Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, California 94583
Telephone (510) 867-0760
Facsimile (510) 277-2309

UNOCAL 76

January 5, 1993

Mr. Scott Seery
Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Northern Region
Corporate Environmental
Remediation & Technology

Request for Site Closure
Former Unocal Service Station #5901
11976 Dublin Boulevard
Dublin, California

Dear Mr. Seery:

Attached is a copy of a report that documents the most recent environmental work performed at the subject site. The attached report was prepared by Unocal's consultant for this project, Kaprealian Engineering, Inc. (KEI), and documents the soil and ground water samples that were collected during the installation of 11 exploratory borings at the site. Previously, two sets of underground tanks and lines have been removed from the site (samples were collected during both removal projects). Excavation of contaminated soil was performed in the vicinity of the former underground storage tanks, the former pump islands, the former hydraulic lifts, and the former waste oil tank. Four monitoring wells were installed at the site were monitored and sampled for a period of six quarters.

The analytical results of the soil samples collected from the 11 exploratory borings that were recently installed at the site indicated predominantly non-detectable concentrations of petroleum hydrocarbon contamination. Detectable concentrations of petroleum contaminants were only encountered in two of the borings. The highest contaminant concentration was 10 ppm of TPH as gasoline in exploratory boring EB9 at a depth of 25 feet below grade. This sample was also the only sample collected from any exploratory boring that showed a detectable concentration of benzene (0.028 ppm).

] east side of mapped fault trace - speculated

The final soil samples collected in 1992 from beneath the former underground storage tanks, the former hydraulic lifts, and the former pipe trenches showed non-detectable concentrations of both TPH as gasoline and benzene except for 0.0078 ppm and 0.069 ppm of benzene detected in one of the pipe trench and hydraulic lift samples, respectively. Samples collected from the former waste oil tank pit showed non-detectable levels of TPH as diesel and TOG. In addition, the final soil samples collected from beneath the former hydraulic lifts showed non-detectable concentrations of TPH as hydraulic fluid and TOG.

In addition, the final soil samples collected in 1990 beneath the underground storage tanks and the product pipe trenches showed concentrations of TPH as gasoline ranging from non-detectable to 37 ppm, and concentrations of benzene ranging from non-detectable to 0.78 ppm. The final soil samples collected from the waste oil tank pit excavation also showed non-detectable levels of TPH as diesel. TOG was detected at a concentration of 3,500 ppm in the sample collected in 1990 between the former waste oil tank pit excavation and adjacent to the former building. However, this contamination appears to have been removed in the 1992 tank removal and building demolition project.

Based on the analytical results of the soil samples collected during the installation of the 11 exploratory borings, and based on the analytical results of the final soil samples collected during the removal of the underground storage tanks in both 1990 and 1992, it appears that the majority of the hydrocarbon-contaminated soil has been removed from the site.

Subsequent to the installation of the exploratory borings at the site, grab water samples were collected from each of the borings. Although these "grab" samples are collected during drilling and may not be completely representative of formation water, they are useful in determining if a significant ground water contaminant problem exists at a site. The analytical results of these grab samples showed non-detectable concentrations of TPH as gasoline and benzene in 10 of the 11 samples. One sample showed a concentration of TPH as gasoline of 840 ppb (which Sequoia Analytical Laboratory reported to not appear to be gasoline) and a concentration of benzene of 0.70 ppb (which is below the State of California Maximum Contaminant Level for Drinking Water of 1.0 ppb of benzene). TPH as hydraulic fluid and TPH as diesel were detected in two of the grab water samples at concentrations of 510 ppb and 500 ppb, respectively. No TOG or EPA method 8010 constituents were detected in any of the grab water samples.

In addition, KEI previously installed four monitoring wells at the site on November 6, 1990. No soil contamination was detected during the drilling of these wells. These wells were monitored and sampled for a total of six quarters. No detectable concentrations of TPH as gasoline, TPH as diesel, BTX&E constituents, TOG, or EPA method 8010 constituents were detected in any of these ground water samples, except for concentrations of TPH as gasoline in MW3 that were just above the detection limits on two occasions.

Based on the analytical results and discussion presented above, it does not appear that any significant soil or ground water contamination is present at the site. Therefore, Unocal formally requests

that site closure be granted for this site. Unless we receive additional correspondence from your office, Unocal shall consider this project closed. However, since we are in the process of divesting this property, a closure letter from your office and/or the Regional Water Quality Control Board would be appreciated.

If you have any questions pertaining to this letter or the attached technical report, please feel free to contact me at (510) 277-2383.

