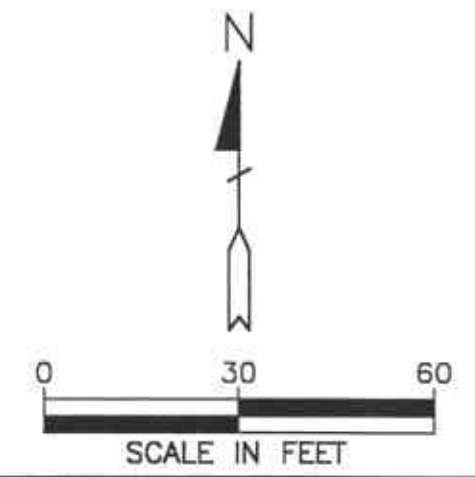
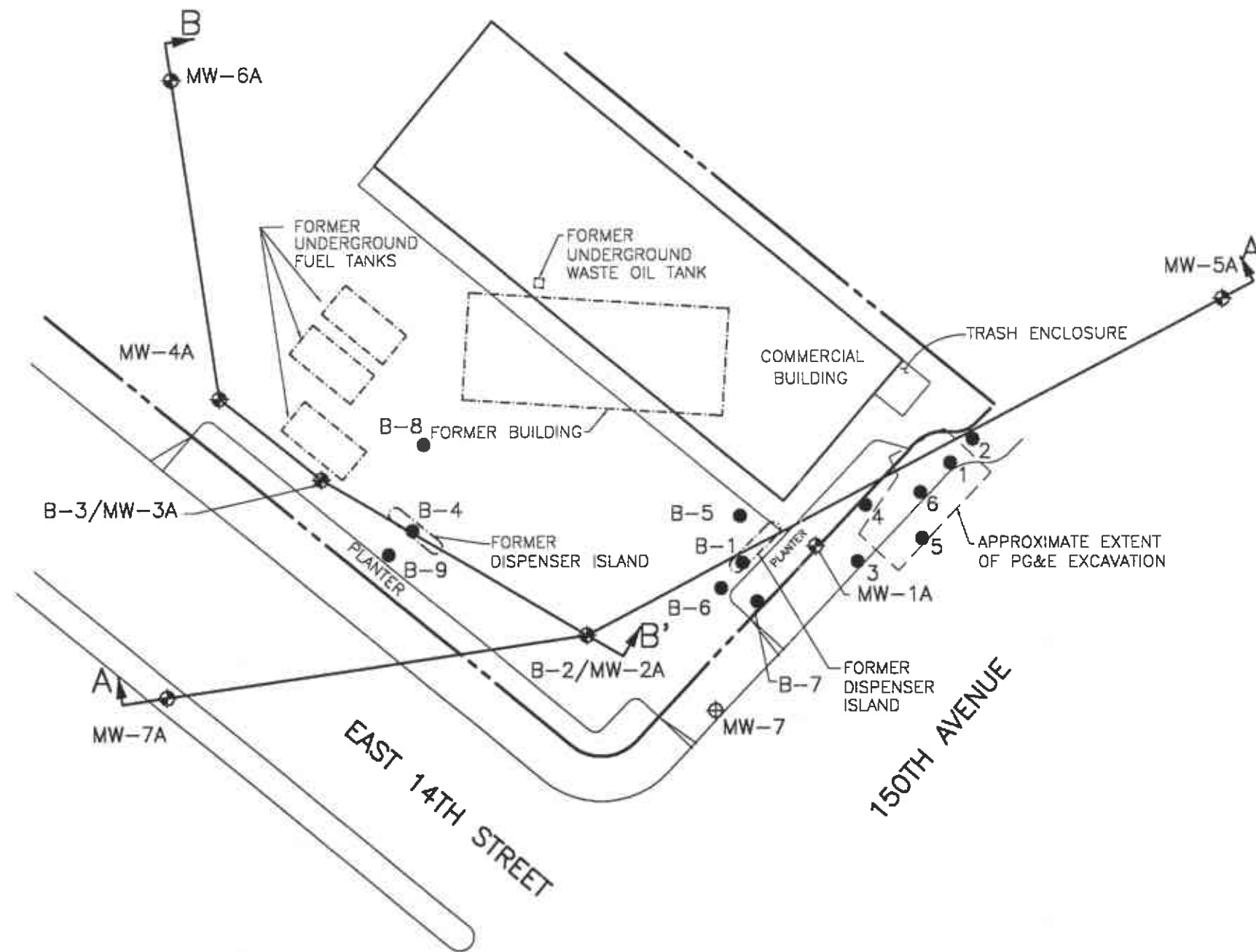
SITE VICINITY MAP

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

PROJECT NO. 10-190



ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA



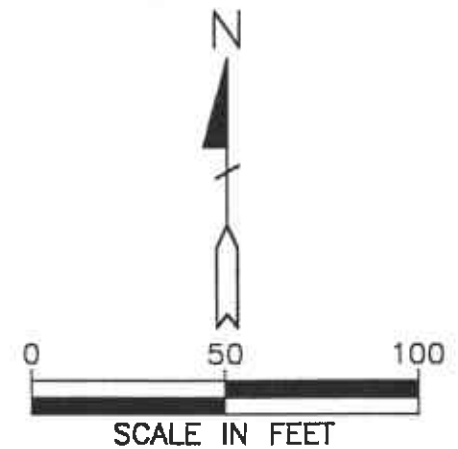
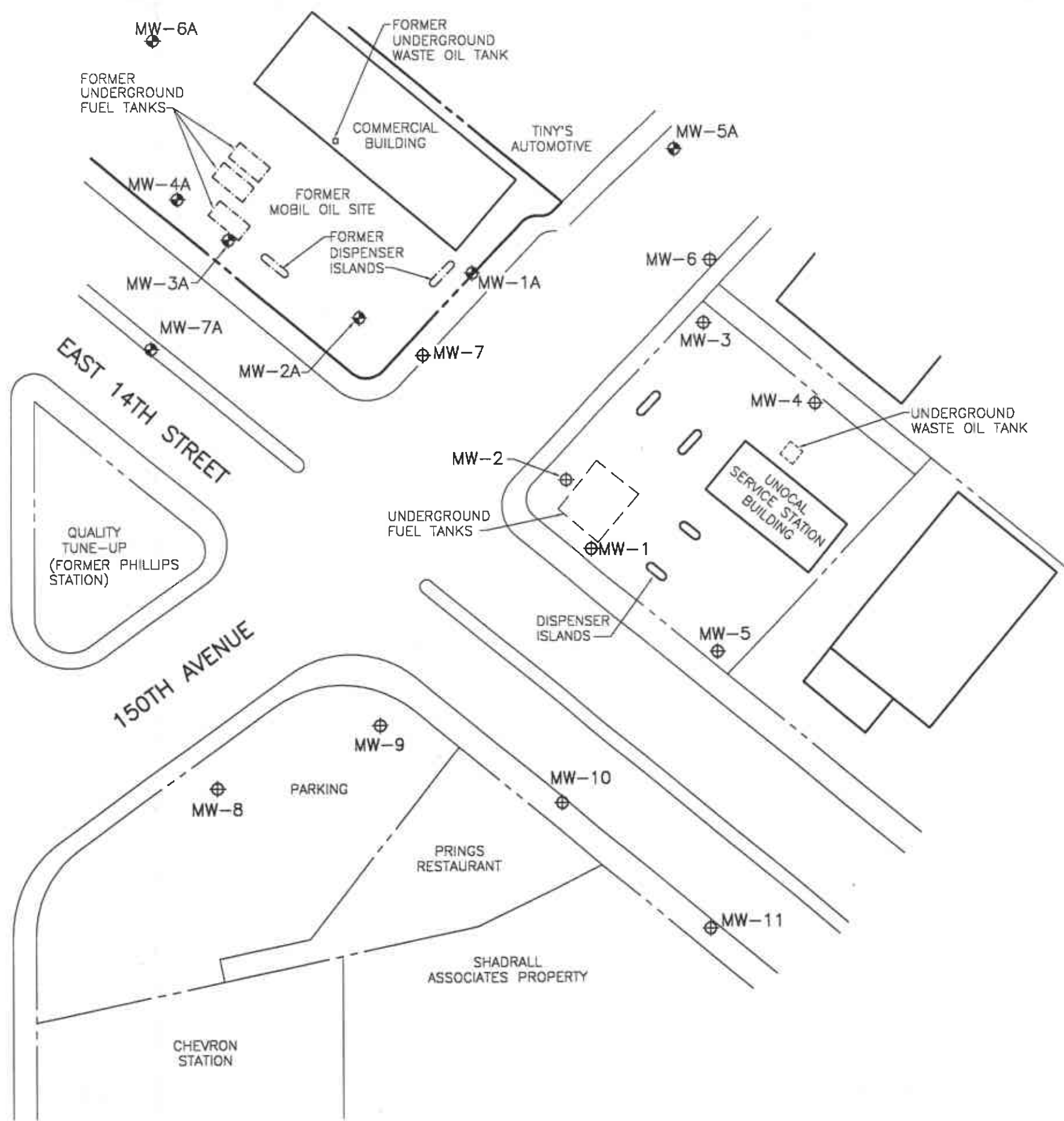
LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊕ UNOCAL GROUNDWATER MONITORING WELL
- SOIL BORING LOCATION
- A-A' LINE OF HYDROGEOLOGIC CROSS SECTION

FIGURE 2
SITE PLAN
 FORMER MOBIL OIL CORPORATION
 STATION 04-FGN
 14994 EAST 14TH STREET
 SAN LEANDRO, CALIFORNIA
 PROJECT NO. 10-190

10100000-0000 8-12-85 MAP 1 of 20

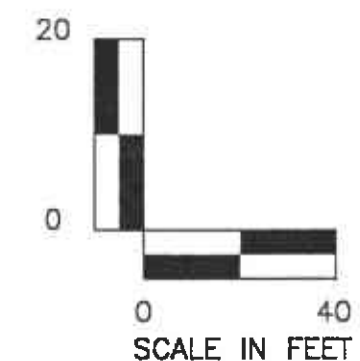
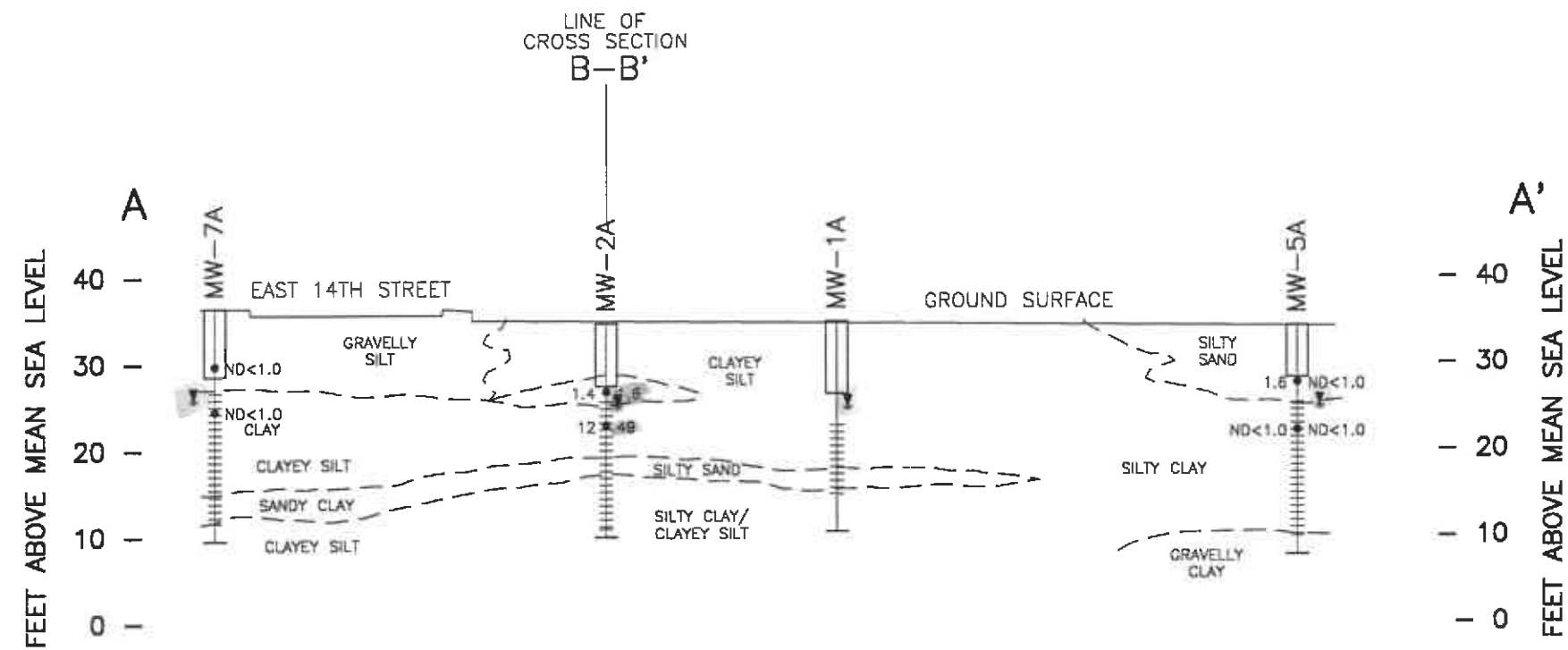
HESPERIAN BOULEVARD



