KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

KEI-P89-0111.QR7
March 11, 1991

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

Attention: Mr. Ron Bock

RE: Quarterly Report
Unocal Service Station #5487
28250 Hesperian Blvd.
Hayward, California

Dear Mr. Bock:

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 proposal KEI-P89-0111.P3 dated June 4, 1990. The wells are currently monitored and sampled on a quarterly basis. This report covers the work performed by KEI from December, 1990 through February, 1991.

SITE DESCRIPTION AND BACKGROUND

The subject site is presently used as a gasoline station. The vicinity of the site is characterized by gently sloping, south-southwest trending topography, and is located approximately 0.8 miles northwest of Alameda Creek and approximately 4 miles northeast of the present shoreline of San Francisco Bay. A Location Map and Site Plans are attached to this report.

KEI's work at the site began on January 30, 1989 when KEI was asked to collect soil samples following the removal of two 10,000 gallon underground fuel storage tanks and one 280 gallon waste oil tank at the site. The tanks were made of steel and no apparent holes or cracks were observed in the fuel tanks; however, the waste oil tank was corroded. Water was encountered in the excavation at a depth of 10.5 feet, thus prohibiting the collection of any soil samples from beneath the tanks. Ten soil samples, labeled SW1 through SW6 and SW2A, SW3A, SW5A and SW6A, were collected from the sidewalls of the fuel tank pit at a depth of approximately six inches above the water table. The samples SW2A, SW3A, SW5A and SW6A were collected from the sidewalls after additional excavation (see the attached Site Plan, Figure 2). One soil sample, labeled WO1, was collected from beneath the waste oil tank at a depth of 9 feet (see the attached Site Plan, Figure 2). After the soil sampling was

completed, approximately 2,000 gallons of ground water was pumped from the fuel tank pit.

On February 1, 1989, the waste oil tank pit was excavated laterally on all sides. The side nearest the existing building was excavated approximately 1 foot laterally, while the other three sides were excavated approximately 10 feet laterally each. The pit was excavated to approximately 21 feet by 29 feet. Four sidewall samples (labeled SWA, SWB, SWC and SWD) were collected (see the attached Site Plan, Figure 3). In addition, three soil samples were collected from the pipe trenches (labeled P1, P2 and P3) also shown on the attached Site Plan, Figure 3.

On February 14, 1989, in preparation for setting of the new fuel tanks, approximately 17,500 gallons of water was pumped from the fuel tank pit. On this date, after pumping, water samples W1A and W1B were then collected.

On February 17, 1989 KEI returned to the site to observe additional excavation of the northeast sidewall of the waste oil tank pit (SW-C) for a distance of approximately 3 feet. Sample SW-C2 was then collected. Also on this date, a water sample (WO-W1) was collected from the waste oil tank pit. The water sample was taken after having pumped 4,500 gallons from the waste oil excavation. Based on the analytical results from SWC2 (680 ppm of TOG), KEI returned to the site on February 24, 1989 to observe excavation of an additional 5 feet of soil. Soil sample SW-C3 was then collected. Sample locations are shown on the attached Site Plans, Figures 2 through 5.

Soil and water 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). The waste oil tank pit samples were also analyzed for TPH as diesel, total oil and grease (TOG), EPA method 8010 and EPA method 8270 constituents, and the metals - cadmium, chromium, lead and zinc. All pipe trench samples were analyzed for TPH as gasoline and BTX&E. After additional excavation, analytical results of soil samples from the fuel tank pit showed less than 1.4 ppm of TPH as gasoline for all samples representing the final pit excavation. After additional excavation in the waste oil pit, the soil sample analytical results showed low residual levels of contamination, indicating that the majority of contaminated soil had been excavated.

Based on the results of the laboratory analyses, and in order to comply with the requirements of the regulatory agencies, KEI proposed the installation of five monitoring wells. Documentation of sample collection and results of the soil and ground water samples collected in January and February, 1989, are summarized in

KEI's reports (KEI-J89-0111.R2) dated March 1, 1989 and (KEI-J89-0111.R3) March 29, 1990. Results of soil sample analyses are summarized in Tables 4 and 5, and water sample analyses in Table 3.

Five two-inch diameter monitoring wells, designated as MW1 through MW5 on the attached Site Plan, Figure 1, were installed on April 20 and 21, 1989. The five wells were drilled and completed to total depths ranging from 24 to 28 feet. Ground water was encountered at depths ranging from 7 to 10 feet beneath the surface during drilling. The wells were developed on April 25, 1989, and initially sampled on April 26, 1989.

Water and selected soil samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California, for TPH as gasoline and BTX&E. In addition, the soil samples collected from MW1 and MW2 and all the water samples were analyzed for TPH as diesel, TOG and EPA method 8010 compounds. Analytical results of soil samples collected from the borings for monitoring wells MW1 through MW4 showed non-detectable levels of TPH as gasoline and BTX&E, except for sample MW4(9), collected at a depth of 9 feet, which showed 1.4 ppm of TPH as gasoline. The soil sample collected from MW5, at a depth of 5 feet, showed 900 ppm of TPH as gasoline and 3.1 ppm of benzene. Analytical results of water samples, collected from MW1 and MW4, showed benzene levels of 2.1 ppb and 0.33 ppb, respectively. Analytical results for all other water samples indicated non-detectable levels for all constituents analyzed. Documentation of the installation, development and sampling of the monitoring wells is presented in KEI's report (KEI-P89-0111.R5) dated May 18, 1989. Soil sample analyses from that report are summarized in Table 6, and water sample analyses in Table 2.

