KAPREALIAN ENGINEERING
INCORPORATED

June 2, 1995

JUN 6 - 1995

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

Attention: Mr. David B. DeWitt

RE: Unocal Service Station #5043
449 Hegenberger Road
Oakland, California

Dear Mr. DeWitt:

Enclosed please find our report for the above referenced site. After your review, please notify me regarding distribution to the appropriate regulatory agencies.

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

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey
Executive Secretary

jad\16

Enc.

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RPT X QM ____ TRANSMITTAL ____
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2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel: 510.602.5100 Fax: 510.687.0602

KAPREALIAN ENGINEERING
INCORPORATED

KEI-P91-1004.R7
June 2, 1995

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

Attention: Mr. David B. DeWitt

RE: Soil Sampling Report and
Continuing Ground Water Investigation at
Unocal Service Station #5043
449 Hegenberger Road
Oakland, California

Dear Mr. DeWitt:

This report summarizes the soil sampling performed by Kaprealian Engineering, Inc. (KEI) during the recent underground storage tank replacement, dispenser islands, and associated piping replacement, and building replacement project at the referenced site. This report also documents the installation of two additional monitoring wells and the destruction of four on-site monitoring wells, in accordance with KEI's work plan/proposals (KEI-P91-1004.P3 and KEI-P91-1004.P5) dated June 22, 1993, and June 3, 1994, respectively. The purpose of the installation of the monitoring wells was to further delineate the degree and extent of soil and ground water contamination at the site. The wells were destroyed in order to accommodate planned excavation and construction activities. All work was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB) and the Alameda County Health Care Services (ACHCS) Agency.

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

Coordination with regulatory agencies

Collection of soil samples from the excavations performed in the vicinity of the underground fuel storage tanks, product dispenser islands, two former ground water monitoring wells, and the former station building

Collection of water samples from the fuel storage tank pit

Geologic logging of two borings for the installation of two monitoring wells

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Collection of soil samples from the borings of the monitoring wells

Development of the newly installed monitoring wells

Destruction of four on-site monitoring wells

Delivery of soil and ground water samples (including properly executed Chain of Custody documentation) to a California-certified analytical laboratory for laboratory analyses

Data analysis, interpretation, and report preparation

SITE DESCRIPTION AND BACKGROUND

The subject site contains a Unocal service station facility. The site is situated at the southwestern corner of the intersection of Hegenberger Road and Edgewater Drive in Oakland, California. The site is characterized by gently sloping, west to west-southwest trending topography, and is located approximately 1,250 feet northeast of the existing drainage channel of San Leandro Creek. A Location Map is attached to this report.

KEI's initial field work was conducted on October 25, 1991, when four soil samples, labeled P1 through P4, were collected from the product pipe trenches (at depths of approximately 3 feet below grade) during a dispenser island modification project at the site. Sample point locations are shown on the attached Figure 4. In addition, two shallow borings were hand-augered to ground water (which was encountered at a depth of approximately 4 to 4.5 feet below grade). The product pipe trenches were subsequently excavated to the ground water depth.

All samples were analyzed by Sequoia Analytical Laboratory. All soil samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene, and xylenes (BTEX), and TPH as diesel. The results of the soil analyses are summarized in Table 7. Documentation of the sample collection techniques and the analytical results of the soil samples collected from the product pipe trenches are presented in KEI's report (KEI-J91-1004.R1) dated December 17, 1991.

To comply with the requirements of the regulatory agencies and based on the analytical results, KEI proposed the installation of three monitoring wells.

On February 5, 1992, three two-inch diameter monitoring wells (designated as MW1, MW2, and MW3 on the attached Figure 1) were installed at the site. The monitoring wells were drilled and completed to total depths ranging from 13.5 to 15 feet below grade. Ground water was encountered at depths ranging from approximately 3 to 5 feet beneath the surface during drilling. The wells were developed on February 10, 1992, and were initially sampled on February 18, 1992.

Water and selected soil samples were analyzed at Sequoia Analytical Laboratory. The soil and water samples were analyzed for TPH as gasoline, BTEX, and TPH as diesel. The results of the soil analyses are summarized in Table 5, and the results of the water analyses are summarized in Table 4.

Based on the analytical results, KEI recommended the implementation of a monthly monitoring and quarterly sampling program. Documentation of the well installation protocol, sample collection techniques, and the analytical results are presented in KEI's report (KEI-P91-1004.R3) dated March 26, 1992. In KEI's first quarterly report (KEI-P91-1004.QR1) dated July 7, 1992, KEI recommended the installation of three additional monitoring wells at the site in order to further define the extent of contamination.

On August 21, 1992, three additional two-inch diameter monitoring wells (designated as MW4, MW5, and MW6 on the attached Figure 1) were installed at the site. The three wells were each drilled and completed to total depths of 13.5 feet below grade. Ground water was encountered between 5.5 to 6.5 feet beneath the surface during drilling. The new wells (MW4, MW5, and MW6) were developed on August 24, 1992, and were initially sampled on August 31, 1992.

Water samples from all of the wells, and selected soil samples from the borings for MW4 through MW6, were analyzed for TPH as gasoline, BTEX, and TPH as diesel. The results of the soil analyses are summarized in Table 5, and the results of the water analyses are summarized in Table 4. Documentation of the well installation procedures, sampling techniques, and the analytical results are presented in KEI's report (KEI-P91-1004.R4) dated October 12, 1992.

KEI was present at the site on September 20, 1994, when one 280 gallon underground waste oil tank was removed from the subject Unocal facility. Tank removal and soil sampling were performed in the presence of Mr. Barney Chan of the ACHCS. The tank was made of steel, and no apparent holes or cracks were observed in the tank.

One soil sample (labeled WO1) was collected from beneath the tank at a depth of approximately 9 feet below grade. The sample point location is shown on the attached Figure 4.

The soil sample was analyzed by Sequoia Analytical Laboratory. Sample WO1 was analyzed for TPH as gasoline, BTEX, TPH as diesel, EPA method 8010 constituents, EPA method 8270 constituents, total oil and grease (TOG), and the metals cadmium, chromium, lead, nickel, and zinc.

Based on the analytical results and visual inspection, KEI recommended no further sampling be conducted relative to the waste oil tank that was removed, unless required by the regulatory agencies. Documentation of tank removal procedures, sample collection techniques, and the analytical results are presented in KEI's report (KEI-P91-1004.R5) dated October 7, 1994.

RECENT FIELD ACTIVITIES - MONITORING WELL INSTALLATION

On January 25, 1995, two additional two-inch diameter monitoring wells (designated as MW9 and MW10 on the attached Figure 1) were installed at the site. The wells were each drilled, constructed, and completed in accordance with the guidelines of the RWQCB and the California Well Standards (per Bulletin 74-90). The subsurface materials penetrated and details of the construction of the wells are described in the attached Boring Logs and Well Construction Diagrams, respectively.

The two wells were each drilled and completed to a total depth of 13 feet below grade. Ground water was encountered at depths ranging from 2 to 3 feet below grade during drilling. Soil samples were collected for laboratory analysis and for lithologic logging purposes at a maximum spacing of 2 foot intervals, at significant changes in lithology, at obvious areas of contamination, and at or within the soil/ground water interface, beginning at a depth of approximately 2.5 feet below grade and continuing until ground water was encountered. Soil sampling conducted below the ground water table was for lithologic logging purposes only. The undisturbed soil samples were collected by driving a California-modified split-spoon sampler (lined with brass liners) ahead of the drilling augers. The two-inch diameter brass liners holding the samples were sealed with Teflon-lined plastic caps, labeled, and placed in individually sealed plastic bags, which were then stored in a cooler, on ice, until delivery to a state-certified laboratory.

Each well casing was installed with a watertight cap and padlock. A round, watertight, flush-mounted well cover was cemented in place

over each well casing. The top of each well casing was surveyed by Kier & Wright of Pleasanton, California, to Mean Sea Level (MSL) and to a vertical accuracy of 0.01 foot.

The new wells were developed on February 1, 1995. Prior to development, the wells were checked for the depth to the water table and the presence of free product. No free product was noted in the two newly installed wells. After recording the monitoring data, the new wells (MW9 and MW10) were each purged (by the use of a pump) of 42 and 90 gallons of water, respectively, until the evacuated water was clear and free of visible suspended sediment. Monitoring and well development data are summarized in Table 1.

All of the wells (MW2, MW3, MW6, and the newly installed monitoring wells MW9 and MW10) were monitored and sampled on February 21, 1995, by MPDS Services, Inc. of Concord, California. Well MW1 was not sampled due to the presence of free product.

RECENT FIELD ACTIVITIES - TANK REMOVAL, EXCAVATION, AND SAMPLING

KEI's recent field work was conducted on March 7, 1995, when two 10,000 gallon underground unleaded gasoline storage tanks and one 10,000 gallon underground diesel storage tank were removed from the site. The gasoline tanks were made of steel, and the diesel tank was made of fiberglass. No apparent holes or cracks were observed in the tanks. Mr. Barney Chan of the ACHCS was present during tank removal operations. Sampling was scheduled to be performed after the removal of all of the fill materials from the fuel tank pit.

KEI returned to the site on March 10, 1995, in order to collect the required soil samples from the fuel tank pit excavation. Water was encountered in the fuel tank pit at a depth of approximately 8.5 feet below grade, thus prohibiting the collection of any soil samples from immediately beneath the tanks. Eight soil samples, labeled SW1 through SW8, were collected from the sidewalls of the fuel tank pit, approximately six inches above the observed water table. In addition, due to observed soil contamination in the south sidewall of the fuel tank pit between depths of 2 feet and 6 feet below grade, one additional soil sample, labeled SW2(4), was collected from the south sidewall above sample point SW2 at a depth of about 4 feet below grade. Mr. Chan was present during soil sampling activities. The undisturbed samples were collected from bulk material excavated by backhoe. The samples were placed in clean, two-inch diameter brass tubes, sealed with Teflon-lined plastic caps, and stored in a cooled ice chest for delivery to a state-certified laboratory. Sample point locations are shown on the attached Figure 1.

On March 15, 1995, KEI returned to the site in order to collect a water sample from the fuel tank pit excavation. The fuel tank pit was excavated to a depth of about 16 feet below grade. Approximately 36,000 gallons of water were intermittently pumped from the fuel tank pit excavation and stored on-site in a temporary 20,000 above ground storage tank for subsequent disposal. Ground water was observed in the fuel tank pit at a depth of about 15 feet below grade. One water sample, labeled Water-1, was collected from the tank pit in two clean glass VOA vials and a one-liter amber bottle that were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory.

On March 24, 1995, during excavation activities in the vicinity of the former product dispenser islands, KEI collected two initial soil samples, labeled D1 and D2, from beneath two former product dispensers at depths of about 3 feet below grade. These samples were also collected and handled as previously described. Sample point locations are shown on the attached Figure 1.

On March 28, 1995, following overexcavation activities in the vicinity of the former product pump islands, KEI returned to the site in order to collect soil samples in the presence of Ms. Madhulla Logan and Ms. Amy Leech of the ACHCS. Four soil samples, labeled BD1 through BD4, were collected from beneath the former product pump islands, and four soil samples, labeled B1 through B4, were collected from the areas located on the north side and south side of the island excavation. These soil samples were collected at depths of approximately six feet below grade. In addition, four soil samples, labeled S1 through S4, were collected from the east sidewall of the pump island excavation at depths of about 4 feet below grade. These soil samples were also handled and stored as previously described. The sample point locations and areas of additional excavation are shown on the attached Figure 1.

On March 31, 1995, during demolition activities of the former station building, and based upon visual inspection, KEI collected two soil samples, labeled RF1 and RF2, from two pot holes located inside the former building in an attempt to characterize the subsurface soil condition beneath the former building where hydrocarbon contamination was detected by the use of a photoionization detector (PID). The samples were collected at depths of about 3 feet below grade and handled as previously described. Sample point locations are shown on the attached Figure 1.

Following overexcavation activities beneath the former station building to a depth of about 4.5 feet below grade, KEI returned to the site on April 3, 1995, to collect soil samples from the new

excavation. Four soil samples, labeled FB1 through FB4, were collected from the bottom of the new excavation at depths of approximately 4.5 feet below grade, and four soil samples, labeled FBSW1 through FBSW4, were collected from the west sidewall of the former building excavation at depths of about 3 feet below grade. Mr. Chan was present during soil sampling activities. These samples were also handled and stored as described above. Sample point locations and excavated areas are shown on the attached Figure 1.

On April 5, 1995, an additional area (located on the south side of the former station building) was excavated due to observed hydrocarbon contamination detected by the use of a PID. Per the direction of Mr. Chan of the ACHCS, KEI collected three soil samples, labeled WE1, WE2, and WE3, from the new excavation at depths of about 4.5 feet below grade. Approximately 20 feet of abandoned sewer piping were removed and one soil sample, labeled FS-1, was collected from the excavated trench at a depth of about 4 feet below grade. In addition, two soil samples, labeled MW1SW1 and MW1SW2, were collected from the adjacent sidewalls of the former monitoring well MW1 that was destroyed on April 4, 1995, at depths of approximately 5 feet below grade. These samples were also handled and stored as described above. Sample point locations and areas of additional excavation are shown on the attached Figure 1.

An additional 59,000 gallons of ground water were intermittently pumped from the fuel tank pit excavation. Subsequent to purging the tank pit, on April 19, 1995, one additional ground water sample, labeled Water-2, was collected from the tank pit and handled as described previously. A further 30,000 gallons of ground water were intermittently pumped from the fuel tank pit excavation subsequent to the collection of sample Water-2. In summary, a cumulative total of approximately 125,000 gallons of ground water were pumped from the fuel tank pit and dispenser island excavations and properly disposed.

