



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

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

KEI-J90-0606.R1

July 16, 1990

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

Attention: Mr. Rick Sisk

RE: Soil Sampling Report
Unocal Service Station #5901
11976 Dublin Boulevard
Dublin, California

Dear Mr. Sisk:

This report presents the soil sampling performed by Kaprealian Engineering, Inc. (KEI) at the referenced site. All work was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB), and the Alameda County Health Agency (ACHA).

The scope of the work performed by KEI consisted of the following:

Coordination with regulatory agencies.

Collection of soil samples from both the former and new fuel tank pit sidewalls, from beneath the waste oil tank, from one waste oil tank pit sidewall, and from beneath the product dispensers.

Collection of water samples from both the former and the new fuel storage tank pits.

Delivery of samples, including proper Chain of Custody documentation, to a certified analytical laboratory.

Technical review and preparation of this report.

SITE DESCRIPTION AND BACKGROUND

The subject site is presently used as a gasoline station. The site is situated on relatively gently sloping, eastward trending topography, and is located approximately 700 feet northwest of a channelized portion of Dublin Creek. The site is also located near the southwest end of the San Ramon Valley near Amador

Valley. A Location Map and Site Plans are attached to this report. No leaks or previous subsurface work performed at the site are known to KEI.

FIELD ACTIVITIES

KEI's field work was conducted on June 13, 1990, when two underground fuel storage tanks and one waste oil tank were removed from the site. The tanks consisted of one 10,000 gallon super unleaded fuel storage tank, one 10,000 gallon regular unleaded fuel storage tank, and one 280 gallon waste oil tank. The tanks were made of steel and at least one hole of 1/4-inch diameter was observed in each of the fuel tanks. Numerous holes up to 1/2-inch in diameter were observed in the waste oil tank. Mr. Ravi Arulanantham of the ACHA was present during tank removal and subsequent soil sampling.

Water was encountered in the fuel tank pit at a depth of approximately 7.0 feet, thus prohibiting the collection of any soil samples from immediately beneath the tanks. Six soil samples, labeled SW1 through SW6, were collected from the sidewalls of the fuel tank pit approximately 6 to 12 inches above the observed water table. One soil sample, labeled WO1, was collected from beneath the waste oil tank at a depth of approximately 6.5 feet. An additional soil sample, labeled SWA, was collected from the waste oil tank pit sidewall at a depth of approximately 6.5 feet. The undisturbed samples were all collected from bulk material excavated by backhoe, except for the waste oil tank pit sidewall sample, SWA. This sample was collected using a driven tube-type soil sampler. The samples were placed in clean, two-inch diameter brass tubes, sealed with aluminum foil, plastic caps and tape, and stored in a cooled ice chest for delivery to a certified laboratory. Sample point locations are as shown on the attached Site Plan, Figure 1.

KEI returned to the site on June 15, 1990, in order to collect soil samples from the product pipe trenches. Four samples, labeled P1 through P4, were collected from trenches by using a driven tube-type soil sampler at a depth of 6.0 feet. These samples were also collected in clean two-inch diameter brass tubes, handled as described above. After the soil sampling was completed, pipe trenches were excavated to ground water over the area indicated on the attached Site Plan, Figure 2. Pipe trench sample point locations are shown on the attached Site Plan, Figure 2.

On June 15, 1990, after reviewing the analytical results of the soil samples (SW1 through SW6), four additional soil samples,

labeled SW1(3), SW2(3), SW5(2.5) and SW6(3), were collected from the sidewalls of the fuel tank pit approximately 6 to 12 inches above ground water in the vicinity of sample point locations SW1, SW2, SW5 and SW6, respectively. The samples were collected and handled as previously described. The fuel tank pit sidewalls were excavated to the sample points. Excavated soil was stockpiled on-site for further sampling.

After soil sampling was completed, approximately 25,000 gallons of ground water were pumped from the fuel tank pit. On June 20, 1990, one water sample, labeled W1, was collected from the fuel tank pit in two clean glass VOA vials with Teflon screw caps. The water sample was stored and delivered as described above.

Also on June 20, 1990, based on analytical results of soil samples SW1(3) and SW2(3), two additional soil samples, labeled SW1(6.5) and SW2(6.5), were collected from the northerly sidewall of the fuel tank pit approximately 6 to 12 inches above ground water in the vicinity of sample point locations SW1(3) and SW2(3). The samples were collected after excavation to the building apron. The samples were collected and handled as previously described. The excavated soil was stockpiled on-site for further sampling. The sample point locations and the area excavated are as indicated on the attached Site Plan, Figure 1.

On June 26, 1990, KEI again returned to the site in order to collect soil samples from the sidewalls of the new underground fuel storage tank pit located to the west of the pump islands. Four soil samples, labeled SW11, SW12, SW13 and SW14, were collected from the sidewalls of the excavation 6 to 12 inches above ground water. The samples were taken from bulk material excavated by backhoe. The samples were collected and handled as previously described. Sample point locations are as shown on the attached Site Plan, Figure 3.

On July 3, 1990, after having pumped approximately 10,000 gallons of ground water from the new fuel tank pit, a water sample, labeled W2, was collected from the pit in two clean glass VOA vials with Teflon screw caps and a one-liter amber bottle. The water sample was stored and delivered as described above.

REGIONAL GEOLOGY AND SUBSURFACE CONDITIONS

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 Quaternary-age alluvium. The surficial alluvium

has been mapped as Holocene coarse-grained alluvium (Qhac) typically consisting of unconsolidated, permeable sand and silt with locally coarse sand and gravel materials and ranges in thickness from less than 10 feet to as much as 50 feet. This coarse-grained alluvium zone appears to have been deposited from sediments generated from erosion within Dublin Canyon situated immediately west of the site. The site is present at the northern perimeter of the Qhac near a mapped geologic contact with Late-Pleistocene alluvium (Qpa). The Late Pleistocene alluvium typically consists of weakly consolidated, irregular interbedded clay, silt, sand, and gravel materials. The overall thickness of the alluvium underlying the site is presently unknown to KEI.

In addition, the site is situated closely adjacent to and east of the mapped trace of the active Calaveras Fault. The Calaveras Fault is a major structural break within the Coast Ranges near San Francisco Bay and most likely forms a significant barrier to the migration of ground water in the alluvial materials from the hillside areas immediately west of the site.

The subsurface soils exposed in the excavations consisted primarily of sandy silt to a depth of about 6.5 feet, which is in turn underlain by silty clay materials.

ANALYTICAL RESULTS

All samples were analyzed by Sequoia Analytical Laboratory in Redwood City, California and were accompanied by properly executed Chain of Custody documentation. All soil samples, except the waste oil tank pit sidewall sample SWA, were analyzed for total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 in conjunction with modified 8015, and benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA method 8020. In addition to TPH as gasoline and BTX&E, the soil sample W01, collected from the waste oil tank pit, was analyzed for TPH as diesel using EPA method 3550 in conjunction with modified 8015, total oil and grease (TOG) by EPA 503D&E, and EPA 8010 constituents. The waste oil tank pit sidewall sample, SWA, was analyzed for TOG only. In addition to TPH as gasoline and BTX&E, sample SW11 from the new fuel tank pit was also analyzed for TOG.