Subsequently, KEI proposed a monthly monitoring and quarterly sampling program of existing wells which was initiated in June, 1989, which has been modified to quarterly monitoring and sampling as of January, 1991, as recommended in KEI's quarterly report (KEI-P89-0111.QR6) dated January 4, 1991.

RECENT FIELD ACTIVITIES

The five wells were monitored two times and sampled once during the quarter. During monitoring, the wells were checked for depth to water and presence of free product and sheen. No free product or sheen was noted in any of the wells during the quarter. Monitoring and purging data are summarized in Table 1.

Water samples were collected from the wells on February 11, 1991. Prior to sampling, the wells were each purged of between 15 to 20 gallons. Samples were then collected using a clean Teflon bailer. Samples were decanted into clean VOA vials and/or one liter amber bottles as appropriate, which were sealed with Teflon-lined screw

caps and stored in a cooler on ice until delivery to the state certified laboratory.

HYDROLOGY AND GEOLOGY

Based on the water level data gathered during the quarter, ground water flow direction generally appeared to be toward the northeast with an average gradient of approximately .008 on February 11, 1991, relatively unchanged from the previous quarter. Water levels have increased during the quarter, showing a net increase of between 0.58 and 0.81 feet in all of the wells since November 15, 1990. The measured depth to ground water at the site on February 11, 1991 ranged between 7.11 and 8.45 feet.

Based on review of regional geologic maps (U.S. Geological Survey Professional Paper 943 "Flatland Deposits - 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 Holocene-age coarse-grained alluvium (Qhac). The coarse-grained alluvium typically consists of unconsolidated, moderated sorted sand and silt materials with local gravel lenses. In addition, the site is situated closely adjacent to a mapped geologic contact with Holocene-age medium-grained alluvium (Qham), which is described as typically consisting of unconsolidated fine sand, silt, and clayey silt with a trace of coarse sand.

The results of our previous subsurface investigation (borings for MW1 through MW5) indicate that the site is predominantly underlain by sandy to silty clay materials. However, in the vicinity of MW1 and MW4, the relatively thick sequence of clay materials are underlain by a clayey sand bed at a depth of about 24 feet in MW1 and about 23 feet in MW4, and extend to the maximum depth explored (28 feet). Clayey sand materials were not encountered in MW2, MW3 or MW5.

ANALYTICAL RESULTS

Water samples 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 using EPA method 5030 in conjunction with modified 8015, and BTX&E using EPA method 8020. In addition, the sample from MW1 was analyzed for TPH as diesel using EPA method 3510 in conjunction with modified 8015, TOG using Standard Method 5520B&F, and halogenated volatile organics using EPA method 8010.

Analytical results of the ground water samples collected from monitoring wells MW1 through MW4, indicate non-detectable levels of TPH as gasoline and BTX&E. Analytical results of the ground water sample collected from MW5 showed a level of TPH as gasoline at 58

ppb, with benzene at 23 ppb. Analytical results of the ground water sample collected from well MW1 also indicated non-detectable levels of TPH as diesel, TOG and EPA method 8010 constituents. 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 and no evidence of free product or sheen in any of the wells, KEI recommends continuation of the quarterly monitoring and sampling program of the existing wells for two additional quarters. In addition, KEI recommends discontinuation of TPH as diesel, TOG and EPA method 8010 analyses for monitoring well MW1, since the analytical results have been non-detectable for the last six quarters.

The contamination levels of TPH as gasoline detected in monitoring well MW5 has varied from non-detectable up to 4,400 ppb, and has fluctuated widely as indicated on Table 2. Also, as well MW5 is upgradient from potential on-site source areas, it is considered probable that the intermittent contamination is from an upgradient off-site source. KEI will inspect the vicinity of the site for possible source areas of off-site contamination and review the files of the Regional Water Quality Control Board (RWQCB) with the results submitted in the next quarterly report. Also, KEI recommends a duplicate water sample be collected from monitoring well MW5 next quarter for quality assurance purposes.

DISTRIBUTION

A copy of this report should be sent to the Alameda County Department of Public Health, to the City of Hayward, and to the RWQCB, 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.

If you have any questions regarding this report, please do not hesitate to call me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

Thomas J. Berkins
Senior Environmental Engineer

Don R. Braun
Certified Engineering Geologist

License No. 1310
Exp. Date 6/30/92

\bam:jad

Attachments: Tables 1 through 6
Location Map
Site Plans - Figures 1 through 5
Laboratory Analyses
Chain of Custody documentation

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TABLE 1

SUMMARY OF MONITORING DATA

Date	Well No.	Ground Water Elevation (feet)	Depth to Water (feet)	Product Thickness	Sheen	Water Bailed (gallons)
2/11/91	MW1	91.95	8.05	0	None	15
	MW2	92.35	8.45	0	None	15
	MW3	92.23	8.17	0	None	15
	MW4	92.35	7.65	0	None	15
	MW5	93.03	7.11	0	None	20
12/13/90	MW1	91.42	8.58	0	None	0
	MW2	91.80	9.00	0	None	0
	MW3	91.71	8.69	0	None	0
	MW4	91.80	8.20	0	None	0
	MW5	92.51	7.63	0	None	0

Well #	Surface Elevation* (feet)
MW1	100.00
MW2	100.80
MW3	100.40
MW4	100.00
MW5	100.14

* Elevation of top of well covers surveyed to an assumed datum of 100.00 feet at top of MW4 well cover.