RECENT FIELD ACTIVITIES - MONITORING WELL DESTRUCTION

On January 25, 1995, two existing monitoring wells (designated as MW4 and MW5 on the attached Figure 1) were destroyed in accordance with KEI's work plan/proposal (KEI-P91-1004.P5) dated June 3, 1994, in order to accommodate the construction of a car wash at the subject site. The two wells were installed in August of 1992, and each well extended to a total depth of 13.5 feet below grade.

Wells MW4 and MW5 were destroyed by fully drilling out the existing well seals and filter pack sand materials to the total depth of

each well, immediately after the removal of the PVC casing and screen from each well. The boreholes were then fully sealed with neat cement grout that was placed from the bottom of each boring to the surface through the hollow-stem augers.

The two destroyed wells will be replaced at a convenient time after the end of construction activities at the subject Unocal facility.

On March 29 and April 4, 1995, two existing monitoring wells (designated as MW1 and MW2, respectively, on the attached Figure 1) were destroyed during the recent UST and product piping replacement project at the subject site. The destruction of these two wells was necessary in order to allow for overexcavation activities to extend to an area adjacent to the dispenser islands in the southeastern quadrant of the site.

The former monitoring wells MW1 and MW2 were installed on February 5, 1992, and extended to total depths of 13.5 and 15 feet below grade, respectively.

The two wells were destroyed by fully excavating the well casing, filter pack, and seal materials to the total depth of each well. The excavated areas were subsequently backfilled with clean engineered fill. Replacement of destroyed wells will be addressed at an appropriate time after the completion of construction activities at the site.

ANALYTICAL RESULTS - TANK REMOVAL AND EXCAVATION ACTIVITIES

All samples were analyzed by Sequoia Analytical Laboratory in Walnut Creek, California, and were accompanied by properly executed Chain of Custody documentation. All soil and water samples were analyzed for TPH as gasoline by EPA method 5030/modified 8015, and BTEX by EPA method 8020. In addition, all soil samples, except SW1, SW2, SW6, SW7, and SW8, and water sample Water-2, were also analyzed for TPH as diesel by EPA method 3550/modified 8015 (soil) and 3510/modified 8015 (water). Soil samples FB2 and FB3 were also analyzed for TPH as hydraulic fluid.

The analytical results of the soil analyses are summarized in Table 1, and 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.

ANALYTICAL RESULTS - MONITORING WELL INSTALLATION AND GROUND WATER SAMPLING

One soil sample collected from the boring of each of the two monitoring wells MW9 and MW10 during well installation were analyzed at Sequoia Analytical Laboratory in Walnut Creek, California. The samples that were analyzed were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for TPH as gasoline by EPA method 5030/modified 8015, BTEX by EPA method 8020, and TPH as diesel by EPA method 3550/modified 8015. The analytical results of the soil samples are summarized in Table 5. Copies of the laboratory analyses and the Chain of Custody documentation for the soil samples are attached to this report.

The analytical results of the ground water samples collected from all of the monitoring wells (MW2, MW3, MW6, MW9, and MW10) on February 21, 1995, are summarized in Table 4. The concentrations of TPH as gasoline, benzene, and TPH as diesel detected in ground water samples collected on February 21, 1995, are shown on the attached Figure 3. Copies of the laboratory analyses and the Chain of Custody documentation for the water samples are attached to MPDS Services, Inc. Quarterly Data Report (MPDS-UN5043-05) dated March 17, 1995.

HYDROLOGY AND GEOLOGY

On February 21, 1995, the measured depth to ground water in the monitoring wells ranged from 1.53 to 4.69 feet below grade. The ground water flow direction appeared to be complex, but predominantly to the south-southeast, as shown on the attached Figure 1. The hydraulic gradient at the site on February 21, 1995, was 0.08, based on water level data collected from the monitoring wells prior to purging.

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 Bay Mud (Qhbm). The Bay Mud typically consists of unconsolidated, saturated clay and silty clay that is rich in organic material. The Bay Mud locally contains lenses and stringers of well-sorted silt, sand, and beds of peat.

The subsurface soils exposed during the excavation activities that were conducted at the site during March and April 1995, consisted primarily of sandy clayey silt and clayey sandy silt. On March 7, 1995, ground water was initially encountered in the fuel tank pit

excavation at a depth of 8.5 feet below grade. On March 15, 1995, following excavation activities in the fuel tank pit, ground water was observed at a depth of approximately 15 feet below grade. On April 19, 1995, ground water was observed to stabilize in the conductor casing located at the northwest corner of the fuel tank pit at a depth of about 10 feet below grade (after purging approximately 95,000 gallons).

Based on the results of our subsurface studies, the site is underlain by artificial fill materials that extend to approximately 2 to 4.5 feet below grade. The fill materials are underlain by Bay Mud, which consists predominantly of organic-rich silty clay and clayey silt, with minor interbeds of sand, peat, sandy silt, and silty clay. As of February 1995, the unsaturated zone underneath the site is approximately 1.5 to 5 feet thick.

The results of the particle size analysis (sieve and hydrometer) previously conducted on a soil sample collected from the saturated zone in the boring for monitoring well MW5 at a depth of 9 feet below grade indicate that the sample is composed of approximately 70% clay, 27% silt, and 3% fine-grained sand. The sample is classified as an organic clay with silt (OH).

DISCUSSION AND RECOMMENDATIONS

The analytical results of the final confirmatory soil samples collected during the recent excavation activities indicated relatively low residual concentrations of hydrocarbons remaining at the site, ranging from non-detectable to 70 mg/kg, except for two samples collected along the property line adjacent to Hegenberger Road (in which TPH as gasoline was detected at 110 mg/kg and 150 mg/kg). Therefore, it appears that a majority of the known accessible hydrocarbon contaminated soil has been removed from the site.

A cumulative total of 125,000 gallons of ground water were pumped from the excavations and properly disposed of. The analytical results of the ground water samples collected from the fuel tank pit excavation (Water-1 and Water-2) indicate that ground water purging appears to have significantly reduced the concentrations of dissolved hydrocarbons.

The analytical results of the soil and ground water samples collected from recently installed wells indicate that the extent of hydrocarbon contamination is reasonably well defined to the north of the site. Additionally, KEI previously proposed the installation of two off-site wells (MW7 and MW8, shown on the attached Figure 1). It is KEI's understanding that Unocal is currently in

the process of requesting access permission from the off-site property owner. KEI is prepared to install these wells once an access agreement is obtained.

As previously noted in this report, four monitoring wells (MW1, MW2, MW4, and MW5) were properly destroyed in order to accommodate the planned excavation and reconstruction activities at the site. Reinstallation of these wells will be addressed once the construction activities at the site are complete.

Lastly, KEI recommends the continuation of the current ground water monitoring and sampling program at the site. The four existing monitoring wells (MW3, MW6, MW9, and MW10) are monitored and sampled on a quarterly basis. Ground water samples are analyzed for TPH as gasoline, BTEX, and TPH as diesel.

DISTRIBUTION

A copy of this report should be sent to Mr. Barney Chan of the ACHCS, 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.

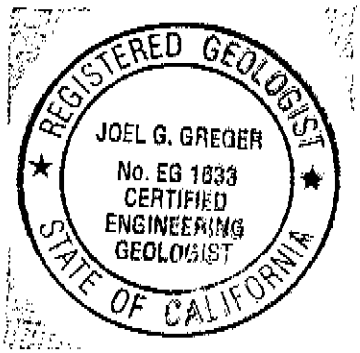
The results of this study are based on the data obtained from the field work and laboratory analyses. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied,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

Should you have any questions regarding this report, please feel free to call me at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

Hagop Kevork
Staff Engineer



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

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

Robert H. Kezerian
Project Manager

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Attachments: Tables 1 through 7
Location Map
Figures 1 through 4
Boring Logs
Well Construction Diagrams
Laboratory Analyses
Chain of Custody documentation

KEI-P91-1004.R7
June 2, 1995

TABLE 1

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
3/10/95	SW1	8.0	--	11	2.8	ND	1.6	0.067
	SW2	8.0	--	11	3.8	ND	0.79	0.034
	SW2(4)	4.0	140	2,000	ND	53	42	240
	SW3	8.0	ND	1.0	0.009	0.006	0.007	0.014
	SW4	8.0	1.8	ND	ND	ND	ND	ND
	SW5	8.0	1.4	ND	ND	ND	ND	ND
	SW6	8.0	--	ND	ND	ND	ND	ND
	SW7	8.0	--	ND	ND	ND	ND	ND
	SW8	8.0	--	140	2.6	5.3	2.7	12
3/24/95	D1	3.0	46	760	1.5	19	15	73
	D2	3.0	97	1,200	1.6	16	22	110
3/28/95	B1	6.0	ND	ND	0.13	0.026	0.0088	0.059
	B2	6.0	ND	3.4	2.8	0.041	0.19	0.28
	B3	6.0	ND	ND	ND	0.010	ND	0.017
	B4	6.0	ND	ND	ND	0.017	ND	0.032
	BD1	6.0	ND	ND	0.21	0.011	0.018	0.038
	BD2	6.0	4.8	12	2.6	0.68	0.56	1.7
	BD3	6.0	ND	ND	0.012	0.014	0.012	0.043
	BD4	6.0	ND	ND	ND	0.011	0.0072	0.037
	S1	4.0	ND	110	3.5	0.61	7.0	13
	S2	4.0	9.4	1.4	0.028	0.012	0.015	0.019
	S3	4.0	2.9	22	1.2	1.2	0.65	1.9
	S4	4.0	5.8	150	6.8	5.6	5.3	27
3/31/95	RF1	3.0	330	2,000	8.8	68	55	280
	RF2	3.0	230	3,300	18	160	110	550
4/03/95	SW8(6)	8.0	ND	ND	0.0085	ND	0.0084	0.011
	FB1	4.5	8.6	25	2.1	0.058	2.2	1.3
	FB2*	4.5	1.6	7.1	0.40	0.018	0.81	1.7
	FB3*	4.5	ND	1.6	0.028	ND	0.13	0.26
	FB4	4.5	ND	1.4	0.23	0.022	0.050	0.15
	FBSW1	3.0	1.3	7.4	0.066	0.021	1.0	ND
	FBSW2	3	7.6	70	0.11	0.096	2.1	6.7
	FBSW3	3.0	7.8	2.3	0.012	0.010	0.018	0.012
	FBSW4	3.0	3.7	9.0	0.25	0.036	0.93	0.062

KEI-P91-1004.R7
June 2, 1995

TABLE 1 (Continued)

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
4/05/95	MW1SW1	5.0	2.8	25	2.1	0.025	2.4	0.19
	MW1SW2	5.0	1.2	4.2	0.17	0.010	0.68	0.048
	WE1	4.5	3.4	26	0.31	0.30	0.59	2.6
	WE2	4.5	5.1	2.7	0.0054	0.0065	0.038	0.17
	WE3	4.5	1.6	8.2	0.21	0.074	1.6	0.0076
	FS-1	4.0	ND	12	0.28	ND	1.5	0.016

-- Indicates analysis was not performed.

ND = Non-detectable.

* TPH as hydraulic fluid was non-detectable.

Results are in milligrams per kilogram (mg/kg), unless otherwise indicated.

KEI-P91-1004.R7
June 2, 1995

TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

(Collected on March 15, 1995,
prior to Overexcavation Activities,
after Purging Approximately
36,000 gallons)

Sample #	TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
Water-1	31,000	4,000	4,400	1,100	3,600

(Collected on April 19, 1995,
following Overexcavation Activities,
after Purging an Additional Approximately
59,000 gallons)

Sample #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
Water-2	ND	ND	ND	ND	ND	ND

ND = Non-detectable.