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊕ UNOCAL GROUNDWATER MONITORING WELL

FIGURE 3
ADJACENT PROPERTIES MAP
 FORMER MOBIL OIL CORPORATION
 STATION 04-FGN
 14994 EAST 14TH STREET
 SAN LEANDRO, CALIFORNIA
 PROJECT NO. 10-190



- LEGEND**
- GROUNDWATER MONITORING WELL SHOWING SEAL AND SCREENED INTERVAL
 - GEOLOGIC CONTACT (APPROXIMATE)
 - SOIL SAMPLE AND TOTAL PETROLEUM HYDROCARBONS AS GASOLINE CONCENTRATION IN MILLIGRAMS PER KILOGRAM
 - SOIL SAMPLE AND TOTAL PETROLEUM HYDROCARBONS AS DIESEL CONCENTRATION IN MILLIGRAMS PER KILOGRAM
 - ND NOT DETECTED ABOVE REPORTED DETECTION LIMIT
 - GROUNDWATER ELEVATION AS MEASURED ON AUGUST 2, 1995

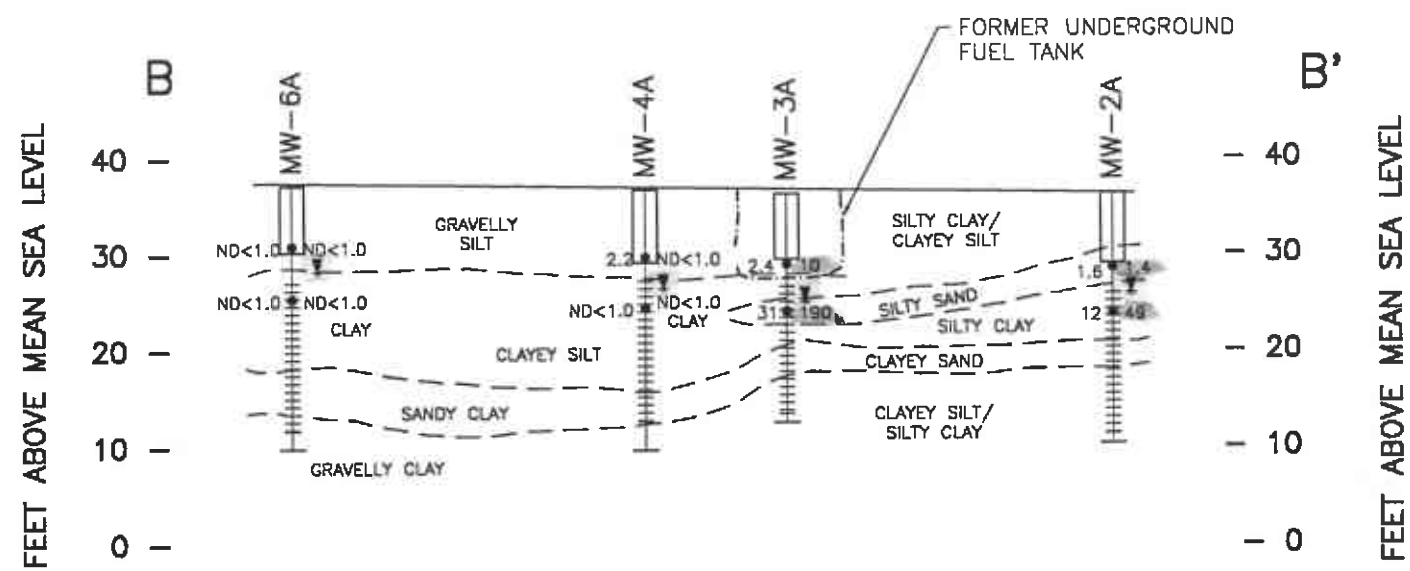
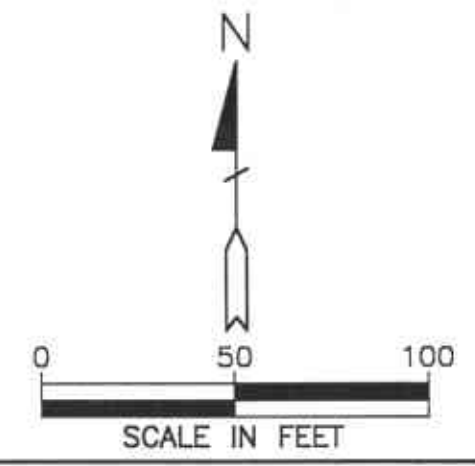
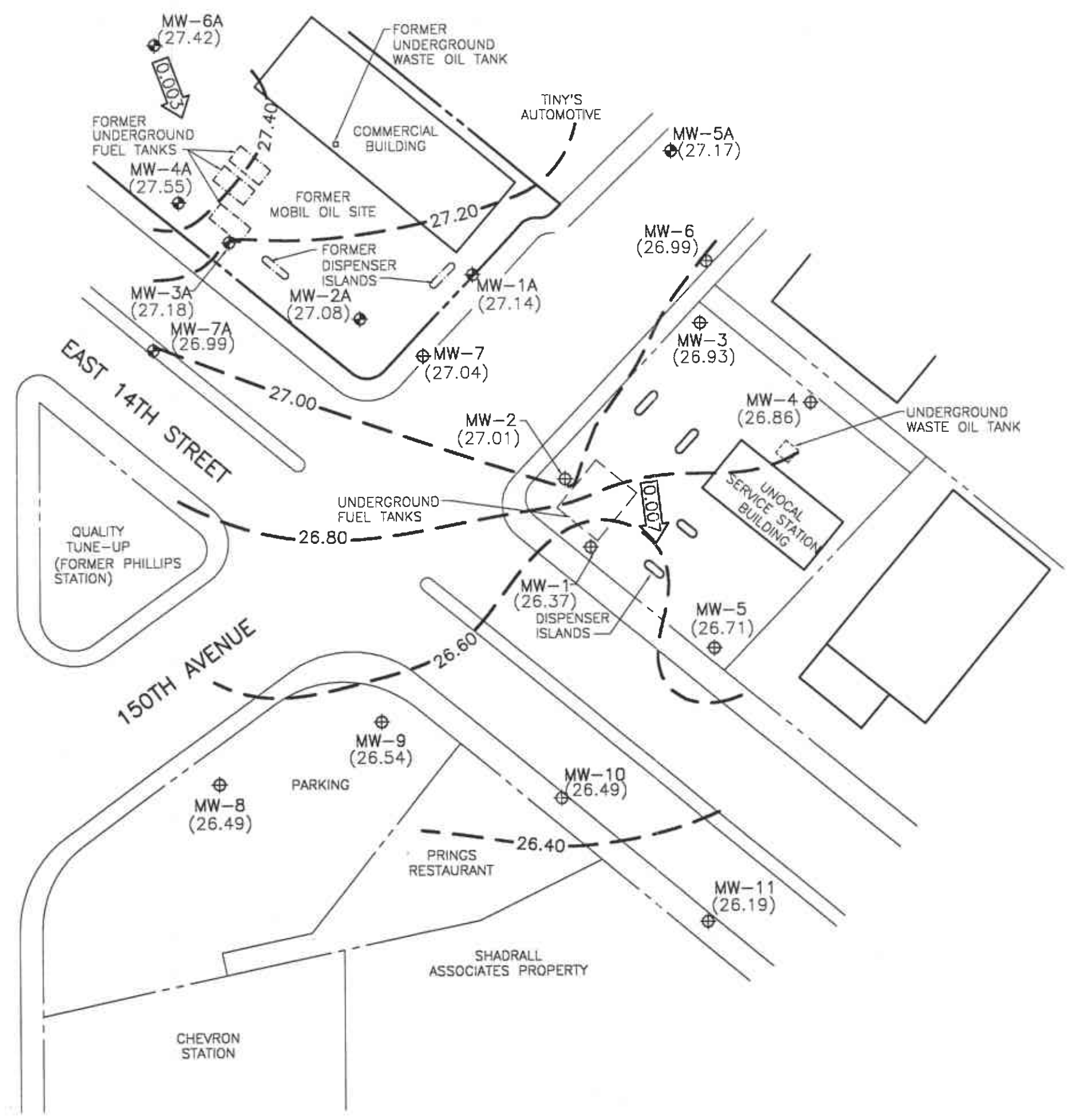


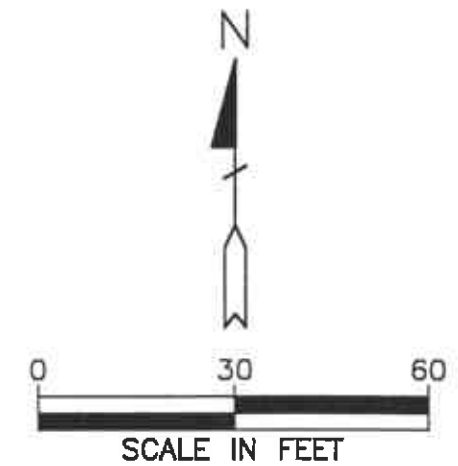
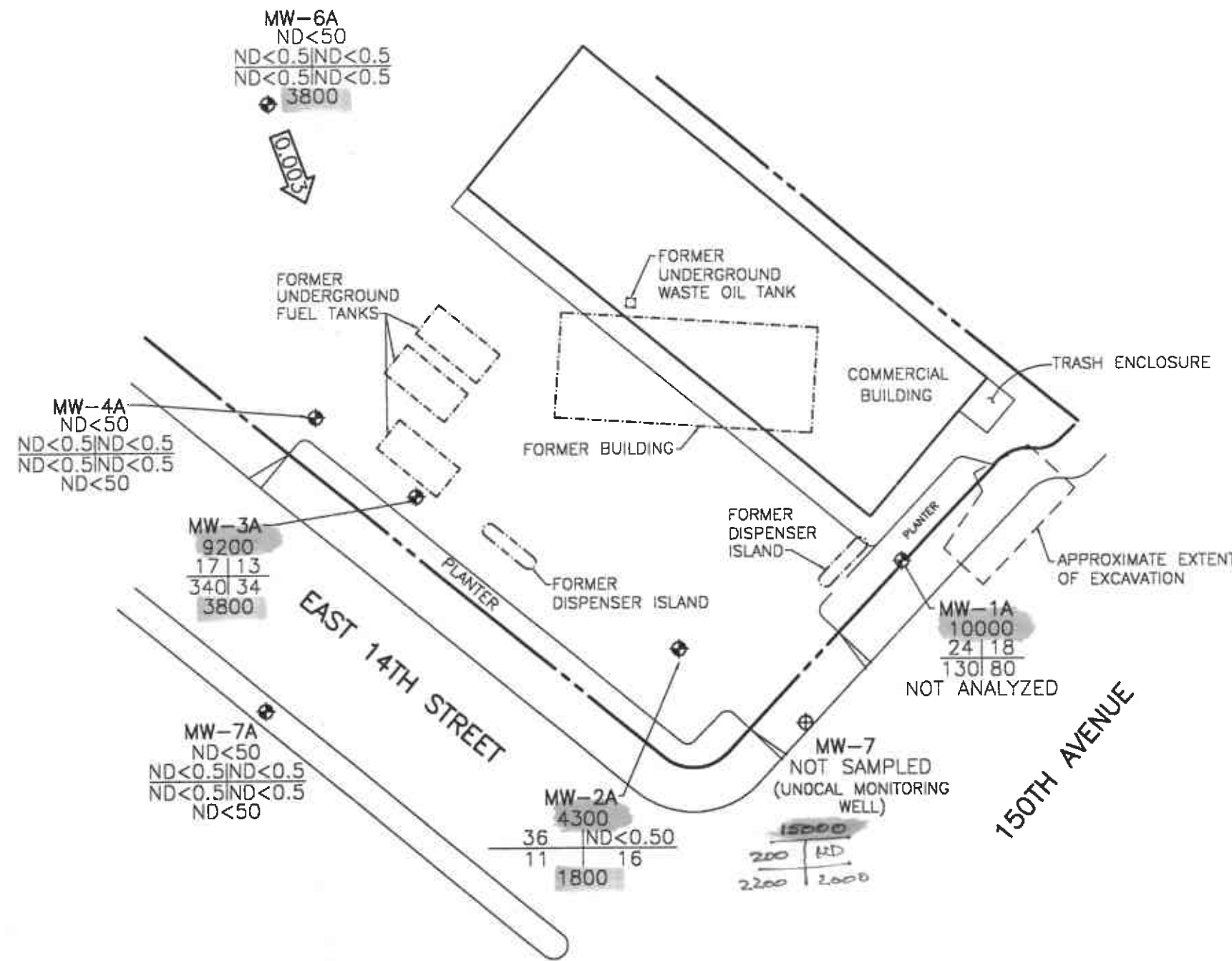
FIGURE 4
HYDROGEOLOGIC CROSS SECTIONS A-A' AND B-B'
 FORMER MOBIL STATION NO. 04-FGN
 14994 E. 14TH STREET
 SAN LEANDRO, CALIFORNIA
 PROJECT NO. 10-190