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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
2/11/91	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
	MW5	--	58	23	ND	1.3	2.9
11/15/90	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
	MW5	--	ND	ND	ND	0.47	ND
8/29/90	MW1*	ND	ND	ND	ND	0.74	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	0.52	ND	ND
	MW4	--	ND	ND	ND	ND	ND
	MW5	--	ND	0.70	ND	1.1	0.57
5/16/90	MW1*	ND	ND	ND	ND	ND	ND
	MW2*	ND	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
	MW5	--	1,100	310	2.8	110	70
2/16/90	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
	MW5	--	ND	ND	ND	ND	ND
11/14/89	MW1*	ND	ND	ND	ND	ND	ND
	MW2*	ND	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
	MW5	--	73	4.7	0.97	16	2.9
8/16/89	MW1**	ND	ND	ND	ND	ND	ND
	MW2**	ND	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
	MW5	--	4,400	1,400	84	950	200

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TABLE 2 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Sample Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
8/31/89	MW5	--	910	120	7.1	53	50
4/26/89	MW1***	ND	ND	2.1	ND	ND	ND
	MW2***	ND	ND	ND	ND	ND	ND
	MW3***	ND	ND	ND	ND	ND	ND
	MW4***	ND	ND	0.33	ND	ND	ND
	MW5***	ND	ND	ND	ND	ND	ND
Detection Limits		50	30	0.3	0.3	0.3	0.3

* TOG and EPA method 8010 constituents were non-detectable.

** TOG for these samples were 23 ppm and 7.4 ppm, respectively. EPA method 8010 constituents were non-detectable for both samples.

*** These samples were non-detectable for TPH as diesel, TOG, and EPA method 8010 constituents.

-- Indicates analysis not performed.

ND = Non-detectable.

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

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TABLE 3

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Sample Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
2/14/89	W1A	110	--	2.2	0.55	12	<0.5
	W1B	All EPA method 601 constituents were non-detectable.					
2/17/89	WO-W1*	1,300	500	52	8.6	100	9.2

* TOG and all EPA method 601 constituents were non-detectable.

-- Indicates analysis not performed.

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

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TABLE 4

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on January 30,
February 2, 14 & 17, 1989)

Sample #	Depth (feet)	TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Xylenes	Ethyl-benzene
SW1	10	1.4	--	0.14	<0.1	<0.1	<0.1
SW2A	10	1.1	--	<0.05	<0.1	<0.1	<0.1
SW3A	10	<1.0	--	<0.05	<0.1	<0.1	<0.1
SW4	10	<1.0	--	<0.05	<0.1	<0.1	<0.1
SW5	10	130	--	1.1	4.6	18	3.7
SW5A	10	<1.0	--	<0.05	<0.1	<0.1	<0.1
SW6A	10	<1.0	--	<0.05	<0.1	<0.1	<0.1
P1	3.5	7.8	--	2.0	<0.1	2.4	0.53
P2	3.5	12	--	1.9	0.91	0.70	3.0
P3	3.5	11	--	0.37	0.36	0.29	1.7
SWA*	10	<1.0	1.0	<0.05	<0.1	<0.1	<0.1
SWB*	10	1.1	2.4	<0.05	<0.1	<0.1	<0.1
SWC*	10	110	180	0.68	<0.1	5.6	1.9
SWC2*	10	89	57	<0.05	<0.1	0.42	0.76
SWC3*	10	<1.0	<1.0	<0.05	<0.1	<0.1	<0.1
SWD*	10	<1.0	<1.0	<0.05	<0.1	<0.1	<0.1
WO1**	9	60	800	3.6	9.2	9.5	2.5

* TOG for SWA was 35 ppm, SWB was 44 ppm, SWC was 500 ppm, SWC2 was 680 ppm, SWC3 was <30 ppm, and SWD was 77 ppm.

** TOG for WO1 was 1,900 ppm; cadmium was 0.3 ppm; chromium was 39 ppm; lead was 10 ppm, and zinc was 42 ppm.

-- Indicates analysis not performed.

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

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TABLE 5

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on March 9, 1989)

Sample Number	Cadmium	Chromium	Lead	Zinc
SWA*	0.2	96	4.7	35
SWB*	0.16	91	5.1	29
SWC3*	0.33	140	6.8	41
SWD*	0.19	92	4.8	32
Detection Limits	0.1	0.05	0.05	0.1

* All EPA method 8010 and 8270 constituents were non-detectable.

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

KEI-P89-0111.QR7
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TABLE 6

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on April 20, 1989)

Sample Number	Depth (feet)	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethylbenzene
MW1*	5	ND	ND	ND	ND	ND
MW2*	5	ND	ND	ND	ND	ND
MW3	5	ND	ND	ND	ND	ND
MW3	9	ND	ND	ND	ND	ND
MW4	5	ND	ND	ND	ND	ND
MW4	9	1.4	ND	ND	ND	ND
MW5	5	900	3.1	3.1	110	30
MW5	9	ND	ND	ND	ND	ND
Detection Limits		1.0	0.05	0.1	0.1	0.1

* TPH as diesel, TOG, and 8010 were non-detectable.

ND = Non-detectable.