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

KEI-P91-1004.R7
June 2, 1995

TABLE 3

SUMMARY OF MONITORING DATA

Well	Ground Water Elevation (feet)	Depth to Water (feet)♦	Total Well Depth (feet)♦	Product Thickness (feet)	Sheen	Product Purged (gallons)	Product Purged (ounces)
(Monitored and Sampled on February 21, 1995)							
MW1*	5.87▲	1.53	12.65	0.02	N/A	25	<1
MW2	6.93	1.65	14.34	0	No	29	0
MW3	5.61	1.81	14.03	0	No	8.5	0
MW4	WELL DESTROYED ON JANUARY 25, 1995						
MW5	WELL DESTROYED ON JANUARY 25, 1995						
MW6	5.67	3.20	13.75	0	No	7.5	0
MW9	6.31	1.98	13.02	0	No	8	0
MW10	3.93	4.69	13.24	0	No	6	0
(Monitored and Developed on February 1, 1995)							
MW9	6.91	1.38	13.01	0	--	42	0
MW10	5.09	3.53	13.22	0	--	90	0
(Monitored on January 17, 1995)							
MW1	5.97▲	1.44	12.70	0.04	--	25	<1
MW2	7.00	1.58	14.36	0	--	15	0
MW3	5.82	1.60	14.06	0	--	0	0
MW4	6.23	2.18	13.00	0	--	0	0
MW5	6.05	2.90	13.60	0	--	0	0
MW6	5.35	3.52	13.80	0	--	0	0
(Monitored on December 9, 1994)							
MW1	5.23	2.15	12.60	0	--	10	<1
MW2	6.82	1.76	14.28	0	--	15	0
MW3	4.86	2.56	13.98	0	--	0	0
MW4	4.88	3.53	12.91	0	--	0	0
MW5	3.50	5.45	13.51	0	--	0	0
MW6	4.12	4.75	13.71	0	--	0	0
(Monitored and Sampled on November 14, 1994)							
MW1*	4.50▲	2.97	12.71	0.12	N/A	9(5.0)	<1
MW2	6.45	2.13	14.36	0	No	8.5(4.5)	0
MW3	4.24	3.18	14.04	0	No	8	0
MW4	4.36	4.05	13.00	0	No	7	0
MW5	3.32	5.63	13.58	0	No	6	0
MW6	3.25	5.62	13.76	0	No	6	0

KEI-P91-1004.R7
June 2, 1995

TABLE 3 (Continued)

SUMMARY OF MONITORING DATA

Well	Ground Water Elevation (feet)	Depth to Water (feet)♦	Total Well Depth (feet)♦	Product Thickness (feet)	Sheen	Product Purged (gallons)	Product Purged (ounces)
(Monitored and Sampled on August 15, 1994)							
MW1*	4.61▲	2.85	12.53	0.11	N/A	35	2
MW2	5.33	3.25	14.33	0	No	25	0
MW3	2.77	4.65	14.02	0	No	6.5	0
MW4	4.14	4.27	12.94	0	No	6	0
MW5	3.27	5.68	13.54	0	No	5.5	0
MW6	3.50	5.37	13.74	0	No	6	0
(Monitored and Sampled on May 19, 1994)							
MW1*	5.16▲	2.23	12.67	0.01	N/A	25	<1
MW2	6.45	2.13	14.35	0	No	30	0
MW3	3.82	3.60	14.05	0	No	7.5	0
MW4	4.49	3.92	12.95	0	No	6.5	0
MW5	3.86	5.09	13.56	0	No	6	0
MW6	4.25	4.62	13.77	0	No	6.5	0

Well #	Well Casing Elevation (feet)**
MW1	7.38
MW2	8.58
MW3	7.42
MW4	8.41
MW5	8.95
MW6	8.87
MW9	8.29
MW10	8.62

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

▲ The ground water elevation was corrected for the presence of free product (correction factor = 0.77).

* Monitored only.

TABLE 3 (Continued)

SUMMARY OF MONITORING DATA

** The elevations of the top of the well casings for wells MW1 through MW6 are relative to MSL, per the City of Oakland Benchmark #3880 (elevation = 20.37 feet MSL). The elevations of the tops of the well casings for wells MW9 and MW10 were surveyed on February 23, 1995, relative to MSL and to the same benchmark.

( ) Amount of water purged after sampling.

-- Sheen determination was not performed.

N/A = Not applicable.

NOTE: Monitoring data were provided by MPDS Services, Inc., except for the monitoring and development data for February 1, 1995, which were provided by KEI.

KEI-P91-1004.R7
June 2, 1995

TABLE 4

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
2/21/95	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	2,000♦♦	44,000	2,200	3,200	1,300	1,500
	MW3	850♦♦	3,800	350	ND	130	22
	MW4	WELL DESTROYED ON JANUARY 25, 1995					
	MW5	WELL DESTROYED ON JANUARY 25, 1995					
	MW6	730♦♦	2,000	250	4.6	25	30
	MW9	71♦♦	70**	ND	ND	ND	ND
	MW10	270♦♦	1,500	250	26	9.1	160
11/14/94	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	10,000♦	43,000	2,200	6,500	1,800	14,000
	MW3	150♦♦	1,600**	ND	ND	ND	ND
	MW4	ND	130**	ND	ND	ND	ND
	MW5	290♦	250	40	ND	ND	5.0
	MW6	800♦♦	730	50	ND	ND	39
8/15/94	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	2,800♦♦	35,000	2,400	850	1,700	15,000
	MW3	110♦♦	130	1.1	0.54	ND	0.97
	MW4	72♦♦	59**	ND	0.60	ND	ND
	MW5	860♦♦	1,600	110	ND	340	72
	MW6	790♦♦	1,300	130	6.7	54	57
5/19/94	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	3,000♦♦	42,000	2,500	1,300	2,300	13,000
	MW3	480♦♦	1,800	83	ND	6.2	9.1
	MW4	90♦♦	140**	ND	ND	ND	ND
	MW5	600♦♦	260	44	ND	32	4.1
	MW6	1,400♦♦	3,600	300	1.7	210	41
2/07/94	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW3	620♦♦	2,700	110	ND	17	ND
	MW4	ND	56**	ND	ND	ND	ND
	MW5	830♦♦	2,000	87	ND	370	110
	MW6	970♦♦	4,900	650	ND	250	35
11/03/93	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	2,600♦♦	72,000	3,700	16,000	3,700	20,000
	MW3	160	640**	ND	ND	ND	ND
	MW4	68	130**	ND	ND	ND	ND
	MW5	2,100♦♦	13,000	350	ND	3,500	530
	MW6	390♦♦	1,400	320	ND	200	7.7

KEI-P91-1004.R7
June 2, 1995

TABLE 4 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
8/04/93	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	1,800♦♦	45,000	2,100	6,600	1,400	12,000
	MW3	100	210**	ND	ND	ND	ND
	MW4	81	250**	ND	3.5	ND	4.1
	MW5▲	970♦♦	1,500	130	1.0	460	11
	MW6	1,100♦♦	3,400	390	ND	440	190
5/04/93	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	7,100♦	63,000	3,200	17,000	470	17,000
	MW3	250♦♦	1,800*	95	ND	ND	ND
	MW4	ND	110*	0.95	ND	ND	ND
	MW5▲	4,600♦	7,400	41	ND	1,000	35
	MW6	1,800♦	4,900	360	18	450	430
2/04/93	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	6,100♦	18,000	1,600	3,000	ND	6,900
	MW3	550♦♦	3,300	320	ND	96	6.1
	MW4	ND	ND	ND	ND	ND	ND
	MW5▲	5,500♦♦	5,700	38	ND	620	170
	MW6	890♦♦	3,600	340	ND	290	550
11/30/92	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	5,700♦	29,000	2,000	3,400	1,200	6,900
	MW3	94	790**	ND	ND	ND	ND
	MW4	61	420**	ND	ND	ND	ND
	MW5▲	470♦♦	930	70	290	0.79	14
	MW6	1,400♦	9,200	550	ND	740	1,600
8/31/92	MW1	8,900♦	64,000	13,000	12,000	2,500	22,000
	MW2	1,600♦	9,000	1,800	640	140	2,000
	MW3	92♦♦	210**	1.0	ND	ND	ND
	MW4	90♦♦	240**	ND	ND	ND	0.54
	MW5	690♦	78	0.89	ND	ND	13
	MW6	750♦♦	ND	ND	ND	ND	ND
5/20/92	MW1	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					
	MW2	4,300♦	24,000	2,200	7,600	630	11,000
	MW3	WELL WAS INACCESSIBLE					
2/18/92	MW1	13,000	150,000	17,000	26,000	5,200	26,000
	MW2	4,300	29,000	1,000	5,300	260	7,900
	MW3	ND	230	4.8	22	1.8	33

TABLE 4 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

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

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

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

** Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.

▲ Total Oil & Grease was non-detectable.

ND = Non-detectable.

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

KEI-P91-1004.R7
June 2, 1995

TABLE 5

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample Number	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes
2/05/92	MW1(2.5)	1,200	14,000	160	680	470	2,400
	MW2(3.5)	2,400	9,000	74	440	280	1,400
	MW2(4.5)	29	31	2.4	0.14	3.0	9.0
	MW3(3)	49	ND	ND	ND	ND	0.011
	MW3(4.5)	ND	ND	ND	ND	ND	ND
8/21/92	MW4(5)	ND	ND	ND	ND	ND	0.0066
	MW5(6)	43*	340	1.1	1.2	7.8	13
	MW6(5)	1.2	3.7	0.90	ND	1.0	0.05
1/25/95	MW9(3)	2.6**	1.7	0.016	ND	ND	ND
	MW10(2.5)	17**	44	2.0	1.5	2.3	5.4

NOTE: The soil samples were collected at the depths below grade indicated in the ( ) of the respective sample number.

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

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

ND = Non-detectable.

Results are in milligrams per kilogram (mg/kg), unless otherwise indicated.

KEI-P91-1004.R7
June 2, 1995

TABLE 6

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
9/20/94	WO1*	9	ND	ND	ND	ND	ND	ND

* TOG, all EPA method 8010 constituents, all EPA method 8270 constituents, and the metal cadmium were all non-detectable. The metals chromium, lead, nickel, and zinc were detected at concentrations of 37 mg/kg, 6.0 mg/kg, 42 mg/kg, and 51 mg/kg, respectively.

ND = Non-detectable.

Results are in milligrams per kilogram (mg/kg), unless otherwise indicated.

KEI-P91-1004.R7
June 2, 1995

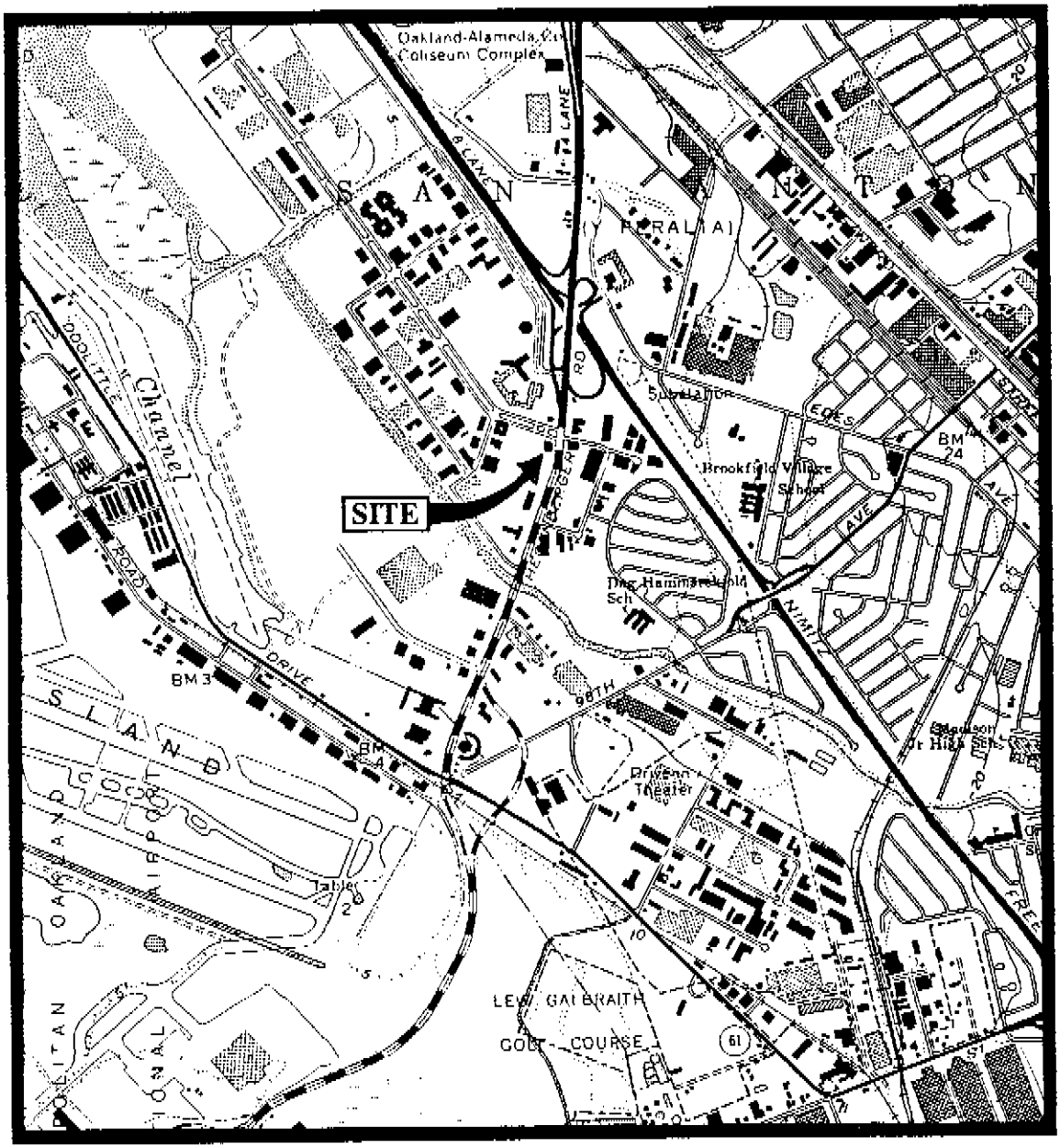
TABLE 7

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
10/25/91	P1	3	420	3,200	33	120	110	540
	P2	3	8,400	9,000	46	120	330	1,500
	P3	3	1,100	7,100	48	410	220	1,200
	P4	3	460	370	7.4	39	12	77