HESPERIAN BOULEVARD



- LEGEND**
- ◆ GROUNDWATER MONITORING WELL
 - ⊕ UNOCAL GROUNDWATER MONITORING WELL
 - (27.42) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 - 27.40 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL=0.20 FOOT)
 - ←0.003→ CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 5
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP
AUGUST 2, 1995
 FORMER MOBIL OIL CORPORATION
 STATION 04-FGN
 14994 EAST 14TH STREET
 SAN LEANDRO, CALIFORNIA
 PROJECT NO. 10-190



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊕ UNOCAL GROUNDWATER MONITORING WELL
- TPH-G
B | T
E | X
TPH-D
- 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
- ←0.003→ CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

⊕ MW-5A

1300
16 0.68
1.3 4.3
220

MW-1A
10000
24 | 18
130 | 80
NOT ANALYZED

⊕ MW-2A

4300
36 ND<0.50
11 16
1800

⊕ MW-7A

ND<50
ND<0.5 ND<0.5
ND<0.5 ND<0.5
ND<50

⊕ MW-4A

ND<50
ND<0.5 ND<0.5
ND<0.5 ND<0.5
ND<50

⊕ MW-3A

9200
17 13
340 34
3800

⊕ MW-6A

ND<50
ND<0.5 ND<0.5
ND<0.5 ND<0.5
3800

FIGURE 6
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
AUGUST 2, 1995
 FORMER MOBIL OIL CORPORATION
 STATION 04-FGN
 14994 EAST 14TH STREET
 SAN LEANDRO, CALIFORNIA
 PROJECT NO. 10-190

ENCROACHMENT PERMIT

TR-0120 (NEW 9/91)

Permit No. 0495-6SV-0631	
Dist/Co/Rte/PM 04-Ala-185-3.74	
Date May 30, 1995	
Fee Paid \$ 210.00	Deposit \$
Performance Bond Amount (1) \$ 2,000.00	Payment Bond Amount (2) \$
Bond Company Federal Insurance Co.	
Bond Number (1) 8143-45-03	Bond Number (2)

In compliance with (check one):

Your application of February 10, 1995

Utility Notice No. _____ of _____

Agreement No. _____ of _____

R/W Contract No. _____ of _____

TO:

**Mobil Oil Corporation
c/o Alisto Engineering Group
1777 Oakland Boulevard, Suite 200
Walnut Creek, CA 94596
ATTN: Ken Simas
PHONE: (510) 295-1650**

, PERMITTEE

and subject to the following, PERMISSION IS HEREBY GRANTED to:

drill one soil boring and install one monitoring well on State Highway 04-Ala-185, Post Mile 3.74 at 14901 E.14th Street in San Leandro.

Two days before work is started under this permit, notice shall be given to, and approval of construction details, operations, public safety, and traffic control shall be obtained from State Representative N. Freitag, 600 Lewelling Blvd., San Leandro, 94579, 510-614-5951, weekdays, between 7:30 AM and 4:00 PM.

Immediately following completion of the work permitted herein, the permittee shall fill out and mail the Notice of completion attached to this permit.

Certain details of work authorized hereby are shown on permittee's plan submitted with request for permit.

The following attachments are also included as part of this permit.
(Check applicable):

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	General Provisions
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Utility Maintenance Provisions
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Special Provisions
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	A Cal-OSHA permit required prior to beginning work;
		# _____

In addition to fee the permittee will be billed actual costs for:

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Review
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	inspection
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Field Work

(If any Caltrans effort expended)

Yes No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before June 30, 1995

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.

No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

APPROVED:

Joe Browne, District Director

BY:



G. J. Battaglini, District Permit Engineer

NAME: Mobil Oil Corporation
PERMIT #: 0495-6SV-0631
DATE: May 30, 1995

Traffic control is authorized only between 9:00 a.m. and 3:00 p.m., Monday through Friday, holidays excluded. Any traffic control which requires lane closure shall be in compliance with the appropriate traffic control plan. Where required by the plan, the use of a flashing arrow sign is MANDATORY.

Before any work is begun which will interrupt the normal flow of public traffic, approval shall be obtained from State's representative, and closures will be as shown on the attached copy of Standard Plan Sheet T-10.

The attached freeway traffic control plan shall be used for shoulder closures only.

Drainage of treated or untreated effluent into the State drainage system is not permitted.

Bentonite material on the median shall be removed after well abandonment.

Upon completion of observation and testing, the well shall be abandoned in compliance with the requirements of the Department of Water Resources publication " Water Well Standards - State of California " Bulletin 74-81, latest edition.

The location of the monitoring wells shall not be within the travelled way portion of the highway. Their location shall be reviewed and approved by the State's representative before the starting the work. Top of the vault box shall be set flush with the existing ground level.

No excavation shall be left open overnight without written permission from the Caltrans representative or unless otherwise specified herein.

All personnel shall wear hard hats and orange vests, shirts, or jackets as appropriate.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
ENCROACHMENT PERMIT RIDER

TR-0122

Collected By —	Permit No. 0495-6SV0631
Rider Fee Paid \$ 70.00	Dist/Co/Rte/PM 04-Ala-185 3.74
Date June 22, 1995	Rider Number 0495-6RT1210

TO: Mobil Oil Corporation
 c/o Alisto Engineering Group
 Attention Ken Simas
 1777 Oakland Boulevard, Suite 200
 Walnut Creek, Ca 94596
 (510) 295-1650 , PERMITTEE


In compliance with your request of June 12, 1995, we are hereby amending the above numbered encroachment permit as follows:

Date of completion extended to: June 30, 1997

Reference your project to: drill one soil boring and install one monitoring well on State Highway 04-Ala-185, Post Mile 3.74, at 14901 E. 14th Street in San Leandro.

RECEIVED
 JUN 28 1995

Except as amended, all other terms and provisions of the original permit shall remain in effect.

	APPROVED: JOE BROWNE, District Director
	BY:  G. J. BATTAGLINI, District Permit Engineer

Service No. _____

CITY OF SAN LEANDRO
APPLICATION TO PERFORM WORK
IN THE PUBLIC RIGHT-OF-WAY

95070
Permit Number
MAR. 30, 1995
Date Approved

Work Site: IMMEDIATELY NORTHEAST OF 1499A 14TH STREET
Applicant: Name ALISTO ENGINEERING FIELD Address 1777 OAKLAND BLDG, STE. 200 WALNUT CREEK
Owner: Name Mobil Oil Coop Address 3700 W. 190th ST TPT-2 TORRANCE CA
Purpose of Permit: _____ Tel: 910-571-295-16, 57
90509-2929 Tel: 212-1877

Utility Street Excavation Curb, Gutter Sidewalk, Driveway Other DRILL & INSTALL WELL

Detailed Description and Dimensions of Work: DRILL & INSTALL ONE (1) GROUNDWATER MONITORING WELL ON THE NORTHWEST CORNER OF 150TH AVENUE APPROX. 208 FEET NORTHEAST OF EAST 14th STREET CENTERLINE. THE WELL WILL BE TO AN APPROX. DEPTH OF 25 FEET. Well head Schematic is attached. 12" Diameter concrete sawcut for well box.

Plan Submitted: Yes No (Pg. 2) Well head schematic
Date Work to be Started: Notice will given upon receipt of permit Date Work To Be Completed By: 2 days after start of work
Building Permit No. N/A State Encroachment Permit No. N/A
Oro Loma Permit No. N/A Alameda County Flood Control Permit No. in progress

Compliance with State Labor Code: In accordance with Section 3800.
 Applicant has on file, with the City of San Leandro, evidence that workman's compensation insurance is carried. (submitted with this application)
 Applicant will not employ anyone so as to become subject to the workman's compensation laws of California.

Statement of State Contractor's License: In accordance with Section 7031.5 of the State Business and Professions Code.
 Applicant has State License No. _____, Class _____ in full force and effect.
 Applicant is exempt from the State Contractor's License Law for the following reason(s): _____
RECEIVED
MAR 30 1995

By the application and acceptance of this permit, the undersigned intending to be legally bound does hereby agree that all work performed will be in accordance with all applicable provisions of this permit and all regulations, provisions, and specifications as adopted by the City. Further, the undersigned agrees that this permit is to serve as a guaranty for payment of all permit and/or inspection charges as billed by the City. Any misrepresentation of information requested from the applicant on this form shall make this permit null and void.
Signed: [Signature] Chris Reinheim 5-24-95
REINHEIM Date: 1/10/95

PLEASE CALL 577-2708 FOR INSPECTIONS

SPECIAL PROVISIONS
Backfill Required AS PER STANDARD SAMPLING/MONITORING
Pavement Section Required WELL INSTALLATION AND SPECIFICATIONS
Minimum Depth of Cover _____
Police & Fire Dept. to be notified 24 hours prior to start: YES _____ NO
* TRAFFIC PLAN HAS BEEN SUBMITTED AND APPROVED WITH RED LINES PER CITY TRAFFIC ENGINEER
SEE REVERSE SIDE FOR GENERAL PROVISIONS APPLICABLE TO ALL PERMIT WORK

PERMIT IS VALID WHEN SIGNED
Any omission on the part of the City to specify on this permit any rule, regulation, provision, or specification shall not excuse the permittee from complying with all requirements of law and appropriate ordinances and all applicable regulations, provisions, and specifications adopted by the City.
ISSUE FOR CITY ENGINEER
[Signature]

INSPECTION RECORD

Date	Comments	Insp.	Hrs. Chrgd.

FEES
PERMIT FEE: \$120.00 TO ACCT #3306
RESTORE/INSPECT DEPOSIT: _____ TO CN# _____
STREET CUT FEE: _____ TO ACCT #3304
TOTAL: _____

NOTE: 1 hr. minimum charge per inspection stop
Hours forwarded from reverse side: _____
TOTAL HOURS CHARGED: 1

All charges collected at permit issuance
 All charges to be billed to CN# _____



ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 14 994 EAST 14th ST.
SAN LEANDRO, CA

PERMIT NUMBER 95291
LOCATION NUMBER 3S/2W 6C80

CLIENT
Name MOBIL OIL CORP. ATTN: Steve Pao
Address 3700 W. 140th ST - TPT-2 Voice 90/212-1877
City TORRANCE, CA Zip 90509-2929

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name Alisto Engineering Group
ATTN: Ken Simas Fax 510/295-1823
Address 1575 Treat Blvd, Ste 201 Voice 510/295-1650
City Walnut Creek, CA Zip 94598

TYPE OF PROJECT (see attached site plan)
Well Construction _____ Geotechnical Investigation _____
Cathodic Protection _____ General _____
Water Supply _____ Contamination _____
Monitoring X Well Destruction X
(MW-A)

PROPOSED WATER SUPPLY WELL USE
Domestic _____ Industrial _____ Other N/A
Municipal _____ Irrigation _____

DRILLING METHOD:
Mud Rotary _____ Air Rotary _____ Auger X
Cable _____ Other _____

DRILLER'S LICENSE NO. C-57 672617

WELL PROJECTS
Drill Hole Diameter _____ in. Maximum _____ ft.
Casing Diameter 4 in. Depth _____ ft.
Surface Seal Depth _____ ft. Number 1
(MW-A)

GEOTECHNICAL PROJECTS
Number of Borings _____ Maximum _____ ft.
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE MAY 31, 1995
ESTIMATED COMPLETION DATE APRIL 1, 1995

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] Date 5/3/95

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved

[Signature]
Wyman Hong

Date 10 May 95



ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 14994 East 14th St.
SAN LEANDRO, CA

PERMIT NUMBER 95290
LOCATION NUMBER _____

CLIENT
Name MOBIL OIL CORP. Attn: Steve Pro
Address 2700 W. 140th St - TPT-2 Voice 710/212-1877
City TORRANCE, CA Zip 90509-2929

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name Alisto Engineering Group
Attn: Ken Simas Fax 510/295-1823
Address 1575 Trest Blvd, Ste 201 Voice 510/295-1650
City Walnut Creek, CA Zip 94598

TYPE OF PROJECT (see attached site plan)
Well Construction _____ Geotechnical Investigation _____
Cathodic Protection _____ General _____
Water Supply _____ Contamination _____
Monitoring X Well Destruction _____

PROPOSED WATER SUPPLY WELL USE
Domestic _____ Industrial _____ Other N/A
Municipal _____ Irrigation _____

DRILLING METHOD:
Mud Rotary _____ Air Rotary _____ Auger X
Cable _____ Other _____

DRILLER'S LICENSE NO. C-57 672617

WELL PROJECTS
Drill Hole Diameter 8-10 in. Maximum _____
Casing Diameter 4 in. Depth 25' ft.
Surface Seal Depth 5 ft. Number 4 wells

GEOTECHNICAL PROJECTS
Number of Borings 5 Maximum _____
Hole Diameter 8-10 in. Depth 25 ft.