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

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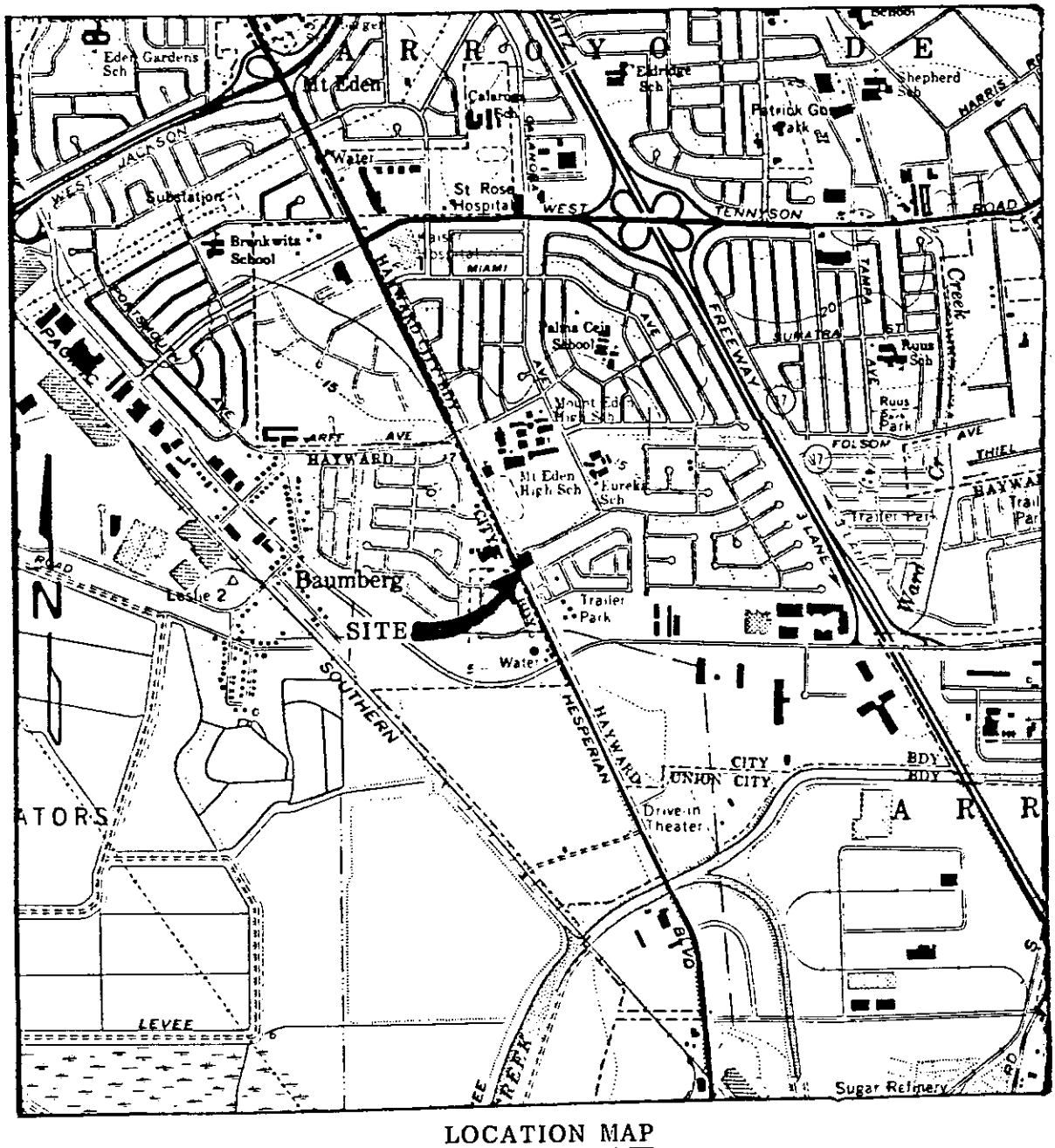

LOCATION MAP

Unocal S/S #5487
28250 Hesperian Boulevard
Hayward, CA

KAPREALIAN ENGINEERING, INC.
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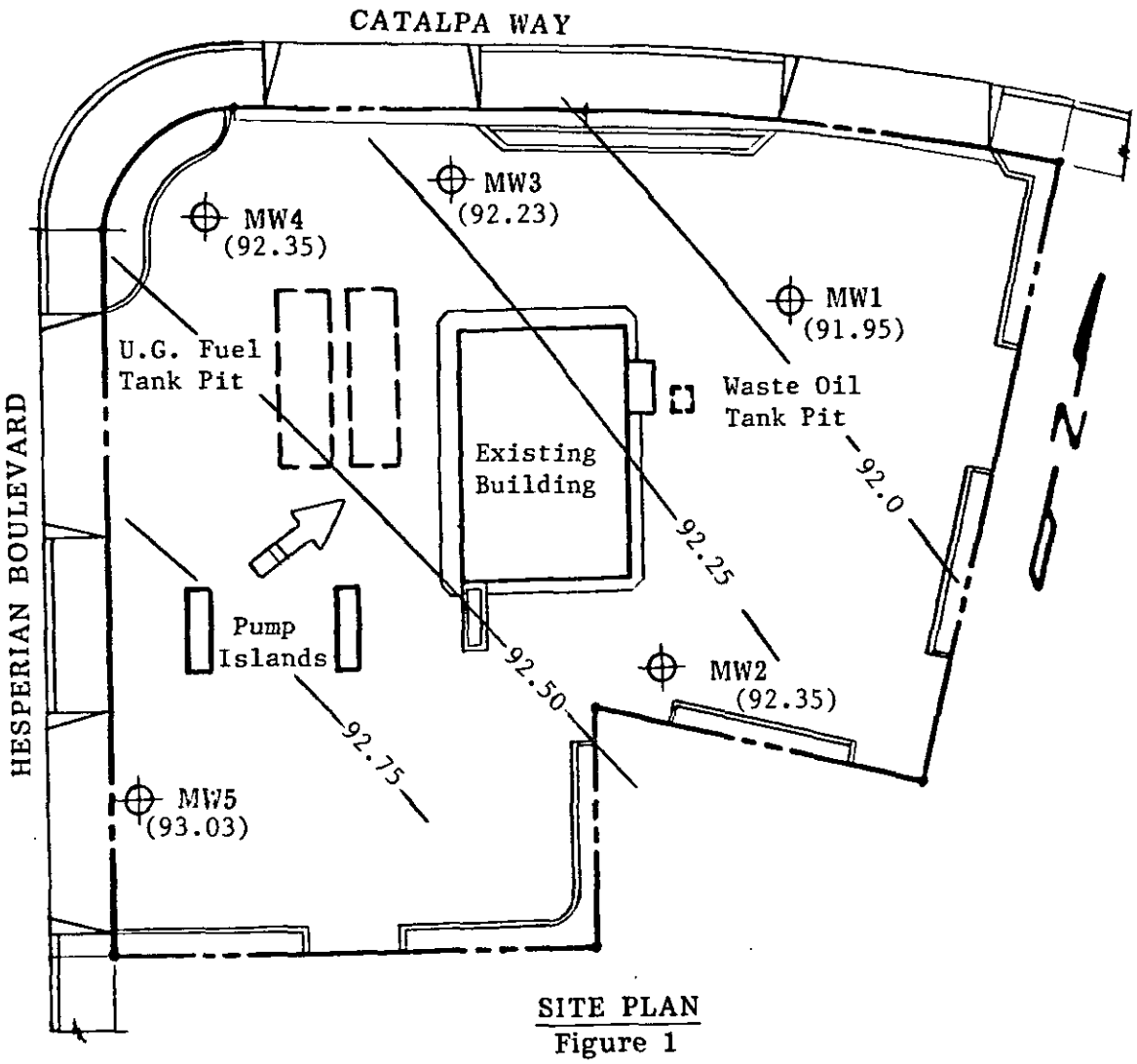