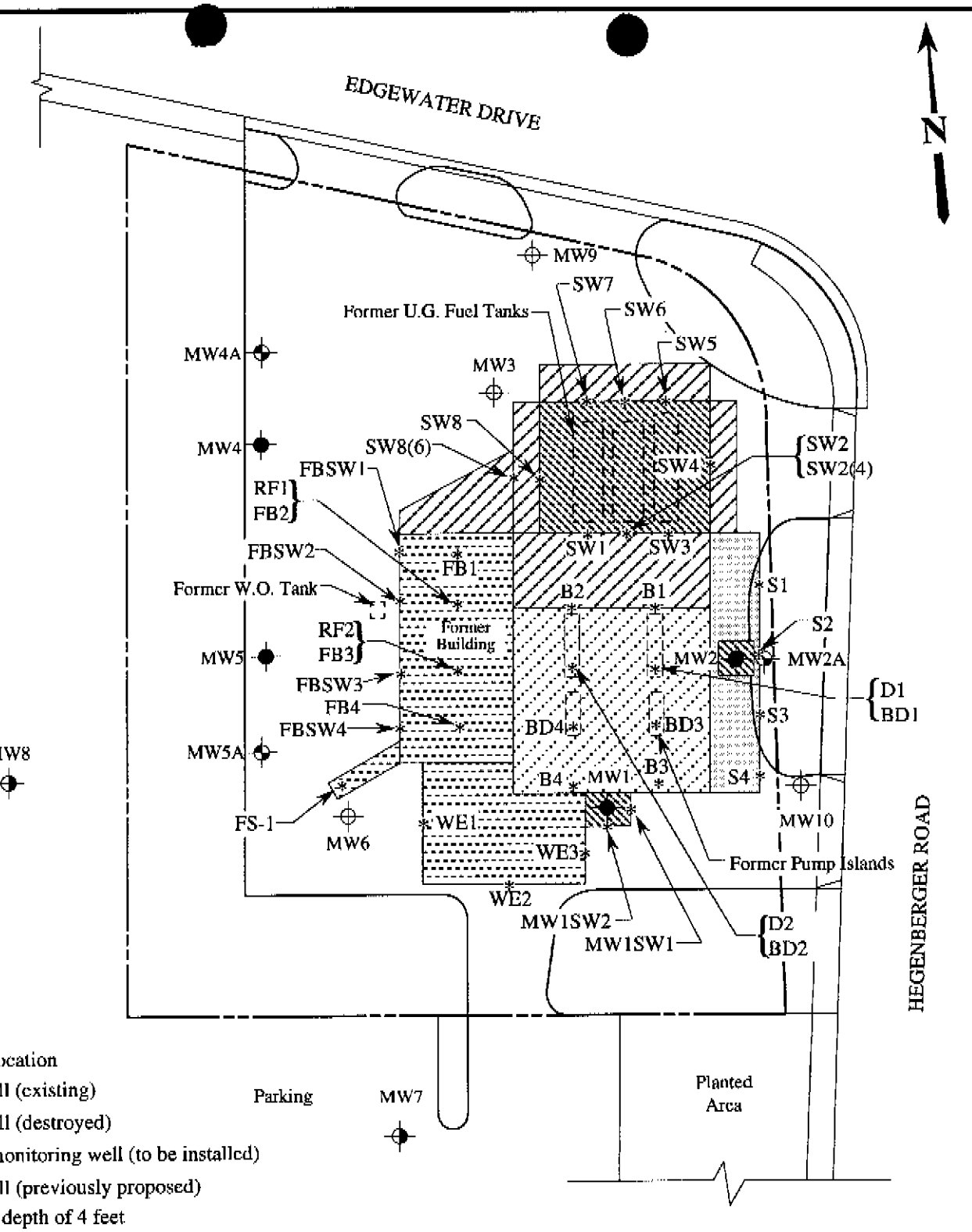
ND = Non-detectable.

Results are in milligrams per kilogram (mg/kg), unless otherwise indicated.



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

KAPREALIAN ENGINEERING INCORPORATED	**UNOCAL SERVICE STATION #5043** **449 HEGENBERGER ROAD** **OAKLAND, CALIFORNIA**	**LOCATION MAP**



LEGEND

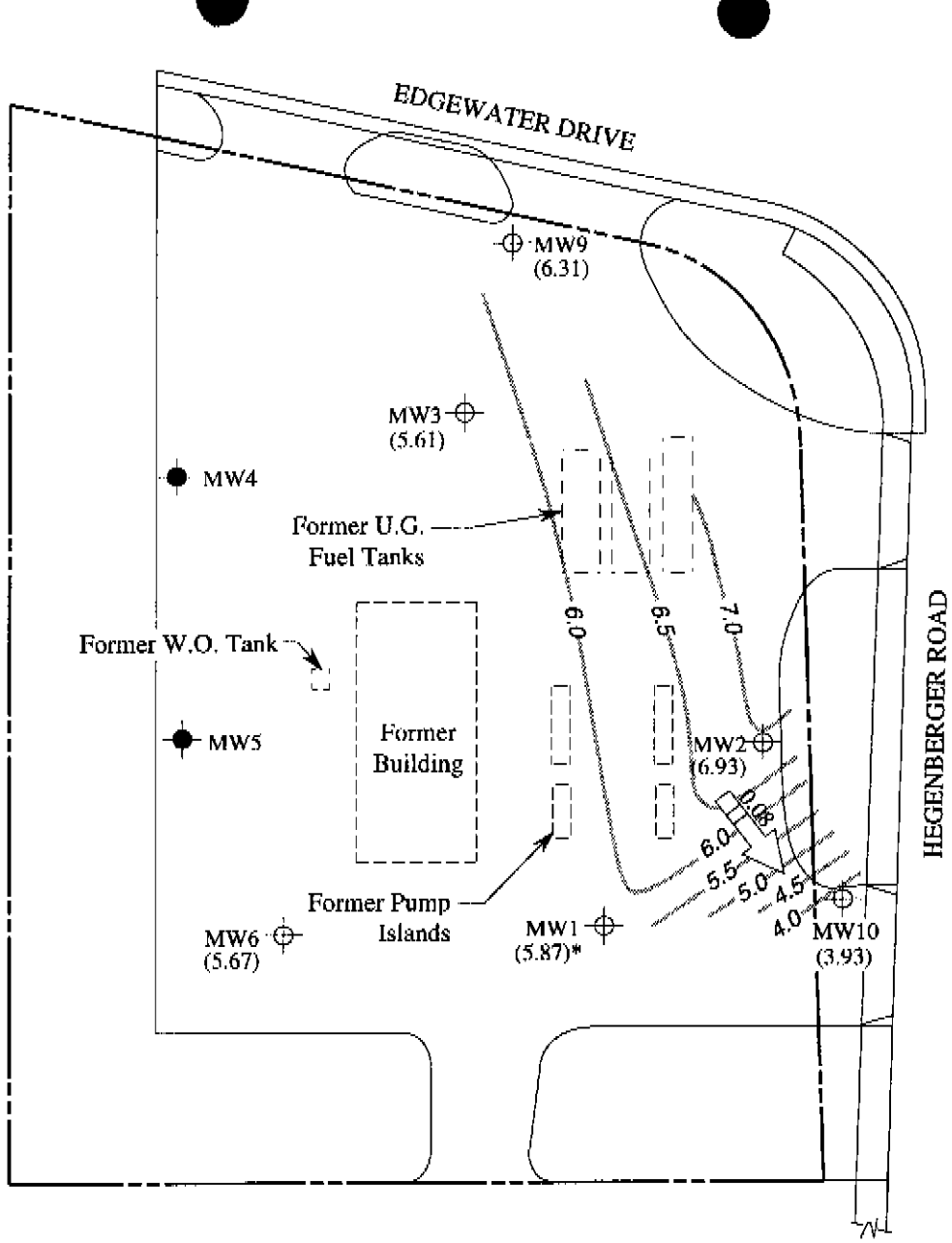
- * Sample point location
- Monitoring well (existing)
- Monitoring well (destroyed)
- Replacement monitoring well (to be installed)
- Monitoring well (previously proposed)
- Excavated to a depth of 4 feet
- Excavated to a depth of 5 feet
- Excavated to a depth of 6 feet
- Excavated to a depth of 8 feet
- Excavated to a depth of 16 feet

SOIL SAMPLE POINT AND EXISTING AND PROPOSED MONITORING WELL LOCATION MAP

KAPREALIAN ENGINEERING
INCORPORATED

UNOCAL SERVICE STATION #5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

- Monitoring well (existing)
- Monitoring well (destroyed)
- ( ) Ground water elevation in feet above Mean Sea Level
- #.## Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation
- * Ground water elevation corrected due to the presence of free product.

Note:
The ground water elevations and contours were obtained from MPDS Services, Inc.'s report (MPDS-UN5043-05) dated March 17, 1995.

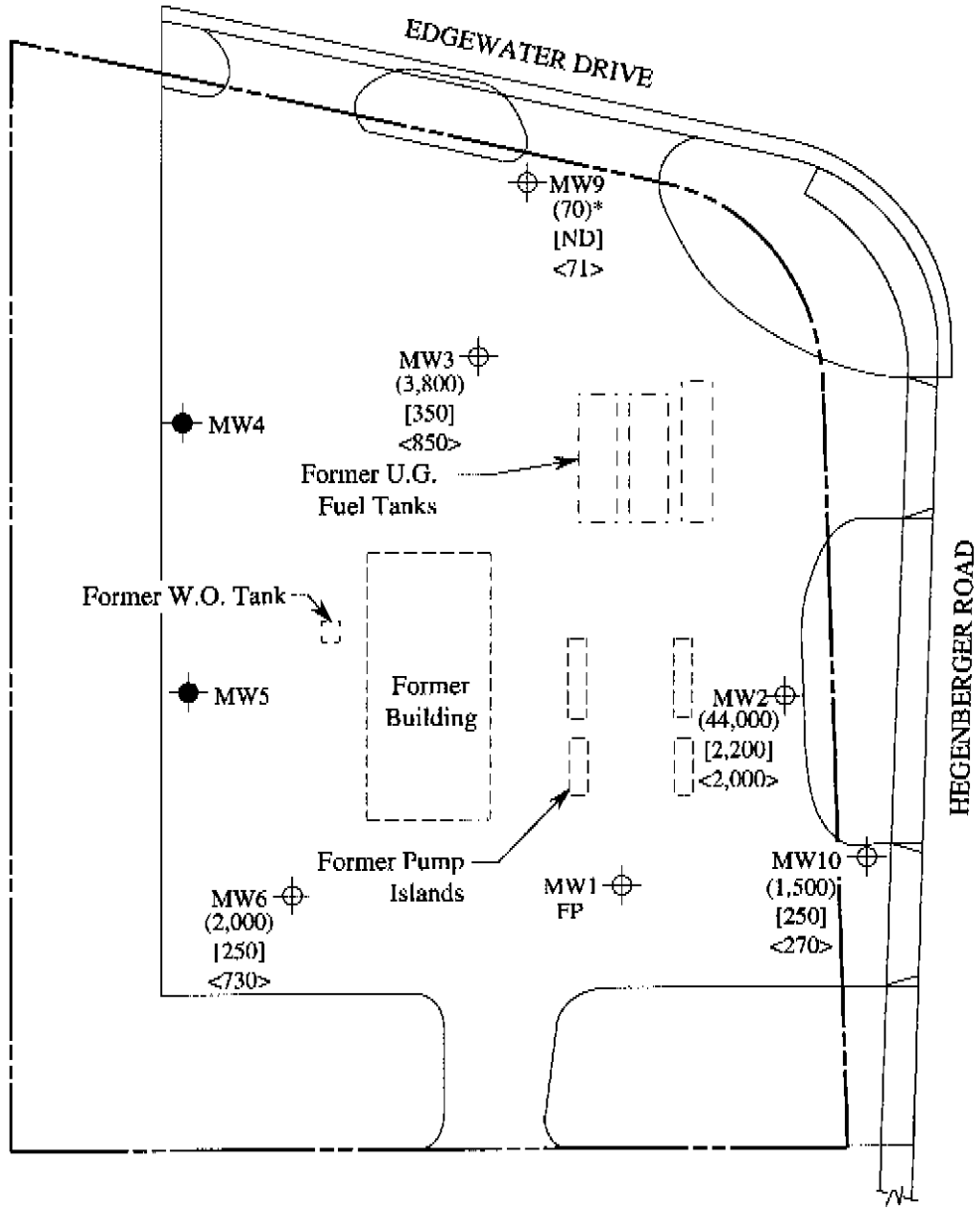
0 40 80
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE FEBRUARY 21, 1995 MONITORING EVENT

KAPREALIAN ENGINEERING
INCORPORATED

UNOCAL SERVICE STATION #5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

FIGURE
2



LEGEND

- ⊕ Monitoring well (existing)
- ● Monitoring well (destroyed)
- ( ) Concentration of TPH as gasoline in µg/L
- [ ] Concentration of benzene in µg/L
- < > Concentration of TPH as diesel in µg/L
- FP Free product
- ND Non-detectable
- * The lab reported that the hydrocarbons detected did not appear to be gasoline.