Both water samples were analyzed for TPH as gasoline and BTX&E. In addition, water sample W2 collected from the new fuel tank pit was analyzed for TOG.

Analytical results of the soil samples SW1, SW2, SW5 and SW6, collected from the sidewalls of the former fuel tank pit, indicate levels of TPH as gasoline ranging from 120 ppm to 5,700 ppm. Samples SW3 and SW4 indicate levels of TPH as gasoline at non-detectable and 8.0 ppm, respectively. However, after additional excavation, analyses of final sidewall soil samples SW1(6.5), SW2(6.5), SW5(2.5) and SW6(3), collected laterally beyond the samples SW1, SW2, SW5 and SW6 at a depth of approximately 6.0 feet, indicated levels of TPH as gasoline ranging from 1.2 ppm to 32 ppm.

Analyses of soil samples collected from the pipe trenches, indicate levels of TPH as gasoline ranging from 2.5 ppm to 37 ppm. Benzene was detected in all pipe trench samples at concentrations ranging from 0.28 ppm to 0.78 ppm.

Analytical results of the soil sample W01, collected from beneath the waste oil tank pit, indicate levels of TPH as gasoline at 36 ppm, TPH as diesel at 120 ppm, and TOG at 1,500 ppm, with non-detectable concentrations of all EPA 8010 constituents, except 1,2-dichlorobenzene at 210 ppb. Analysis of soil sample SWA, collected from the sidewall of the waste oil tank pit, indicate levels of TOG at 3,500 ppm.

Analyses of the soil samples (SW11, SW12, SW13 and SW14), collected from the new fuel tank pit, indicate non-detectable levels of TPH as gasoline and benzene for all samples. Analysis of sample SW11 for TOG indicates 78 ppm. Results of all soil analyses are summarized in Table 1.

Analytical results of the water sample (W1), collected from the former fuel tank pit, indicate levels of TPH as gasoline and 2,300 ppb, and levels of benzene at 3.1 ppb. Analyses of the water samples (W2), collected from the new fuel tank pit, indicate non-detectable levels of TPH as gasoline, TOG, and benzene. The results of the water analyses are summarized in Table 2. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

DISCUSSION AND RECOMMENDATIONS

Based on the analytical results and in accordance with the guidelines established by the RWQCB, further work is necessary at the site because of the level of contamination found in the soil and ground water. To comply with the requirements of the RWQCB and the ACHA, KEI recommends additional excavation of the area surrounding the waste oil tank pit at this time to further define the extent of the soil contamination and remove as much con-

KEI-J90-0606.R1
July 16, 1990
Page 6

taminated soil as possible. In addition, KEI proposes the installation of four ground water monitoring wells to determine the ground water flow direction, and to begin to determine the extent of ground water contamination. KEI's proposal for this work is attached for your review and consideration.

DISTRIBUTION

A copy of this report should be sent to Mr. Ravi Arulanantham of the ACHA, and to the RWQCB, San Francisco Bay Region.

LIMITATIONS

Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in 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.

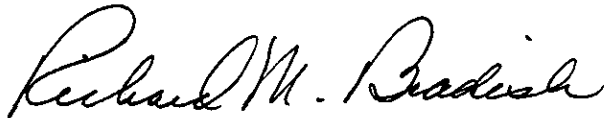
The results of this study are based on the data obtained from the field work and laboratory analyses. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied,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

KEI-J90-0606.R1
July 16, 1990
Page 7

Should you have any questions regarding this report, please feel free to call me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.



Richard M. Bradish
Staff Engineer



Don R. Braun
Certified Engineering Geologist

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



Mardo Kaprealian
President

jad

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

KEI-J90-0606.R1
 July 16, 1990

TABLE 1

SUMMARY OF LABORATORY ANALYSES
 SOIL

(Samples collected on June 13, 15, 20 & 26, 1990)

<u>Sample</u>	<u>Depth (feet)</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethyl- benzene</u>
SW1	6.0	--	5,700	2.1	41	640	110
SW1(3)	6.0	--	2,200	1.8	6.3	76	30
SW1(6.5)	6.0	--	32	0.020	0.14	0.17	0.13
SW2	6.0	--	1,500	0.35	0.57	56	8.0
SW2(3)	6.0	--	360	ND	1.0	2.0	3.0
SW2(6.5)	6.5	--	6.8	0.020	0.052	0.063	0.029
SW3	6.0	--	ND	ND	ND	ND	ND
SW4	6.0	--	8.0	0.019	0.088	0.16	0.0071
SW5	6.5	--	340	0.80	0.26	3.6	2.5
SW5(2.5)	6.0	--	11	0.027	0.054	0.12	0.070
SW6	6.5	--	120	ND	0.21	0.14	0.19
SW6(3)	6.0	--	1.2	0.0084	0.012	0.021	0.012
P1	6.0	--	2.5	0.099	0.079	0.034	ND
P2	6.0	--	37	0.78	0.14	3.8	0.43
P3	6.0	--	8.5	0.028	0.016	0.080	0.35
P4	6.0	--	16	0.091	ND	1.3	0.52
SW11***	6.0	--	ND	ND	ND	0.0079	ND
SW12	6.0	--	ND	ND	ND	ND	ND
SW13	6.0	--	ND	ND	0.022	ND	ND
SW14	6.0	--	ND	ND	ND	0.020	ND
WO1*	6.5	120	36	0.091	0.17	1.8	0.38
SWA**	6.0	--	--	--	--	--	--
Detection Limits		1.0	1.0	0.0050	0.0050	0.0050	0.0050

-- Indicates analysis not performed.

ND = Non-detectable.

* TOG was 1,500 ppm, and all EPA 8010 constituents were non-detectable, except 1,2-dichlorobenzene at 210 ppb.

** TOG was 3,500 ppm.

*** TOG was 78 ppm.

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

KEI-J90-0606.R1
July 16, 1990

TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

(Samples collected on June 20 & July 3, 1990)

<u>Sample #</u>	<u>TOG</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethylbenzene</u>
W1	--	2,300	3.1	0.88	250	0.39
W2	ND	ND	ND	0.96	ND	ND
Detection Limits		30	0.30	0.30	0.30	0.30

-- Indicates analysis not performed.

