

April 8, 1996

Ms. Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502

RE: Quarterly Summary Report-First Quarter 1996
Unocal Service Station No. 7176
7850 Amador Valley Boulevard
Dublin, California

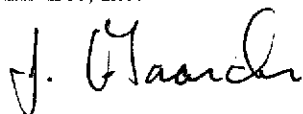
Dear Ms. Mih:

As directed by Ed Ralston of Unocal Corporation-CERT, Enviros Inc. is submitting the Quarterly Summary Report for the above referenced site.

If you have any questions please call (707) 935-4850.

Sincerely,

Enviros, Inc.



Jeffrey D. Gaarder
Project Manager

Attachment: Quarterly Summary Report-First Quarter 1996

cc: Ed Ralston, Unocal

QUARTERLY SUMMARY REPORT
1st Quarter 1996
(January-March)

UNOCAL SERVICE STATION No. 7176
7850 Amador Valley Boulevard
Dublin, California

CITY/COUNTY ID No.: Dublin

COUNTY: Alameda

BACKGROUND:

The site is currently occupied by an operating Unocal service station. The former UST's were replaced and the waste oil tank was removed. Soil and groundwater investigations have been performed. Hydrocarbon-impacted soils were delineated in the vicinity of the former USTs, product lines, and dispensers. The majority of the impacted soils (1,863 tons) were excavated and transported to an approved landfill. Drilled six soil borings and installed three groundwater monitoring wells. Installed Oxygen Release Compound (ORC) socks in the three monitoring wells and one tank backfill well.

RECENT QUARTER ACTIVITIES:

Performed groundwater monitoring and quarterly summary report.

NEXT QUARTER ACTIVITIES:

Perform quarterly groundwater monitoring and summary reporting.

CHARACTERIZATION/REMEDIAL STATUS:

Soil contamination delineated?	<u>yes</u>
Dissolved groundwater plume delineated?	<u>no</u>
Free product delineated?	<u>N/A</u>
Volume of GW contamination recovered this quarter?	<u>24 gal.</u>
Total volume to date?	<u>15,480 gal.</u>
Soil remediation in progress?	<u>no</u>
Dissolved/free product remediation in progress?	<u>yes (ORC)</u>
- Anticipated completion?	<u>unknown</u>

CONSULTANT/CONTRACTOR:

Enviros, Inc.
P.O. Box 259
270 Perkins Street
Sonoma, California 95476
P.M. - Jeff Gaarder
Tel: (707) 935-4850
Fax: (707) 935-6649

AG

QUARTERLY SUMMARY REPORT

First Quarter 1999
(January - March)

STID
4104

2/25/99

TOSCO 76 SERVICE STATION 7176
7850 Amador Valley Boulevard
Dublin, California

City/County ID Alameda County Health Care Services Agency

County: Alameda County

BACKGROUND

Unocal Corporation (Unocal) replaced the fuel underground storage tanks (USTs) and removed the used-oil UST. The majority of hydrocarbon-impacted soil (1,863 tons) was excavated and transported to a Unocal-approved landfill. In July 1995, Unocal performed a soil and groundwater investigation that included drilling nine soil borings and constructing three on-site groundwater monitoring wells. During March 1998, Tosco Marketing Company (Tosco) performed an off-site soil and groundwater investigation that included installation of two off-site groundwater monitoring wells south and east of the site. Dissolved hydrocarbons have not been delineated east and south of the site.

RECENT QUARTER ACTIVITIES

Performed quarterly groundwater monitoring and sampling and submitted report.

NEXT QUARTER ACTIVITIES

Perform quarterly groundwater monitoring and sampling.

CHARACTERIZATION/REMEDIAL STATUS

Soil contamination delineated?	<u>Yes</u>
Dissolved groundwater delineated?	<u>No</u>
Free Product delineated?	<u>NA</u>
Amount of gw contaminant recovered this quarter?	<u>0 gallons</u>
Amount of gw contaminant recovered to date?	<u>15,511 gallons/groundwater</u>
Soil remediation in progress?	<u>No</u>
Dissolved/free product remediation in progress?	<u>No</u>

CONSULTANT: Environmental Resolutions, Inc. (209299.1qs)

MPDS-UN7176-02
February 5, 1996

Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, California 94583

Attention: Mr. Edward C. Ralston

RE: Quarterly Data Report
Unocal Service Station #7176
7850 Amador Valley Boulevard
Dublin, California

96 MAR 19 PM 1:42
ENVIRONMENTAL
PROTECTION

Dear Mr. Ralston:

This data report presents the results of the most recent quarter of monitoring and sampling of the monitoring wells at the referenced site by MPDS Services, Inc.