ESTIMATED STARTING DATE MAY 31, 1995
ESTIMATED COMPLETION DATE April 1, 1995

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] Date 5/3/95

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

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C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved [Signature] Date 10 May 95

APPENDIX B

**FIELD PROCEDURES FOR DRILLING, SAMPLING,
AND GROUNDWATER MONITORING WELL INSTALLATION**

FIELD PROCEDURES
FOR
DRILLING, SAMPLING, AND
GROUNDWATER MONITORING WELL INSTALLATION

Drilling Procedures

The soil borings were drilled using 8-inch-diameter, continuous-flight, hollow-stem augers. To avoid cross-contamination, drilling equipment in contact with potentially contaminated material was decontaminated by steam cleaning before and after each use. Decontamination fluids were placed into DOT approved drums for disposal.

Soil Sampling Procedures

During drilling, samples were collected beginning at 5 feet below grade and terminating at the total depth of each boring. Soil sampling was performed using a 18-inch-long, split-barrel core sampler. Before and after each use, the sampler was washed using a phosphate-free detergent followed by tap water and deionized water rinses.

After retrieval from the augers, the sampler was split and a soil sample was collected in a stainless steel sample tube for possible chemical analysis. Each sample was field screened using a photo-ionization detector to assist in selecting the samples for laboratory analysis. The sample was retained within the stainless steel tube, and both ends were immediately covered with Teflon sheeting and polyurethane caps. The caps were sealed with tape and labeled with the following information: Alisto's project number, boring number, sample depth interval, sampler's initials, and date of collection. The soil sample was immediately placed in a waterproof plastic bag and stored in a cooler containing blue or dry ice. Possession of the soil samples was documented from the field to the state-certified analytical laboratory by using a chain of custody form.

Soil samples and drill cuttings, when appropriate, were described by Alisto's personnel using the Unified Soils Classification System, and field estimates of soil type, color, moisture, density, and consistency were noted on the boring logs. The logs were reviewed by a civil engineer registered in the state of California.

Groundwater Monitoring Well Installation

Construction of the groundwater monitoring wells was based on the stratigraphy in the soil borings. The well construction materials were introduced into the boring through the hollow-stem augers to centralize the well casing and minimize the possibility of native material entering the annular space of the well.











The 2- and 4-inch-diameter, Schedule 40 PVC well casing consisted of 0.010-inch slotted casing from the bottom of the boring to a depth interval above the highest anticipated water level, and solid casing was installed from the top of the slotted casing to approximately 1 foot above grade. The casings, fittings, screens, and other well construction components were steam cleaned before installation.

The annular space surrounding the screened portion was backfilled with No. 2/12 Lonestar sand (filter pack) to approximately 1 foot above the top of the screened section. An approximately 1-foot-thick interval of bentonite pellets was added to the annulus above the filter pack and hydrated with approximately 5 gallons of deionized water to minimize intrusion of well seal into the filter pack. The remaining annulus was sealed with a neat cement grout to the surface. A traffic-rated utility box was installed around the top of the well casing and set in concrete. An expanding, watertight well cap and lock were installed on top of the casing to secure the well from surface fluid and tampering.









APPENDIX C

BORING LOGS AND WELL CONSTRUCTION DETAILS

GEOLOGIC LEGEND

COARSE-GRAINED SOILS	GRAVELS more than 1/2 of coarse fraction > No. 4 Sieve	LITTLE OR NO FINES		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
		LITTLE OR NO FINES		GP	Poorly-graded gravels, gravel-sand mixtures
		APPRECIABLE NO FINES		GM	Silty gravels, gravel-sand-silt mixtures
		APPRECIABLE NO FINES		GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS more than 1/2 of coarse fraction < No. 4 Sieve	LITTLE OR NO FINES		SW	Well-graded sands, gravelly sands, little or no fines
		LITTLE OR NO FINES		SP	Poorly-graded sands, gravelly sands, little or no fines
		APPRECIABLE NO FINES		SM	Silty sands, sand-silt mixtures
		APPRECIABLE NO FINES		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS	SILTS AND CLAYS Liquid limit < 50		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	

SYMBOL LEGEND:

- | | |
|--|---|
| <ul style="list-style-type: none">  Cement  Sand  Bentonite Pellets  Driven Interval of Soil Sample  Sample preserved for possible analysis  No sample recovered | <ul style="list-style-type: none">  Stabilized water level  Groundwater level encountered during drilling |
|--|---|

LEGEND TO BORING LOGS

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

PROJECT NO. 10-190



ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA



SEE SITE PLAN

ALISTO PROJECT NO: 10-190-02 DATE DRILLED: 06/01/95
 CLIENT: Mobil Oil Corporation
 LOCATION: 14994 E. 14th Street, San Leandro, California
 DRILLING METHOD: Hollow-Stem Auger (6"); 2" sampler.
 DRILLING COMPANY: Mitchell Drilling Env.tl CASING ELEVATION: N/A
 LOGGED BY: Chris Reinheimer APPROVED BY: Al Sevilla

BLOMS/0 IN.	PTD VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
8,8,11	25.0		5	■	▨	CL	silty CLAY: dark greenish black, damp, stiff; gravel to 1 cm < 5%.
7,9,14	38.1		10	■	▨	CL	CLAY: greenish brown, moist, very stiff; some medium-grained sand to 2%.
8,8,9	26.8		15	■	▨	ML	clayey SILT: greenish brown, moist to wet, very stiff; some medium-grained sand to approximately 2%.
				15.5			



SEE SITE PLAN

ALISTO PROJECT NO: 10-190-02

DATE DRILLED: 06/01/95

CLIENT: Mobil Oil Corporation

LOCATION: 14994 E. 14th Street, San Leandro, California

DRILLING METHOD: Hollow-Stem Auger (6"); 2" sampler

DRILLING COMPANY: Mitchell Drilling Env.tl

CASING ELEVATION: N/A

LOGGED BY: Chris Reinheimer

APPROVED BY: Al Sevilla

BLOWS/6 IN.	PTD VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
8,8,8	18.2		5	■		ML	clayey SILT: gray/green, damp, stiff; medium-grained sand to 5%.
11,12,12	22.8		10	■		CL	silty CLAY: light gray/green and light orange/brown, damp to moist, very stiff; root traces 2%.
8,10,10	82.1		15	■		ML	clayey SILT: mottled light brown and greenish gray, moist to wet, hard; rare gravel to 1 cm < 2%.
			20				Boring terminated at 18.5 feet.
			25				
			30				



SEE SITE PLAN

ALISTO PROJECT NO: 10-190-02

DATE DRILLED: 06/01/95

CLIENT: Mobil Oil Corporation

LOCATION: 14994 E. 14th Street, San Leandro, California

DRILLING METHOD: Hollow-Stem Auger (6"); 2" sampler

DRILLING COMPANY: Mitchell Drilling Env.tl

CASING ELEVATION: N/A

LOGGED BY: Chris Reinheimer

APPROVED BY: Al Sevilla

BLOWS/6 IN.	PTD VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
	3.6		0			SM	silty SAND: medium orange/brown, damp; medium-grained sand; root traces present.
	11.4		10			CL	silty CLAY: mottled gray/green and light orange tan, damp to moist; root traces 2%.
	23.1		15			ML	clayey SILT: mottled light brown and greenish gray, moist to wet, hard; rare gravel to 1 cm < 2%.
				20			



ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

LOG OF BORING B-8

Page 1 of 1

SEE SITE PLAN

ALISTO PROJECT NO: 10-190-02

DATE DRILLED: 06/01/95

CLIENT: Mobil Oil Corporation

LOCATION: 14994 E. 14th Street, San Leandro, California

DRILLING METHOD: Hollow-Stem Auger (8"); 2" sampler

DRILLING COMPANY: Mitchell Drilling Env.tl

CASING ELEVATION: N/A

LOGGED BY: Chris Reinheimer

APPROVED BY: Al Sevilla

BLOWS/6 IN.	PTD VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
8,8,11	9.2		5	■		GC	silty-gravelly-CLAY: dark brown; gravel to 1.5 cm approximately 10%; roots, wood, and glass present.
8,7,8	17.8		10	■		SM	silty SAND: medium greenish brown, damp, medium dense; medium-grained sand slightly clayey; gravel to 1 cm approximately 5%.
8,11,12	11.5		15	■		CL	silty CLAY: mottled greenish brown and light gray, damp to moist; very stiff; root traces to 5%.
			16.5	■			Same: moist to wet, very stiff; organic blebs from 1 to 2%.
			18.5				Boring terminated at 18.5 feet.



SEE SITE PLAN

ALISTO PROJECT NO: 10-190-02 DATE DRILLED: 06/01/95
 CLIENT: Mobil Oil Corporation
 LOCATION: 14994 E. 14th Street, San Leandro, California
 DRILLING METHOD: Hollow-Stem Auger (8"); 2" sampler
 DRILLING COMPANY: Mitchell Drilling Env.tl CASING ELEVATION: N/A
 LOGGED BY: Chris Reinheimer APPROVED BY: Al Seville

BLOWS/6 IN.	PTD VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
7,7,11	7.1		5	■	SM	SM	silty SAND: medium orange/brown, damp, medium dense; fine- to medium-grained sand slightly clayey; well graded.
11,12,14	16.4		10	■	CL	CL	silty CLAY: mottled gray/green and greenish brown, damp to moist; very stiff; root traces from 2% to 5%; rare gravel to 0.75 cm approximately 2%.
8,12,16	45.3		15	■			Same: moist to wet, hard; organic blebs from 1 to 2%.
			20				Boring terminated at 16.5 feet.
			25				
			30				



SEE SITE PLAN

ALISTO PROJECT NO: 10-190-02 DATE DRILLED: 08/01/95
 CLIENT: Mobil Oil Corporation
 LOCATION: 14994 E. 14th Street, San Leandro, California
 DRILLING METHOD: Hollow-Stem Auger (11")
 DRILLING COMPANY: Mitchell Drilling Env.tl CASING ELEVATION: 37.18 'MSL
 LOGGED BY: Chris Reinheimer APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							3" Asphalt; 1.5' Roadbase.
8,8,8	0					ML	clayey-gravelly-SILT: dark brown, damp, very stiff; gravel to 1.5 cm approximately 5%; roots to 5%.
8,11,11	1.2					CL	CLAY: medium gray/green, moist to wet, very stiff; root traces to 5%; rare gravel to 1 cm to approximately 2%.
8,7,9	NM					ML	clayey SILT: medium gray/green, moist to wet, very stiff; root traces to 2%; rare gravel to 1.5 cm < 2%.
4,5,5	NM					SC	sandy CLAY: medium gray/green, wet, stiff; fine- to medium-grained sand; well graded; wood fragments to 1.5 cm approximately 5%.
8,11,12	NM					ML	gravelly-silty-CLAY: medium orange brown, wet, very stiff; gravel to 1 cm approximately 10%; wood fragments to 1 cm approximately 5%.
							Stabilized water level measured on August 2, 1995.