SITE PLAN
Figure 1

LEGEND

Monitoring Well

Direction of Ground Water Flow

( ) Water Table elevation in feet on 2/11/91 . MW1 well cover assumed 100.00 feet as datum.

——— Contours on ground water surface in feet

0 30 60
Approx. scale feet

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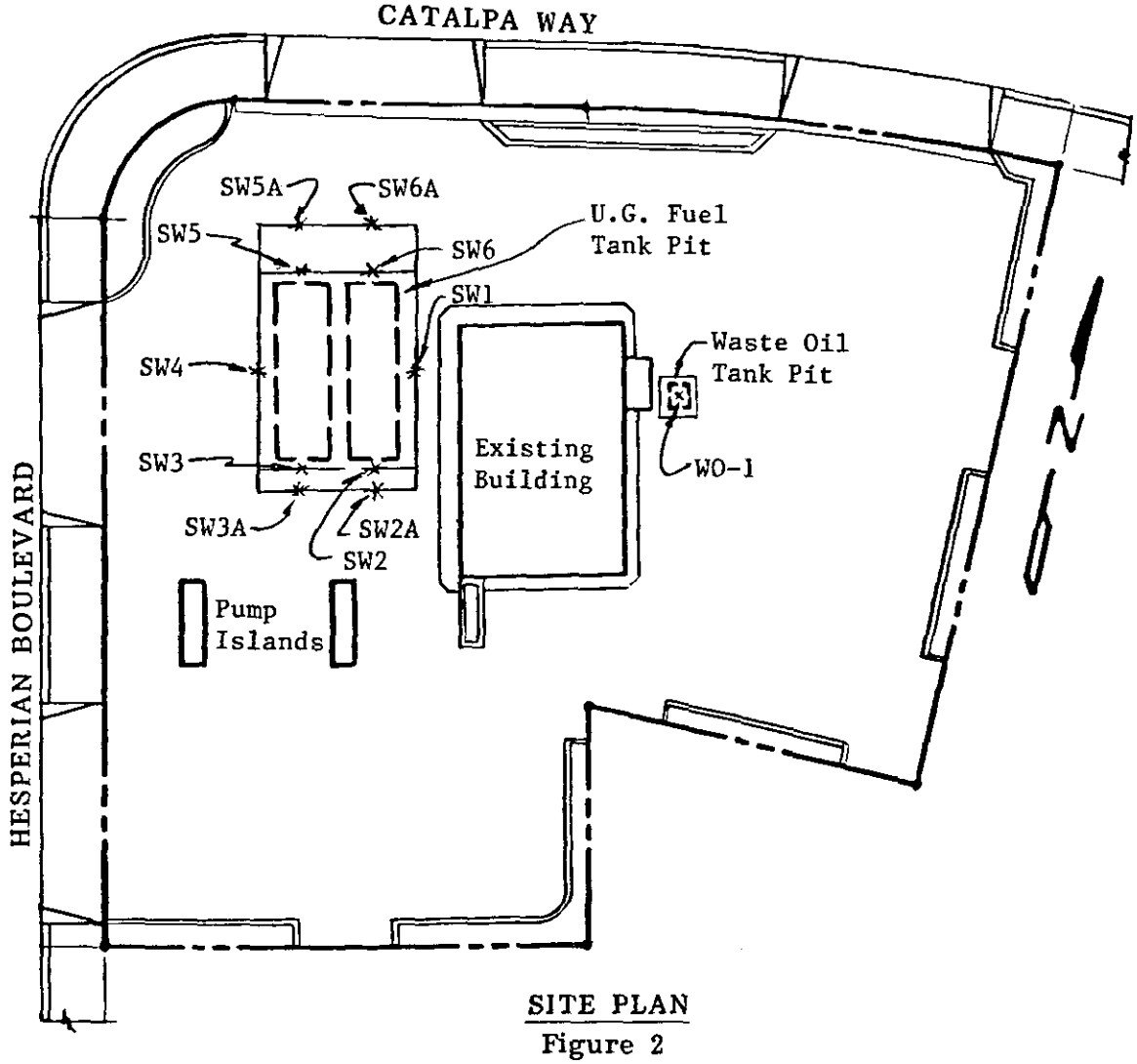