0 40 80

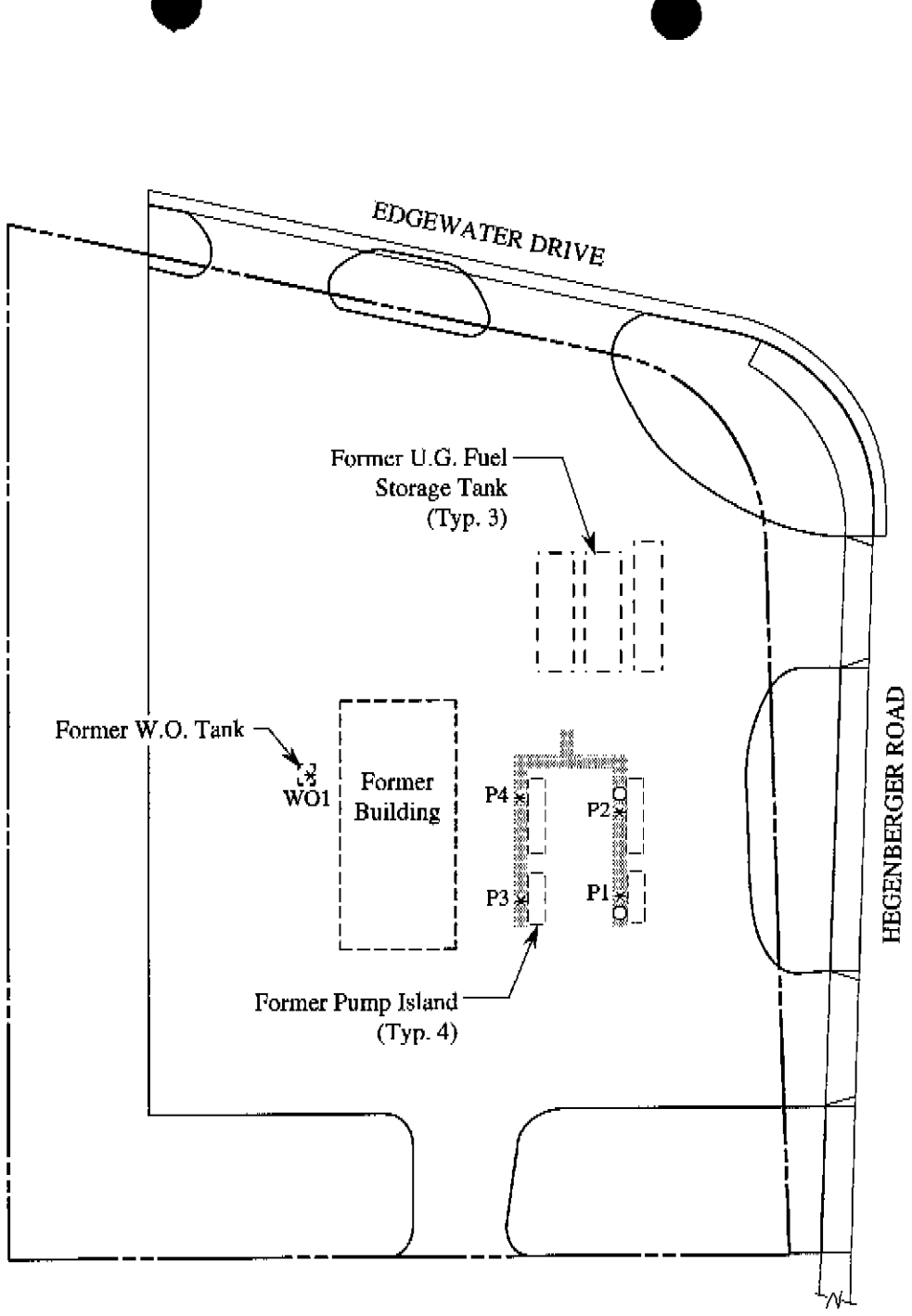
Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON FEBRUARY 21, 1995

KAPREALIAN ENGINEERING
INCORPORATED

UNOCAL SERVICE STATION #5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

FIGURE
3



LEGEND

* Soil sample point location

○ Hand augered boring location

Area excavated to ground water
(approx. 4 – 4.5 feet below grade)

0 40 80

Approx. scale feet

SOIL SAMPLE POINT LOCATIONS MAP

KAPREALIAN ENGINEERING
INCORPORATED

UNOCAL SERVICE STATION #5043
449 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

FIGURE
4

BORING LOG

Project No. KEI-P 91-1004	**Boring Diameter** 8.5" **Casing Diameter** 2"	**Logged By** JGG D.L. CC 6/633
Project Name Unocal S/S #5043 499 Hegenberger road Oakland, California	**Well Cover Elevation** N/A	**Date Drilled** 1/25/95
Boring No. MW9	**Drilling Method** Hollow-stem Auger	**Drilling Company** V & W Drilling

Pene-tration blows/6"	G.W. level	O.V.M. (P.P.M.)	Depth (feet) Samples	Stratigraphy USCS	Description
			0		A.C. pavement over sand and gravel base.
				CL / ML	Pocketed clayey silt and silty clay, stiff, moist, black and dark greenish gray, with organic matter (fill and/or disturbed native soil).
1/2/2	▽			SP	Poorly graded sand, predominantly fine to medium-grained, loose, moist grading to saturated, dark greenish gray.
			5	ML	Silt, estimated at 5-15% variable clay content, soft, wet, dark greenish gray.
1/2/2				PT	Peat with variable clay and silt content to 30%, soft, fibrous, wet, brown and black.
				ML	Clayey silt, soft, wet, black, with abundant plant fibers and organic matter.
2/4/5			10	CL	Silty clay, firm to stiff, moist, black, with plant fibers and organic matter.
13/15/18					Silty clay, estimated at 10-15% sand, trace gravel, very stiff to hard, moist, olive and dark olive gray, mottled with olive brown below 12-1/2 feet.
			15		TOTAL DEPTH: 13'
			20		

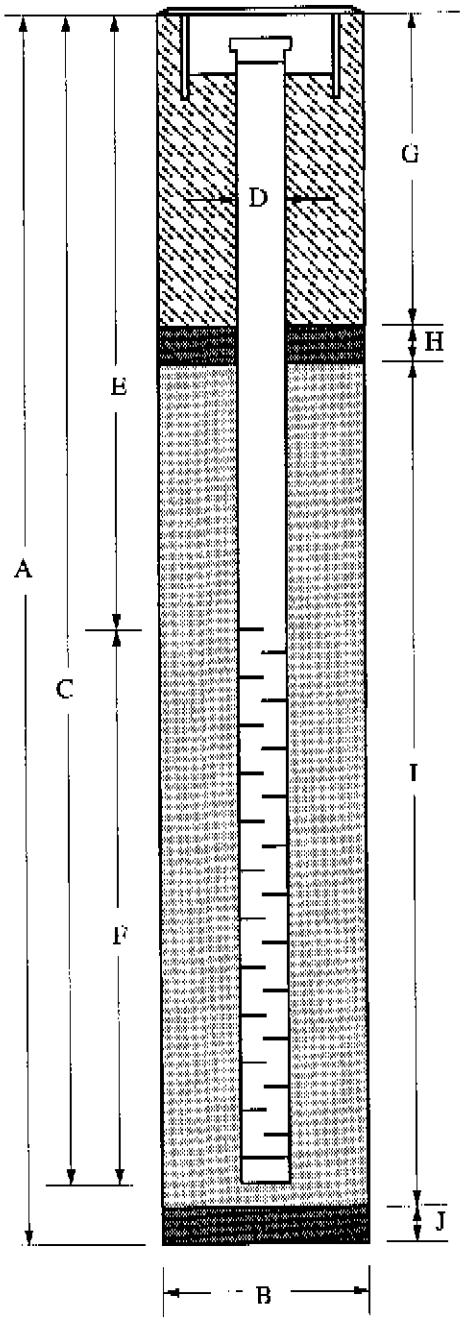
WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #5043, 499 Hegenberger Road, Oakland **WELL NO.:** MW9

PROJECT NUMBER: KEI-P91-1004

WELL PERMIT NO.: ACFC & WCD #94666

Flush-mounted Well Cover



A. Total Depth : 13'

B. Boring Diameter: 8.5"

Drilling Method: Hollow Stem Auger

C. Casing Length: 13'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 3'

F. Perforated Length: 10'

Perforation Type: Machine Slotted

Perforation Size: 0.010"

G. Surface Seal: 2'

Seal Material: Neat Cement

H. Seal: 0.5'

Seal Material: Bentonite

I. Filter Pack: 13.5'

Pack Material: SRI Supreme Sand

Size: #12

J. Bottom Seal: None

Seal Material: N/A

BORING LOG

Project No. KEI-P 91-1004	**Boring Diameter** 8.5"	**Logged By** JGG
	Casing Diameter 2"	**D.L.** CEG 1633
Project Name Unocal S/S #5043 499 Hegenberger Road Oakland, California	**Well Cover Elevation** N/A	**Date Drilled** 1/25/95
Boring No. MW10	**Drilling Method** Hollow-stem Auger	**Drilling Company** V & W Drilling

Pene-tration blows/6"	G.W level	O.V.M. (P.P.M.)	Depth (feet) Samples	Stratigraphy USCS	Description
			0		A.C. pavement over sand and gravel base.
	▽				Perched water at base of gravel base.
4/4/5				CL/ ML	Pocketed clayey silt and silty clay, trace-15% sand and gravel, stiff, very moist, black and dark greenish gray, with abundant plant fibers and organic matter (fill and disturbed native soil).
1/2/2			5	OL/ OH	Silty clay, soft to firm, wet, black, with abundant plant fibers and organic matter.
3/5/5			10	CL	Silty clay, stiff, moist, black, grades to dark greenish gray below 10 feet, with plant fibers and organic matter, trace sand below 10 feet.
9/11/13				SC	Clayey sand, estimated at 20-25% clay and 10-15% silt, trace gravel, medium dense, moist, dark greenish gray, with plant fibers and organic matter.
			15		TOTAL DEPTH: 13'
			20		

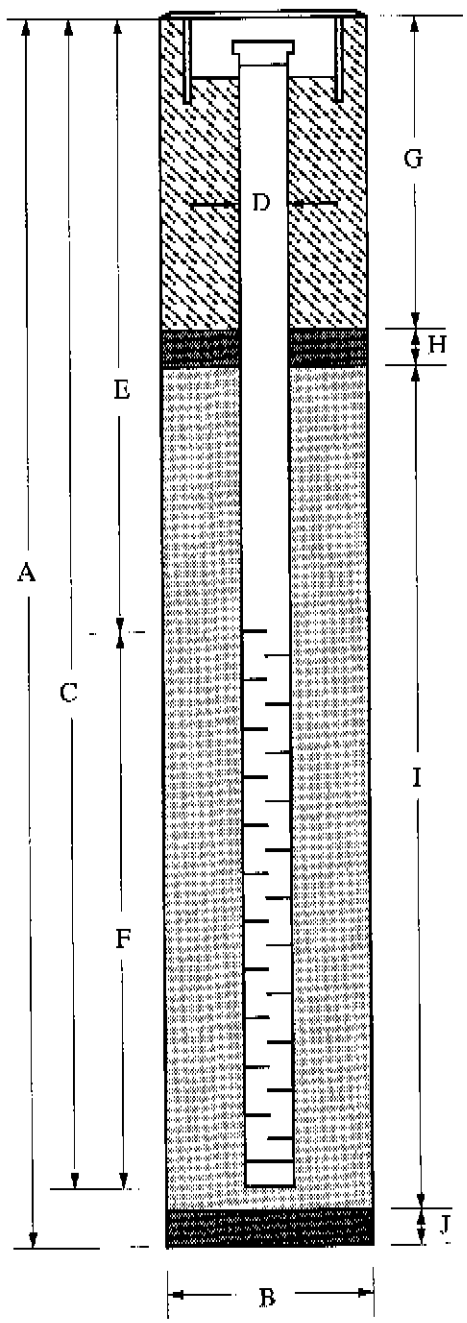
WELL CONSTRUCTION DIAGRAM

PROJECT NAME: Unocal S/S #5043, 499 Hegenberger Road, Oakland **WELL NO.:** MW10

PROJECT NUMBER: KEI-P91-1004

WELL PERMIT NO.: ACFC & WCD #94666

Flush-mounted Well Cover



A. Total Depth : 13'

B. Boring Diameter: 8.5"

Drilling Method: Hollow Stem Auger

C. Casing Length: 13'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375"

ID = 2.067"

E. Depth to Perforations: 3'

F. Perforated Length: 10'

Perforation Type: Machine Slotted

Perforation Size: 0.010"

G. Surface Seal: 2'

Seal Material: Neat Cement

H. Seal: 0.5'

Seal Material: Bentonite

I. Filter Pack: 13.5'

Pack Material: SRI Supreme Sand

Size: #12

J. Bottom Seal: None

Seal Material: N/A

Sequoia Analytical

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, Oakland	Sampled: Mar 10, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Mar 13, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported: Mar 17, 1995
Attention: Dennis Royce	First Sample #:	503-0489	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 503-0489 SW1	Sample I.D. 503-0490 SW2	Sample I.D. 503-0491 SW2 (4)	Sample I.D. 503-0492 SW3	Sample I.D. 503-0493 SW4	Sample I.D. 503-0494 SW5
Purgeable Hydrocarbons	1.0	11	11	2,000	1.0	N.D.	N.D.
Benzene	0.0050	2.8	3.8	N.D.	0.0090	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	53	0.0060	N.D.	N.D.
Ethyl Benzene	0.0050	1.6	0.79	42	0.0070	N.D.	N.D.
Total Xylenes	0.0050	0.067	0.034	240	0.014	N.D.	N.D.
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline	--	--

Quality Control Data

Report Limit Multiplication Factor:	2.5	5.0	400	1.0	1.0	1.0
Date Analyzed:	3/13/95	3/13/95	3/13/95	3/13/95	3/13/95	3/13/95
Instrument Identification:	GCHP-18	GCHP-18	GCHP-18	GCHP-18	GCHP-18	GCHP-18
Surrogate Recovery, %: (QC Limits = 70-130%)	115	110	110	111	103	104

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1210

Alan B. Kemp
Project Manager

5030489.KEI <1>

Sequoia Analytical

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

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5043, Oakland	Sampled:	Mar 10, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Mar 13, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 17, 1995
Attention: Dennis Royce	First Sample #:	503-0495		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 503-0495 SW6	Sample I.D. 503-0496 SW7	Sample I.D. 503-0497 SW8
Purgeable Hydrocarbons	1.0	N.D.	N.D.	140
Benzene	0.0050	N.D.	N.D.	2.6
Toluene	0.0050	N.D.	N.D.	5.3
Ethyl Benzene	0.0050	N.D.	N.D.	2.7
Total Xylenes	0.0050	N.D.	N.D.	12
Chromatogram Pattern:		--	--	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	20
Date Analyzed:	3/13/95	3/13/95	3/13/95
Instrument Identification:	GCHP-18	GCHP-18	GCHP-18
Surrogate Recovery, %: (QC Limits = 70-130%)	106	108	123

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1210

Alan B. Kemp
Project Manager

Sequoia Analytical

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, Oakland	Sampled: Mar 10, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Mar 13, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: Mar 17, 1995
Attention: Dennis Royce	First Sample #:	503-0491	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 503-0491 SW2 (4)*	Sample I.D. 503-0492 SW3	Sample I.D. 503-0493 SW4*	Sample I.D. 503-0494 SW5*
Extractable Hydrocarbons	1.0	140	N.D.	1.8	1.4
Chromatogram Pattern:		Unidentified Hydrocarbons <C14	--	Discrete Peaks	Discrete Peaks

Quality Control Data

Report Limit Multiplication Factor:	5.0	1.0	1.0	1.0
Date Extracted:	3/14/95	3/14/95	3/14/95	3/14/95
Date Analyzed:	3/16/95	3/15/95	3/16/95	3/16/95
Instrument Identification:	GCHP-5A	GCHP-4B	GCHP-4B	GCHP-5A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1210

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C14" are probably gasoline; "Discrete Peaks" refers to unidentified peaks in the EPA 8270 range.