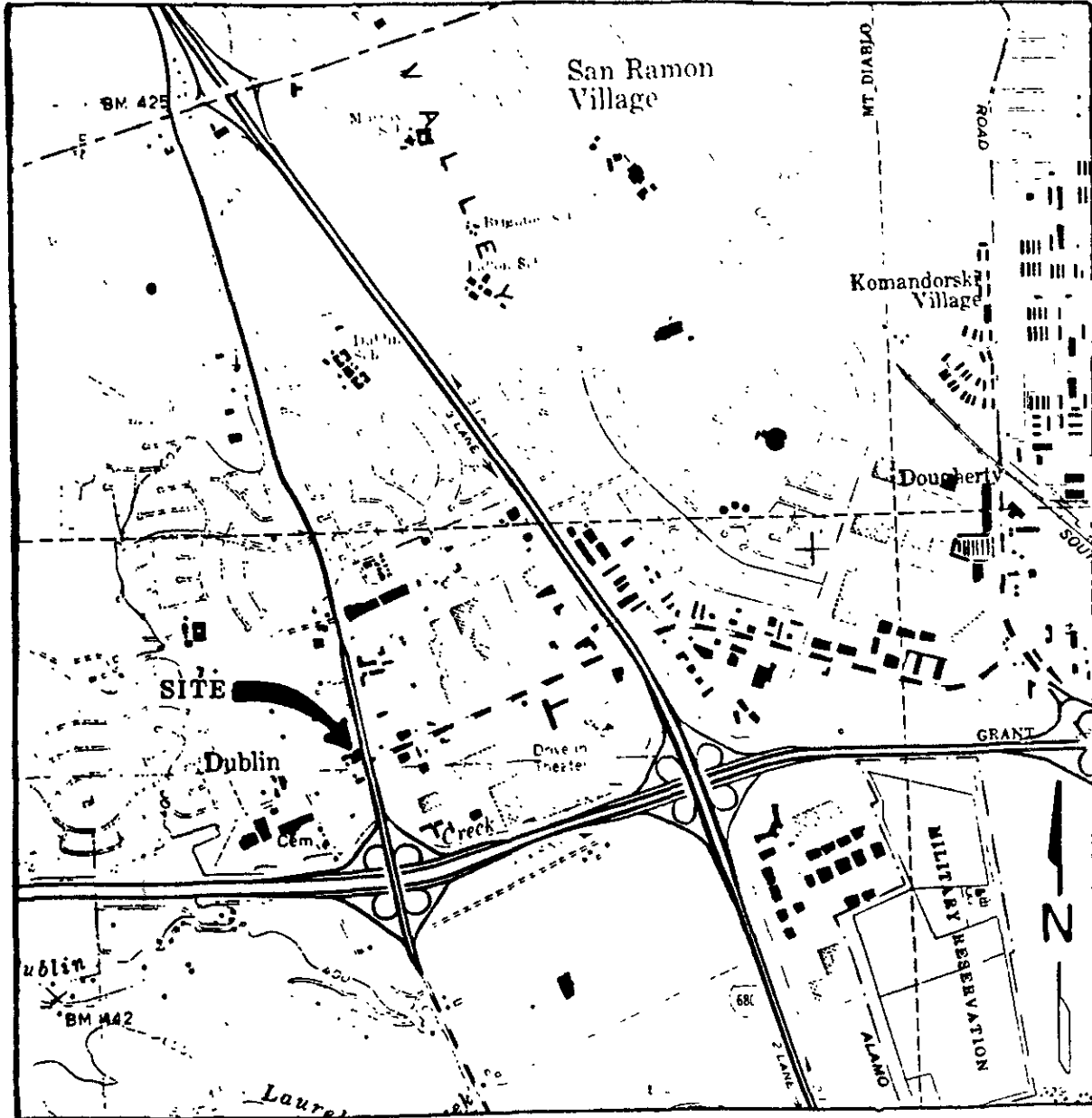
ND = Non-detectable.

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



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LOCATION MAP

Unocal S/S #5901
11976 Dublin Blvd.
Dublin, CA

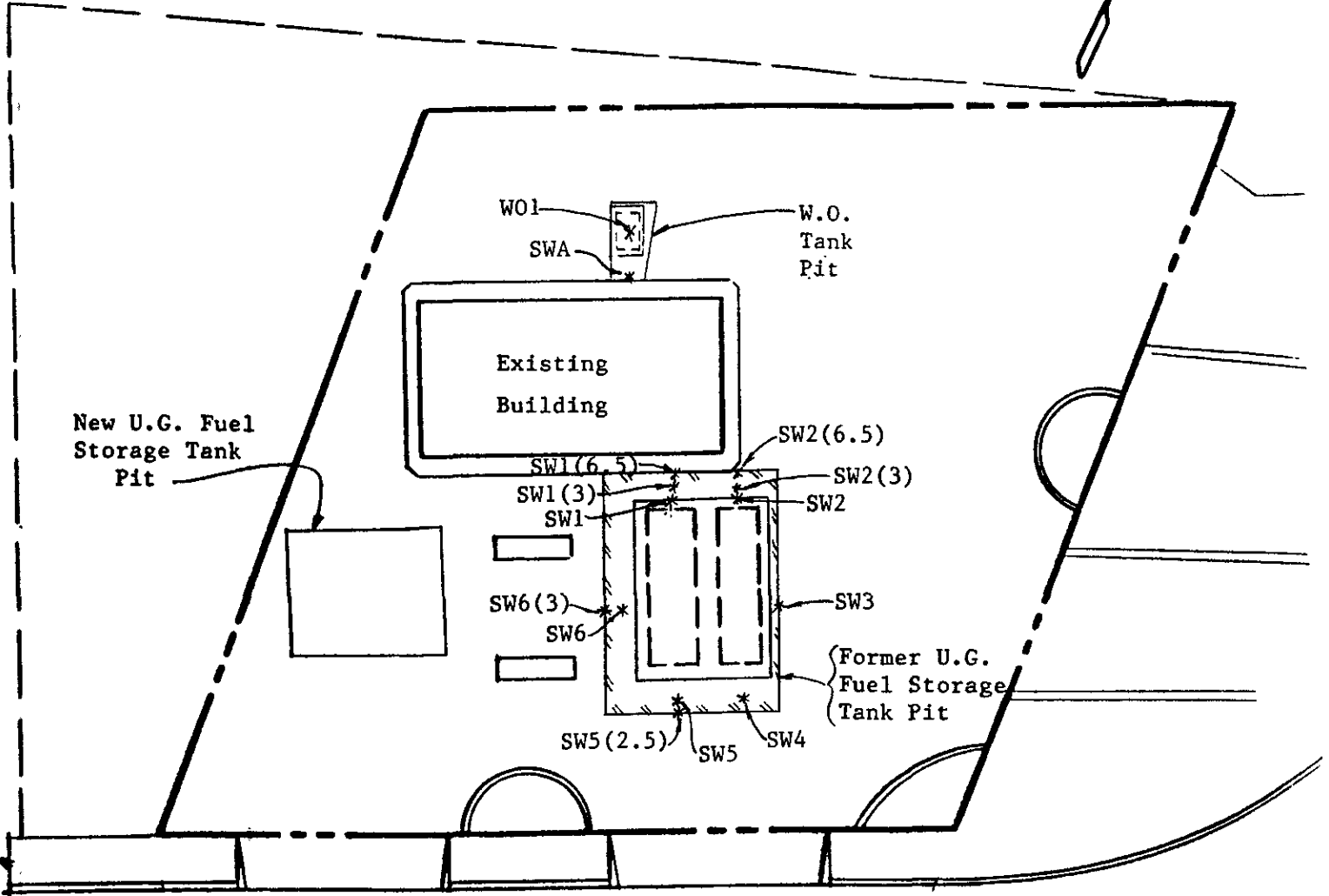


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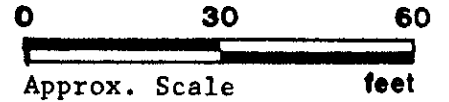
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DUBLIN BLVD.