RECENT FIELD ACTIVITIES

The monitoring wells that were monitored and sampled during this quarter are indicated in Table 1. Prior to sampling, the wells were checked for depth to water and the presence of free product or sheen. The monitoring data and the ground water elevations are summarized in Table 1. The ground water flow direction during the most recent quarter is shown on the attached Figure 1.

Ground water samples were collected on January 11, 1996. Prior to sampling, the wells were each purged of between 7 and 9 gallons of water. In addition, dissolved oxygen concentrations were also measured and are presented in Table 4. During purging operations, the field parameters pH, temperature, and electrical conductivity were recorded and are presented in Table 2. Once the field parameters were observed to stabilize, and where possible, a minimum of approximately four casing volumes had been removed from each well, samples were then collected using a clean Teflon bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory. Field blank and Trip blank samples (denoted as ES1 and ES2 respectively) were also collected for quality assurance and control. MPDS Services, Inc. transported the purged ground water to the Unocal Refinery located in Rodeo, California, for treatment and discharge to San Pablo Bay under NPDES permit.

ANALYTICAL RESULTS

The ground water samples were analyzed at Sequoia Analytical Laboratory and were accompanied by properly executed Chain of Custody documentation. The analytical results of the ground water samples

collected to date are summarized in Table 3. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline, TPH as diesel, and benzene detected in the ground water samples collected this quarter are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

LIMITATIONS

Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

DISTRIBUTION

A copy of this report should be sent to Ms. Eva Chu of the Alameda County Health Care Services Agency.

If you have any questions regarding this report, please do not hesitate to call Joel G. Greger at (510) 602-5120.

Sincerely,

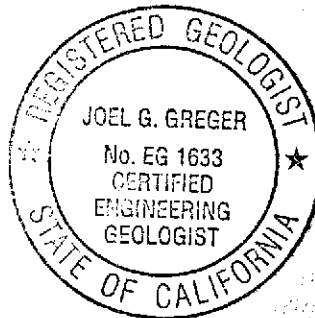
MPDS Services, Inc.



Haig (Gary) Tejirian
Senior Staff Geologist



Joel G. Greger, C.E.G.
Senior Engineering Geologist



License No. EG 1633
Exp. Date 8/31/96

/bp

Attachments: Tables 1 through 4
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Clyde Galantine, Enviros, Inc.

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 January 11, 1996)						
U-1	339.29	16.33	28.85	0	No	9
U-2	339.53	17.06	27.25	0	No	7
U-3	339.48	18.65	29.33	0	No	7.5
(Monitored and Sampled October 12, 1995)						
U-1	340.24	15.38	29.15	0	No	10
U-2	340.58	16.01	26.15	0	No	7.5
U-3	340.53	17.60	29.06	0	No	8.5
(Monitored and Sampled on July 8, 1995)						
U-1	343.03	12.59	30.00	0	--	NA
U-2	343.91	12.68	30.00	0	--	NA
U-3	343.55	14.58	30.00	0	--	NA

Well #	Well Casing Elevation (feet) *
U-1	355.62
U-2	356.59
U-3	358.13

♦ The depth to water level and total well depth measurements were taken from the top of the well casings.

* The elevations of the top of the well casings are relative to Mean Sea Level (MSL), per the Benchmark AM-STW1977 located at the easterly return at the most easterly corner of intersection of Amador Valley Blvd. and Starward Street (Elevation = 344.17 feet MSL).

-- Sheen determination was not performed.

NA = Not available.

Note: Monitoring data prior to October 12, 1995, were provided by Enviros, Inc.

TABLE 2

RECORD OF THE TEMPERATURE, CONDUCTIVITY, AND pH VALUES
 IN THE MONITORING WELLS DURING PURGING AND PRIOR TO SAMPLING

(Measured on January 11, 1996)

<u>Well #</u>	<u>Gallons per Casing Volume</u>	<u>Time</u>	<u>Gallons Purged</u>	<u>Casing Volumes Purged</u>	<u>Temper- ature (°F)</u>	<u>Conductivity ([μmhos/cm] x100)</u>	<u>pH</u>
U-1	2.13	12:05	0	0	69.5	11.08	6.99
			2.5	1.17	72.1	10.57	6.85
			4.5	2.11	72.1	10.73	6.76
			7	3.29	72.1	10.65	6.75
			12:15	9	4.23	72.1	10.90
U-2	1.73	11:40	0	0	73.7	10.10	7.25
			2	1.16	73.0	10.45	7.02
			3.5	2.02	72.7	11.11	6.88
			5	2.89	73.3	10.93	6.86
			11:45	7	4.05	73.9	11.21
U-3	1.82	11:05	0	0	56.7	7.64	7.07
			2	1.10	68.1	10.73	6.94
			4	2.20	70.9	11.27	6.94
			6	3.30	71.8	11.21	6.95
			11:15	7.5	4.12	71.9	11.58