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Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, Oakland
Matrix: Solid
QC Sample Group: 5030489-97

Reported: Mar 17, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod.
Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler	B. Ali
MS/MSD Batch#:	9503893-01	9503893-01	9503893-01	9503893-01	9503739-5
Date Prepared:	3/13/95	3/13/95	3/13/95	3/13/95	3/13/95
Date Analyzed:	3/14/95	3/14/95	3/14/95	3/14/95	3/14/95
Instrument I.D.#:	GCHP-01	GCHP-01	GCHP-01	GCHP-01	GCHP-4B
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg	15 mg/kg
Matrix Spike % Recovery:	90	90	93	93	38
Matrix Spike Duplicate % Recovery:	100	105	105	105	36
Relative % Difference:	11	15	10	12	4.1
LCS Batch#:	-	-	-	-	BLK031395
Date Prepared:	-	-	-	-	3/13/95
Date Analyzed:	-	-	-	-	3/14/95
Instrument I.D.#:	-	-	-	-	GCHP-4B
LCS % Recovery:	-	-	-	-	56
% Recovery Control Limits:	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL, #1210

Alan B. Kemp
Project Manager

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

UNOCAL 76

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☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: UNOCAL #5043 - OAKLAND
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: DAVE DEWITT
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 687-0602	Site #: 5043 - 449 HEGENBERGER ROAD
Report To: KEI Sampler: HAIG	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☐ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☒ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☒ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☒ Other

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTXE	TPH-D							Comments
1.	SW1	3/10/95	SOIL	1	TUBE	5030489	✓	✓								
2.	SW2			1		5030490	✓	✓								
3.	SW2(4)			1		5030491	✓	✓	✓							
4.	SW3			1		5030492	✓	✓	✓							
5.	SW4			1		5030493	✓	✓	✓							
6.	SW5			1		5030494	✓	✓	✓							
7.	SW6			1		5030495	✓	✓								
8.	SW7			1		5030496	✓	✓								
9.	SW8	↓	↓	1	↓	5030497	✓	✓								
10.																

Relinquished By: [signature]	Date: 3-13-95	Time: 0845	Received By: [signature] Date: 3-13-95 Time: 0845
Relinquished By: [signature]	Date: 3-13-95	Time: 0900	Received By: Date: Time:
Relinquished By:	Date:	Time:	Received By Lab: RD Kelley Date: 3/13/95 Time: 0900

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road,	Sampled:	Mar 24, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil Oakland	Received:	Mar 27, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 31, 1995
Attention: Dennis Royce	First Sample #:	503-1253		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 503-1253 D1	Sample I.D. 503-1254 D2
Purgeable Hydrocarbons	1.0	760	1,200
Benzene	0.0050	1.5	1.6
Toluene	0.0050	19	16
Ethyl Benzene	0.0050	15	22
Total Xylenes	0.0050	73	110
Chromatogram Pattern:		Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	50	50
Date Analyzed:	3/30/95	3/30/95
Instrument Identification:	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	74	70

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled: Mar 24, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Mar 27, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: Mar 31, 1995
Attention: Dennis Royce	First Sample #:	503-1253	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 503-1253 D1*	Sample I.D. 503-1254 D2*
Extractable Hydrocarbons	1.0	46	97
Chromatogram Pattern:		Unidentified Hydrocarbons <C16 & >C20	Unidentified Hydrocarbons <C16 & >C20

Quality Control Data

Report Limit Multiplication Factor:	1.0	5.0
Date Extracted:	3/29/95	3/29/95
Date Analyzed:	3/29/95	3/29/95
Instrument Identification:	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C16" are probably gasoline; ">C20" refers to unidentified peaks in the total oil and grease range.

Sequoia Analytical

1680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, 449 Hegenberger Road, Oakland
Matrix: Solid
QC Sample Group: 5031253-54
Reported: Mar 31, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod.
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	J. Dinsay
MS/MSD Batch#:	5031364	5031364	5031364	5031364	5031253
Date Prepared:	3/30/95	3/30/95	3/30/95	3/30/95	3/29/95
Date Analyzed:	3/30/95	3/30/95	3/30/95	3/30/95	3/29/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg
Matrix Spike % Recovery:	78	78	80	98	-
Matrix Spike Duplicate % Recovery:	83	83	83	103	-
Relative % Difference:	6.2	6.2	3.7	5.0	-
LCS Batch#:	3LCS033095	3LCS033095	3LCS033095	3LCS033095	BLK032995
Date Prepared:	3/30/95	3/30/95	3/30/95	3/30/95	3/29/95
Date Analyzed:	3/30/95	3/30/95	3/30/95	3/30/95	3/29/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
LCS % Recovery:	87	88	87	89	58
% Recovery Control Limits:	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

UNOCAL 76

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☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: UNOCAL #5043 - Oakland
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: DAVE DEWITT
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 687-0602	Site #: 5043 - 449 Hegenberger Road
Report To: KEI Sampler: HAIG	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround ☐ 10 Work Days ☐ 5 Work Days ☒ 3 Work Days
Time: ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☒ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☒ Other

Analyses Requested: TPH-G, BTXE, TPH-D

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTXE	TPH-D	Comments
1.	D1	3/24/95	SOIL	1	TUBE	5021253	✓	✓	✓	
2.	D2	↓	↓	1	↓	5021254	✓	✓	✓	
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

Relinquished By: [signature]	Date: 3-27-95	Time: 0545	Received By: [signature] Date: 3-27-95 Time: 0615
Relinquished By: [signature]	Date: 3-27-95	Time: 1505	Received By: Date: Time:
Relinquished By:	Date:	Time:	Received By Lab: [signature] Date: 3/27/95 Time: 1705

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment ____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?

Approved by: _____ Signature: _____ Company: _____ Date:

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled: Mar 28, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Mar 29, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported: Apr 5, 1995
Attention: Dennis Royce	First Sample #:	503-1397	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 503-1397 B1	Sample I.D. 503-1398 B2	Sample I.D. 503-1399 B3	Sample I.D. 503-1400 B4	Sample I.D. 503-1401 BD1	Sample I.D. 503-1402 BD2
Purgeable Hydrocarbons	1.0	N.D.	3.4	N.D.	N.D.	N.D.	12
Benzene	0.0050	0.13	2.8	N.D.	N.D.	0.21	2.6
Toluene	0.0050	0.026	0.041	0.010	0.017	0.011	0.68
Ethyl Benzene	0.0050	0.0088	0.19	N.D.	N.D.	0.018	0.56
Total Xylenes	0.0050	0.059	0.28	0.017	0.032	0.038	1.7
Chromatogram Pattern:		--	Gasoline	--	--	--	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	5.0
Date Analyzed:	4/3/95	4/3/95	4/3/95	4/3/95	4/3/95	4/4/95
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	109	115	107	107	88	94

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled:	Mar 28, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Mar 29, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 3, 1995
Attention: Dennis Royce	First Sample #:	503-1403		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 503-1403 BD3	Sample I.D. 503-1404 BD4
Purgeable Hydrocarbons	1.0	N.D.	N.D.
Benzene	0.0050	0.012	N.D.
Toluene	0.0050	0.014	0.011
Ethyl Benzene	0.0050	0.012	0.0072
Total Xylenes	0.0050	0.043	0.037
Chromatogram Pattern:		--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	4/3/95	4/3/95
Instrument Identification:	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	93	93

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled: Mar 28, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Mar 29, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: Apr 3, 1995
Attention: Dennis Royce	First Sample #:	503-1397	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 503-1397 B1	Sample I.D. 503-1398 B2	Sample I.D. 503-1399 B3	Sample I.D. 503-1400 B4	Sample I.D. 503-1401 BD1	Sample I.D. 503-1402 BD2*
Extractable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	4.8
Chromatogram Pattern:		--	--	--	--	--	Unidentified Hydrocarbons <C16 & >C20

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	3/29/95	3/29/95	3/29/95	3/29/95	3/29/95	3/29/95
Date Analyzed:	4/2/95	4/2/95	4/2/95	4/2/95	4/2/95	4/2/95
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C16" are probably gasoline; ">C20" refers to unidentified peaks in the total oil and grease range.

Sequoia Analytical

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled: Mar 28, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Mar 29, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: Apr 3, 1995
Attention: Dennis Royce	First Sample #:	503-1403	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 503-1403 BD3	Sample I.D. 503-1404 BD4
Extractable Hydrocarbons	1.0	N.D.	N.D.
Chromatogram Pattern:		--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	3/29/95	3/29/95
Date Analyzed:	4/2/95	4/2/95
Instrument Identification:	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

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

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, 449 Hegenberger Road, Oakland
Matrix: Solid
QC Sample Group: 5031397-404
Reported: Apr 5, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 M
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	J. Dinsay
MS/MSD Batch#:	5031404	5031404	5031404	5031404	BLK032995
Date Prepared:	4/3/95	4/3/95	4/3/95	4/3/95	3/29/95
Date Analyzed:	4/3/95	4/3/95	4/3/95	4/3/95	4/2/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg
Matrix Spike % Recovery:	93	98	103	104	37
Matrix Spike Duplicate % Recovery:	93	98	105	104	45
Relative % Difference:	0.0	0.0	1.9	0.0	20
LCS Batch#:	1LCS040395	1LCS040395	1LCS040395	1LCS040395	BLK032995
Date Prepared:	4/3/95	4/3/95	4/3/95	4/3/95	3/29/95
Date Analyzed:	4/3/95	4/3/95	4/3/95	4/3/95	4/2/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A
LCS % Recovery:	106	107	114	114	37
% Recovery Control Limits:	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

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☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: UNOCAL #5043 - Oakland
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: DAVE DEWITT
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 687-0602	Site #: 5043 - 449 Hegenberger Road
Report To: KEI Sampler: HAIG	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☐ 10 Work Days ☐ 5 Work Days ☒ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☒ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☒ Other

Analyses Requested: TPH-D (EPA 3510/8015) | TPH-G (EPA 5030/8015) | BTEX (EPA 8020)

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-D	TPH-G	BTEX						Comments
1.	B1	3/28/95	SOIL	1	TUBE		✓	✓	✓		5021397	T			
2.	B2			1			✓	✓	✓		5021398				
3.	B3			1			✓	✓	✓		5021399				
4.	B4			1			✓	✓	✓		5021400				
5.	BD1			1			✓	✓	✓		5021401				
6.	BD2			1			✓	✓	✓		5021402				
7.	BD3			1			✓	✓	✓		5021403				
8.	BD4	↓	↓	1	↓		✓	✓	✓		5021404	↓			
9.															
10.															

Relinquished By:	Date: 3-21-95	Time: 0910	Received By:	Date: 3-21-95	Time: 0910
Relinquished By:	Date: 3-21-95	Time: 0935	Received By:	Date: 3/21/95	Time: 0935
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled:	Mar 28, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Mar 29, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 5, 1995
Attention: Dennis Royce	First Sample #:	503-1393		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 503-1393 S1	Sample I.D. 503-1394 S2	Sample I.D. 503-1395 S3	Sample I.D. 503-1396 S4
Purgeable Hydrocarbons	1.0	110	1.4	22	150
Benzene	0.0050	3.5	0.028	1.2	6.8
Toluene	0.0050	0.61	0.012	1.2	5.6
Ethyl Benzene	0.0050	7.0	0.015	0.65	5.3
Total Xylenes	0.0050	13	0.019	1.9	27
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	50	5.0	5.0	50
Date Analyzed:	4/3/95	4/4/95	4/4/95	4/4/95
Instrument Identification:	HP-2	HP-4	HP-4	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	115	90	92	117

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

5031393.KEI <1>

Sequoia Analytical

[redacted]80 Chesapeake Drive, Redwood City, CA 94063, [redacted]15) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled:	Mar 28, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Mar 29, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported:	Apr 5, 1995
Attention: Dennis Royce	First Sample #:	503-1393		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 503-1393 S1	Sample I.D. 503-1394 S2*	Sample I.D. 503-1395 S3*	Sample I.D. 503-1396 S4*
Extractable Hydrocarbons	1.0	N.D.	9.4	2.9	5.8
Chromatogram Pattern:		- -	Unidentified Hydrocarbons <C16	Unidentified Hydrocarbons <C16	Unidentified Hydrocarbons <C16

Quality Control Data

Report Limit Multiplication Factor:	1.0	5.0	5.0	1.0
Date Extracted:	3/29/95	3/29/95	3/29/95	3/29/95
Date Analyzed:	3/31/95	3/31/95	3/31/95	3/31/95
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C16" are probably gasoline.