SEE SITE PLAN

ALISTO PROJECT NO: 10-190-02 DATE DRILLED: 06/01/95
 CLIENT: Mobil Oil Corporation
 LOCATION: 14994 E. 14th Street, San Leandro, California
 DRILLING METHOD: Hollow-Stem Auger (11")
 DRILLING COMPANY: Mitchell Drilling Env.tl CASING ELEVATION: 35.91 'MSL
 LOGGED BY: Chris Reinheimer APPROVED BY: Al Sevilla

BLOWS/ft IN.	PTD VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
7,10,13	0	<p>2" Sch. 40 PVC</p> <p>Neat Cement</p> <p>Bentonite Seal</p> <p>2" 0.010" Slotted PVC Screen</p> <p>#2/12 Lanester Sand</p>	5			SM	clayey-silty-SAND: medium orange/brown, damp, medium dense; fine- to medium-grained sand; organics to 2%; rare gravel to 1 cm < 2%.
7,7,7	0		10			CL	silty CLAY: mottled medium brown and light red/brown, moist, stiff; caliche on root traces to 2%.
4,7,8	0		15				Same: mottled gray/brown and light red/brown, moist to wet, very stiff.
12,12,18	0		20				Same: dark brown, damp, hard; organics (rootlets and blebs); rare gravel to 1 cm < 2%.
8,18,20	0		25			GC	gravelly CLAY: mottled dark brown and red/brown, damp, hard; gravel to 1 cm approximately 3%; wood fragments and roots to 2%.
			30				Stabilized water level measured on August 2, 1995.



SEE SITE PLAN

ALISTO PROJECT NO: 10-190-02 DATE DRILLED: 08/02/95
 CLIENT: Mobil Oil Corporation
 LOCATION: 14994 E. 14th Street, San Leandro, California
 DRILLING METHOD: Hollow-Stem Auger (1")
 DRILLING COMPANY: Mitchell Drilling Env.tl CASING ELEVATION: 37.10 'MSL
 LOGGED BY: Chris Reinheimer APPROVED BY: Al Sevilla

BLOMS/6 IN.	PID VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
4,8,8	0	<p>2" Sch. 40 PVC Neat Cement Bentonite Seal #2/12 Lanester Sand 2" 0.010" Slotted PVC Screen</p>	5	■		ML	clayey-gravelly-SILT: medium red/brown, damp, stiff; roots from 2-5%; gravel to 1.5 cm approximately 5%.
4,8,12	0		10	■		CL	CLAY: medium tan, moist, very stiff; root traces to 5%; organics to 2%; rare gravel to 1 cm approximately 2%.
8,11,11	NM		15	■		ML	clayey SILT: medium brown mottled light gray, moist to wet, very stiff; root traces to 2%.
4,7,8	NM		20	■		SC	sandy CLAY: medium orange/brown, wet, stiff; fine- to medium-grained sand; well graded; wood fragments and organics to 2%.
8,18,12	NM		25	■	▲	GC	gravelly CLAY: medium orange/brown, damp, very stiff; gravel to 1 cm approximately 10-15%.
							Stabilized water level measured on August 2, 1995.



SEE SITE PLAN

ALISTO PROJECT NO: 10-190-01

DATE DRILLED: 07/28/95

CLIENT: Mobil Oil Corporation

LOCATION: 14994 E. 14th Street, San Leandro, California

DRILLING METHOD: Hollow-Stem Auger (11')

DRILLING COMPANY: Mitchell Drilling Env.tl

CASING ELEVATION: 37.39 MSL

LOGGED BY: Chris Reinheimer

APPROVED BY: Al Sevilla

BLOWS/6 IN.	PTD VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		<p>Well Diagram details: - Top: 3" Asphalt; 1.5' Roadbase. - 0-4' PVC casing (4" Sch. 40 PVC) - 4-7.8' Slotted PVC Screen (4" 0.010") - 7.8-25' Lonestar Sand (#2/12) - Bentonite Seal - Neat Cement</p>	0				3" Asphalt; 1.5' Roadbase.
7,9,10	0		5			ML	clayey-gravelly-SILT: dark brown, damp, very stiff; gravel to 1.5 cm approximately 5%; roots to 5%.
9,13,12	0		10			CL	CLAY: medium gray/green, moist to wet, very stiff; root traces to 5%; rare gravel to 1 cm to approximately 2%.
7,8,11	NM		15			ML	clayey SILT: medium gray/green, moist to wet, very stiff; root traces to 2%; rare gravel to 1.5 cm < 2%.
6,8,8	NM		20			SC	sandy CLAY: medium gray/green, wet, stiff; fine- to medium-grained sand; well graded; wood fragments to 1.5 cm approximately 5%.
7,12,12	NM	25			ML	gravelly-silty-CLAY: medium orange brown, wet, very stiff; gravel to 1 cm approximately 10%; wood fragments to 1 cm approximately 5%.	
			30				Stabilized water level measured on August 2, 1995.

APPENDIX D

FIELD PROCEDURES FOR GROUNDWATER MONITORING WELL
DEVELOPMENT AND SAMPLING, AND
ELEVATION SURVEY MAP

**FIELD PROCEDURES
FOR
GROUNDWATER MONITORING WELL DEVELOPMENT AND SAMPLING**

Groundwater Monitoring Well Development

The groundwater monitoring wells were developed to consolidate and stabilize the filter pack to optimize well production and reduce the turbidity of subsequent groundwater samples. Well development was accomplished by alternately using a surge block and pump to evacuate the water and sediment a minimum of 72 hours after installation of the cement seal. Development continued until the groundwater was relatively free of sediment and/or stabilization of pH, electrical conductivity, and temperature parameters was achieved. Well development fluids were placed into DOT-approved drums for disposal.

Groundwater Level Measurement

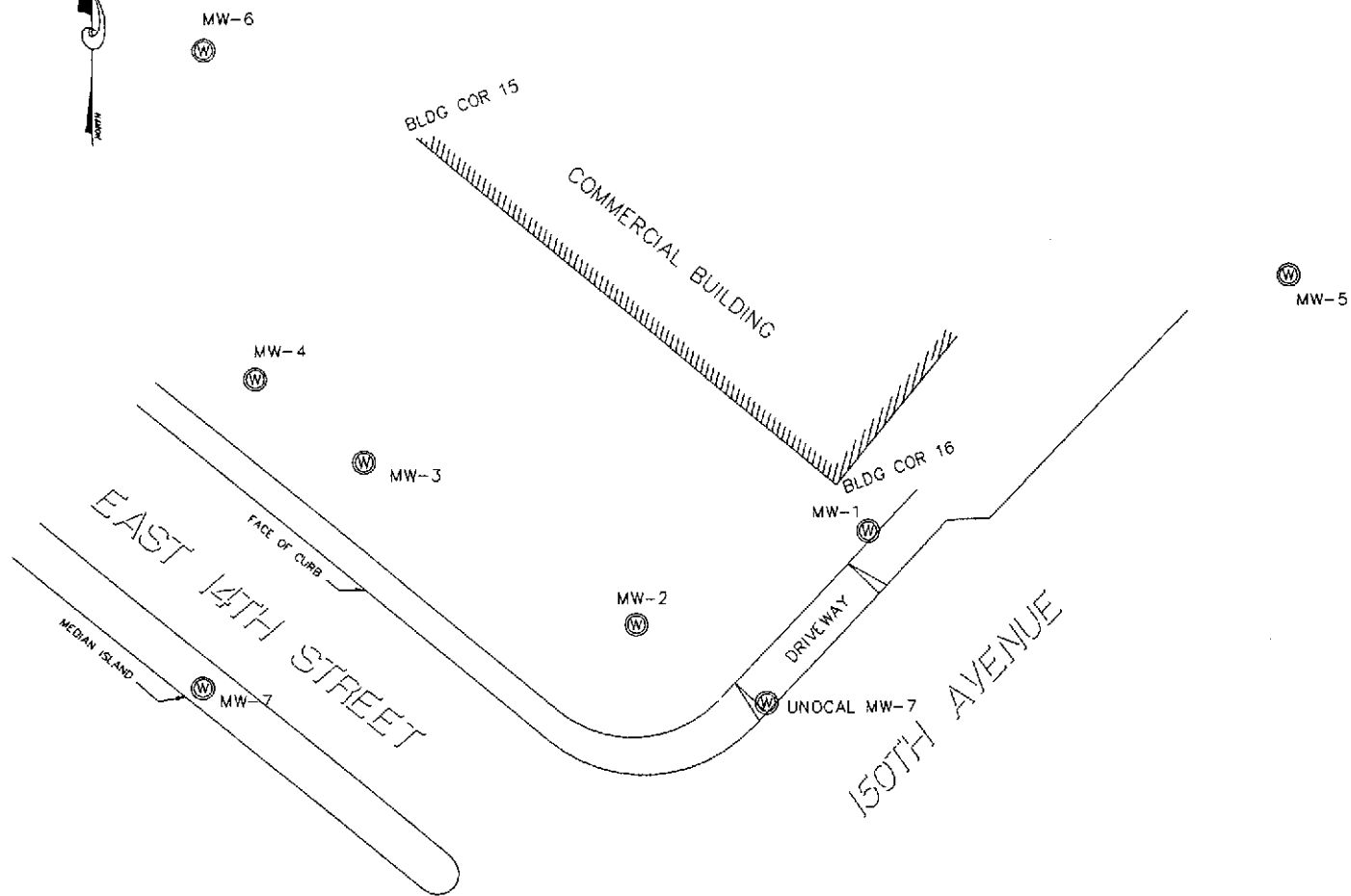
Before groundwater sampling, the groundwater level in each well was measured from the permanent survey reference point on top of the well casing. Groundwater in each well was monitored for free-floating product or sheen. The depth to groundwater was measured to an accuracy of 0.01 foot from the top of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

Groundwater Monitoring Well Sampling

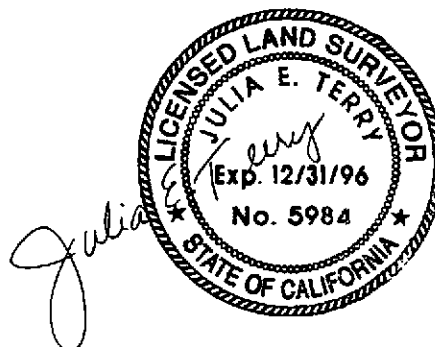
To ensure that the groundwater samples were representative of the aquifer, the wells were purged of 3 casing volumes and the above parameters stabilized before sample collection. Purging was accomplished using either a pump or a disposable bailer.

The groundwater samples were collected using a disposable bailer, and transferred into laboratory-supplied containers. The sampling technician wore nitrile gloves during purging and well sampling. The samples were labeled with well number, site identification, date and time of collection, and sampler's initials, and transported in an iced cooler to a state-certified laboratory following preservation and chain of custody protocol.

BENCHMARK:
 CITY OF SAN LEANDRO BENCHMARK, A CINCH NAIL ON CURB
 AT THE STORM WATER INLET AT THE NORTHWEST CORNER
 OF THE INTERSECTION OF EAST 14TH STREET AND 150TH
 AVENUE. ELEVATION = 36.883 MSL.



STRUCTURE NO.	ELEVATION	NORTHING	EASTING
MW-1, VAULT	36.80	2048.43	2045.63
MW-1, CASING	36.63		
MW-2, VAULT	36.97	2029.28	1996.86
MW-2, CASING	36.62		
MW-3, VAULT	37.23	2062.88	1940.26
MW-3, CASING	36.93		
MW-4, VAULT	37.57	2080.19	1918.19
MW-4, CASING	37.18		
MW-5, VAULT	36.13	2101.21	2132.96
MW-5, CASING	35.91		
MW-6, VAULT	37.56	2148.38	1908.06
MW-6, CASING	37.10		
MW-7, VAULT	37.83	2016.11	1907.11
MW-7, CASING	37.39		
UNOCAL MW-7, VAULT	36.38	2012.79	2024.19
UNOCAL MW-7, CASING	36.06		
BLDG COR 15		2130.25	1951.61
BLDG COR 16		2057.92	2038.98



PLS SURVEYS, INC.