TABLE 3

**SUMMARY OF LABORATORY ANALYSES
 WATER**

<u>Date</u>	<u>Well #</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
1/11/96▲	U-1▼▼	8,200◆	8,300	690	11	680	1,500
	U-2▼▼	8,600◆	10,000	210	55	1,400	240
	U-3	260◆◆	230	0.62	0.91	0.97	1.9
10/12/95	U-1▼	4,200◆	33,000	1,400	ND	1,400	3,100
	U-2▼	3,600◆	24,000	310	60	1,900	190
	U-3	470◆◆	560	ND	0.87	0.70	1.1
7/08/95	U-1	9,400*	39,000	1,500	19	1,600	5,200
	U-2	4,700*	17,000	430	ND	2,200	590
	U-3	710*	1,100**	0.57	2.1	1.7	2.4

▲ On January 11, 1996, the polynuclear aromatic hydrocarbon (PNA) compound naphthalene was detected in well U-1 at a concentration of 320 µg/L, and at a concentration of 310 µg/L in well U-2. All other PNA compounds (EPA method 8100) were non-detectable.

▼ Sequoia Analytical Laboratory has potentially identified the presence of MTBE at reportable levels in the ground water sample collected from this well.

▼▼ Sequoia Analytical Laboratory has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 µg/L in the sample collected from this well.

* = Unidentified Hydrocarbon C9-C24

** = Gas and Unidentified Hydrocarbons >C12

◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a diesel and non-diesel mixture.

◆◆ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be diesel.

ND = Non-detectable.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

Note: Laboratory analyses data prior to October 12, 1995, were provided by Enviros, Inc.