SITE PLAN
Figure 2

LEGEND

* Sample Point Location

0 30 60
Approx. scale feet

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Hayward, CA

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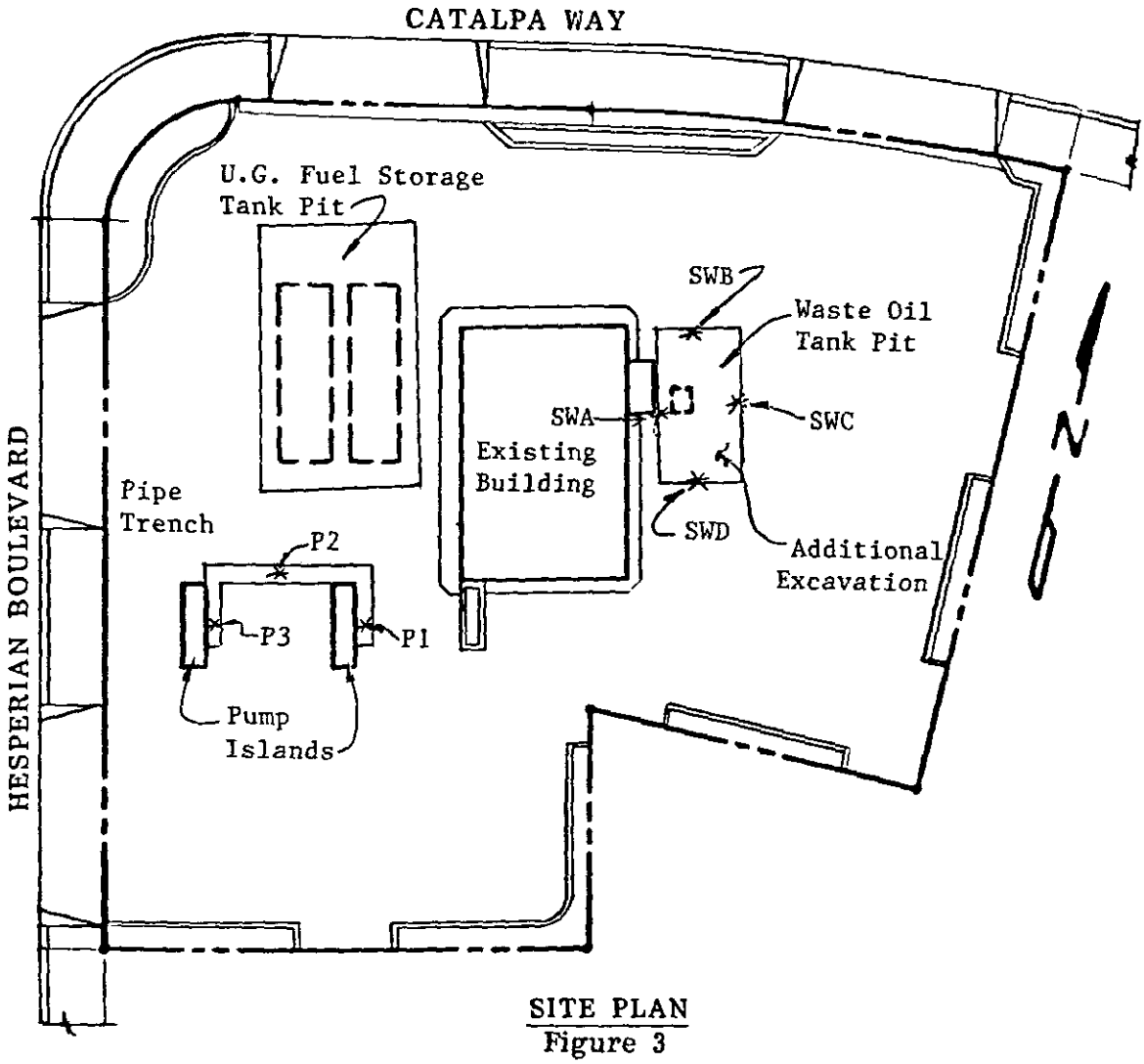