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, 449 Hegenberger Road, Oakland
Matrix: Solid
QC Sample Group: 5031393-96
Reported: Apr 5, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 M
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	J. Dinsay
MS/MSD Batch#:	5031404	5031404	5031404	5031404	5031394
Date Prepared:	4/3/95	4/3/95	4/3/95	4/3/95	3/29/95
Date Analyzed:	4/3/95	4/3/95	4/3/95	4/3/95	3/31/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg
Matrix Spike % Recovery:	93	98	103	104	54
Matrix Spike Duplicate % Recovery:	93	98	105	104	70
Relative % Difference:	0.0	0.0	1.9	0.0	26
LCS Batch#:	1LCS040395	1LCS040395	1LCS040395	1LCS040395	BLK032995
Date Prepared:	4/3/95	4/3/95	4/3/95	4/3/95	3/29/95
Date Analyzed:	4/3/95	4/3/95	4/3/95	4/3/95	3/31/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3A
LCS % Recovery:	106	107	114	114	62
% Recovery Control Limits:	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

UNOCAL 76

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❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: UNOCAL #5043 - Oakland
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: DAVE DEWITT
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 687-0602	Site #: 5043 - 449 Hegenberger Road
Report To: KEI Sampler: HAQ	QC Data: ☒ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround ❑ 10 Work Days ☒ 5 Work Days ❑ 3 Work Days
Time: ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water
❑ Waste Water
☒ Other

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTXE	TPH-D							Comments
1.	S1	3/28/95	SOIL	1	TUBE		✓	✓	✓		5021393	T				
2.	S2			1			✓	✓	✓		5021394					
3.	S3			1			✓	✓	✓		5021395					
4.	S4			1			✓	✓	✓		5021396					
5.																
6.																
7.																
8.																
9.																
10.																

Relinquished By:		Date: 3-29-95	Time: 0910	Received By:	Date: 3-29-95	Time: 0910
Relinquished By:		Date: 3-29-95	Time: 0935	Received By:	Date: 3/29/95	Time: 1:30pm
Relinquished By:		Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment ____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed?
2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time?

Approved by: _____ Signature: _____ Company: _____ Date:

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled:	Mar 31, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Apr 3, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 6, 1995
Attention: Dennis Royce	First Sample #:	504-0018		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0018 RF1	Sample I.D. 504-0019 RF2
Purgeable Hydrocarbons	1.0	2,000	3,300
Benzene	0.0050	8.8	18
Toluene	0.0050	68	160
Ethyl Benzene	0.0050	55	110
Total Xylenes	0.0050	280	550
Chromatogram Pattern:		Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	250	250
Date Analyzed:	4/5/95	4/5/95
Instrument Identification:	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	129	142

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled: Mar 31, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Apr 3, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: Apr 6, 1995
Attention: Dennis Royce	First Sample #:	504-0018	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0018 RF1*	Sample I.D. 504-0019 RF2*
Extractable Hydrocarbons	1.0	330	230
Chromatogram Pattern:		Diesel & Unidentified Hydrocarbons <C16	Diesel & Unidentified Hydrocarbons <C16

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	4/4/95	4/4/95
Date Analyzed:	4/5/95	4/5/95
Instrument Identification:	HP-3B	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
*This sample appears to contain diesel & a non-diesel mixture. Unidentified hydrocarbons <C16 are probably gasoline.

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, 449 Hegenberger Road, Oakland
Matrix: Solid
QC Sample Group: 5040018-019
Reported: Apr 6, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	J. Dinsay
MS/MSD Batch#:	5031063	5031063	5031063	5031063	5031530
Date Prepared:	4/5/95	4/5/95	4/5/95	4/5/95	4/4/95
Date Analyzed:	4/5/95	4/5/95	4/5/95	4/5/95	4/5/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg
Matrix Spike % Recovery:	108	113	123	119	107
Matrix Spike Duplicate % Recovery:	108	110	123	118	110
Relative % Difference:	0.0	2.7	0.0	0.84	2.8
LCS Batch#:	1LCS040595	1LCS040595	1LCS040595	1LCS040595	BLK040495
Date Prepared:	4/5/95	4/5/95	4/5/95	4/5/95	4/4/95
Date Analyzed:	4/5/95	4/5/95	4/5/95	4/5/95	4/5/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B
LCS % Recovery:	105	108	113	114	103
% Recovery Control Limits:	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

UNOCAL 76

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❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: UNOCAL #5043 - OAKLAND
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: Dave De Witt
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 684-0602	Site #: 5043 - 449 Hegenberger Road
Report To: KEI Sampler: HAIG	QC Data: ☒ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ❑ 10 Work Days ❑ 5 Work Days ☒ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water ❑ Waste Water ☒ Other

Analyses Requested: TPH-G, BTXE, TPH-D

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTXE	TPH-D	Comments
1.	RF1	3/31/95	SOIL	1	TUBE	5040018	✓	✓	✓	
2.	RF2	3/31/95	SOIL	1	TUBE	5040019	✓	✓	✓	
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

Relinquished By:	Date: 4/3/95	Time: 9:05	Received By:	Date: 4/3/95	Time: 9:05
Relinquished By:	Date: 4/3/95	Time: 4:35	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: 4/3/95	Time: 1635

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment_____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger, Oakland	Sampled:	Apr 3, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Apr 4, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 10, 1995
Attention: Dennis Royce	First Sample #:	504-0105		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0105 SW 8 (6)	Sample I.D. 504-0106 FB 1	Sample I.D. 504-0107 FB 2	Sample I.D. 504-0108 FB 3	Sample I.D. 504-0109 FB 4	Sample I.D. 504-0110 FB SW1
Purgeable Hydrocarbons	1.0	N.D.	25	7.1	1.6	1.4	7.4
Benzene	0.0050	0.0085	2.1	0.40	0.028	0.23	0.066
Toluene	0.0050	N.D.	0.058	0.018	N.D.	0.022	0.021
Ethyl Benzene	0.0050	0.0084	2.2	0.81	0.13	0.050	1.0
Total Xylenes	0.0050	0.011	1.3	1.7	0.26	0.15	N.D.
Chromatogram Pattern:		--	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	2.0	1.0	1.0	1.0
Date Analyzed:	4/7/95	4/7/95	4/10/95	4/7/95	4/10/95	4/7/95
Instrument Identification:	HP-5	HP-4	HP-2	HP-5	HP-2	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	91	92	118	88	115	81

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

5040105.KEI <1>

Sequoia Analytical

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger, Oakland	Sampled: Apr 3, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Apr 4, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported: Apr 10, 1995
Attention: Dennis Royce	First Sample #:	504-0111	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0111 FB SW2	Sample I.D. 504-0112 FB SW3	Sample I.D. 504-0113 FB SW4
Purgeable Hydrocarbons	1.0	70	2.3	9.0
Benzene	0.0050	0.11	0.012	0.25
Toluene	0.0050	0.096	0.010	0.036
Ethyl Benzene	0.0050	2.1	0.018	0.93
Total Xylenes	0.0050	6.7	0.012	0.062
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	10	1.0	5.0
Date Analyzed:	4/7/95	4/7/95	4/7/95
Instrument Identification:	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	88	91	84

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

5040105.KEI <2>

Sequoia Analytical

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger, Oakland	Sampled:	Apr 3, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Apr 4, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported:	Apr 10, 1995
Attention: Dennis Royce	First Sample #:	504-0105		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0105 SW 8 (6)	Sample I.D. 504-0106 FB 1*	Sample I.D. 504-0107 FB 2*	Sample I.D. 504-0108 FB 3	Sample I.D. 504-0109 FB 4	Sample I.D. 504-0110 FB SW1*
Extractable Hydrocarbons	1.0	N.D.	8.6	1.6	N.D.	N.D.	1.3
Chromatogram Pattern:		--	Unidentified Hydrocarbons <C15 & >C20	Unidentified Hydrocarbons <C15 & >C20	--	--	Unidentified Hydrocarbons <C15 & >C20

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	4/6/95	4/6/95	4/6/95	4/6/95	4/6/95	4/6/95
Date Analyzed:	4/6/95	4/6/95	4/6/95	4/6/95	4/6/95	4/6/95
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C15" are probably gasoline; ">C20" refers to unidentified peaks in the total oil and grease range.

5040105.KEI <3>

Sequoia Analytical

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger, Oakland	Sampled: Apr 3, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Apr 4, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: Apr 10, 1995
Attention: Dennis Royce	First Sample #:	504-0111	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0111 FB SW 2*	Sample I.D. 504-0112 FB SW 3	Sample I.D. 504-0113 FB SW 4*
Extractable Hydrocarbons	1.0	7.6	7.8	3.7
Chromatogram Pattern:		Unidentified Hydrocarbons <C15 & >C20	Diesel	Unidentified Hydrocarbons <C15

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	4/6/95	4/6/95	4/6/95
Date Analyzed:	4/6/95	4/6/95	4/6/95
Instrument Identification:	HP-3B	HP-3B	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C15" are probabably gasoline; ">C20" refers to unidentified peaks in the total oil and grease range.

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger, Oakland	Sampled:	Apr 3, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Relogged:	Apr 5, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported:	Apr 10, 1995
Attention: Dennis Royce	First Sample #:	504-0107		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS AS HYDRAULIC FLUID

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0107 FB 2	Sample I.D. 504-0108 FB 3
Extractable Hydrocarbons	10	N.D.	N.D.
Chromatogram Pattern:		--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	4/6/95	4/6/95
Date Analyzed:	4/6/95	4/6/95
Instrument Identification:	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh hydraulic fluid standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

5040105.KEI <5>

Sequoia Analytical

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Kapreallan Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, 449 Hegenberger, Oakland
Matrix: Solid

QC Sample Group: 5040107-108

Reported: Apr 11, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	J. Dinsay
MS/MSD Batch#:	5031425	5031425	5031425	5031425	5040107
Date Prepared:	4/7/95	4/7/95	4/7/95	4/7/95	4/6/95
Date Analyzed:	4/7/95	4/7/95	4/7/95	4/7/95	4/6/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg
Matrix Spike % Recovery:	70	75	78	80	80
Matrix Spike Duplicate % Recovery:	75	80	83	85	84
Relative % Difference:	6.9	6.5	6.2	6.1	4.9
LCS Batch#:	3LCS040795	3LCS040795	3LCS040795	3LCS040795	BLK040695
Date Prepared:	4/7/95	4/7/95	4/7/95	4/7/95	4/6/95
Date Analyzed:	4/7/95	4/7/95	4/7/95	4/7/95	4/6/95
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	HP-3A
LCS % Recovery:	78	83	84	86	93
% Recovery Control Limits:	71-133	72-128	72-130	71-120	38-122

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

SEQUOIA ANALYTICAL/UNOCAL RELOG SHEET

CLIENT:	KEI	DATE RELOG:	4/5/95
PROJECT ID:	Unocal #5043, Oakland	DATE DUE:	4/10/95
PROJ. MANAGER:	Alan Kemp	DATE SAMP:	4/3/95
DATE REC'D: 4/4/95	MATRIX: Soil	T.A.T.	72h

PREVIOUSLY LOGGED SAMPLES

[ ] TAT Change status to: 0

Change status as of Day: 4/5/95 Time: 4:00 PM

[X] CHANGE ANALYSES

Add Analyses [X]

Cancel Analyses [ ]

Sequoia Project ID: 9504035

Sample Number	Analyses
5040107	TPH as Hydraulic Fluid
5040108	TPH as Hydraulic Fluid
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA

SAMPLES ON HOLD

Add analyses

Sample Description	Analyses
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA
NA	NA

TAT 0

Client Authorization (Person/Date/Time): Heig 4/5/95 4:00 PM

Project Manager:

(Please submit to Sample Control with a copy of the COC & log-in sheets)

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ___Yes___No If no, what analyses are still needed?

2) as the report issued within the requested turnaround time? ___Yes ___No If no, what was the turnaround time?

Approved by: Signature: Company:

UNOCAL 76

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☒ 1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600
❑ 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
❑ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: Unocal #5043
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: Dave DeWitt
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 687-0602	Site #: 5043 - Oakland - 449 Hegenberger
Report To: KEI Sampler: HAIG	QC Data: ☒ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround ❑ 10 Work Days ❑ 5 Work Days ☒ 3 Work Days
Time: ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water
❑ Waste Water
☒ Other

Analyses Requested: TPH-G, BTXE, TPH-D, TPH-HE

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTXE	TPH-D	TPH-HE	Comments
1. SW8 (6)	4/3/95	SOIL	1	TUBE	5040105	✓	✓	✓		
2. FB1			1		5040106	✓	✓	✓		
3. FB2			1		5040107	✓	✓	✓	X	
4. FB3			1		5040108	✓	✓	✓	X	
5. FB4			1		5040109	✓	✓	✓		
6. FBSW1			1		5040110	✓	✓	✓		
7. FBSW2			1		5040111	✓	✓	✓		
8. FBSW3			1		5040112	✓	✓	✓		
9. FBSW4	↓	↓	1	↓	5040113	✓	✓	✓	↓	
10.										

Relinquished By:	Date: 4/4/95	Time: 9:08	Received By:	Date: 4/4/95	Time: 9:08
Relinquished By:	Date: 4/4	Time: 6:07	Received By: Leslie Creeston	Date: 4/4/95	Time: 6:07 pm
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment_____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed?
2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time?