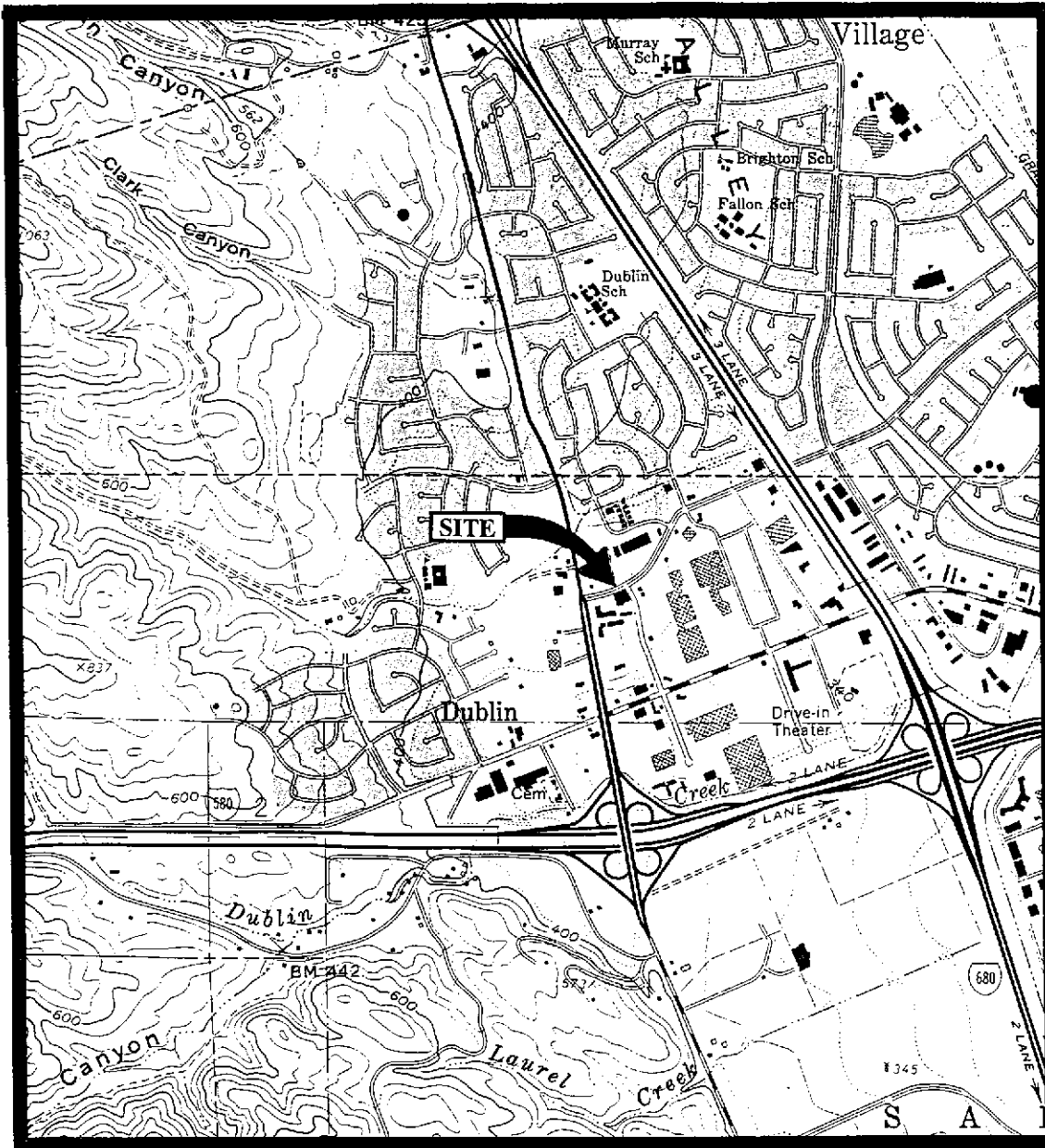
TABLE 4

SUMMARY OF MONITORING DATA

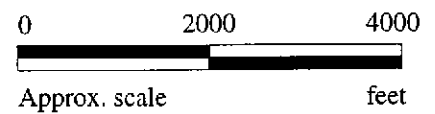
DISSOLVED OXYGEN CONCENTRATIONS (O₂)

<u>Date</u>	<u>Well #</u>	<u>O₂ (ppm)</u>
1/11/96	U-1	3.41
	U-2	3.99
	U-3	5.05
10/02/95	CC1*	2.83

* For the location of sample point CC1, see Figure 1.



Base modified from 7.5 minute U.S.G.S. Dublin Quadrangle
 (photorevised 1980)

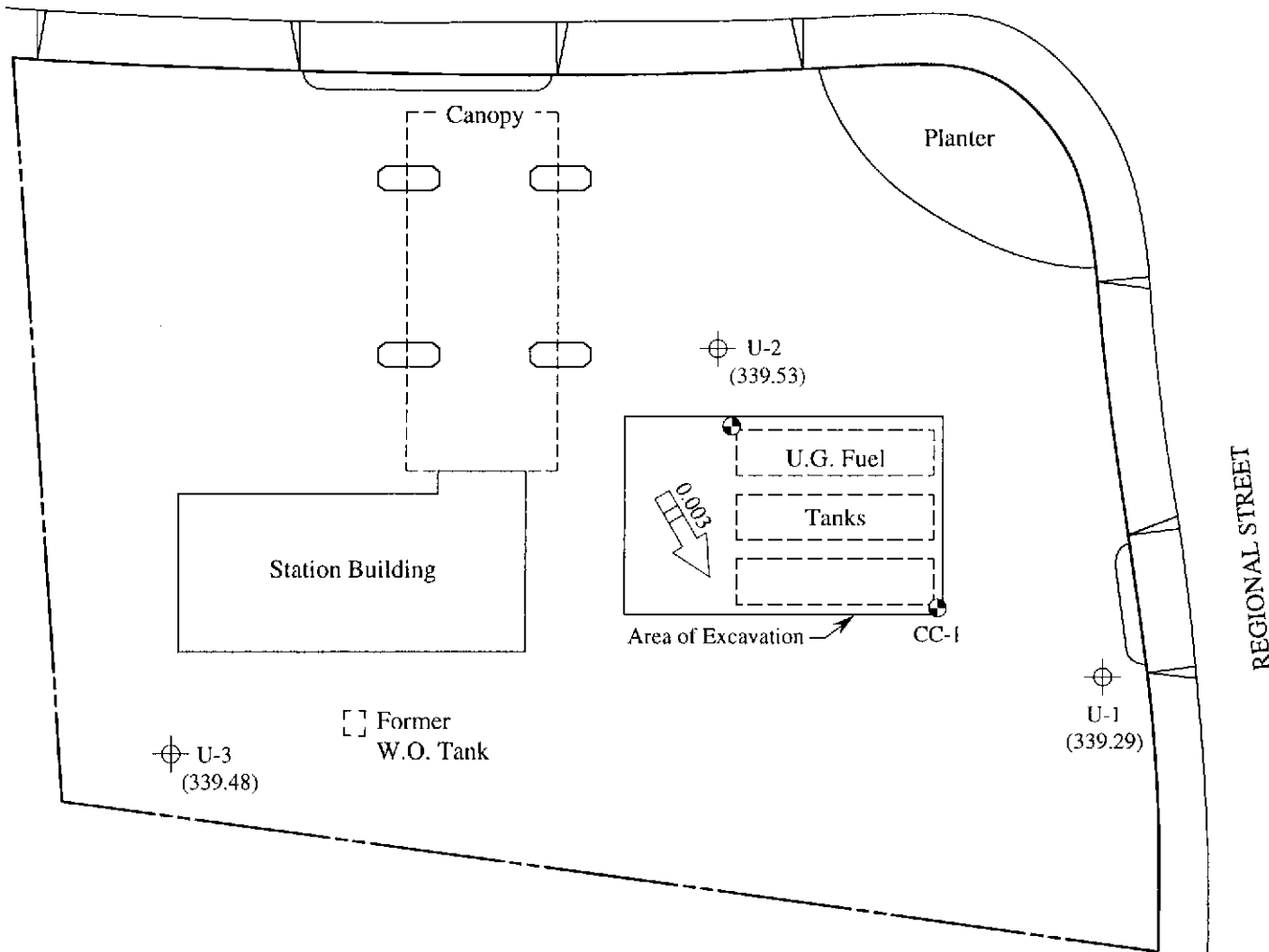


MPDS SERVICES, INCORPORATED

**UNOCAL SERVICE STATION #7176
 7850 AMADOR VALLEY BOULEVARD
 DUBLIN, CALIFORNIA**

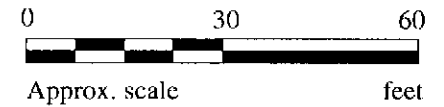
**LOCATION
 MAP**

AMADOR VALLEY BOULEVARD



LEGEND

- Monitoring well
- Conductor casing
- Ground water elevation in feet above Mean Sea Level
- Direction of ground water flow with approximate hydraulic gradient



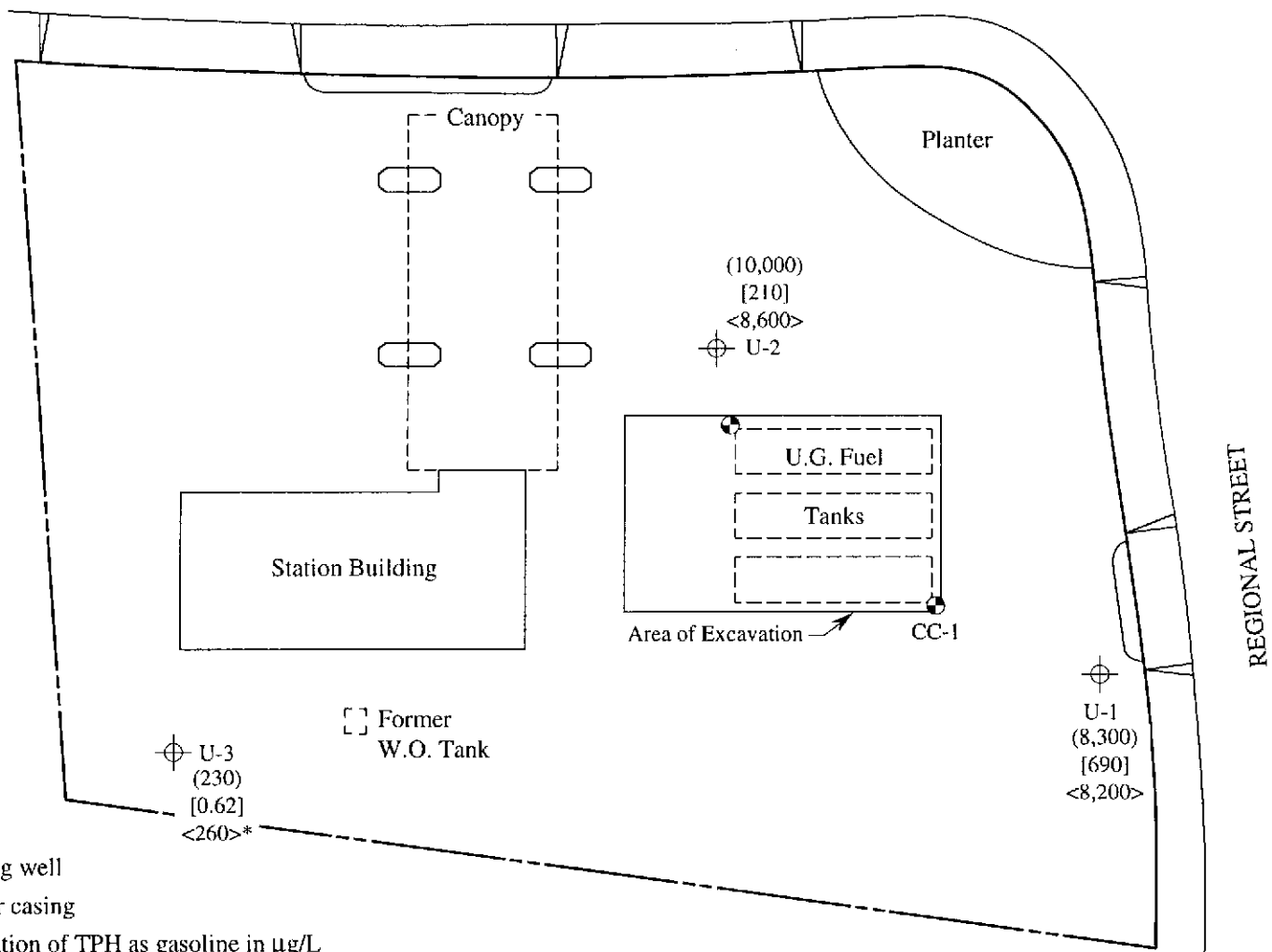
GROUND WATER FLOW DIRECTION MAP FOR THE JANUARY 11, 1996 MONITORING EVENT

UNOCAL SERVICE STATION #7176
 7850 AMADOR VALLEY BOULEVARD
 DUBLIN, CALIFORNIA



FIGURE
1

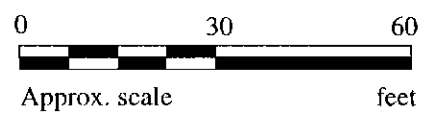
AMADOR VALLEY BOULEVARD



LEGEND

- ⊕ Monitoring well
- Conductor casing
- () Concentration of TPH as gasoline in $\mu\text{g/L}$
- [] Concentration of benzene in $\mu\text{g/L}$
- < > Concentration of TPH as diesel in $\mu\text{g/L}$
- ND Non-detectable

* The lab reported that the hydrocarbons detected did not appear to be diesel.



PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON JANUARY 11, 1996

UNOCAL SERVICE STATION #7176
7850 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA



FIGURE
2



MPDS Services	Client Project ID: Unocal #7176, 7850 Amador Valley Blvd.	Sampled: Jan 11, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript: Water	Received: Jan 11, 1996
Concord, CA 94520	Analysis Method: EPA 5030/8015 Mod./8020	Reported: Jan 31, 1996
Attention: Jarrel Crider	First Sample #: 601-0680	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Purgeable Hydrocarbons µg/L	Benzene µg/L	Toluene µg/L	Ethyl Benzene µg/L	Total Xylenes µg/L
601-0680	U-1	8,300	690	11	680	1,500
601-0681	U-2	10,000	210	55	1,400	240
601-0682	U-3	230	0.62	0.91	0.97	1.9
601-0683	ES1	ND	ND	ND	ND	ND
601-0684	ES2	ND	ND	ND	ND	ND

Detection Limits:	50	0.50	0.50	0.50	0.50
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Total Purgeable Petroleum Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as ND were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager





MPDS Services	Client Project ID: Unocal #7176, 7850 Amador Valley Blvd.	Sampled: Jan 11, 1996
2401 Stanwell Dr., Ste. 300	Matrix Descript: Water	Received: Jan 11, 1996
Concord, CA 94520	Analysis Method: EPA 5030/8015 Mod./8020	Reported: Jan 31, 1996
Attention: Jarrel Crider	First Sample #: 601-0680	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Sample Number	Sample Description	Chromatogram Pattern	DL Mult. Factor	Date Analyzed	Instrument ID	Surrogate Recovery, % QC Limits: 70-130
601-0680	U-1	Gasoline	20	1/23/96	HP-2	111
601-0681	U-2	Gasoline	100	1/23/96	HP-9	81
601-0682	U-3	Gasoline	1.0	1/21/96	HP-2	85
601-0683	ES1	--	1.0	1/21/96	HP-2	102
601-0684	ES2	--	1.0	1/21/96	HP-2	101

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager





MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #7176, 7850 Amador Valley Blvd.
Sample Matrix: Water
Analysis Method: EPA 3510/8015 Mod.
First Sample #: 601-0680

Sampled: Jan 11, 1996
Received: Jan 11, 1996
Reported: Jan 31, 1996

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 601-0680 U-1^	Sample I.D. 601-0681 U-2^	Sample I.D. 601-0682 U-3*
Extractable Hydrocarbons	50	8200	8600	260

Chromatogram Pattern:

Diesel & Unidentified Hydrocarbons <C15 >C16	Diesel & Unidentified Hydrocarbons <C15	Unidentified Hydrocarbons <C15
--	---	--------------------------------

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	1/11/96	1/11/96	1/11/96
Date Analyzed:	1/11/96	1/11/96	1/11/96
Instrument Identification:	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

Signature on File

Alan B. Kemp
Project Manager

Please Note:

* This sample does not appear to contain diesel. Unidentified hydrocarbons <C15 are probably gasoline.

^This sample appears to contain diesel and a non-diesel mixture. "Unidentified Hydrocarbons <C15" are probably gasoline; ">C16" refers to unidentified peaks in the total oil and grease range.





Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

MPDS Services	Client Project ID: Unocal #7176, 7850 Amador Valley Blvd.	Sampled: Jan 11, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript: Water, U-1 Dublin	Received: Jan 11, 1996
Concord, CA 94520	Analysis Method: EPA 8100	Extracted: Jan 17, 1996
Attention: Jarrel Crider	Lab Number: 601-0680	Analyzed: Jan 23, 1996
		Reported: Jan 31, 1996

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8100)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	25	N.D.
Acenaphthylene.....	25	N.D.
Anthracene.....	25	N.D.
Benzo (a) anthracene.....	25	N.D.
Benzo (a) pyrene.....	25	N.D.
Benzo (b) fluoranthene.....	25	N.D.
Benzo (ghi) perylene.....	25	N.D.
Benzo (k) fluoranthene.....	25	N.D.
Chrysene.....	25	N.D.
Dibenzo (a,h) anthracene.....	25	N.D.
Fluoranthene.....	25	N.D.
Fluorene.....	25	N.D.
Indeno (1,2,3-cd) pyrene.....	25	N.D.
Naphthalene.....	25	320
Phenanthrene.....	25	N.D.
Pyrene.....	25	N.D.

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

SEQUOIA ANALYTICAL, #1210

Signature on File

Alan B. Kemp
Project Manager





MPDS Services	Client Project ID: Unocal #7176, 7850 Amador Valley Blvd.	Sampled: Jan 11, 1996
2401 Stanwell Dr., Ste. 300	Sample Descript: Water, U-2 Dublin	Received: Jan 11, 1996
Concord, CA 94520	Analysis Method: EPA 8100	Extracted: Jan 17, 1996
Attention: Jarrel Crider	Lab Number: 601-0681	Analyzed: Jan 23, 1996
		Reported: Jan 31, 1996

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8100)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acenaphthene.....	25	N.D.
Acenaphthylene.....	25	N.D.
Anthracene.....	25	N.D.
Benzo (a) anthracene.....	25	N.D.
Benzo (a) pyrene.....	25	N.D.
Benzo (b) fluoranthene.....	25	N.D.
Benzo (ghi) perylene.....	25	N.D.
Benzo (k) fluoranthene.....	25	N.D.
Chrysene.....	25	N.D.
Dibenzo (a,h) anthracene.....	25	N.D.
Fluoranthene.....	25	N.D.
Fluorene.....	25	N.D.
Indeno (1,2,3-cd) pyrene.....	25	N.D.
Naphthalene.....	25	310
Phenanthrene.....	25	N.D.
Pyrene.....	25	N.D.

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

SEQUOIA ANALYTICAL, #1210

Signature on File

Alan B. Kemp
Project Manager





MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #7176, 7850 Amador Valley Blvd., Dublin
Matrix: Liquid

QC Sample Group: 6010680-684

Reported: Jan 31, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn	J. Dinsay

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Batch#:	6010645	6010645	6010645	6010645	BLK011196
Date Prepared:	1/21/96	1/21/96	1/21/96	1/21/96	1/11/96
Date Analyzed:	1/21/96	1/21/96	1/21/96	1/21/96	1/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	130	130	135	132	130
Matrix Spike Duplicate % Recovery:	115	115	115	117	133
Relative % Difference:	12	12	16	12	2.3

LCS Batch#:	1LCS012196	1LCS012196	1LCS012196	1LCS012196	LCS011196
Date Prepared:	1/21/96	1/21/96	1/21/96	1/21/96	1/11/96
Date Analyzed:	1/21/96	1/21/96	1/21/96	1/21/96	1/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B
LCS % Recovery:	115	110	115	115	130

% Recovery Control Limits:	71-133	72-128	72-130	71-120	50-150
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Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Signature on File

Alan B. Kemp
Project Manager





MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #7176, 7850 Amador Valley Blvd., Dublin
Matrix: Liquid

QC Sample Group: 6010680-684

Reported: Jan 31, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn

MS/MSD				
Batch#:	6010730	6010730	6010730	6010730
Date Prepared:	1/23/96	1/23/96	1/23/96	1/23/96
Date Analyzed:	1/23/96	1/23/96	1/23/96	1/23/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike				
% Recovery:	120	115	120	117
Matrix Spike				
Duplicate %				
Recovery:	120	115	120	117
Relative %				
Difference:	0.0	0.0	0.0	0.0

LCS Batch#:	1LCS012396	1LCS012396	1LCS012396	1LCS012396
Date Prepared:	1/23/96	1/23/96	1/23/96	1/23/96
Date Analyzed:	1/23/96	1/23/96	1/23/96	1/23/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS %				
Recovery:	115	110	120	112

% Recovery				
Control Limits:	71-133	72-128	72-130	71-120

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

Signature on File

Alan B. Kemp
Project Manager





MPDS Services
2401 Stanwell Dr., Ste. 300
Concord, CA 94520
Attention: Jarrel Crider

Client Project ID: Unocal #7176, 7850 Amador Valley Blvd., Dublin
Matrix:

QC Sample Group: 6010680-684

Reported: Jan 31, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Naphthalene	Acenaphthene	Pyrene
Method:	EPA 610	EPA 610	EPA 610
Analyst:	D. Nelson	D. Nelson	D. Nelson

MS/MSD			
Batch#:	BLK011796	BLK011796	BLK011796
Date Prepared:	1/17/96	1/17/96	1/17/96
Date Analyzed:	1/21/96	1/21/96	1/21/96
Instrument I.D.#:	GCHP-11	GCHP-11	GCHP-11
Conc. Spiked:	100 mg/L	100 mg/L	100 mg/L
Matrix Spike % Recovery:	99	81	87
Matrix Spike Duplicate % Recovery:	85	82	83
Relative % Difference:	15	1.2	4.7

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

% Recovery Control Limits:			
	30-120	30-120	30-120

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

Signature on File

Alan B. Kemp
Project Manager





Sequoia Analytical

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(916) 921-9600

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FAX (510) 988-9673
FAX (916) 921-0100

MPDS Services
2401 Stanwell Dr., Ste. 300
Concord CA 94520
Attention: Jarrel Crider

Date: 2/1/96

Sequoia Analytical has identified the presence of MTBE at a level above or equal to the taste and odor threshold of 40 µg/L in the following site(s):

Client Project I.D. - **Unocal #7176, Dublin**

Sequoia Work Order # - **9601188**

Sample Number:

Sample Description:

6010680

U-1

6010681

U-2

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager



CHAIN OF CUSTODY


9601188

SAMPLER		UNOCAL S/S # <u>7176</u> CITY: <u>DUBLIN</u>						ANALYSES REQUESTED						TURN AROUND TIME:			
								TPH-GAS BTEX	TPH- DIESEL	TOG	8010	PNA					
WITNESSING AGENCY		ADDRESS: <u>7850 AMADOR VALLEY</u> ^{BL}												REMARKS			
SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-GAS BTEX	TPH- DIESEL	TOG	8010	PNA					
U-1	1-11-96	12:30	X	X		4	WELL	X	X			X					6010680 A-D
U-2	"	12:00	X	X		4	"	X	X			X					6010681 J
U-3	"	11:30	X	X		3	"	X	X								6010682 A-C
RELINQUISHED BY:		DATE/TIME		RECEIVED BY:			DATE/TIME		THE FOLLOWING <u>MUST</u> BE COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:								
STEVE BALIAN		13:40					1-11-96		1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? <u>Y</u>								
(SIGNATURE)		1-11-96		(SIGNATURE)			1340		2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? <u>Y</u>								
(SIGNATURE)				(SIGNATURE)					3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? <u>N</u>								
(SIGNATURE)				(SIGNATURE)					4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? <u>Y</u>								
(SIGNATURE)				(SIGNATURE)					SIGNATURE:						TITLE:		
(SIGNATURE)				(SIGNATURE)											DATE: 1/11/96		

Note: All water containers to be sampled for TPHG/BTEX, 8010 & 8240 are preserved with HCL. All water containers to be sampled for Lead or Metals are preserved with HNO3. All other containers are unpreserved.

CHAIN OF CUSTODY

9601188

SAMPLER			UNOCAL					ANALYSES REQUESTED							TURN AROUND TIME:	
STEVE BALIAN			SIS # <u>7176</u> CITY: <u>DUBLIN</u>					TPH-GAS BTEX	TPH-DIESEL	TOG	8010					REGULAR
			ADDRESS: <u>7850 AMADOR VALLEY</u> SIV.													
WITNESSING AGENCY	SAMPLE ID NO.	DATE	TIME	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION								
	ES1	1-11-96		X	X		1		X						6010683	
	ES2	"		X	X		1		X						6010684	
RELINQUISHED BY:	DATE/TIME	RECEIVED BY:		DATE/TIME		THE FOLLOWING <u>MUST BE</u> COMPLETED BY THE LABORATORY ACCEPTING SAMPLES FOR ANALYSES:										
STEVE BALIAN	13.40			1-11-96		1. HAVE ALL SAMPLES RECEIVED FOR ANALYSIS BEEN STORED ON ICE? _____										
(SIGNATURE)	1-11-96	(SIGNATURE)		1340		2. WILL SAMPLES REMAIN REFRIGERATED UNTIL ANALYZED? _____										
(SIGNATURE)		(SIGNATURE)				3. DID ANY SAMPLES RECEIVED FOR ANALYSIS HAVE HEAD SPACE? _____										
(SIGNATURE)		(SIGNATURE)				4. WERE SAMPLES IN APPROPRIATE CONTAINERS AND PROPERLY PACKAGED? _____										
(SIGNATURE)		(SIGNATURE)				SIGNATURE:			TITLE:			DATE:				

Note: All water containers to be sampled for TPHG/BTEX, 8010 & 8240 are preserved with HCL. All water containers to be sampled for Lead or Metals are preserved with HN03. All other containers are