1202 LINCOLN AVENUE
 ALAMEDA, CA 94501

(510) 522-1790
 FAX(510) 522-6207

FORMER MOBILE SITE
 NO. 04-FGN
 14994 E. 14TH STREET
 SAN LEANDRO, CA

PROJECT NO. 10-190

SCALE NTS

DATE 08-26-95

BY JET

JOB NO. 95044

APPENDIX E

WELL DEVELOPMENT AND WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING GROUP

Groundwater Sampling

Date: 8/2/95 Project No. 10-190-02-006

1575 TREAT BOULEVARD, SUITE 201

Day: Wed Station No. WFGN

WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Weather: Sunny Address 14994 E. 14th St, San Leandro CA

SAMPLER: DL

Well ID	SAMPLE#	WATER	DEPTH	Well ID	SAMPLE #	WATER	DEPTH	Well ID	SAMPLE	WATER DEPTH
MW-6A	-	9.68	0710	MW-3A	-	9.75	0726			
MW-7A	-	10.40	0714	MW-1A	-	9.49	0730			
MW-5A	-	8.74	0720							
MW-4A	-	9.63	0722							
MW-2A	-	9.54	0724							

FIELD INSTRUMENT CALIBRATION DATA

PH METER Hydr 4.00 7.00 10.00 _____ TEMPERATURE COMPENSATED N TIME 0745
 D.O. METER _____ BAROMETRIC PRESSURE _____ TEMP 71°F ZERO d.o. SOLUTION _____
 CONDUCTIVITY METER Hydr 10,000 TURBIDITY METER _____ 5.0 NIU _____ OTHER _____

Well ID	Depth to Water	Diam	Cap/Lock	Product	Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.	Notes
MW-6A	9.68"	4"	refined	Φ	Φ	Φ	70	0836	67.7	6.96	0.63		<input type="checkbox"/> EPA 601 <input checked="" type="checkbox"/> TPH-G/BTEX <u>W</u>
Total Depth - Water Level = x Well Vol. Factor = x (vol. to Purge = Purge Vol.							80	0843	66.8	7.39	0.54		<input checked="" type="checkbox"/> TPH Diesel <u>W</u>
<u>24.00 - 9.68 = 14.32 x .65 = 9.30 x 10 = 93.00</u>							90	0847	66.7	7.28	0.52		<input type="checkbox"/> TOG 5520
Purge Method: OSurface Pump ODisp.Tube OWinch <input checked="" type="checkbox"/> ODisp. Baller(s) <u>3</u> OSys Port							95	0850	66.7	7.29	0.52		Time Sampled
Comments: <u>development well</u>													<u>0900</u>

Well ID	Depth to Water	Diam	Cap/Lock	Product	Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.	Notes
MW-7A	10.40	4"	refined	Φ	Φ	Φ	70	1019	71.2	7.99	0.84		<input type="checkbox"/> EPA 601 <input checked="" type="checkbox"/> TPH-G/BTEX <u>W</u>
Total Depth - Water Level = x Well Vol. Factor = x (vol. to Purge = Purge Vol.							80	1030	69.9	7.95	0.82		<input checked="" type="checkbox"/> TPH Diesel <u>W</u>
<u>24.50 - 10.40 = 14.10 x .65 = 9.17 x 10 = 92.00</u>							90	1036	69.9	7.75	0.72		<input type="checkbox"/> TOG 5520
Purge Method: OSurface Pump ODisp.Tube OWinch <input checked="" type="checkbox"/> ODisp. Baller(s) <u>3</u> OSys Port							92	1040	69.8	7.74	0.82		Time Sampled
Comments: <u>development well</u>													<u>1050</u>

Well ID	Depth to Water	Diam	Cap/Lock	Product	Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.	Notes
MW-5A	8.74	4"	refined	Φ	Φ	Φ	70	1210	72.7	7.82	0.87		<input type="checkbox"/> EPA 601 <input type="checkbox"/> TPH-G/BTEX
Total Depth - Water Level = x Well Vol. Factor = x (vol. to Purge = Purge Vol.							80	1220	69.9	7.77	0.85		<input type="checkbox"/> TPH Diesel
<u>23.00 - 8.74 = 14.26 x .65 = 9.27 x 10 = 93</u>							90	1231	69.7	7.76	0.84		<input type="checkbox"/> TOG 5520
Purge Method: OSurface Pump ODisp.Tube OWinch <input checked="" type="checkbox"/> ODisp. Baller(s) <u>3</u> OSys Port							93	1237	69.6	7.76	0.84		Time Sampled
Comments: <u>development well</u>													<u>1234</u>

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING GROUP

Groundwater Sampling

1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Date: 8/2/95 Project No. 10-190-02-006
Day: Wed Station No. 04-F6N
Weather: Sunny Address 14994 E. 14th St, San Leandro CA
SAMPLER: DC

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.	
<u>mw-4A</u>	<u>9.63</u>	<u>4"</u>	<u>W/med</u>	<u>Φ</u>	<u>Φ</u>	<u>70</u>	<u>1411</u>	<u>74.1</u>	<u>7.93</u>	<u>1.01</u>		<input type="checkbox"/> EPA 601
Total Depth - Water Level=						<u>80</u>	<u>1420</u>	<u>72.5</u>	<u>7.91</u>	<u>1.05</u>		<input checked="" type="checkbox"/> TPH-G/BTEX <u>HC</u>
x Well Vol. Factor=						<u>90</u>	<u>1430</u>	<u>72.5</u>	<u>7.85</u>	<u>1.07</u>		<input checked="" type="checkbox"/> TPH Diesel <u>HC</u>
xll vol. to Purge=												<input type="checkbox"/> TOG 5520
Purge Vol.												Time Sampled
<u>23.50 - 9.63 = 13.87 x .65 = 9.01 x 10 = 90</u>												<u>1440</u>
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Baller(s) <u>3</u> <input type="checkbox"/> OSys Port												
Comments: <u>development well</u>												

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.	
<u>mw-2A</u>	<u>9.54</u>	<u>2"</u>	<u>OU</u>	<u>Φ</u>	<u>Φ</u>	<u>2.5</u>	<u>73.04</u>	<u>74.8</u>	<u>7.36</u>	<u>1.32</u>		<input type="checkbox"/> EPA 601
Total Depth - Water Level=						<u>5</u>	<u>71.5</u>	<u>74.53</u>	<u>7.33</u>	<u>1.35</u>		<input checked="" type="checkbox"/> TPH-G/BTEX <u>HC</u>
x Well Vol. Factor=						<u>7.25</u>	<u>1457</u>	<u>71.6</u>	<u>7.30</u>	<u>1.36</u>		<input checked="" type="checkbox"/> TPH Diesel <u>HC</u>
xll vol. to Purge=												<input type="checkbox"/> TOG 5520
Purge Vol.												Time Sampled
<u>24.50 - 9.54 = 14.96 x .16 = 2.39 x 3 = 7.18</u>												<u>300</u>
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Baller(s) <u>1</u> <input type="checkbox"/> OSys Port												
Comments: <u>odor to pump H₂O</u>												

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.	
<u>mw-3A</u>	<u>9.75</u>	<u>2"</u>	<u>OU</u>	<u>Φ</u>	<u>Φ</u>	<u>2</u>	<u>1509</u>	<u>73.7</u>	<u>7.41</u>	<u>1.80</u>		<input type="checkbox"/> EPA 601
Total Depth - Water Level=						<u>4</u>	<u>1514</u>	<u>73.6</u>	<u>7.36</u>	<u>1.60</u>		<input checked="" type="checkbox"/> TPH-G/BTEX <u>HC</u>
x Well Vol. Factor=						<u>6.25</u>	<u>1520</u>	<u>72.9</u>	<u>7.32</u>	<u>1.55</u>		<input checked="" type="checkbox"/> TPH Diesel <u>HC</u>
xll vol. to Purge=												<input type="checkbox"/> TOG 5520
Purge Vol.												Time Sampled
<u>22.45 - 9.75 = 12.7 x .16 = 2.03 x 3 = 6.10</u>												<u>1525</u>
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Baller(s) <u>1</u> <input type="checkbox"/> OSys Port												
Comments: <u>Slight odor to pump H₂O</u>												

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.	
<u>mw-1A</u>	<u>9.49</u>	<u>2"</u>	<u>OU</u>	<u>Φ</u>	<u>Φ</u>	<u>2</u>	<u>1536</u>	<u>72.9</u>	<u>7.53</u>	<u>1.41</u>		<input type="checkbox"/> EPA 601
Total Depth - Water Level=						<u>4</u>	<u>1540</u>	<u>72.1</u>	<u>7.45</u>	<u>1.39</u>		<input checked="" type="checkbox"/> TPH-G/BTEX <u>HC</u>
x Well Vol. Factor=						<u>4.5</u>	<u>1542</u>	<u>71.8</u>	<u>7.46</u>	<u>1.37</u>		<input checked="" type="checkbox"/> TPH Diesel <u>HC</u>
xll vol. to Purge=												<input type="checkbox"/> TOG 5520
Purge Vol.												Time Sampled
<u>18.60 - 9.49 = 9.11 x .16 = 1.45 x 3 = 4.37</u>												<u>1545</u>
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input checked="" type="checkbox"/> Disp. Baller(s) <u>1</u> <input type="checkbox"/> OSys Port												
Comments: <u>OU - from this well, globules on pump H₂O</u>												

Well ID	Depth to Water	Diam	Cap/Lock	Product Depth	Thickness	Gal.	Time	Temp °F	pH	E.C.	D.O.	
												<input type="checkbox"/> EPA 601
Total Depth - Water Level=												<input type="checkbox"/> TPH-G/BTEX
x Well Vol. Factor=												<input type="checkbox"/> TPH Diesel
xll vol. to Purge=												<input type="checkbox"/> TOG 5520
Purge Vol.												Time Sampled
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Baller(s) <u>1</u> <input type="checkbox"/> OSys Port												
Comments:												

3292-08

MPDS-UN
Page 1

SAN LEANDRO - 15008 E. 14th Street.

TABLE 1

SUMMARY OF MONITORING DATA

Well #	Ground Water Elevation (feet)	Depth to Water (feet)	Total Well Depth (feet)	Product Thickness (feet)	Sheen	Water Purged (gallons)
(Monitored and sampled on August 2, 1995)						
MW1	26.37	10.00	18.95	0	NO	7
MW2	27.01	9.36	19.10	0	NO	7
MW3	26.93	9.49	22.15	0	NO	7
MW4	26.86	10.18	19.64	0	NO	7
MW5	26.71	9.23	22.13	0	NO	9
MW6	26.99	8.68	20.15	0	NO	8
MW7	27.07	9.02	21.21	0	NO	8.5
MW8	26.49	10.40	19.09	0	NO	6
MW9	26.54	9.75	19.10	0	NO	7
MW10	26.49	9.55	19.88	0	NO	7.5
MW11	26.19	9.31	19.00	0	NO	7

APPENDIX F

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

**FIELD PROCEDURES
FOR
CHAIN OF CUSTODY DOCUMENTATION**

Samples were handled in accordance with the California Department of Health Services guidelines. Each sample was labeled in the field and immediately stored in a cooler and preserved with blue ice for transport to a state-certified laboratory for analysis.

The chain of custody record accompanied the samples, and included the site and sample identification, date and time of sample 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.



RECEIVED
JUN 30 1995
RECEIVED

Alisto Engineering Group
1575 Treat Blvd., #201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil 04-FGN
Sample Matrix: Soil
Analysis Method: EPA 5030/8015/8020
First Sample #: 506-0190

Sampled: Jun 1, 1995
Received: Jun 5, 1995
Reported: Jun 13, 1995

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 506-0190 B-5 6.5	Sample I.D. 506-0191 B-5 11.5	Sample I.D. 506-0192 B-6 6.5	Sample I.D. 506-0193 B-6 11.5	Sample I.D. 506-0194 B-7 6.5	Sample I.D. 506-0195 B-7 11.5
Purgeable Hydrocarbons	1.0	2.5	8.6	3.3	44	N.D.	130
Benzene	0.0050	N.D.	0.025	N.D.	0.053	N.D.	0.28
Toluene	0.0050	N.D.	0.025	N.D.	0.078	N.D.	0.31
Ethyl Benzene	0.0050	0.0076	0.020	0.068	1.4	N.D.	0.92
Total Xylenes	0.0050	0.17	0.11	0.16	5.3	N.D.	1.2
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline	--	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	2.0	10	1.0	25
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-4	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	106	100	106	117	100	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 1575 Treat Blvd., #201 Walnut Creek, CA 94598 Attention: Ken Simas	Client Project ID: Mobil 04-FGN Sample Matrix: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 506-0196	Sampled: Jun 1-2, 1995 Received: Jun 5, 1995 Reported: Jun 13, 1995
--	---	---

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 506-0196 MW-5A 6.5	Sample I.D. 506-0197 MW-5A 11.5	Sample I.D. 506-0198 MW-6A 6.5	Sample I.D. 506-0199 MW-6A 11.5	Sample I.D. 506-0200 B-8 6.5	Sample I.D. 506-0201 B-8 11.5
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95
Instrument Identification:	HP-4	HP-4	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	102	101	104	108	105	108