SITE PLAN
Figure 1



LEGEND

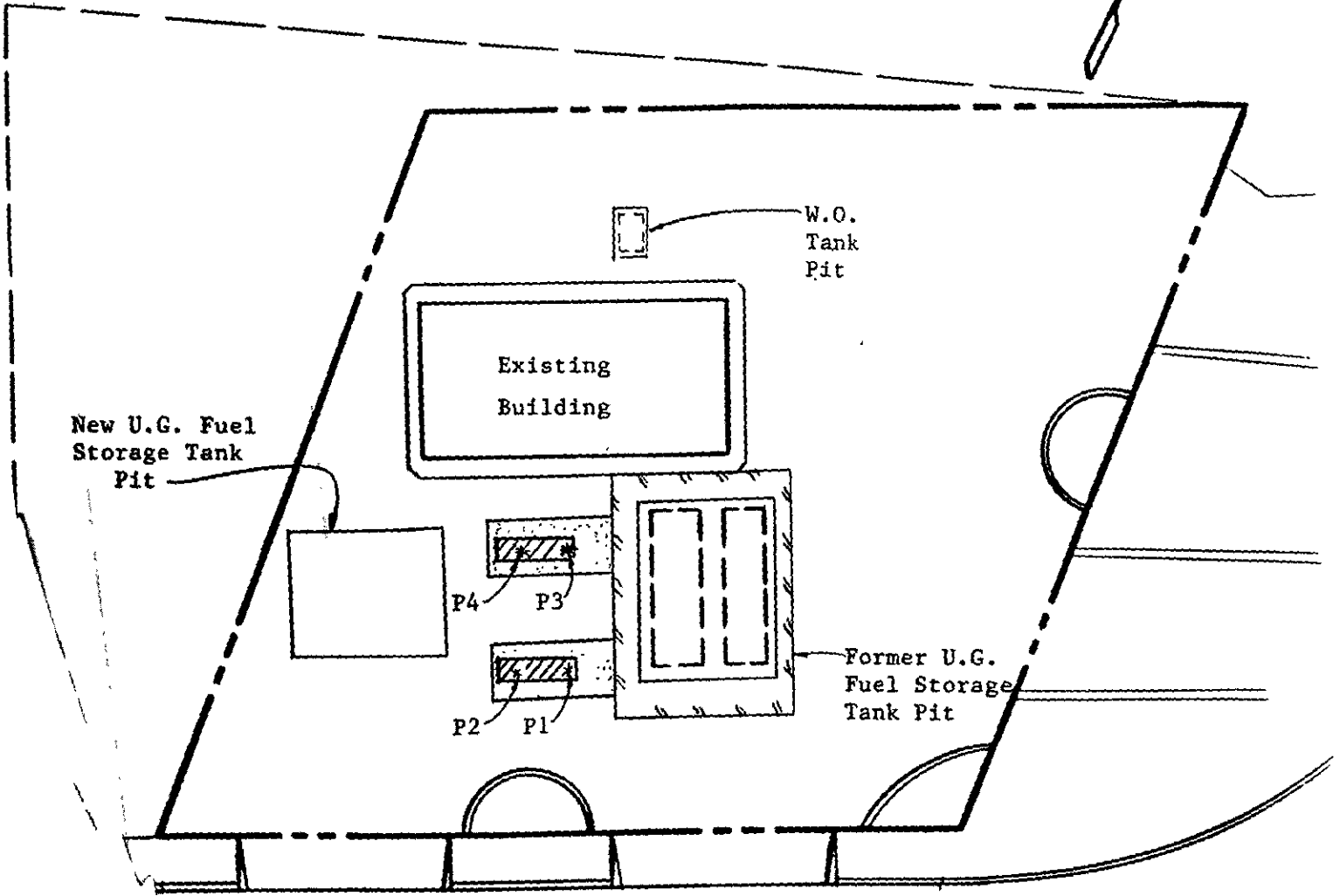
- * Sample Point Location
-  Additional Area Excavated

Unocal S/S #5901
11976 Dublin Blvd.
Dublin, CA



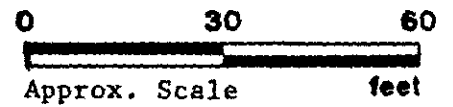
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DUBLIN BLVD.

SITE PLAN
Figure 2



Point Location

Additional Tank Pit Excavation

Additional Pipe Trench Excavation

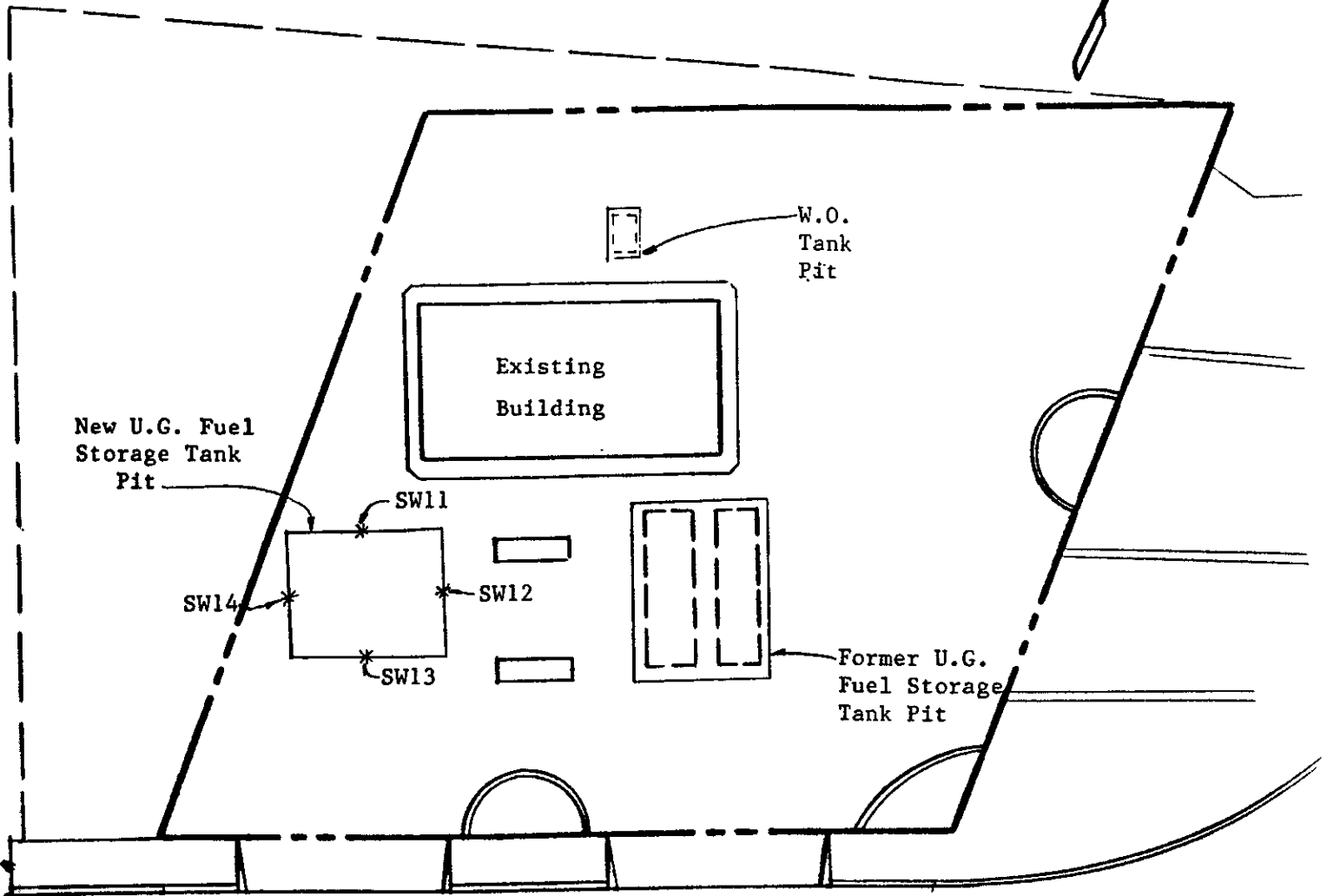
Unocal S/S #5901
11976 Dublin Blvd.
Dublin, CA



KAPREALIAN ENGINEERING, INC.