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Rd., Oakland	Sampled:	Apr 5, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Apr 6, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 12, 1995
Attention: Dennis Royce	First Sample #:	504-0246		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0246 MW1 SW1	Sample I.D. 504-0247 MW1 SW2	Sample I.D. 504-0248 WE1	Sample I.D. 504-0249 WE2	Sample I.D. 504-0250 WE3	Sample I.D. 504-0251 FS-1
Purgeable Hydrocarbons	1.0	25	4.2	26	2.7	8.2	12
Benzene	0.0050	2.1	0.17	0.31	0.0054	0.21	0.28
Toluene	0.0050	0.025	0.010	0.30	0.0065	0.0074	N.D.
Ethyl Benzene	0.0050	2.4	0.68	0.59	0.038	1.6	1.5
Total Xylenes	0.0050	0.19	0.048	2.6	0.17	0.0076	0.016
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	5.0	1.0	5.0	1.0	1.0	1.0
Date Analyzed:	4/11/95	4/11/95	4/11/95	4/11/95	4/11/95	4/11/95
Instrument Identification:	HP-5	HP-5	HP-4	HP-4	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	72	71	92	97	139	178

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Rd., Oakland	Sampled: Apr 5, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Apr 6, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: Apr 12, 1995
Attention: Dennis Royce	First Sample #:	504-0246	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 504-0246 MW1 SW1*	Sample I.D. 504-0247 MW1 SW2*	Sample I.D. 504-0248 WE1*	Sample I.D. 504-0249 WE2*	Sample I.D. 504-0250 WE3*	Sample I.D. 504-0251 FS-1
Extractable Hydrocarbons	1.0	2.8	1.2	3.4	5.1	1.6	N.D.
Chromatogram Pattern:		Unidentified Hydrocarbons <C16	Unidentified Hydrocarbons <C16	Diesel & Unidentified Hydrocarbons <C16	Diesel & Unidentified Hydrocarbons <C16	Diesel & Unidentified Hydrocarbons <C16	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	4/7/95	4/7/95	4/7/95	4/7/95	4/7/95	4/7/95
Date Analyzed:	4/9/95	4/9/95	4/9/95	4/9/95	4/9/95	4/9/95
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
*Unidentified hydrocarbons <C16 are probably gasoline.

5040246.KEI <2>

Sequoia Analytical

1680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, 449 Hegenberger Rd., Oakland
Matrix: Solid
QC Sample Group: 5040246-251
Reported: Apr 12, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA8015 Mod
Analyst:	K. Wimer	K. Wimer	K. Wimer	K. Wimer	J. Dinsay
MS/MSD Batch#:	5040114	5040114	5040114	5040114	5040353
Date Prepared:	4/11/95	4/11/95	4/11/95	4/11/95	4/7/95
Date Analyzed:	4/11/95	4/11/95	4/11/95	4/11/95	4/9/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg
Matrix Spike % Recovery:	88	40	90	90	81
Matrix Spike Duplicate % Recovery:	85	88	88	88	79
Relative % Difference:	3.5	2.2	2.2	2.2	2.5
LCS Batch#:	2LCS041195	2LCS041195	2LCS041195	2LCS041195	BLK040795
Date Prepared:	4/11/95	4/11/95	4/11/95	4/11/95	4/7/95
Date Analyzed:	4/11/95	4/11/95	4/11/95	4/11/95	4/9/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A
LCS % Recovery:	91	94	96	95	87
% Recovery Control Limits:	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

UNOCAL 76

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❑ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: UNOCAL #5043 - Oakland
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: DAVE DE WITT
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 687-0602	Site #: 5043 - 449 HEGENBERGER Rd.
Report To: KEI Sampler: HAIG	QC Data: ☒ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ❑ 10 Work Days ❑ 5 Work Days ☒ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water
❑ Waste Water
☒ Other

Analyses Requested: TPH-G, BTXE, TPH-D

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTXE	TPH-D						Comments
1.	MW1SW1	4/5/95	SOIL	1	TUBE		✓	✓	✓		504246				
2.	MW1SW2			1			✓	✓	✓		504247				
3.	WE1			1			✓	✓	✓		504248				
4.	WE2			1			✓	✓	✓		504249				
5.	WE3			1			✓	✓	✓		504250				
6.	FS-1			1			✓	✓	✓		504251				
7.															
8.															
9.															
10.															

Relinquished By:	Date: 4/6/95	Time: 11:04	Received By:	Date: 4/6/95	Time: 11:04
Relinquished By:	Date: 4/6/95	Time: 6:30	Received By:	Date: 4/6/95	Time: 6:35
Relinquished By:	Date:	Time:	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed? _____
2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road,	Sampled:	Mar 15, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water Oakland	Received:	Mar 17, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 29, 1995
Attention: Dennis Royce	First Sample #:	503-0782		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 503-0782 Water-1
Purgeable Hydrocarbons	50	31,000
Benzene	0.50	4,000
Toluene	0.50	4,400
Ethyl Benzene	0.50	1,100
Total Xylenes	0.50	3,600
Chromatogram Pattern:		Gasoline

Quality Control Data

Report Limit Multiplication Factor:	200
Date Analyzed:	3/29/95
Instrument Identification:	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	93

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

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

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, 449 Hegenberger Road, Oakland
Matrix: Liquid
QC Sample Group: 503-0782
Reported: Apr 4, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon
MS/MSD Batch#:	5030893	5030893	5030893	5030893
Date Prepared:	3/29/95	3/29/95	3/29/95	3/29/95
Date Analyzed:	3/29/95	3/29/95	3/29/95	3/29/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	95	95	100	100
Matrix Spike Duplicate % Recovery:	90	95	95	98
Relative % Difference:	5.4	0.0	5.1	2.0
LCS Batch#:	2LCS032995	2LCS032995	2LCS032995	2LCS032995
Date Prepared:	3/29/95	3/29/95	3/29/95	3/29/95
Date Analyzed:	3/29/95	3/29/95	3/29/95	3/29/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	89	91	94	94
% Recovery Control Limits:	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

UNOCAL 76

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☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: UNOCAL #5043 - OAKLAND
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: DAVE DEWITT
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 687-0602	Site #: 5043 - 449 HEGENBERGER RD
Report To: KEI Sampler: HAIG	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☐ 10 Work Days ☒ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☒ Other

CODE: ☐ Misc. ☒ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested: TPH-G, BTXE

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTXE	Comments
1.	WATER-1	3/15/95	H20	1	AMBER	5030782 AC	✓	✓	
2.				2	VOA				
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									

Relinquished By:	Date: 3-17-95	Time: 0835	Received By:	Date: 3-17-95	Time: 0835
Relinquished By:	Date: 3-17-95	Time: 0900	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: 3/17/95	Time: 0900

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment: _____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Rd, Oakland	Sampled:	Apr 19, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Apr 20, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 27, 1995
Attention: Dennis Royce	First Sample #:	504-1158		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 504-1158 Water-2
Purgeable Hydrocarbons	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Total Xylenes	0.50	N.D.
Chromatogram Pattern:		--

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Analyzed:	4/26/95
Instrument Identification:	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	99

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

[redacted]80 Chesapeake Drive, Redwood City, CA 94063, [redacted]15) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Rd, Oakland	Sampled:	Apr 19, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Apr 20, 1995
Concord, CA 94520	Analysis Method:	EPA 3510/8015	Reported:	Apr 27, 1995
Attention: Dennis Royce	First Sample #:	504-1158		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 504-1158 Water-2
Extractable Hydrocarbons	50	N.D.
Chromatogram Pattern:		--

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Extracted:	4/24/95
Date Analyzed:	4/25/95
Instrument Identification:	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

5041158.KEI <2>

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Dennis Royce

Client Project ID: Unocal #5043, 449 Hegenberger Rd, Oakland
Matrix: Liquid
QC Sample Group: 504-1158
Reported: Apr 28, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod.
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	J. Dinsay
MS/MSD Batch#:	5041158	5041158	5041158	5041158	BLK042495
Date Prepared:	4/26/95	4/26/95	4/26/95	4/26/95	4/24/95
Date Analyzed:	4/26/95	4/26/95	4/26/95	4/26/95	4/25/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike % Recovery:	120	120	125	125	85
Matrix Spike Duplicate % Recovery:	120	120	125	125	88
Relative % Difference:	0.0	0.0	0.0	0.0	3.5
LCS Batch#:	1LCS042695	1LCS042695	1LCS042695	1LCS042695	BLK042495
Date Prepared:	4/26/95	4/26/95	4/26/95	4/26/95	4/24/95
Date Analyzed:	4/26/95	4/26/95	4/26/95	4/26/95	4/25/95
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B
LCS % Recovery:	109	108	112	112	85
% Recovery Control Limits:	71-133	72-128	72-130	71-120	38-122

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

UNOCAL 76

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❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI	Project Name: UNOCAL #5043 - OAKLAND
Address: 2401 STANWELL DR. #400	UNOCAL Project Manager: DAVE DEWITT
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: 602-5100 FAX #: 687-0602	Site #: 5043 - 449 Hegenberger Road
Report To: KEI Sampler: HAIG	QC Data: ☒ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ❑ 10 Work Days ☒ 5 Work Days ❑ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water
❑ Waste Water
☒ Other

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G	BTXE	TPH-D	Comments
1.	Water-2	4/19/95	H2O	4	VOA	504115[illegible]	✓	✓	✓	
2.				1	Amber	A1E				
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

Relinquished By: [signature]	Date: 4-20	Time: 8:35	Received By: [signature]	Date: 4-20	Time: 8:35
Relinquished By: [signature]	Date: 4-20	Time: 8:50	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: [signature]	Date: 4/20/95	Time: 0850

Were Samples Received in Good Condition? ☒ Yes ❑ No Samples on Ice? ☒ Yes ❑ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed?
2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time?

Approved by: Signature: Company: Date:

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road,		Sampled:	Jan 25, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Oakland	Received:	Jan 26, 1995
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020		Reported:	Feb 9, 1995
Attention: Avo Avedissian	First Sample #:	501-1177			

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 501-1177 MW 9 (3)	Sample I.D. 501-1178 MW 10 (2.5)
Purgeable Hydrocarbons	1.0	1.7	44
Benzene	0.0050	0.016	2.0
Toluene	0.0050	N.D.	1.5
Ethyl Benzene	0.0050	N.D.	2.3
Total Xylenes	0.0050	N.D.	5.4
Chromatogram Pattern:		Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	2/7/95	2/7/95
Instrument Identification:	HP-4	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	87	107

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5043, 449 Hegenberger Road, Oakland	Sampled:	Jan 25, 1995
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Jan 26, 1995
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported:	Feb 9, 1995
Attention: Avo Avedissian	First Sample #:	501-1177		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 501-1177 MW 9 (3)*	Sample I.D. 501-1178 MW 10 (2.5)*
Extractable Hydrocarbons	1.0	2.6	17
Chromatogram Pattern:		Unidentified Hydrocarbons <C12	Unidentified Hydrocarbons <C12 & >C20

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	1/31/95	1/31/95
Date Analyzed:	1/31/95	1/31/95
Instrument Identification:	HP-3B	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

Please Note:
* This sample does not appear to contain diesel. "Unidentified Hydrocarbons <C12" are probably gasoline; ">C20" refers to unidentified peaks in the total oil and grease range.

Sequoia Analytical

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1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedissian

Client Project ID: Unocal #5043, 449 Hegenberger Road, Oakland
Matrix: Solid
QC Sample Group: 5011177-78
Reported: Feb 9, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod.
Analyst:	A. Tuzon	A. Tuzon	A. Tuzon	A. Tuzon	K.V.S.
MS/MSD Batch#:	5011376	5011376	5011376	5011376	5011071
Date Prepared:	2/7/95	2/7/95	2/7/95	2/7/95	1/31/95
Date Analyzed:	2/7/95	2/7/95	2/7/95	2/7/95	1/31/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg
Matrix Spike % Recovery:	75	88	93	97	93
Matrix Spike Duplicate % Recovery:	78	90	93	97	94
Relative % Difference:	3.9	2.2	0.0	0.0	1.1
LCS Batch#:	2LCS020795	2LCS020795	2LCS020795	2LCS020795	BLK013195
Date Prepared:	2/7/95	2/7/95	2/7/95	2/7/95	1/31/95
Date Analyzed:	2/7/95	2/7/95	2/7/95	2/7/95	1/31/95
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3A
LCS % Recovery:	82	93	98	101	83
% Recovery Control Limits:	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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

UNOCAL 76

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☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KAPREALIAN ENGINEERING, INC.	Project Name: 443 HEGENBERGER ROAD, OAKLAND
Address: 2401 STANWELL DRIVE, SUITE 400	UNOCAL Project Manager: DAVE DELANTT
City: CONCORD State: CA Zip Code: 94520	Release #:
Telephone: (510)602-5100 FAX #: 687-0602	Site #: 5043
Report To: ANO Sampler: DOUG LEE	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround ☒ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days
Rush: ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☒ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water
☐ Waste Water
☒ Other

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH Gas (8015)	BTEX (8020)	Oil & Grease (5520)	Comments
1.	MW9(3)	1/23/95	SOIL	1	TUBE	5011177	X	X	X	
2.	MW10(2.5)	1/25/95	SOIL	1	TUBE	5011178	X	X	X	
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

Relinquished By: DLee (KPE)	Date: 1/26/95	Time: 12:33	Received By:
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By Lab: Melissa Chenoweth

Received By:	Date:	Time:	
Received By:	Date:	Time:	
Received By Lab: Melissa Chenoweth	Date: 1/26/95	Time: 12:33 pm	

Were Samples Received in Good Condition? ☒ Yes ☐ No Samples on Ice? ☒ Yes ☐ No Method of Shipment _____ Page 1 of 1

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed?
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time?

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory