KAPREALIAN ENGINEERING
INCORPORATED

KEI-P89-0703.QR10
May 15, 1992

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

Attention: Mr. Tim Howard

RE: Quarterly Report
Unocal Service Station #3538
411 W. MacArthur Boulevard
Oakland, California

Dear Mr. Howard:

This report presents the results of the most recent quarter of monitoring and sampling of the monitoring wells at the referenced site by Kaprealian Engineering, Inc. (KEI), per KEI's proposal KEI-P89-0703.P3 dated February 28, 1991, and as modified in KEI's report KEI-P89-0703.QR7 dated August 20, 1991. The wells are currently monitored monthly, and wells MW2 and MW3 are sampled on a quarterly basis. Wells MW1 and MW4 are sampled on an annual basis. This report covers the work performed by KEI from February through April 1992.

SITE DESCRIPTION AND BACKGROUND

The subject site is presently used as a service station. The site is located on gently sloping, south-southwest trending topography, and is situated approximately 1,900 feet northwest of Glen Echo Creek. The site is also located adjacent to and west of Mosswood Park and southwest of a BP service station. A Location Map, Site Vicinity Map, and Site Plans are attached to this report.

KEI's initial work at the site began in July of 1989, when KEI was retained by Unocal to collect soil samples following the removal of two underground gasoline storage tanks and one waste oil tank at the site. The tanks consisted of one 10,000 gallon super unleaded gasoline tank, one 12,000 gallon regular unleaded gasoline tank, and one 550 gallon waste oil tank. No apparent holes or cracks were observed in the fuel tanks; however, the waste oil tank had four small holes. Water was encountered in the fuel tank pit at a depth of 10.5 feet below grade, thus prohibiting sampling directly from beneath the fuel tanks. Six sidewall samples, labeled SW1, SW1(4), SW2, SW3, SW4, and SW4(2), were collected from the fuel tank pit at depths of 10 feet below grade. The soil sample collected from beneath the waste oil tank, labeled WO1, was collected at a depth of 8.5 feet below grade. KEI also collected four samples, labeled P1 through P4, from the piping trenches at

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510.602.5100 Fax: 510.687.0602

depths of 5 to 10 feet below grade (the sample point locations are as shown on the attached Site Plan, Figure 2). After sampling, ground water was pumped from the fuel tank pit. Since there was no recharge, a water sample was not collected. All samples were analyzed by Sequoia Analytical Laboratory in Redwood City, California, for total petroleum hydrocarbons (TPH) as gasoline, and benzene, toluene, xylenes, and ethylbenzene (BTX&E). In addition, the waste oil tank sample was also analyzed for TPH as diesel, total oil and grease (TOG), and EPA methods 8010 and 8270 compounds.

The analytical results of the fuel tank pit soil samples showed levels of TPH as gasoline ranging from non-detectable to 11 ppm, except for sample SW1, which showed 3,100 ppm of TPH as gasoline. However, following excavation of approximately 4 feet of the sidewall where sample SW1 was collected, an additional sample, labeled SW1(4), was collected, analyzed, and indicated non-detectable levels of TPH as gasoline and BTX&E. The soil sample collected from the waste oil pit showed non-detectable levels of TPH as gasoline, TPH as diesel, and BTX&E, with TOG levels at 36 ppm. The results of the soil analyses are summarized in Table 3. Documentation of the tank and piping removal procedures, sample collection techniques, and analytical results from the tank excavation are summarized in KEI's report (KEI-J89-0703.R1) dated July 31, 1989. To comply with the requirements of the regulatory agencies and based on the results of the laboratory analyses, KEI recommended the installation of four monitoring wells.

On September 6 and 7, 1989, four two-inch diameter monitoring wells, designated as MW1, MW2, MW3, and MW4 on the attached Site Plan, Figure 1, were installed at the site. The four wells were each drilled and completed to total depths ranging from 29 to 30 feet below grade. Ground water was encountered at depths ranging from 19 to 19.5 feet beneath the surface during drilling. The wells were developed on September 12, 1989, and were initially sampled on September 15, 1989.

Water and selected soil samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California. Samples were analyzed for TPH as gasoline and BTX&E. In addition, the sample collected from monitoring well MW1 was analyzed for TPH as diesel, TOG, and EPA method 8010 constituents. Analytical results of the soil samples collected from the borings for the monitoring wells showed levels of TPH as gasoline ranging from non-detectable to 20 ppm. TPH as diesel and EPA method 8010 compounds were non-detectable in all samples collected from MW1. All TOG levels in MW1 were less than 50 ppm. Benzene levels were non-detectable in all samples, except MW2 at 19 feet and MW3 at 10 feet, which were 1.5 ppm and 0.29 ppm, respectively. The analytical results of water samples collected

from the monitoring wells MW1 through MW4 indicated non-detectable levels of benzene. Analytical results of the water sample collected from MW1 also revealed non-detectable levels of TPH as diesel, less than 50 ppm of TOG, and non-detectable levels of all EPA method 8010 constituents, except for 2.7 ppb of tetrachloroethene (PCE). TPH as gasoline levels were 290 ppb in MW2, 32 ppb in MW3, and non-detectable in wells MW1 and MW4. The results of the soil samples are summarized in Table 3, and results of the water samples are summarized in Table 2. Documentation of the monitoring well installation procedures, sample collection techniques, and analytical results are presented in KEI's report (KEI-P89-0703.R5) dated October 23, 1989. Based on these analytical results, KEI recommended the implementation of a monthly monitoring and quarterly sampling program. The monthly monitoring and quarterly sampling was initiated in November of 1989.

Based on the contaminant levels detected in monitoring wells MW2 and MW3 in subsequent quarters, KEI recommended the installation of two additional monitoring wells (see the attached Site Vicinity Map) in KEI's fifth quarterly report (KEI-P89-0703.QR5) dated February 28, 1991. KEI considered proposing the installation of monitoring wells in the median strip in the center of MacArthur Boulevard; however, access is precluded due to the presence of underground utilities and trees.

RECENT FIELD ACTIVITIES

All four existing wells (MW1 through MW4) were monitored three times and monitoring wells MW2 and MW3 were sampled once during the quarter. Wells MW1 and MW4 are currently sampled annually and were thus not sampled this quarter. During monitoring, the wells were checked for depth to water and the presence of free product. During sampling, wells MW2 and MW3 were also checked for the presence of sheen. No free product or sheen was noted in any of the wells during the quarter. Monitoring data are summarized in Table 1.

Water samples were collected from wells MW2 and MW3 on April 14, 1992. Prior to sampling, the wells were purged of 7 and 6 gallons, respectively, by the use of a surface pump. Samples were then collected by the use of a clean Teflon bailer. The water samples were decanted into clean VOA vials that were then sealed with Teflon-lined screw caps and stored in a cooler, on ice, until delivery to the state-certified laboratory.

HYDROLOGY AND REGIONAL GEOLOGY

Based on the water level data gathered on April 14, 1992, the ground water flow direction appeared to be generally toward the

east, which is relatively unchanged from the previous quarter. The average hydraulic gradient at the site on April 14, 1992, was approximately 0.01. Water levels have fluctuated during the quarter, showing a net increase of 0.29 to 0.33 feet in all wells since January 15, 1992. The measured depth to ground water at the site on April 14, 1992, ranged between 17.81 and 18.10 feet below grade.

Based on review of regional geologic maps (U.S. Geological Survey Professional Paper 943 "Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties, and their Importance to Comprehensive Planning" by E.J. Helley and K.R. Lajoie, 1979), the subject site is underlain by Late Pleistocene Alluvium (Qpa). These materials, considered to be alluvial fan deposits, are described as consisting of weakly consolidated, slightly weathered, irregular interbedded clay, silt, sand, and gravel. The maximum thickness of these deposits is unknown, but is considered to be at least 150 feet thick.

The results of our previous subsurface study (the logs of borings for MW1 through MW4) indicate that the site is underlain by alluvial materials to at least the maximum depth explored (30.5 feet below grade). The alluvium materials underlying the site typically consist of clay with variable amounts of sand and/or gravel to depths below grade of 16.5 to 21 feet, with occasional lenses of sand and gravel (see log of MW2). The upper clay zone is in turn underlain by a coarse-grained zone consisting of gravel and/or sand lenses, which range in thickness from a minimum of 8 feet up to a maximum of about 11.5 feet. This coarse-grained zone appears to be underlain by a second clay zone, which was generally encountered at depths below grade of about 27.5 to 29 feet (except in the vicinity of well MW3, where clayey gravel was encountered to the maximum depth explored of 29 feet below grade). Immediately underlying the surface of the site is a relatively thin layer of artificial fill materials that varies in thickness from 1 to 2 feet.

ANALYTICAL RESULTS

The ground water samples collected from wells MW2 and MW3 were analyzed at Sequoia Analytical Laboratory in Concord, California, and were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for TPH as gasoline by EPA method 5030 in conjunction with modified 8015, and BTX&E by EPA method 8020.

The analytical results of the ground water samples collected from monitoring wells MW2 and MW3 indicated levels of TPH as gasoline at concentrations of 150 ppb and 14,000 ppb, respectively. Benzene

was detected in monitoring wells MW2 and MW3 at concentrations of 6.2 ppb and 660 ppb, respectively. Concentrations of TPH as gasoline and benzene detected in ground water samples collected on April 14, 1992, are shown on the attached Site Plan, Figure 1a. The results of the analyses are summarized in Table 2. Copies of the analytical results and Chain of Custody documentation are attached to this report.

DISCUSSION AND RECOMMENDATIONS

Based on the analytical results collected and evaluated to date, KEI recommends the continuation of the current sampling program of the existing wells, per KEI's proposal (KEI-P89-0703.P3) dated February 28, 1991, and as modified in KEI's quarterly report (KEI-P89-0703.QR7) dated August 20, 1991.

KEI has obtained the necessary permits for the installation of two off-site monitoring wells, as proposed in KEI's work plan/proposal (KEI-P89-0703.P3) dated February 28, 1991. KEI understands that Unocal and the City of Oakland are still finalizing an off-site access agreement for the installation of well MW5. The approximate locations of the two proposed off-site wells are shown on the attached Site Vicinity Map. KEI is prepared to install the wells as soon as access permission from the City of Oakland is granted.

DISTRIBUTION

A copy of this report should be sent to the Alameda County Health Care Services Agency, and to the Regional Water Quality Control Board, San Francisco Bay Region.

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. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this study are based on the data obtained from the field and laboratory analyses obtained from a state-certified laboratory. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, regarding the above, including laboratory analyses, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

Should you have any questions regarding this report, please do not hesitate to call me at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

Thomas J. Berkins
Senior Environmental Engineer

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

License No. 1633
Exp. Date 6/30/92

Timothy R. Ross
Project Manager

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Attachments: Tables 1, 2 & 3
Location Map
Site Vicinity Map
Site Plans - Figures 1, 1a & 2
Laboratory Analyses
Chain of Custody documentation

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May 15, 1992

TABLE 1

SUMMARY OF MONITORING DATA

Well No.	Ground Water Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Sheen	Water Purged (gallons)
(Monitored and Sampled on April 14, 1992)					
MW1*	82.94	17.88	0	--	0
MW2	82.04	17.96	0	No	7
MW3	82.31	18.10	0	No	6
MW4*	82.54	17.81	0	--	0
(Monitored on March 13, 1992)					
MW1	83.84	16.98	0	--	0
MW2	82.53	17.47	0	--	0
MW3	82.80	17.61	0	--	0
MW4	83.12	17.23	0	--	0
(Monitored on February 15, 1992)					
MW1	83.84	16.98	0	--	0
MW2	82.50	17.50	0	--	0
MW3	82.74	17.67	0	--	0
MW4	83.06	17.29	0	--	0

Well No.	Well Cover Elevation (feet)**
MW1	100.82
MW2	100.00
MW3	100.41
MW4	100.35

* Monitored only.

** The elevations of the tops of the well covers have been surveyed relative to an assumed datum of 100.00 feet at the of top of MW2 well cover.

-- Sheen determination was not performed.

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TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Sample Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	PCE
4/14/92	MW2	--	150	6.2	ND	1.4	ND	--
	MW3	--	14,000	660	48	2,000	560	--
1/15/92	MW2	--	220	37	0.52	7.0	1.1	--
	MW3	--	3,000	590	14	750	310	--
10/15/91	MW2	--	140	44	0.56	12	1.5	--
	MW3	--	3,100	390	34	390	150	--
7/15/91	MW1*	ND	ND	ND	ND	ND	ND	1.8
	MW2	--	2,200	770	12	370	72	--
	MW3	--	9,200	1,300	230	1,900	490	--
	MW4	--	ND	ND	ND	ND	ND	--
4/12/91	MW1*	ND	ND	ND	ND	ND	ND	2.0
	MW2	--	2,200	160	4.3	62	23	--
	MW3	--	880	170	1.1	110	34	--
	MW4	--	ND	ND	ND	ND	ND	--
1/15/91	MW1*	ND	ND	ND	ND	ND	ND	2.1
	MW2	--	680	170	0.7	81	19	--
	MW3	--	3,200	460	1.5	270	120	--
	MW4	--	ND	ND	ND	ND	ND	--
10/16/90	MW1*	ND	ND	ND	ND	ND	ND	2.0
	MW2	--	1,400	430	2.0	240	48	--
	MW3	--	740	210	1.4	82	2.5	--
	MW4	--	ND	ND	ND	ND	ND	--
7/17/90	MW1*	ND	ND	ND	ND	ND	ND	1.7
	MW2	--	490	76	0.59	46	11	--
	MW3	--	4,000	270	48	250	130	--
	MW4	--	ND	ND	ND	ND	ND	--
4/19/90	MW1*	ND	ND	ND	ND	ND	ND	2.2
	MW2	--	3,900	550	5.1	390	91	--
	MW3	--	3,100	600	27	220	54	--
	MW4	--	ND	ND	0.48	ND	ND	--

TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Sample Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	PCE
1/23/90	MW1**	ND	ND	1.5	2.3	4.3	ND	2.1
	MW2	--	400	73	36	40	10	--
	MW3	--	450	110	1.2	11	4.4	--
	MW4	--	ND	ND	0.40	ND	ND	--
9/15/89	MW1***	ND	ND	ND	0.61	ND	ND	2.7
	MW2	--	290	ND	12	ND	ND	--
	MW3	--	32	ND	ND	ND	ND	--
	MW4	--	ND	ND	ND	ND	ND	--
Detection Limits		50	30	0.30	0.30	0.30	0.3	0.50

-- Indicates analysis was not performed.

* TOG was non-detectable. All EPA method 8010 compounds were non-detectable, except for PCE.

** TOG was 1.5 ppm. All EPA method 8010 compounds were non-detectable, except for PCE.

*** TOG was <50 ppm. All EPA method 8010 compounds were non-detectable, except for PCE.

ND = Non-detectable.

Results in parts per billion (ppb), unless otherwise indicated.

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TABLE 3

SUMMARY OF LABORATORY ANALYSES
SOIL

Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
(Collected on July 12 & 17, 1989)							
SW1	10.0	--	3,100	12	300	730	110
SW1(4)	10.0	--	ND	ND	ND	ND	ND
SW2	10.0	--	1.1	0.10	ND	0.18	ND
SW3	10.0	--	5.7	0.26	ND	0.45	0.23
SW4	10.0	--	2.5	ND	ND	0.24	ND
SW4(2)	10.0	--	11	0.61	0.51	1.3	0.44
P1	6.5	--	ND	ND	ND	ND	ND
P2	6.5	--	ND	ND	ND	ND	ND
P3	5.5	--	ND	ND	ND	ND	ND
P4	10.0	--	170	0.71	12	47	6.8
WO1*	8.5	ND	ND	ND	ND	ND	ND
(Collected on September 6 & 7, 1989)							
MW1**	5.0	ND	3.4	ND	ND	ND	ND
MW1**	10.0	ND	5.0	ND	ND	ND	ND
MW1**	15.0	ND	2.2	ND	ND	ND	ND
MW1**	19.0	ND	ND	ND	ND	ND	ND
MW2	5.0	--	1.4	ND	ND	ND	ND
MW2	10.0	--	ND	ND	ND	ND	ND
MW2	15.0	--	1.8	ND	ND	ND	ND
MW2	19.0	--	13	1.5	2.1	1.8	0.34
MW3	5.0	--	1.3	ND	ND	ND	ND
MW3	10.0	--	1.8	0.29	ND	ND	ND
MW3	15.0	--	3.3	ND	ND	ND	ND
MW3	18.5	--	ND	ND	ND	ND	ND
MW4	5.0	--	3.1	ND	ND	ND	ND
MW4	10.0	--	17	ND	ND	0.10	ND
MW4	15.0	--	20	ND	ND	0.27	ND
MW4	18.5	--	2.1	ND	ND	ND	ND
Detection Limits		1.0	1.0	0.05	0.1	0.1	0.11

TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
SOIL

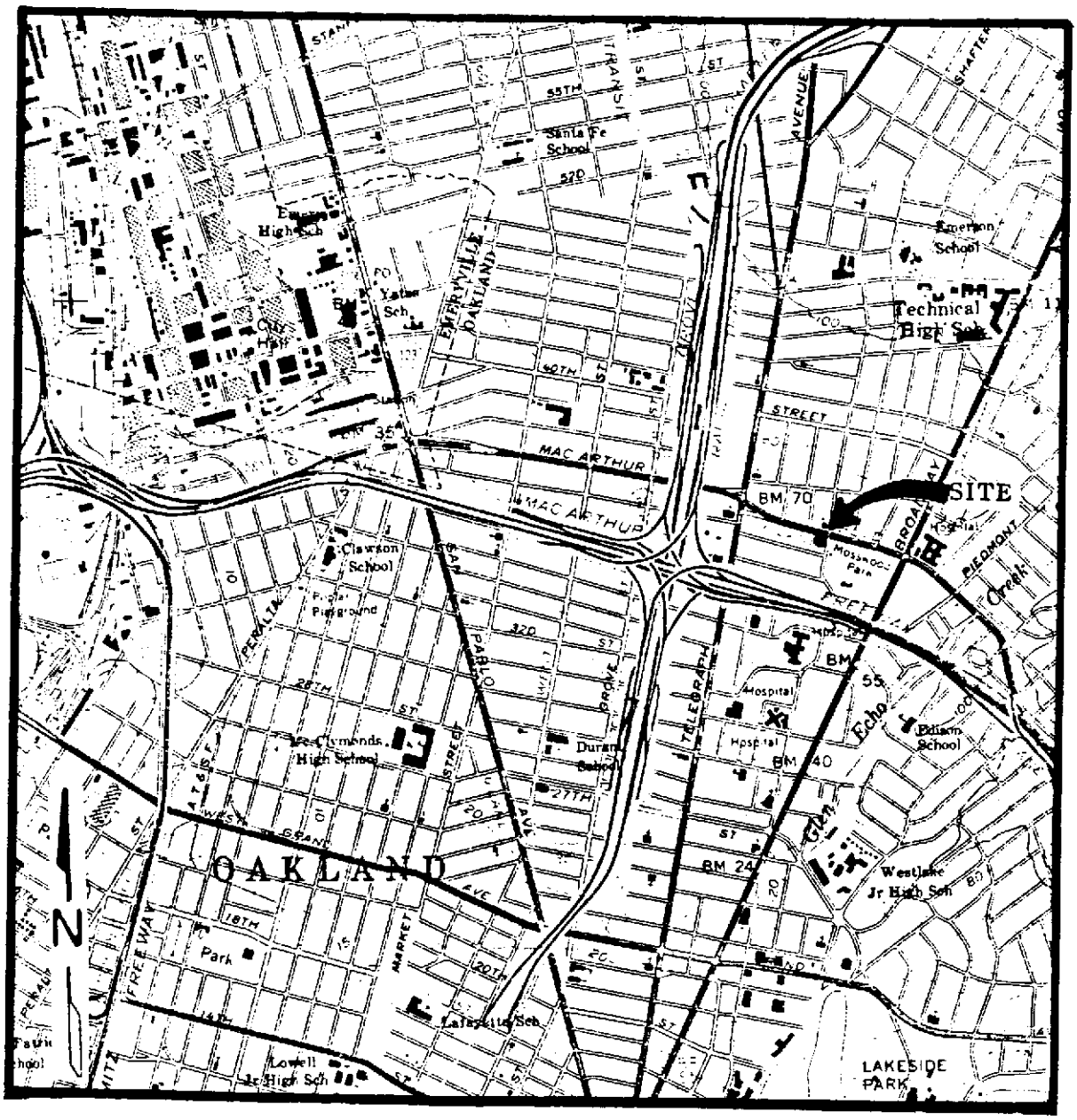
* TOG was 36 ppm, and EPA method 8010 and 8270 constituents were non-detectable.

** TOG was <50 ppm for these samples. EPA method 8010 compounds were non-detectable for these samples.

ND = Non-detectable.

-- Indicates analysis not performed.

Results in parts per million (ppm), unless otherwise indicated.



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

0 2000 4000

Approx. scale feet

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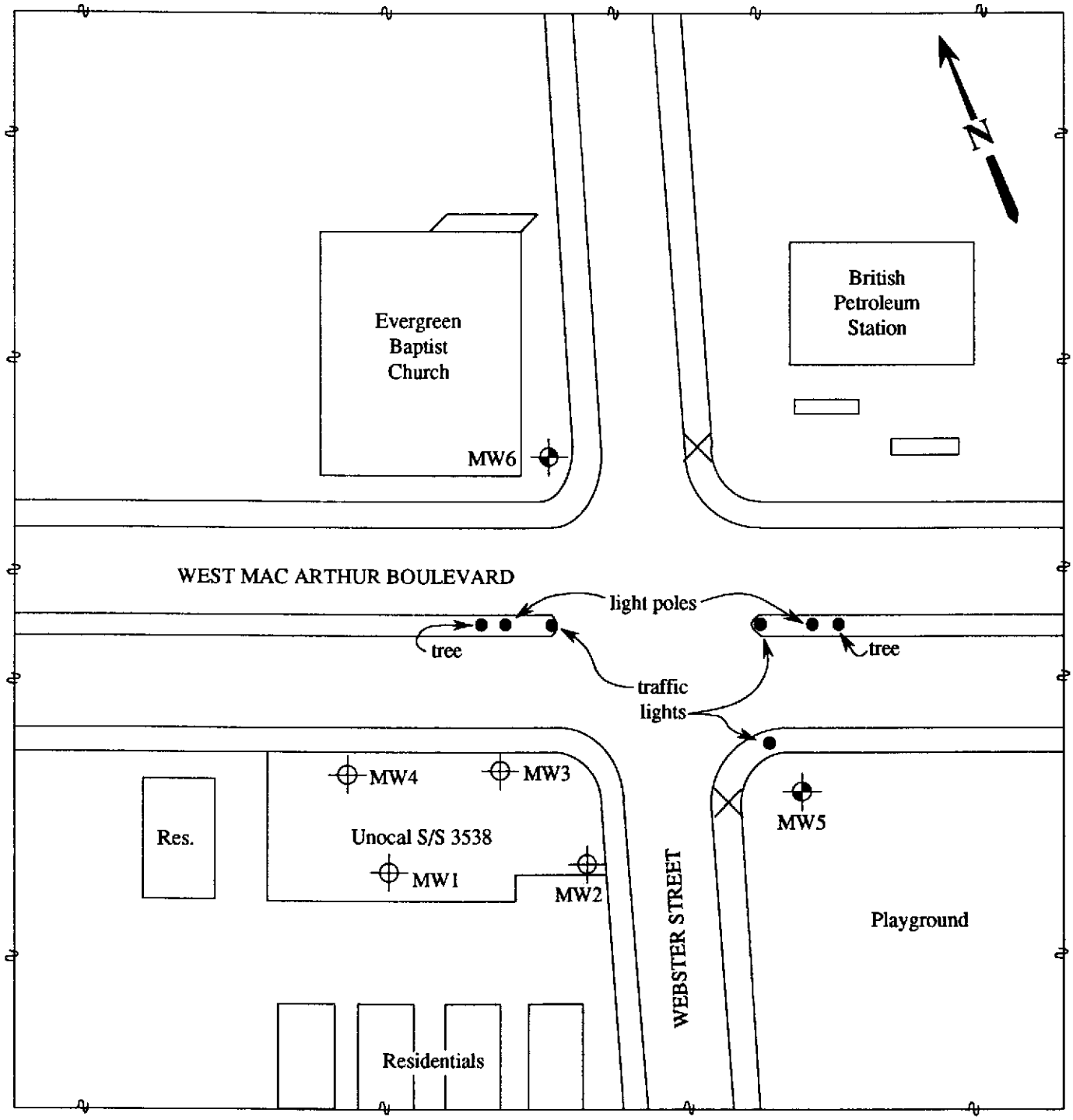
UNOCAL SERVICE STATION # 3538
411 W. MACARTHUR BOULEVARD
OAKLAND, CA

LOCATION MAP



LEGEND

- Monitoring well (existing)
- Monitoring well (proposed)
- Utility pole and overhead lines

0 60 120

Approx. scale feet

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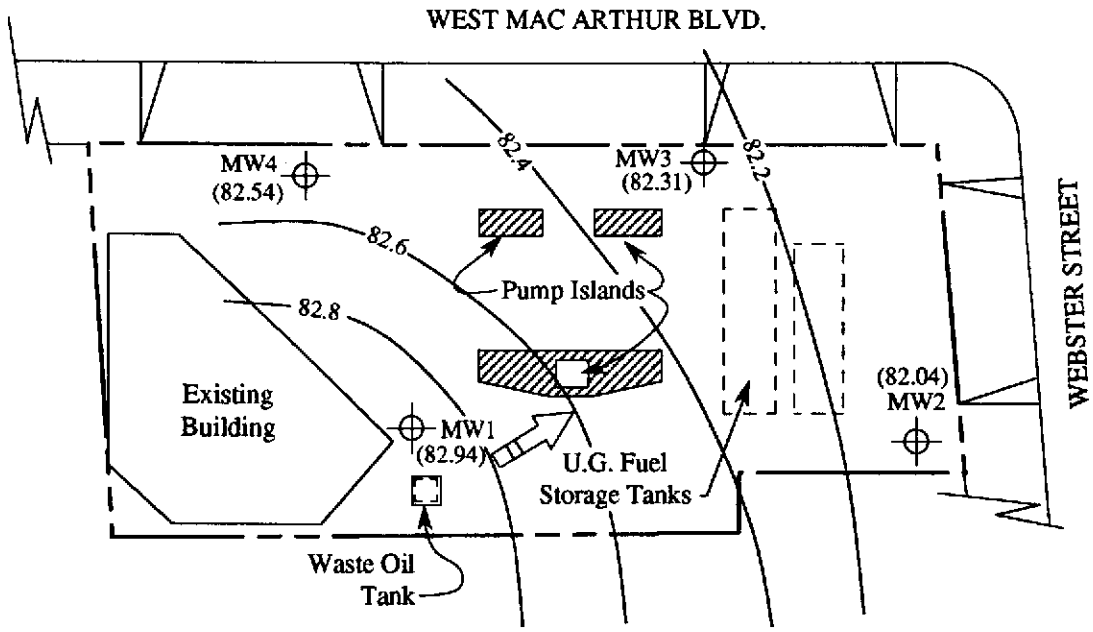
UNOCAL SERVICE STATION # 3538
411 W. MACARTHUR BOULEVARD
OAKLAND, CA

SITE
VICINITY
MAP



SITE PLAN

LEGEND

- Monitoring well
- ( ) Ground water elevation in feet on 4/14/92
  Top of MW2 well cover assumed 100.00
  feet as datum.
- Direction of ground water flow
- Contours of ground water elevation

0 30 60

Approx. scale feet

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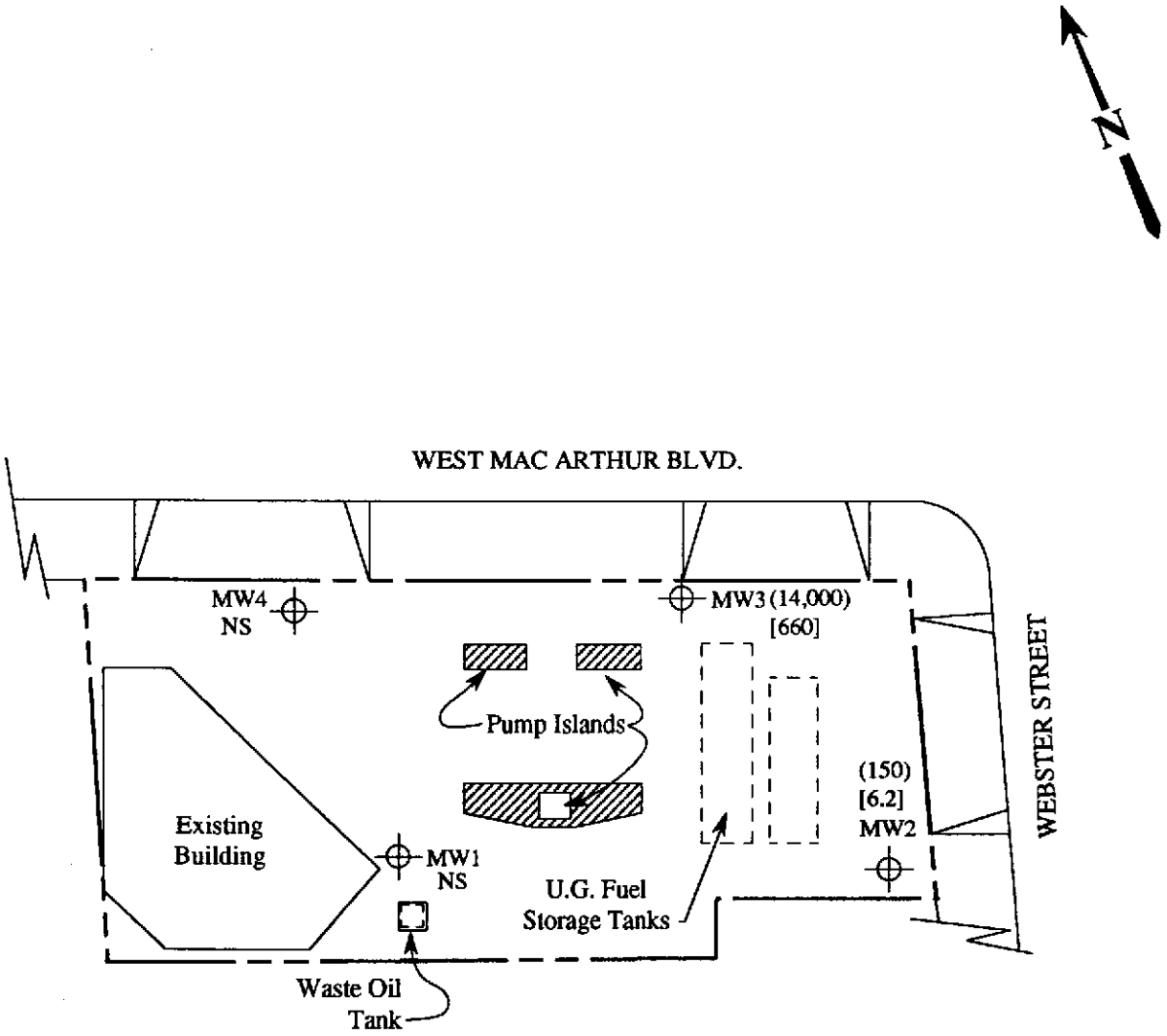
411 W. MACARTHUR BOULEVARD
OAKLAND, CA

FIGURE
1



SITE PLAN

(Samples collected on 4/14/92)

LEGEND

⊕ Monitoring well

( ) Concentrations of TPH as gasoline in ppb

[ ] Concentrations of benzene in ppb

ND = Non-detectable

NS = Not sampled

0 30 60

Approx. scale feet

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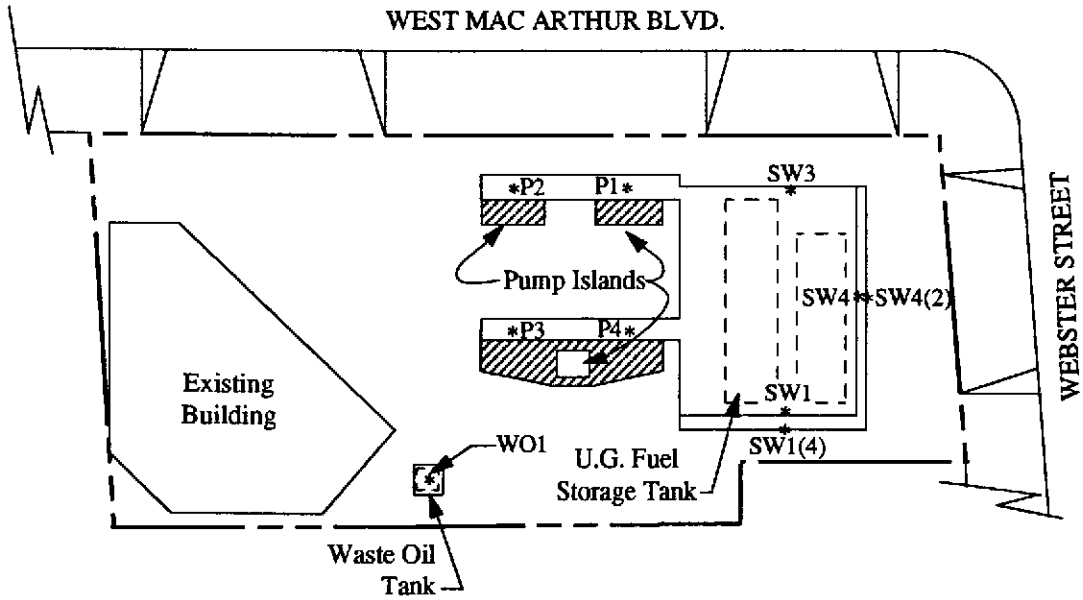
OAKLAND, CA

FIGURE
1a



SITE PLAN

LEGEND

* Sample point location

0 30 60

Approx. scale feet

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INCORPORATED

UNOCAL SERVICE STATION # 3538
411 W. MACARTHUR BOULEVARD
OAKLAND, CA

FIGURE
2

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Kapreallan Engineering, Inc.	Client Project ID:	Unocal, 411 W. MacArthur Blvd., Oakland	Sampled:	Apr 14, 1992
2401 Stanwell Drive	Matrix Descript:	Water	Received:	Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 20, 1992
Attention: Mardo Kaprealian, P.E.	First Sample #:	204-0633	Reported:	Apr 28, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
204-0633	MW-2	150	6.2	N.D.	N.D.	1.4
204-0634	MW-3	14,000	660	48	560	2,000
Method Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

2040633.KEI <1>

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Kaprealian Engineering, Inc.
2401 Stanwell Drive
Concord, CA 94520
Attention: Mardo Kaprealian, P.E.

Client Project ID: Unocal, 411 W. MacArthur Blvd., Oakland
QC Sample Group: 2040633-634
Reported: Apr 28, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020
Analyst:	J.F.	J.F.	J.F.	J.F.
Reporting Units:	ug/L	ug/L	ug/L	ug/L
Date Analyzed:	Apr 21, 1992	Apr 21, 1992	Apr 21, 1992	Apr 21, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	20	20	20	60
Conc. Matrix Spike:	17	17	19	54
Matrix Spike % Recovery:	85	85	95	90
Conc. Matrix Spike Dup.:	17	17	19	55
Matrix Spike Duplicate % Recovery:	85	85	95	92
Relative % Difference:	0.0	0.0	0.0	1.8

Laboratory blank contained the following analytes: None Detected

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

% Recovery:	$\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}}$	x 100
Relative % Difference:	$\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}}$	x 100

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Kaprealian Engineering, Inc.
P.O. Box 996
Benicia, CA 94510
Attention: Mardo Kaprealian, P.E.

Client Project ID: Unocal, 411 W. MacArthur Blvd., Oakland
QC Sample Group: 2040633-634
Reported: Apr 28, 1992

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020
Analyst:	J.F.	J.F.	J.F.
Reporting Units:	ug/L	ug/L	ug/L
Date Analyzed:	Apr 21, 1992	Apr 21, 1992	Apr 21, 1992
Sample #:	204-0633	204-0634	Blank
Surrogate % Recovery:	93	81	92

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER	SITE NAME & ADDRESS	ANALYSES REQUESTED	TURN AROUND TIME:
Vartkes	Unocal / Oakland 411 W. MacArthur Blvd.	TPHG : BTXE	Regular.
WITNESSING AGENCY			

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPHG : BTXE						REMARKS
MW-2	4/14/92	12:30 pm.		✓	✓		2	Monitoring Well	✓						2040633AB
MW-3	"	1:05 pm.		✓	✓		2	" "	✓						↓ 634AB

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
W. Thachafian	4/14/92 2:10 pm	Jim Catttt 4/14/92 2:10pm
MK	4/15 3:30p	Ken Spaulding Exenton
Ken Spaulding	4/15/92 5:05 pm	Kevin Van Slootwork

The following MUST BE completed by the laboratory accepting samples for analysis:

1. Have all samples received for analysis been stored in ice? Y
2. Will samples remain refrigerated until analyzed? Y
3. Did any samples received for analysis have head space? N
4. Were samples in appropriate containers and properly packaged? Y

Signature	Title	Date
J.C.	Analyst	4/14