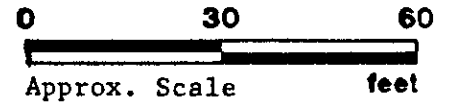
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DUBLIN BLVD.

SITE PLAN
Figure 3



LEGEND

* Sample Point Location

Unocal S/S #5901
11976 Dublin Blvd.
Dublin, CA



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kapreallan Engineering, Inc.	Client Project ID: Unocal #5901, 11976 Dublin Blvd.	Sampled: Jun 13, 1990
P.O. Box 996	Matrix Descript: Soil	Received: Jun 13, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jun 14, 1990
Attention: Mardo Kapreallan, P.E.	First Sample #: 006-1872	Reported: Jun 14, 1990

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

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
006-1872	SW1	5,700	2.1	41	110	640
006-1873	SW2	1,500	0.35	0.57	8.0	56
006-1874	SW3	N.D.	N.D.	N.D.	N.D.	N.D.
006-1875	SW4	8.0	0.019	0.088	0.071	0.16
006-1876	SW5	340	0.80	0.26	2.5	3.6
006-1877	SW6	120	N.D.	0.21	0.19	0.14

Detection Limits:**1.0****0.0050****0.0050****0.0050****0.0050**

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
Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>P.M. Bradish</i>		SITE NAME & ADDRESS <i>Unocal #5901 11976 Dublin Blvd (x-landway) Dublin, CA</i>					ANALYSES REQUESTED <i>TPH-5, BTEX</i>		TURN AROUND TIME: <i>24 HR</i>	
WITNESSING AGENCY <i>K. Arulanantham ACHA</i>									REMARKS 	
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION		
<i>SW1</i>	<i>6-73-90</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<i>1</i>	<i>FUEL TR PIT</i>	<input checked="" type="checkbox"/>	<i>0061872</i>
<i>SW2</i>	<i>"</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<i>1</i>	<i>" " "</i>	<input checked="" type="checkbox"/>	<i>1873</i>
<i>SW3</i>	<i>"</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<i>1</i>	<i>" " "</i>	<input checked="" type="checkbox"/>	<i>1874</i>
<i>SW4</i>	<i>"</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<i>1</i>	<i>" " "</i>	<input checked="" type="checkbox"/>	<i>1875</i>
<i>SW5</i>	<i>"</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<i>1</i>	<i>" " "</i>	<input checked="" type="checkbox"/>	<i>1876</i>
<i>SW6</i>	<i>"</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<i>1</i>	<i>" " "</i>	<input checked="" type="checkbox"/>	<i>1877</i>
Relinquished by: (Signature) <i>P.M. Bradish</i>		Date/Time <i>6/13/90 5:30</i>		Received by: (Signature) <i>Tim M. Cain</i>		The following MUST BE completed by the laboratory accepting samples for analysis:				
Relinquished by: (Signature) <i>Tim M. Cain</i>		Date/Time <i>6/13/90 7:15</i>		Received by: (Signature) <i>[Signature]</i>		1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/>				
						2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/>				
						3. Did any samples received for analysis have head space? <input checked="" type="checkbox"/>				
						4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/>				
Relinquished by: (Signature) <i>[Signature]</i>		Date/Time <i>6/13</i>		Received by: (Signature) <i>[Signature]</i>		Signature <i>[Signature]</i>		Title <i>SR</i>		Date <i>6/13</i>



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680 Chesapeake Drive • Redwood City, CA 94063
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Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kapreallan, P.E.	Client Project ID: Unocal #5901, 11976 Dublin, Dublin Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 006-2335	Sampled: Jun 15, 1990 Received: Jun 15, 1990 Analyzed: Jun 18, 1990 Reported: Jun 18, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
006-2335	SW1 (3)	2,200	1.8	6.3	30	76
006-2336	SW2 (3)	360	N.D.	1.0	3.0	2.0
006-2337	SW5 (2.5)	11	0.027	0.054	0.070	0.12
006-2338	SW6 (3)	1.2	0.0084	0.012	0.012	0.021

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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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
Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>R.M. Braded</i>		SITE NAME & ADDRESS <i>Unocal # 5901 11976 Dublin (Dublin) CA</i>					ANALYSES REQUESTED <i>TPH-G & BTEX</i>		TURN AROUND TIME: <i>24HR</i>
WITNESSING AGENCY									REMARKS
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	NO. OF CONT.	SAMPLING LOCATION		
<i>SW1(3)</i>	<i>6-15-90</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<i>1</i>	<i>FUEL TR PIT</i>	<i>0062335</i>	
<i>SW2(3)</i>	<i>"</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<i>1</i>	<i>" " "</i>	<i>2336</i>	
<i>SW5(2)</i>	<i>"</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<i>1</i>	<i>" " "</i>	<i>2337</i>	
<i>SW6(3)</i>	<i>"</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<i>1</i>	<i>" " "</i>	<i>2338</i>	
<p><i>NOTE PICK UP WAS FOR 4:15 NOT READY TILL 5:30</i></p>									
Relinquished by: (Signature) <i>R.M. Braded</i>		Date/Time <i>6/15/90 5:30</i>		Received by: (Signature) <i>Tom McFar</i>		The following MUST BE completed by the laboratory accepting samples for analysis:			
Relinquished by: (Signature) <i>Tom McFar</i>		Date/Time <i>6/15/90 7:15</i>		Received by: (Signature) <i>[Signature]</i>		1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/>			
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/>			
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		3. Did any samples received for analysis have head space? <i>no</i>			
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/>			
						Signature: <i>[Signature]</i> Title: <i>SR</i> Date: <i>6/15</i>			



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Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kapreallan, P.E.	Client Project ID: Unocal #5901, 11976 Dublin, Dublin Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 006-2950	Sampled: Jun 20, 1990 Received: Jun 20, 1990 Analyzed: Jun 21, 1990 Reported: Jun 21, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
006-2950	SW1 (6.5)	32	0.020	0.14	0.13	0.17
006-2951	SW2 (6.5)	6.8	0.020	0.052	0.029	0.063

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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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
Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>R.M. Bracida</i>		SITE NAME & ADDRESS Unocal #5901 11976 Dublin (San Ramon) Dublin, CA		ANALYSES REQUESTED				TURN AROUND TIME: <u>24 HR</u>	
WITNESSING AGENCY				TPH & BTEX					
SAMPLE ID NO.	DATE	TIME	SOIL					WATER	GRAB
SW1 (6.5)	6-20-90		✓	✓			1	Former Fuel TK Pit	0062950
SW2 (6.5)	"		✓	✓			1	" " " "	0062951
Relinquished by: (Signature) <i>R.M. Bracida</i>	Date/Time 6-20-90 5:40	Received by: (Signature) <i>T. Bolan</i>	The following MUST BE completed by the laboratory accepting samples for analysis:						
Relinquished by: (Signature) <i>T. Bolan</i>	Date/Time 6-20-90 1700	Received by: (Signature)	1. Have all samples received for analysis been stored in ice? <u>yes</u>						
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	2. Will samples remain refrigerated until analyzed? <u>yes</u>						
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	3. Did any samples received for analysis have head space? <u>no</u>						
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	4. Were samples in appropriate containers and properly packaged?						
Relinquished by: (Signature)	6/20/90 1700	<i>Bert Kemper</i>	<u><i>[Signature]</i></u> Signature	<u><i>T. Bolan</i></u> Title	<u>6/20/90</u> Date				



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Kapreallan Engineering, Inc.	Client Project ID: Unocal #5901, 11976 Dublin, Dublin	Sampled: Jun 15, 1990
P.O. Box 996	Matrix Descript: Soil	Received: Jun 15, 1990
Benicla, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jun 18, 1990
Attention: Mardo Kapreallan, P.E.	First Sample #: 006-2339	Reported: Jun 18, 1990

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

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
006-2339	P1	2.5	0.099	0.079	N.D.	0.034
006-2340	P2	37	0.78	0.14	0.43	3.8
006-2341	P3	8.5	0.028	0.016	0.35	0.080
006-2342	P4	16	0.091	N.D.	0.52	1.3

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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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
Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>R.M. Bradish</i>		SITE NAME & ADDRESS <i>Unscal #5901 11976 Dublin (x Loukamon) Dublin, CA</i>				ANALYSES REQUESTED		TURN AROUND TIME: <i>24 HR</i>			
WITNESSING AGENCY						<i>TPH-6 & BZE</i>		REMARKS			
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB				COMP	CONT.	SAMPLING LOCATION
<i>P1</i>	<i>6-15-90</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<i>1</i>	<i>Pipe Trench</i>	<input checked="" type="checkbox"/>	<i>COLO 2339</i>	<i>Note pick up for 415 But not ready till 530</i>
<i>P2</i>	<i>"</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<i>1</i>	<i>"</i>	<input checked="" type="checkbox"/>	<i>2340</i>	
<i>P3</i>	<i>"</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<i>1</i>	<i>"</i>	<input checked="" type="checkbox"/>	<i>2341</i>	
<i>P4</i>	<i>"</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<i>1</i>	<i>"</i>	<input checked="" type="checkbox"/>	<i>2342</i>	
Relinquished by: (Signature) <i>R.M. Bradish</i>		Date/Time <i>6/15/90 530</i>		Received by: (Signature) <i>Tommy McLeary</i>		The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/> 2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/> 3. Did any samples received for analysis have head space? <i>NO</i> 4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/>					
Relinquished by: (Signature) <i>Tommy McLeary</i>		Date/Time <i>6/15/90 530</i>		Received by: (Signature) <i>[Signature]</i>							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							
						Signature		Title <i>JR</i>		Date <i>6/15</i>	



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Kapreallan Engineering, Inc.	Client Project ID: Unocal #5901,11976 Dublin Blvd , Dublin	Sampled: Jun 13, 1990
P.O. Box 996	Sample Descript.: Soll, WO1	Received: Jun 13, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jun 14, 1990
Attention: Mardo Kapreallan, P.E.	Lab Number: 006-1870	Reported: Jun 14, 1990

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

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons	1.0	36
Benzene	0.0050	0.091
Toluene	0.0050	0.17
Ethyl Benzene	0.0050	0.38
Xylenes	0.0050	1.8

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
Belinda C. Vega
Project Manager



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Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kapreallan, P.E.	Client Project ID: Unocal #5901,11976 Dublin Blvd , Dublin Matrix Descript: Soil Analysis Method: EPA 3550/8015 First Sample #: 006-1870	Sampled: Jun 13, 1990 Received: Jun 13, 1990 Extracted: Jun 14, 1990 Analyzed: Jun 14, 1990 Reported: Jun 14, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
006-1870	WO1	120

Detection Limits:

1.0

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
Belinda C. Vega
Project Manager

Please Note:

The above samples do not appear to contain diesel.



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Kaprealian Engineering, Inc.	Client Project ID: Unocal #5901,11976 Dublin Blvd, Dublin	Sampled: Jun 13, 1990
P.O. Box 996	Sample Descript: Soil, WO1	Received: Jun 13, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8010	Analyzed: Jun 13, 1990
Attention: Mardo Kaprealian, P.E.	Lab Number: 006-1870	Reported: Jun 14, 1990

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane.....	50	N.D.
Bromoform.....	50	N.D.
Bromomethane.....	50	N.D.
Carbon tetrachloride.....	50	N.D.
Chlorobenzene.....	50	N.D.
Chloroethane.....	250	N.D.
2-Chloroethylvinyl ether.....	50	N.D.
Chloroform.....	50	N.D.
Chloromethane.....	50	N.D.
Dibromochloromethane.....	50	N.D.
1,2-Dichlorobenzene.....	100	210
1,3-Dichlorobenzene.....	100	N.D.
1,4-Dichlorobenzene.....	100	N.D.
1,1-Dichloroethane.....	50	N.D.
1,2-Dichloroethane.....	50	N.D.
1,1-Dichloroethene.....	50	N.D.
Total 1,2-Dichloroethene.....	50	N.D.
1,2-Dichloropropane.....	50	N.D.
cis-1,3-Dichloropropene.....	50	N.D.
trans-1,3-Dichloropropene.....	50	N.D.
Methylene chloride.....	100	N.D.
1,1,2,2-Tetrachloroethane.....	50	N.D.
Tetrachloroethene.....	50	N.D.
1,1,1-Trichloroethane.....	50	N.D.
1,1,2-Trichloroethane.....	50	N.D.
Trichloroethene.....	50	N.D.
Trichlorofluoromethane.....	50	N.D.
Vinyl chloride.....	100	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


Belinda C. Vega
Project Manager



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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901,11976 Dublin Blvd , Dublin	Sampled:	Jun 13, 1990
P.O. Box 996	Matrix Descript:	Soil	Received:	Jun 13, 1990
Benicia, CA 94510	Analysis Method:	EPA 418.1 (I.R. with clean-up)	Extracted:	Jun 14, 1990
Attention: Mardo Kapreallan, P.E.	First Sample #:	006-1870	Analyzed:	Jun 14, 1990
			Reported:	Jun 14, 1990

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Sample Number	Sample Description	Petroleum Oil mg/kg (ppm)
006-1870	WO1	1,500
006-1871	SWA	3,500

Detection Limits:

50

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


Belinda C. Vega
Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>R.M. Bradish</i>		SITE NAME & ADDRESS <i>Unscal #5901 11976 Dublin Blvd (San Ramon) Dublin, CA</i>		ANALYSES REQUESTED <i>TPH-G 4137K TPH-D TOG 4181 8010</i>				TURN AROUND TIME: <i>24HR</i>
WITNESSING AGENCY								REMARKS

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	ANALYSES REQUESTED				REMARKS
									TPH-G	TPH-D	TOG	8010	
W01	6-13		✓	✓			1	W.O. TR PIT	✓	✓	✓	✓	0061870
SWA	"		✓	✓			1	" " "			✓		0061871