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
1575 Treat Blvd., #201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil 04-FGN
Sample Matrix: Soil
Analysis Method: EPA 5030/8015/8020
First Sample #: 506-0202

Sampled: Jun 1, 1995
Received: Jun 5, 1995
Reported: Jun 13, 1995

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 506-0202 B-9 6.5	Sample I.D. 506-0203 B-9 11.5	Sample I.D. 506-0204 MW-4A 6.5	Sample I.D. 506-0205 MW-4A 11.5
Purgeable Hydrocarbons	1.0	N.D.	2.5	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	0.0053	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	0.0059	N.D.	N.D.
Total Xylenes	0.0050	N.D.	0.0052	N.D.	N.D.
Chromatogram Pattern:		--	Gasoline	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95
Instrument Identification:	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	100	95	102	101

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 1575 Treat Blvd., #201 Walnut Creek, CA 94598 Attention: Ken Simas	Client Project ID: Mobil 04-FGN Sample Matrix: Soil Analysis Method: EPA 3550/8015 First Sample #: 506-0190	Sampled: Jun 1, 1995 Received: Jun 5, 1995 Reported: Jun 13, 1995
--	--	---

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 506-0190 B-5 6.5	Sample I.D. 506-0191 B-5 11.5	Sample I.D. 506-0192 B-6 6.5	Sample I.D. 506-0193 B-6 11.5	Sample I.D. 506-0194 B-7 6.5	Sample I.D. 506-0195 B-7 11.5
Extractable Hydrocarbons	1.0	N.D.	2.1	4.3	2.7	N.D.	8.1
Chromatogram Pattern:		--	Unidentified Hydrocarbons <C15	Unidentified Hydrocarbons <C15 & >C20	Unidentified Hydrocarbons <C15	--	Unidentified Hydrocarbons <C15

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	6/8/95	6/8/95	6/8/95	6/8/95	6/8/95	6/8/95
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A

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 1575 Treat Blvd., #201 Walnut Creek, CA 94598 Attention: Ken Simas	Client Project ID: Mobil 04-FGN Sample Matrix: Soil Analysis Method: EPA 3550/8015 First Sample #: 506-0196	Sampled: Jun 1-2, 1995 Received: Jun 5, 1995 Reported: Jun 13, 1995
--	--	---

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 506-0196 MW-5A 6.5	Sample I.D. 506-0197 MW-5A 11.5	Sample I.D. 506-0198 MW-6A 6.5	Sample I.D. 506-0199 MW-6A 11.5	Sample I.D. 506-0200 B-8 6.5	Sample I.D. 506-0201 B-8 11.5
Extractable Hydrocarbons	1.0	1.6	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		Discrete Peaks	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	6/8/95	6/8/95	6/8/95	6/8/95	6/8/95	6/8/95
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95
Instrument Identification:	HP-3B	HP-3B	HP-3B	HP-3B	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 1575 Treat Blvd., #201 Walnut Creek, CA 94598 Attention: Ken Simas	Client Project ID: Mobil 04-FGN Sample Matrix: Soil Analysis Method: EPA 3550/8015 First Sample #: 506-0202	Sampled: Jun 1, 1995 Received: Jun 5, 1995 Reported: Jun 13, 1995
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TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 506-0202 B-9 6.5	Sample I.D. 506-0203 B-9 11.5	Sample I.D. 506-0204 MW-4A 6.5	Sample I.D. 506-0205 MW-4A 11.5
Extractable Hydrocarbons	1.0	1.4	1.7	2.2	N.D.
Chromatogram Pattern:		Discrete Peaks	Discrete Peaks	Discrete Peaks	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Extracted:	6/8/95	6/8/95	6/8/95	6/8/95
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95
Instrument Identification:	HP-3B	HP-3B	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
Project Manager





Alisto Engineering Group
 1575 Treat Blvd., #201
 Walnut Creek, CA 94598
 Attention: Ken Simas

Client Project ID: Mobil 04-FGN
 Matrix: Solid

QC Sample Group: 5060190-205

Reported: Jun 20, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M	EPA 8015M
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha	J. Dinsay	J. Dinsay

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Diesel
Batch#:	5060190	5060190	5060190	5060190	5060186	5060186
Date Prepared:	6/9/95	6/9/95	6/9/95	6/9/95	6/8/95	6/8/95
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	GCHP-3B	GCHP-3A
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg	10 mg/kg
Matrix Spike % Recovery:	85	88	93	103	82	75
Matrix Spike Duplicate % Recovery:	98	98	105	113	90	81
Relative % Difference:	14	11	12	9.3	9.3	7.7

LCS Batch#:	1LCS060995	1LCS060995	1LCS060995	1LCS060995	BLK060895	BLK060895
Date Prepared:	6/9/95	6/9/95	6/9/95	6/9/95	6/8/95	6/8/95
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95	6/9/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	GCHP-3B	GCHP-3A
LCS % Recovery:	111	113	119	119	75	66

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Diesel
	55-145	47-149	47-155	56-140	38-122	38-122

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
 1575 Treat Blvd., #201
 Walnut Creek, CA 94598
 Attention: Ken Simas

Client Project ID: Mobil 04-FGN
 Matrix: Solid

QC Sample Group: 5060190-205

Reported: Jun 20, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	5060190	5060190	5060190	5060190
Date Prepared:	6/9/95	6/9/95	6/9/95	6/9/95
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike % Recovery:	83	88	93	101
Matrix Spike Duplicate % Recovery:	80	95	100	103
Relative % Difference:	3.7	7.7	7.3	2.0

LCS Batch#:	2LCS060995	2LCS060995	2LCS060995	2LCS060995
Date Prepared:	6/9/95	6/9/95	6/9/95	6/9/95
Date Analyzed:	6/9/95	6/9/95	6/9/95	6/9/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	98	105	109	109

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes
	55-145	47-149	47-155	56-140

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





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: ALISTO ENGINEERING Station No./Site Address: Former Mobil 04-FLW 14901 E. 14th San Leandro

Address: 1575 Trent Blvd #201 Project Contact: Cherine Foutch Ken Simas

City: Walnut Creek State: CA Zip: 94598 Mobil Oil Engineer: Cherine Foutch

Tel: 510 295 1650 Fax: 510 295 1823 Sampler(s) signature: [Signature]

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	BTEX - EPA 602/8020	BTEX - TPH	EPA M602/8015/8020 (GAS)	TPH EPA Modified 8015	Gas <input type="checkbox"/> Diesel <input checked="" type="checkbox"/>	Oil & Grease - EPA 413.2	TPH - EPA 418.1	EPA 601/8010	EPA 624/8240	EPA 625/8270	Title 22 Metals EPA 6010/7000	TTL <input type="checkbox"/> STL <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	CODING (check one)			
																									Code	Description		
B-5 6.5	Soil	6/19		Ice	1	2x6"	X	X																	5060190	<input type="checkbox"/>	Emergency Response	
B-5 11.5					1		X	X																	5060191	<input checked="" type="checkbox"/>	Site Assessment	
B-5 16.5					1																					5060192	<input type="checkbox"/>	Remediation (Plan Devlpmt.)
B-6 6.5					1		X	X																		5060193	<input type="checkbox"/>	Active Remed. (Install./Start-up)
B-6 11.5					1		X	X																		5060194	<input type="checkbox"/>	Active Remed. (O & M)
B-6 16.5					1																					5060195	<input type="checkbox"/>	Passive Remed/Monitoring
B-7 6.5					1		X	X																		5060194	<input type="checkbox"/>	Closure
B-7 11.5					1		X	X																		5060195	<input type="checkbox"/>	Construction
B-7 16.5					1																							Litigation/Claims Fines

Relinquished by: [Signature] Date/Time: 6-5-95 1:20P Relinquished by: [Signature] Date/Time: 6/5/95 1530

Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____

Relinquished by: _____ Date/Time: _____ Relinquished in Lab by: _____ Date/Time: _____

Remarks: _____

Turnaround Time: (check one):
 Normal _____ Same day _____
 1 day _____ 2 day _____
 5 day _____

Sample Integrity:
 Intact _____ On Ice _____



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 ENGINEERS</u>	Station No./Site Address: <u>DFGN 14901 E 14th San Leandro</u>
Address: <u>1575 Treat Blvd #201</u>	Project Contact: <u>Kar Simas</u>
City: <u>Walnut Creek</u> State: <u>CA</u> Zip: <u>94598</u>	Mobil Oil Engineer: <u>Cherine Fortch</u>
Tel: <u>510 295 1650</u> Fax: <u>510 295 1823</u>	Sampler(s) signature:

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	BTEX - EPA 602/8020	BTEX - TPH	EPA M602/8015/8020 (GAS)	TPH EPA Modified 8015	Gas <input type="checkbox"/> Diesel <input checked="" type="checkbox"/>	Oil & Grease - EPA 413.2	TPH - EPA 418.1	EPA 601/8010	EPA 624/8240	EPA 625/8270	Title 22 Metals EPA 6010/7000	TLC <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	CODING (check one)
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MW-4A 21.5	SO ₂	6-1-95		Ice	1	2x6																			Code 2 <input checked="" type="checkbox"/> Site Assessment
MW-SA 6.5					1			X	X																Code 4 <input type="checkbox"/> Active Remed. (Install./Start-up)
MW SA 11.5					1			X	X																Code 5 <input type="checkbox"/> Active Remed. (O & M)
MW-SA 16.5					1																				Code 6 <input type="checkbox"/> Passive Remed./Monitoring
MW-SA 21.5					1																				Code 7 <input type="checkbox"/> Closure
MW-6A 6.5		6/2/95			1			X	X																Code 8 <input type="checkbox"/> Construction
MW-6A 11.5		6/2/95			1			X	X																Code 9 <input type="checkbox"/> Litigation/Claims Fines
MW-6A 16.5		6/2/95			1																				Code 9 <input type="checkbox"/> Litigation/Claims Fines

5060196

5060197

5060198

5060199

Relinquished by:

Date/Time: 6-5-95 1:20P

Relinquished by:

Date/Time: 6/5/95 1550

Relinquished by:

Date/Time:

Relinquished by:

Date/Time:

Relinquished by:

Date/Time:

Relinquished in Lab by:

Date/Time:

Remarks:

Turnaround Time: (check one):

Normal Same day
 1 day 2 day
 5 day

Sample Integrity:

Intact On Ice



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>04FGN 14901 E 14th San Leandro</u>	
Address: <u>1575 Trent Blvd # 201</u>		Project Contact: <u>Ken Simas</u>	
City: <u>Walnut Creek</u> State: <u>CA</u> Zip: <u>94598</u>		Mobil Oil Engineer: <u>Cherine Foutch</u>	
Tel: <u>510 295 1650</u>		Fax: <u>510 295 1823</u>	
		Sampler(s) signature:	

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	BTEX - EPA 602/8020	BTEX - TPH	EPA M602/8015/8020 (GAS)	TPH EPA Modified 8015	Gas <input type="checkbox"/> Diesel <input checked="" type="checkbox"/>	Oil & Grease - EPA 413.2	TPH - EPA 418.1	EPA 601/8010	EPA 624/8240	EPA 625/8270	Title 22 Metals EPA 6010/7000	TTL <input type="checkbox"/> STL <input type="checkbox"/> CL <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		
B-8	6.5	50.4	6-5-95	Ice	1	2x6		X	X																5060200	
B-8	11.5				1			X	X																	5060201
B-8	16.5				1																					
B-9	6.5				1			X	X																	5060202
B-9	11.5				1			X	X																	5060203
B-9	16.5				1																					
MW-4A	6.5				1			X	X																	5060204
MW-4A	11.5				1			X	X																	5060205
MW-4A	16.5				1																					5060204

CODING
(check one)

Code 1 Emergency Response

Code 2 Site Assessment

Code 3 Remediation (Plan Devlpmnt.)

Code 4 Active Remed. (Install./Start-up)

Code 5 Active Remed. (O & M)

Code 6 Passive Remed./Monitoring

Code 7 Closure

Code 8 Construction

Code 9 Litigation/Claims Fines

Relinquished by:	Date/Time: <u>6-5-95 1:20P</u>	Relinquished by:	Date/Time: <u>6/5/95-1150</u>
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:
Relinquished by:	Date/Time:	Relinquished in Lab by:	Date/Time:

Turnaround Time: (check one):

Normal Same day

1 day 2 day

5 day

Sample Integrity:

Intact On Ice

Remarks:



Alisto Engineering Group
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil #04-FGN
Sample Matrix: Soil
Analysis Method: EPA 3550/8015 Mod.
First Sample #: 507-1596

Sampled: Jul 21, 1995
Received: Jul 25, 1995
Reported: Aug 1, 1995

QC Batch Number:

SP080195

8015EXA

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 507-1596 SC-1
Extractable Hydrocarbons	1.0	N.D.

Chromatogram Pattern:

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Quality Control Data

Report Limit Multiplication Factor: 1.0
Date Extracted: 8/1/95
Date Analyzed: 8/1/95
Instrument Identification: 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
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil #04-FGN
Sample Descript: Soil
Analysis for: Lead
First Sample #: 507-1596

Sampled: Jul 21, 1995
Received: Jul 25, 1995
Extracted: Jul 27, 1995
Analyzed: Jul 28, 1995
Reported: Aug 1, 1995

LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg	QC Batch Number	Instrument ID
507-1596	SC-1	2.5	6.5	ME0727956010MDB	MV-1

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

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager





Alisto Engineering Group
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil #04-FGN
Matrix: Solid

QC Sample Group: 5071594-96

Reported: Aug 2, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Lead	Diesel
QC Batch#:	SP072795	SP072795	SP072795	SP072795	ME072795	SP080195
	8020EXA	8020EXA	8020EXA	8020EXA	6010MDB	8015EXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 7420	EPA 8015
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 3050	EPA 3550
Analyst:	M.Creusere	M.Creusere	M.Creusere	M.Creusere	T. Le	J. Dinsay
MS/MSD #:	5071790	5071790	5071790	5071790	5071770	5071637
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	22 mg/kg	1.6 mg/kg
Prepared Date:	7/27/95	7/27/95	7/27/95	7/27/95	7/27/95	8/1/95
Analyzed Date:	7/27/95	7/27/95	7/27/95	7/27/95	7/28/95	8/1/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	MV-1	GCHP-3B
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	50 mg/kg	10 mg/kg
Result:	0.38	0.40	0.43	1.3	62	6.1
MS % Recovery:	95	100	108	106	80	45
Dup. Result:	0.43	0.45	0.48	1.4	57	6.1
MSD % Recov.:	108	113	120	118	70	45
RPD:	12	12	11	10	8.4	0.0
RPD Limit:	0-20	0-20	0-20	0-20	0-20	0-20

LCS #:	1LCS072795	1LCS072795	1LCS072795	1LCS072795	BLK072795	BLK080195
Prepared Date:	7/27/95	7/27/95	7/27/95	7/27/95	7/27/95	8/1/95
Analyzed Date:	7/27/95	7/27/95	7/27/95	7/27/95	7/28/95	8/1/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	MV-1	GCHP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	50 mg/kg	10 mg/kg
LCS Result:	21	21	22	67	40	7.9
LCS % Recov.:	106	106	112	112	80	79

MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140	75-125	38-122
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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.

** MS = Matrix Spike, MSD = MS Duplicate, IS = Instrument Spike, ISD = IS Duplicate, RPD = Relative % Difference

SEQUOIA ANALYTICAL, #1271

Kevin Van Slambrook
Project Manager





10-190-

Alisto Engineering Group 1575 Treat Blvd., Ste. 201 Walnut Creek, CA 94598 Attention: Ken Simas	Client Project ID: Mobil #04-FGN Sample Matrix: Water Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 508-0313	Sampled: Aug 2, 1995 Received: Aug 4, 1995 Reported: Aug 11, 1995
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QC Batch Number:	GC080995	GC080995	GC080995	GC080995	GC080995	GC080995
	802002A	802002A	802002A	802002A	802002A	802005A

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 508-0313 MW-6A	Sample I.D. 508-0314 MW-7A	Sample I.D. 508-0315 MW-5A	Sample I.D. 508-0316 MW-4A	Sample I.D. 508-0317 MW-2A	Sample I.D. 508-0318 MW-3A
Purgeable Hydrocarbons	50	N.D.	N.D.	1,300	N.D.	4,300	9,200
Benzene	0.50	N.D.	N.D.	16	N.D.	36	17
Toluene	0.50	N.D.	N.D.	0.68	N.D.	N.D.	13
Ethyl Benzene	0.50	N.D.	N.D.	1.3	N.D.	11	340
Total Xylenes	0.50	N.D.	N.D.	4.3	N.D.	16	34
Chromatogram Pattern:		--	--	Gasoline	--	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	2.0	1.0	10	20
Date Analyzed:	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-2	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	110	98	128	107	136	72

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
Project Manager

RECEIVED
AUG 11 1995
LABORATORY





Alisto Engineering Group
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil #04-FGN
Sample Matrix: Water
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 508-0319

Sampled: Aug 2, 1995
Received: Aug 4, 1995
Reported: Aug 11, 1995

QC Batch Number: GC080995 GC080995 GC080995
802005A 802005A 802005A

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 508-0319 MW-1A	Sample I.D. 508-0320 QC-1	Sample I.D. 508-0321 QC-2
Purgeable Hydrocarbons	50	10,000	11,000	N.D.
Benzene	0.50	24	21	N.D.
Toluene	0.50	18	20	0.76
Ethyl Benzene	0.50	130	120	N.D.
Total Xylenes	0.50	80	61	0.67
Chromatogram Pattern:		Gasoline	Gasoline	--

Quality Control Data

Report Limit Multiplication Factor:	20	20	1.0
Date Analyzed:	8/9/95	8/9/95	8/9/95
Instrument Identification:	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	79	78	95

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
Project Manager





Alisto Engineering Group
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil #04-FGN
Sample Matrix: Water
Analysis Method: EPA 3510/8015 Mod.
First Sample #: 508-0313

Sampled: Aug 2, 1995
Received: Aug 4, 1995
Reported: Aug 11, 1995

QC Batch Number: SP080795 8015EXB SP080795 8015EXB SP080795 8015EXB SP080795 8015EXB SP080895 8015EXA SP080895 8015EXA

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

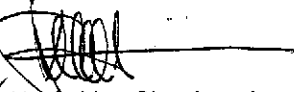
Analyte	Reporting Limit µg/L	Sample I.D. 508-0313 MW-6 _A	Sample I.D. 508-0314 MW-7 _A	Sample I.D. 508-0315 MW-5 _A	Sample I.D. 508-0316 MW-4 _A	Sample I.D. 508-0317 MW-2 _A	Sample I.D. 508-0318 MW-3 _A
Extractable Hydrocarbons	50	N.D.	N.D.	220	N.D.	1800	3800
Chromatogram Pattern:		--	--	Unidentified Hydrocarbons <C15	--	Unidentified Hydrocarbons <C15	Unidentified Hydrocarbons <C15

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	8/7/95	8/7/95	8/7/95	8/7/95	8/8/95	8/8/95
Date Analyzed:	8/8/95	8/8/95	8/8/95	8/8/95	8/9/95	8/9/95
Instrument Identification:	HP-3B	HP-3B	HP-3B	HP-3B	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
Project Manager





Alisto Engineering Group
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil #04-FGN
Sample Matrix: Water
Analysis Method: EPA 3510/8015 Mod.
First Sample #: 508-0319

Sampled: Aug 2, 1995
Received: Aug 4, 1995
Reported: Aug 11, 1995

QC Batch Number: SP080895

8015EXA

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 508-0319 MW-6A
Extractable Hydrocarbons	50	3800

Chromatogram Pattern: Unidentified Hydrocarbons <C15

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	8/8/95
Date Analyzed:	8/9/95
Instrument Identification:	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
Project Manager





Alisto Engineering Group
 1575 Treat Blvd., Ste. 201
 Walnut Creek, CA 94598
 Attention: Ken Simas

Client Project ID: Mobil #04-FGN
 Matrix: Liquid

QC Sample Group: 5080313-21

Reported: Aug 11, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
QC Batch#:	GC080995	GC080995	GC080995	GC080995	SP080795
	802002A	802002A	802002A	802002A	8015EXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Prep. Method:	-	-	-	-	EPA 3510
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	J. Dinsay
MS/MSD #:	5080313	5080313	5080313	5080313	BLK080795
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95	8/7/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95	8/8/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	GCHP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Result:	19	21	24	72	330
MS % Recovery:	95	105	120	120	110
Dup. Result:	19	21	23	70	330
MSD % Recov.:	95	105	115	117	110
RPD:	0.0	0.0	4.3	2.8	0-0
RPD Limit:	0-20	0-20	0-20	0-20	0-20

LCS #:	1LCS080495	1LCS080495	1LCS080495	1LCS080495	BLK080795
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95	8/7/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95	8/8/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	GCHP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
LCS Result:	19	21	24	70	330
LCS % Recov.:	94	105	119	116	110

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120	38-122
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SEQUOIA ANALYTICAL, #1271

[Signature]
 Kevin Van Slambrook
 Project Manager

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.

** MS = Matrix Spike, MSD = MS Duplicate, IS = Instrument Spike, ISD = IS Duplicate,
 RPD = Relative % Difference





Alisto Engineering Group
1575 Treat Blvd., Ste. 201
Walnut Creek, CA 94598
Attention: Ken Simas

Client Project ID: Mobil #04-FGN
Matrix: Liquid

QC Sample Group: 5080313-21

Reported: Aug 11, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
QC Batch#:	GC080995 802005A	GC080995 802005A	GC080995 802005A	GC080995 802005A	SP080895 8015EXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Prep. Method:	-	-	-	-	EPA 3510
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha	J. Dinsay
MS/MSD #:	5080236	5080236	5080236	5080236	BLK080895
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95	8/8/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	GCHP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Result:	15	17	18	57	210
MS % Recovery:	75	85	90	95	70
Dup. Result:	17	19	20	62	200
MSD % Recov.:	85	95	100	103	67
RPD:	13	11	11	8.4	4.9
RPD Limit:	0-20	0-20	0-20	0-20	0-20

LCS #:	3LCS080995	3LCS080995	3LCS080995	3LCS080995	BLK080895
Prepared Date:	8/9/95	8/9/95	8/9/95	8/9/95	8/8/95
Analyzed Date:	8/9/95	8/9/95	8/9/95	8/9/95	8/9/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	GCHP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
LCS Result:	16	18	18	57	210
LCS % Recov.:	80	88	92	96	70

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120	38-122
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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.

** MS = Matrix Spike, MSD = MS Duplicate, IS = Instrument Spike, ISD = IS Duplicate,
RPD = Relative % Difference

SEQUOIA ANALYTICAL, #1271

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-FCN/149919 14th Ave S. L...</u>	
Address: <u>1575 Tenth Blvd</u>		Project Contact: <u>Mr. Simas / Project # 10-150 02-206</u>	
City: <u>Lawndale, CA</u>	State: <u>CA</u>	Zip: <u>90558</u>	Mobil Oil Engineer: <u>[Signature]</u>
Tel: <u>(510) 795-1650</u>	Fax: <u>(510) 295-1823</u>	Sampler(s) signature: <u>[Signature]</u>	

Sample I.D.	Matrix	Date Sampled	Time	Preservation	Number of Containers	Type of Containers	BTEX - EPA 602/8020	BTEX - TPH	EPA M602/8015/8020 (GAS)	TPH EPA Modified 8015	Gas <input type="checkbox"/> Diesel <input checked="" type="checkbox"/>	Oil & Grease - EPA 413.2	TPH - EPA 418.1	EPA 601/8010	EPA 624/8240	EPA 625/8270	Title 22 Metals EPA 6010/7000	TTL <input type="checkbox"/> STL <input type="checkbox"/> STL <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
MW-6A	112	8/27/95	0500	tc	3	VSA	X	X																
MW-7A			0500																					
MW-5A			256																					
MW-4A			1410																					
MW-2A			1500																					
MW-3A			1525																					
MW-1A			1415																					
QC-1			-		2	VSA																		
QC-2			-		2																			

CODING
(check one)

Code 1 Emergency Response

Code 2 Site Assessment

Code 3 Remediation (Plan Devlpmt.)

Code 4 Active Remed. (Install./Start-up)

Code 5 Active Remed. (O & M)

Code 6 Passive Remed./Monitoring

Code 7 Closure

Code 8 Construction

Code 9 Litigation/Claims Fines

Relinquished by: <u>[Signature]</u>	Date/Time: <u>8/29/95 4:00</u>	Relinquished by: <u>[Signature]</u>	Date/Time: <u>8/29/95 4:00</u>	Turnaround Time: (check one): Normal <input type="checkbox"/> Same day <input type="checkbox"/> 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 5 day <input type="checkbox"/>
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:	
Relinquished by:	Date/Time:	Relinquished in Lab by:	Date/Time:	
Remarks:				Sample Integrity: Intact <input type="checkbox"/> On Ice <input type="checkbox"/>