SITE PLAN
Figure 3

LEGEND

* Sample Point Location

0 30 60
Approx. scale feet

Unocal S/S #5487
28250 Hesperian Boulevard
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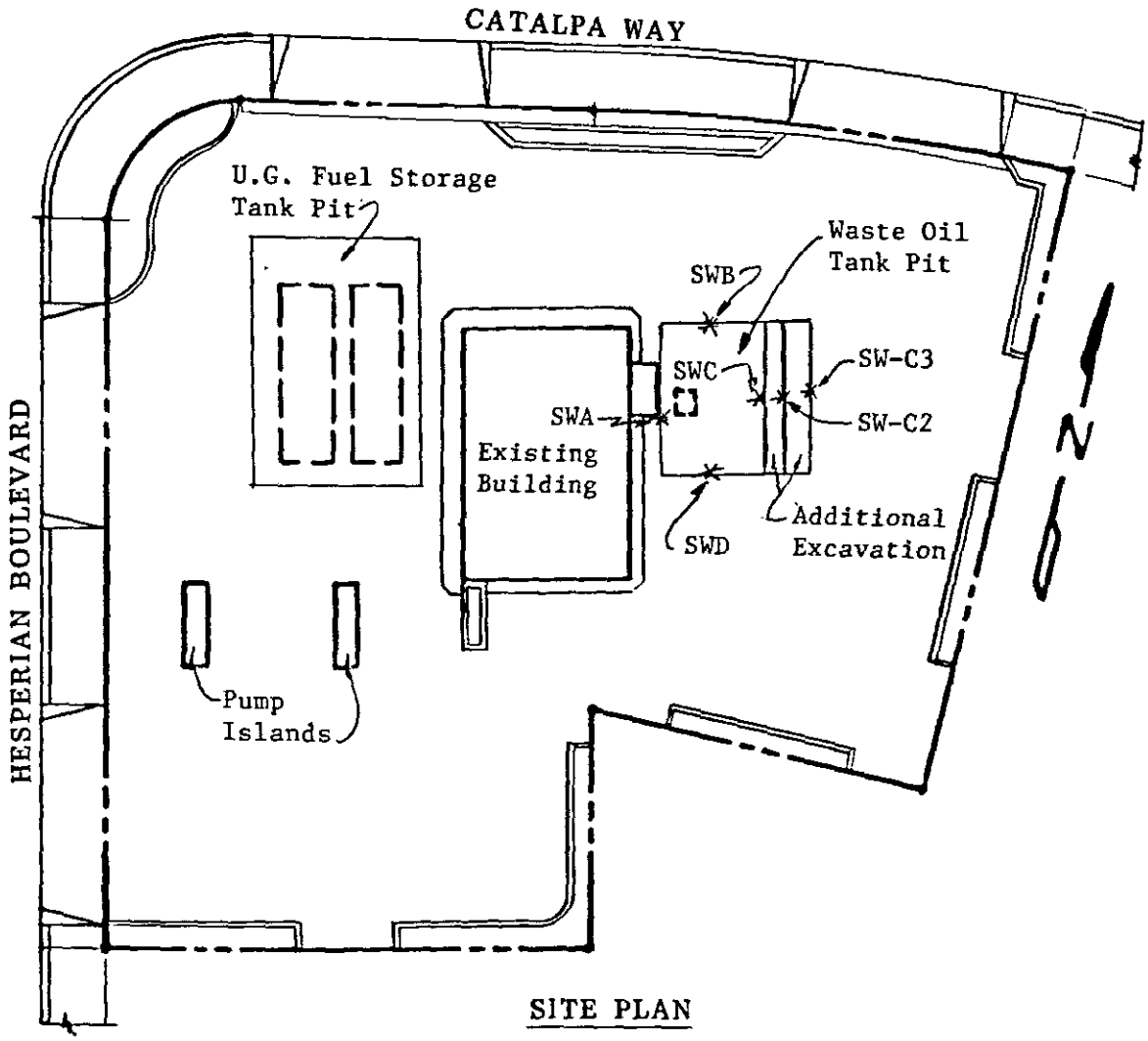

SITE PLAN

Figure 4

LEGEND

* Sample Point Location

0 30 60

Approx. scale feet

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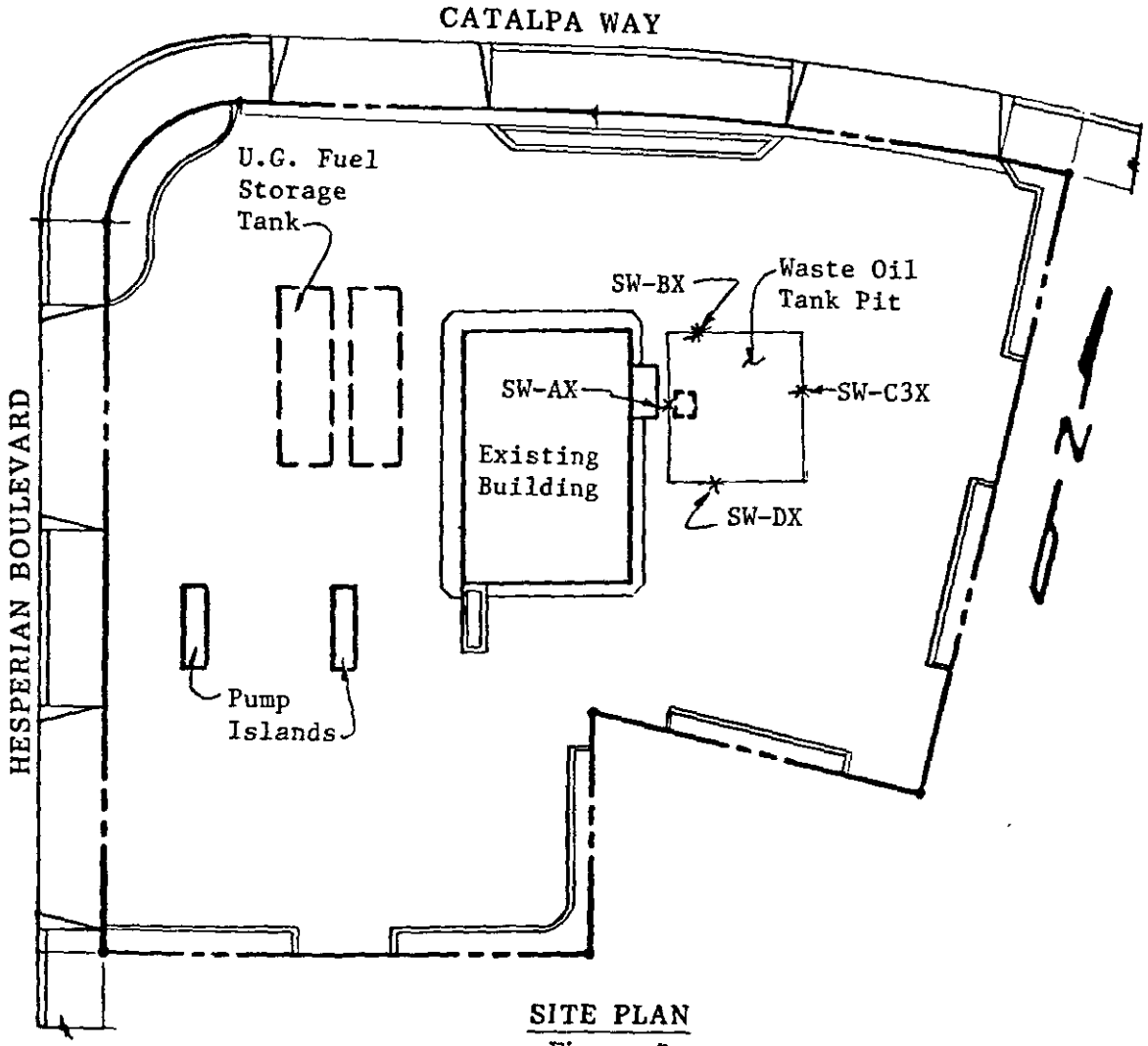

SITE PLAN
Figure 5

LEGEND

* Sample Point Location

0 30 60
Approx. scale feet

Unocal S/S #5487
28250 Hesperian Boulevard
Hayward, CA

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc.	Client Project ID:	Unocal, 28250 Hesperian, Hayward	Sampled:	Feb 11, 1991
P.O. Box 996	Matrix Descript:	Water	Received:	Feb 11, 1991
Benicia, CA 94510	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Feb 13, 1991
Attention: Mardo Kaprealian, P.E.	First Sample #:	102-0242 A-B	Reported:	Feb 15, 1991

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)
102-0242 A-B	MW-1	N.D.	N.D.	N.D.	N.D.	N.D.
102-0243 A-B	MW-2	N.D.	N.D.	N.D.	N.D.	N.D.
102-0244 A-B	MW-3	N.D.	N.D.	N.D.	N.D.	N.D.
102-0245 A-B	MW-4	N.D.	N.D.	N.D.	N.D.	N.D.
102-0246 A-B	MW-5	58	23	N.D.	2.9	1.3
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc.	Client Project ID:	Unocal, 28250 Hesperian, Hayward	Sampled:	Feb 11, 1991
P.O. Box 996	Matrix Descript:	Water	Received:	Feb 11, 1991
Benicia, CA 94510	Analysis Method:	EPA 3510/8015	Extracted:	Feb 12, 1991
Attention: Mardo Kaprealian, P.E.	First Sample #:	102-0242 C	Analyzed:	Feb 13, 1991
			Reported:	Feb 15, 1991

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons µg/L (ppb)
102-0242 C	MW-1	N.D.

Detection Limits:	50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal, 28250 Hesperian, Hayward	Sampled:	Feb 11, 1991
P.O. Box 996	Matrix Descript:	Water	Received:	Feb 11, 1991
Benicia, CA 94510	Analysis Method:	SM 5520 B&F (Gravimetric)	Extracted:	Feb 13, 1991
Attention: Mardo Kaprealian, P.E.	First Sample #:	102-0242 D	Analyzed:	Feb 14, 1991
			Reported:	Feb 15, 1991

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
102-0242 D	MW-1	N.D.

Detection Limits:	5.0

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

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal, 28250 Hesperian, Hayward	Sampled:	Feb 11, 1991
P.O. Box 996	Sample Descript:	Water, MW-1	Received:	Feb 11, 1991
Benicia, CA 94510	Analysis Method:	EPA 5030/8010	Analyzed:	Feb 12, 1991
Attention: Mardo Kaprealian, P.E.	Lab Number:	102-0242 E-F	Reported:	Feb 15, 1991

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	1.0	N.D.
Bromoform	1.0	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	1.0	N.D.
Chlorobenzene	1.0	N.D.
Chloroethane	5.0	N.D.
2-Chloroethylvinyl ether	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	0.50	N.D.
Dibromochloromethane	0.50	N.D.
1,2-Dichlorobenzene	2.0	N.D.
1,3-Dichlorobenzene	2.0	N.D.
1,4-Dichlorobenzene	2.0	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	1.0	N.D.
Total 1,2-Dichloroethene	1.0	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	2.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	1.0	N.D.
Vinyl chloride	2.0	N.D.

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

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER: JOE

WITNESSING AGENCY:

SITE NAME & ADDRESS: Unocal / Hayward #5457
25250 Hesperian

TURN AROUND TIME: Regular

ANALYSES REQUESTED: TPHG, BTXE / 8010 / TOG (5520 C+F) / TPHD

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	REMARKS
MW-1	2/11/91	9:00 am		"	"		6	MW	VOA-s preserved
MW-2	"			"	"		2	"	
MW-3	"			"	"		2	"	
MW-4	"	12:00		"	"		2	"	
MW-5	"			2	"		2	"	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	2/11/91 1650	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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

1. Have all samples received for analysis been stored in ice? yes
2. Will samples remain refrigerated until analyzed? yes
3. Did any samples received for analysis have head space? no
4. Were samples in appropriate containers and properly packaged? yes

[signature] — Signature; Login — Title; 2/11/91 — Date