Relinquished by: (Signature) <i>R.M. Bradish</i>	Date/Time <i>6/13/90 5:35</i>	Received by: (Signature) <i>Tim M' Lane</i>	The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/> 2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/> 3. Did any samples received for analysis have head space? <i>NO</i> 4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/>
Relinquished by: (Signature) <i>Tim M' Lane</i>	Date/Time <i>6/13 7:15</i>	Received by: (Signature) <i>[Signature]</i>	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
		<i>[Signature]</i>	Signature
		<i>SR</i>	Title
		<i>6/15</i>	Date



SEQUOIA ANALYTICAL

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Kapreallan Engineering, Inc.	Client Project ID: Unocal, 11976 Dublin Blvd., Dublin	Sampled: Jun 26, 1990
P.O. Box 996	Matrix Descript: Soil	Received: Jun 27, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Jun 27, 1990
Attention: Mardo Kapreallan, P.E.	First Sample #: 006-4403	Reported: Jun 28, 1990

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

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
006-4403	SW11	N.D.	N.D.	N.D.	N.D.	0.0079
006-4404	SW12	N.D.	N.D.	N.D.	N.D.	N.D.
006-4405	SW13	N.D.	N.D.	0.022	N.D.	N.D.
006-4406	SW14	N.D.	N.D.	N.D.	N.D.	0.020

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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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
Belinda C. Vega
Project Manager



SEQUOIA ANALYTICAL

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Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kapreallan, P.E.	Client Project ID: Unocal, 11976 Dublin Blvd., Dublin Matrix Descript: Soil Analysis Method: SM 503 D&E (Gravimetric) First Sample #: 006-4403	Sampled: Jun 26, 1990 Received: Jun 27, 1990 Extracted: Jun 27, 1990 Analyzed: Jun 27, 1990 Reported: Jun 28, 1990
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TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
006-4403	SW11	78

Detection Limits:

30

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

SEQUOIA ANALYTICAL


Belinda C. Vega
Project Manager

64403.KEI <2>



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

AMPLER *[Signature]*
 WITNESSING AGENCY *[Signature]*

SITE NAME & ADDRESS
 Duocast - Dublin - 11976
 Dublin Blvd.

ANALYSES REQUESTED

T P T T O
 H X X
 G E G

TURN AROUND TIME:

24 HRS.

REMARKS

0064403
 04
 05
 06

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	T	P	T	T	O
SW11	6/26	3:15	X		X		1	New Tank Pit	X	X	X		
SW12	6/26	3:20	X		X		1	New Tank Pit	X	X			
SW13	6/26	3:25	X		X		1	New Tank Pit	X	X			
SW14	6/26	3:30	X		X		1	New Tank Pit	X	X			

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 6/26/90	Received by: (Signature) <i>T. Bolan</i>	0830 6-27-90
Relinquished by: (Signature) <i>T. Bolan</i>	Date/Time 6/27/90 1055	Received by: (Signature) <i>[Signature]</i>	
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:

- Have all samples received for analysis been stored in ice?
 - Will samples remain refrigerated until analyzed?
 - Did any samples received for analysis have head space?
 - Were samples in appropriate containers and properly packaged?
- Signature: *[Signature]* Title: *[Signature]* Date: 6/27/90



SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.	Client Project ID: Unocal #5901, 11976 Dublin, Dublin	Sampled: Jun 20, 1990
P.O. Box 996	Sample Descript.: Water, W1	Received: Jun 20, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/ 8015/8020	Analyzed: Jun 21, 1990
Attention: Mardo Kaprealian, P.E.	Lab Number: 006-2995 A-B	Reported: Jun 21, 1990

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

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
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Low to Medium Boiling Point Hydrocarbons	30	2,300
Benzene	0.30	3.1
Toluene	0.30	0.88
Ethyl Benzene	0.30	0.39
Xylenes	0.30	250

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
Belinda C. Vega
Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER <i>R.M. Bradish</i>		SITE NAME & ADDRESS <i>Unocal # 5901 11976 Dublin (San Ramon) Dublin, CA</i>				ANALYSES REQUESTED		TURN AROUND TIME: <i>24 HR</i>	
WITNESSING AGENCY									
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	CONT.	SAMPLING LOCATION	REMARKS
<i>W1</i>	<i>6-20-90</i>		<i>✓</i>	<i>✓</i>				<i>2 in. Former Fuel Tank Pit</i>	<i>0062995 A-B</i>

TPH-G-101

Relinquished by: (Signature) <i>R.M. Bradish</i>	Date/Time <i>6-20-90 1540</i>	Received by: (Signature) <i>T. Baker</i>	The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <i>yes</i> 2. Will samples remain refrigerated until analyzed? <i>yes</i> 3. Did any samples received for analysis have head space? <i>no</i> 4. Were samples in appropriate containers and properly packaged? <i>yes</i> <i>yes</i> <i>yes</i>
Relinquished by: (Signature) <i>T. Baker</i>	Date/Time <i>6-20-90 1700</i>	Received by: (Signature) <i>[Signature]</i>	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
			Signature: <i>[Signature]</i> Title: <i>[Signature]</i> Date: <i>6/20/90</i>



SEQUOIA ANALYTICAL

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Kapreallan Engineering, Inc.	Client Project ID: Unocal, 11976 Dublin Blvd., Dublin	Sampled: Jul 3, 1990
P.O. Box 996	Sample Descript.: Water, W-2	Received: Jul 3, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/ 8015/8020	Analyzed: Jul 3, 1990
Attention: Mardo Kapreallan, P.E.	Lab Number: 007-0267 A-B	Reported: Jul 9, 1990

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

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Low to Medium Boiling Point Hydrocarbons.....	30	N.D.
Benzene.....	0.30	N.D.
Toluene.....	0.30	0.96
Ethyl Benzene.....	0.30	N.D.
Xylenes.....	0.30	N.D.

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
Belinda C. Vega
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kapreallan, P.E.	Client Project ID: Unocal, 11976 Dublin Blvd., Dublin Matrix Descript: Water Analysis Method: SM 503 A&E (Gravimetric) First Sample #: 007-0267 C	Sampled: Jul 3, 1990 Received: Jul 3, 1990 Extracted: Jul 3, 1990 Analyzed: Jul 5, 1990 Reported: Jul 9, 1990
--	--	---

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
007-0267 C	W-2	N.D.

Detection Limits:

5.0

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

SEQUOIA ANALYTICAL


Belinda C. Vega
Project Manager

670267.KEI <2>



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER		SITE NAME & ADDRESS							ANALYSES REQUESTED			TURN AROUND TIME:	
Wade Weston		Unocal - Dublin 11976 Dublin Blvd							IPH-G	BTEX	TOG	24 HR	
WITNESSING AGENCY												REMARKS	
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COND	NO. OF CONT.	SAMPLING LOCATION					
W2	7/3/90			✓	✓		2 Uses 1 Liter	New Tank Pit	✓	✓	✓	0070267 A-C	
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? 2. Will samples remain refrigerated until analyzed? 3. Did any samples received for analysis have head space? 4. Were samples in appropriate containers and properly packaged?		
Wade Weston		7/3/90 3:55		Tim M. Sai									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)									
Tim M. Sai		7/3 5:40		[Signature]									
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							Signature		
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							Title		
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							Date		



KAPREALIAN ENGINEERING, INC.
Consulting Engineers

PO. BOX 996 • BENICIA, CA 94510
 (707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

TRANSMITTAL PAGE

DATE: 7-24-90

ALAMEDA COUNTY HEALTH AGENCY
 DIV. OF HAZARDOUS MAT'L'S

TO: RAVI ABULANANTHAM

FROM: DICK BRADISH

Number of Pages
 (including cover): 18

SUBJECT: Unocal #5901, DUBLIN, 11976 DUBLIN BLVD

• Please find attached laboratory analyses and chain of custody documentation for the below listed samples collected at the above referenced site:

a) Water sample, W3, collected 7-17-90, from W.O. excavation.

If any problems occur in receiving, please call the number listed above.

b) Sidewalk soil samples, SWB(13), SWC(10) & SWD(14), collected 7/16/90

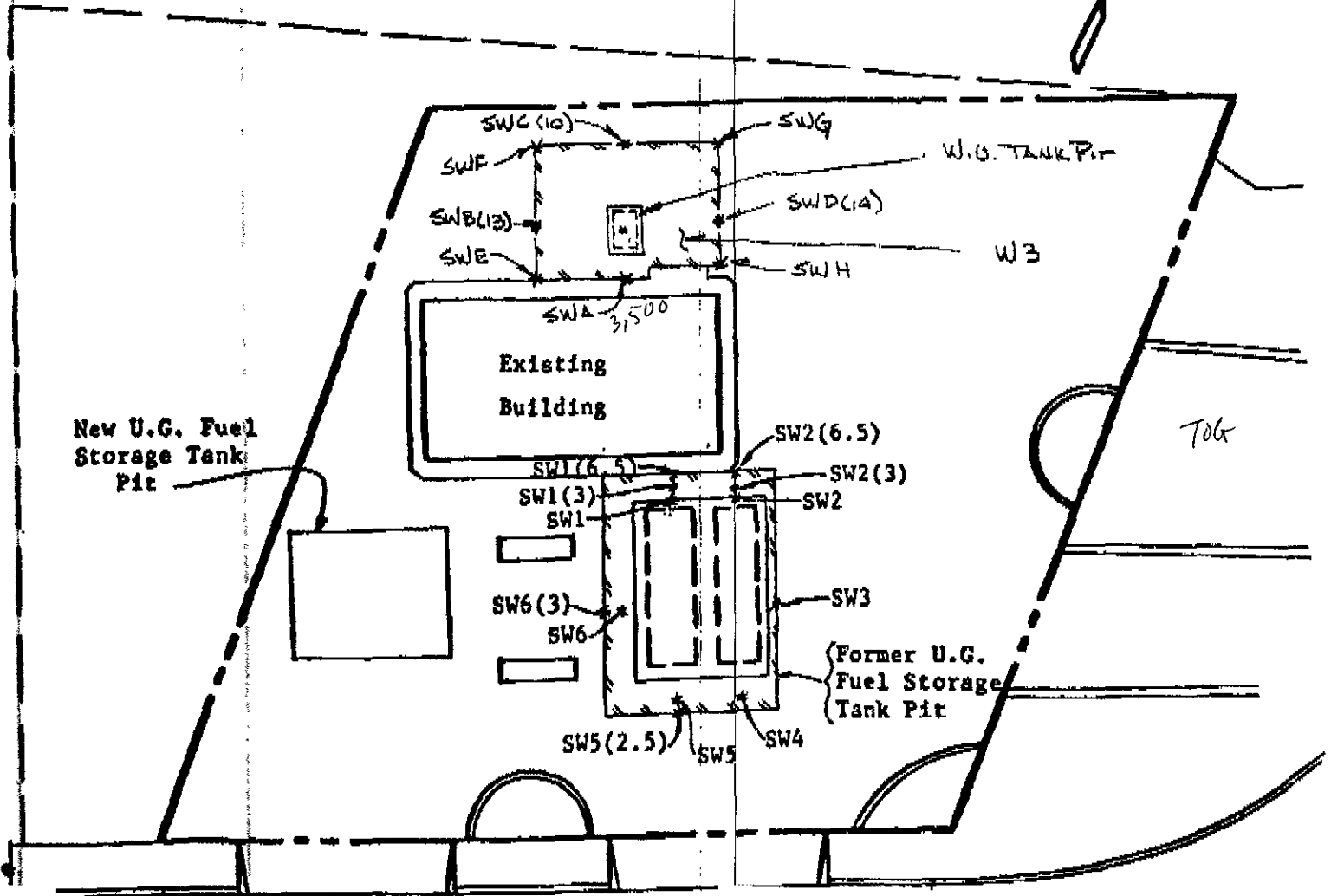
and c) Sidewalk soil samples, SWE, SWF, SWG & SWH, collected 7-20-90

• Laboratory analyses & chain of custody documentation for samples W01 & SWA have been previously submitted.

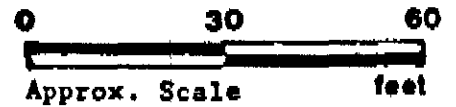


KAPREALIAN ENGINEERING, INC. Consulting Engineers

PO BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX. (707) 746-5581



DUBLIN BLVD.



SITE PLAN
Figure 1

LEGEND

- * Sample Point Location
- ☒ Additional Area Excavated

Unocal S/S #5901
11976 Dublin Blvd.
Dublin, CA



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
 (415) 364-9800 • FAX (415) 364-9233

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin, 11976 Dublin Blvd.	Sampled:	Jul 16, 1990
P.O. Box 996	Matrix Descript:	Soil	Received:	Jul 17, 1990
Benicia, CA 94510	Analysis Method:	SM 503 D&E (Gravimetric)	Extracted:	Jul 17, 1990
Attention: Mardo Kapreallan, P.E.	First Sample #:	007-2513	Analyzed:	Jul 18, 1990
			Reported:	Jul 18, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
007-2513	6WB (13)	N.D.
007-2514	6WC (10)	N.D.
007-2515	6WD (14)	N.D.

Detection Limits:

30

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

SEQUOIA ANALYTICAL

Belinda C. Vega
 Belinda C. Vega
 Project Manager

72513.KEI <1>

KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

JUL 24 '90 16:51

07/24/90 18:08 2707 746 5581 KAPREALIAN ENG.

SITE NAME & ADDRESS		ANALYSES REQUESTED				TURN AROUND TIME:		
cal #5901 Dublin Blvd 2 nd						24 Hr		
NO	COMP	NO. OF CONT.	SAMPLING LOCATION	TOU	TPH-5-RTV	TPH-D	TOB	REMARKS
1		1	W.O. TR Pt - SIDE	✓		007	2513	RUN TOU ONLY INITIALLY. BALANCE OF TESTS MAY OR MAY NOT BE READ BASED ON TOU RESULTS
1		1	" " " "	✓		2	2514	
1		1	" " " "	✓		2	2515	

707 746 5581 PAGE 004

Received By: (Signature)
Tom M. Scan

Received By: (Signature) 12:45
K. Walter 7/17/90

Received By: (Signature)

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?
2. Will samples remain refrigerated until analyzed?
3. Did any samples received for analysis have head space?
4. Were samples in appropriate containers and properly packaged?

Signature Title Date