Very truly yours,

Adadu Yemane

Adadu Yemane, P.E.
Project Manager

AY/TRR:bsb
c:\wp51\cert\5901clsr.ltr
Attachments

cc: R.D. Sisk - Unocal, w/o
T.R. Ross - KEI, w/o

Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, #500
Oakland, California, 94612

KAPREALIAN ENGINEERING
INCORPORATED

KEI-P90-0606.R10
October 8, 1992

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

Attention: Mr. Adadu Yemane

RE: Continuing Subsurface Investigation at
Former Unocal Service Station #5901
11976 Dublin Boulevard
Dublin, California

Dear Mr. Yemane:

This report presents the results of our most recent subsurface investigation for the referenced site, in accordance with Kaprealian Engineering, Inc's. (KEI) proposal (KEI-P90-0606.P5) dated July 31, 1992. This subsurface study was conducted at the request of Unocal, per Unocal's procedure for potential site divestment locations.

This report also documents the destruction of monitoring well MW2, as noted in KEI's above referenced proposal. Currently, there are three monitoring wells remaining at the site.

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

Coordination with regulatory agencies

Geologic logging of 11 exploratory borings

Soil sampling

Ground water sampling

Laboratory analyses

Data analyses, interpretation, and report preparation

SITE DESCRIPTION AND BACKGROUND

The subject site formerly contained a Unocal service station facility. The site is situated on topography that slopes gently eastward, and is located approximately 700 feet northwest of a channelized portion of Dublin Creek. The site is also located near the southwest end of the San Ramon Valley, near Amador Valley. The station building, pump islands, and other station facilities have been demolished and removed from the site.

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel 510 602.5100 Fax: 510 687 0602

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

Water was encountered in the fuel tank pit at a depth of approximately 7 feet below grade, thus prohibiting the collection of any soil samples from immediately beneath the tanks. Six soil samples, labeled SW1 through SW6, were collected from the sidewalls of the fuel tank pit (each sample was collected at approximately 6 to 12 inches above the observed water table). One soil sample, labeled WO1, was collected from beneath the waste oil tank at a depth of approximately 6.5 feet below grade. An additional soil sample, labeled SWA, was collected from the waste oil tank pit sidewall at a depth of approximately 6.5 feet below grade. Sample point locations are as shown on the attached Figure 3.

KEI returned to the site on June 15, 1990, in order to collect soil samples from the product pipe trenches. Four samples, labeled P1 through P4, were collected from the trenches at depths of 6 feet below grade. After the soil sampling was completed, the pipe trenches were excavated to ground water at the areas indicated on the attached Figure 4. Pipe trench sample point locations are also shown on the attached Figure 4.

On June 15, 1990, after reviewing the analytical results of the soil samples SW1 through SW6, additional excavation was performed. Four additional soil samples, labeled SW1(3), SW2(3), SW5(2.5), and SW6(3), were collected from the sidewalls of the fuel tank pit (each sample was collected approximately 6 to 12 inches above ground water), in the vicinity of sample point locations SW1, SW2, SW5, and SW6, respectively.

After soil sampling was completed, approximately 25,000 gallons of ground water were pumped from the fuel tank pit. On June 20, 1990, one water sample, labeled W1, was collected from the fuel tank pit.

Also on June 20, 1990, based on analytical results of soil samples SW1(3) and SW2(3), additional excavation was again performed. Two additional soil samples, labeled SW1(6.5) and SW2(6.5), were collected from the northerly sidewall of the fuel tank pit (each sample was collected approximately 6 to 12 inches above ground

water), in the vicinity of sample point locations SW1(3) and SW2(3). The sample point locations and the area excavated are as indicated on the attached Figure 3.

On June 26, 1990, KEI again returned to the site, in order to collect soil samples from the sidewalls of the new underground fuel storage tank pit located to the west of the pump islands. Four soil samples, labeled SW11, SW12, SW13, and SW14, were collected from the sidewalls of the excavation (each sample was collected at 6 to 12 inches above ground water). Sample point locations are as shown on the attached Figure 5.

On July 3, 1990, after approximately 10,000 gallons of ground water were pumped from the new fuel tank pit, KEI collected a water sample (labeled W2) from the pit.

All samples were analyzed by Sequoia Analytical Laboratory in Redwood City, California. All soil samples, except the waste oil tank pit sidewall sample SWA, were analyzed for total petroleum hydrocarbons (TPH) as gasoline, and benzene, toluene, xylenes, and ethylbenzene (BTX&E). In addition to TPH as gasoline and BTX&E, soil sample WO1 (collected from the waste oil tank pit) was also analyzed for TPH as diesel, total oil and grease (TOG), and EPA method 8010 constituents. The waste oil tank pit sidewall sample (SWA) was analyzed for TOG only. In addition to TPH as gasoline and BTX&E, a soil sample (SW11) collected from the new fuel tank pit was also analyzed for TOG.

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

Analytical results of the soil samples (SW1, SW2, SW5, and SW6) collected from the sidewalls of the former fuel tank pit indicated levels of TPH as gasoline ranging from 120 ppm to 5,700 ppm. Samples SW3 and SW4 indicated levels of TPH as gasoline at non-detectable and 8.0 ppm, respectively. However, after additional excavation, analytical results of the final sidewall soil samples, SW1(6.5), SW2(6.5), SW5(2.5), and SW6(3), collected laterally beyond the samples SW1, SW2, SW5, and SW6 and at a depth of approximately 6 feet below grade, indicated levels of TPH as gasoline ranging from 1.2 ppm to 32 ppm.

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

Analytical results of the soil sample (WO1) collected from beneath the waste oil tank pit indicated levels of TPH as gasoline at 36 ppm, TPH as diesel at 120 ppm, and TOG at 1,500 ppm, with non-detectable concentrations of all EPA method 8010 constituents, except for 1,2-dichlorobenzene at 210 ppb. Analytical results of the soil sample (SWA) collected from the sidewall of the waste oil tank pit indicated a level of TOG at 3,500 ppm.

Analytical results of the soil samples (SW11, SW12, SW13, and SW14) collected from the new fuel tank pit indicated non-detectable levels of TPH as gasoline and benzene for all samples. Analytical results of sample SW11 for TOG indicated 78 ppm. The results of the soil analyses are summarized in Table 7.

Analytical results of the water sample (W1) collected from the former fuel tank pit indicated a level of TPH as gasoline at 2,300 ppb and a level of benzene at 3.1 ppb. Analytical results of the water sample (W2) collected from the new fuel tank pit indicated non-detectable levels of TPH as gasoline, TOG, and benzene. The results of the water analyses are summarized in Table 8.

KEI returned to the site on July 16, 1990, when three trenches were excavated laterally from the easterly, northerly, and westerly waste oil tank pit sidewalls. Water was encountered at a depth of approximately 7 feet below grade. Three soil samples, labeled SWB(13), SWC(10), and SWD(14), were collected from the sidewalls of the trenches, each approximately 6 to 12 inches above the observed water table. Sample point locations are as shown on the attached Site Plan, Figure 6. After sampling, the sidewalls of the waste oil tank pit were excavated laterally to the sample point locations and to depths of approximately 1 foot below the water table (or about 8 feet below grade).

On July 19, 1990, after having pumped approximately 5,000 gallons of ground water from the waste oil excavation, a water sample, labeled W3, was collected from the pit.

On July 20, 1990, KEI returned to the site to collect the additional soil samples required by the ACHCS. Four soil samples, labeled SWE, SWF, SWG, and SWH, were collected (each approximately 6 to 12 inches above the ground water level) from the four corners of the waste oil tank excavation. Sample point locations are also shown on the attached Site Plan, Figure 6.

All samples were analyzed by Sequoia Analytical Laboratory in Redwood City, California. All soil samples were analyzed for TPH as gasoline, BTX&E, TPH as diesel, TOG, and EPA method 8010 constituents. The water sample was analyzed for TPH as gasoline, BTX&E, TPH as diesel, TOG, and EPA method 8010 constituents.

Analytical results of the soil samples indicated non-detectable levels of TPH as diesel, TOG, and all EPA method 8010 constituents for all samples. Analytical results also indicated non-detectable levels of TPH as gasoline for all samples except SWC(10), which showed a level of TPH as gasoline at 1.1 ppm. The analytical results of the water sample indicated non-detectable levels of all constituents analyzed. The results of the soil analyses are summarized in Table 9, and the results of the water analyses are summarized in Table 10.

To comply with the requirements of the regulatory agencies and based on the analytical results, KEI proposed the installation of four monitoring wells. Documentation of the tank removal procedures, sample collection techniques, and the analytical results of the soil samples collected from the fuel and waste oil tank excavations are summarized in KEI's reports (KEI-J90-0606.R1 and KEI-J90-0606.R4) dated July 16, 1990, and July 30, 1990, respectively.

On November 6 and 7, 1990, four two-inch diameter monitoring wells (designated as MW1, MW2, MW3, and MW4 on the attached Figure 1) were installed at the site. The monitoring wells were drilled and completed to total depths ranging from 20 to 24 feet below grade. Ground water was encountered at depths ranging from about 5.4 to 9.5 feet below grade during drilling in all wells, except MW3, in which ground water was not encountered until a depth of about 15.2 feet below grade. All four wells were surveyed by a licensed land surveyor (Kier & Wright of Pleasanton, California) to Mean Sea Level (MSL) and to a vertical accuracy of 0.01 feet. The wells were developed on November 12, 1990, and were initially sampled on November 16, 1990.

Water and selected soil samples were analyzed at Sequoia Analytical Laboratory in Concord, California. Samples were analyzed for TPH as gasoline and BTX&E. In addition, samples collected from MW1 (adjacent to the waste oil tank pit) were analyzed for TPH as diesel, TOG, and for EPA method 8010 compounds.

Analytical results of the soil samples collected from the borings for monitoring wells MW1 through MW4 indicated non-detectable levels of TPH as gasoline and BTX&E in all soil samples. Analytical results of the soil sample MW1(5) also indicated non-detectable levels of TPH as diesel, TOG, and EPA method 8010 compounds.

Analytical results of the ground water samples collected from monitoring wells MW1 through MW4 indicated non-detectable levels of TPH as gasoline and BTX&E. Analytical results of the water sample collected from MW1 indicated non-detectable levels of TPH as diesel, TOG, and EPA method 8010 constituents. The results of the

soil analyses are summarized in Table 12, and the results of the water analyses are summarized in Table 11. Based on the analytical results, KEI recommended the implementation of a monthly monitoring and quarterly sampling program. Documentation of the well installation procedures, sample collection techniques, and the analytical results are presented in KEI's report (KEI-P90-0606.R6) dated December 17, 1990. The monitoring and sampling program was initiated in February, 1991.

As shown in the attached tables, the analytical results of soil and ground water samples collected at the site during various phases of KEI's subsurface investigation have shown the following:

- After overexcavation of the former underground fuel tank pit, all final soil samples indicated concentrations of less than 32 ppm of TPH as gasoline, with benzene levels less than 0.027 ppm.

- After overexcavation of the waste oil tank pit, all final soil samples showed non-detectable levels of TOG and all EPA method 8010 constituents, TPH as diesel, TPH as gasoline (except one sample at 1.1 ppm), and benzene (except two samples, at 0.0061 ppm and 0.0052 ppm).

- Pipe trench soil samples showed all TPH as gasoline levels at or less than 37 ppm, with benzene levels at or less than 0.078 ppm. Following sampling, the pipe trenches were excavated to ground water.

- All soil samples collected during installation of the four wells (MW1, MW2, MW3, and MW4) indicated non-detectable levels of TPH as gasoline and BTX&E. Additionally, the soil samples collected during the installation of well MW1 indicated non-detectable levels of TPH as diesel, TOG, and all EPA method 8010 constituents.

- All soil samples collected during excavation of the new underground fuel tank pit indicated non-detectable levels of TPH as gasoline and benzene.

- Water samples collected from the four wells during six consecutive quarters of sampling have consistently shown non-detectable concentrations of TPH as gasoline and BTX&E since the inception of sampling on November 16, 1990 (except for 38 ppb and 32 ppb of TPH as gasoline detected in MW3 on January 2, 1992, and October 3, 1991, respectively). Water samples collected from MW1 have also consistently shown non-detectable levels of TPH as diesel, TOG, and EPA method 8010 constituents. It should

be noted that the two detectable levels of TPH as gasoline encountered in MW3 were just slightly above the laboratory detection limit (30 ppb).

- Ground water flow direction has been consistent, generally to the north-northeast and with a relatively flat gradient.

Based on the analytical results of the soil and ground water samples collected and evaluated through April of 1992, and because the majority of the contaminated soil appeared to have been excavated and removed from the site, KEI recommended that no further ground water sampling be conducted at the site, unless required by the regulatory agencies.

KEI conducted additional field work on May 21, 1992, when two 12,000 gallon storage tanks (formerly containing regular unleaded and super unleaded gasoline) and one 520 gallon waste oil tank were removed from the site. The tanks, which had been installed in July 1990, were made of double-walled steel. No apparent holes or cracks were observed in any of the tanks. Mr. Scott Seery of the ACHCS was present during tank removal and subsequent soil sampling. Mr. Tom Hathcox of the Dougherty Regional Fire Authority was also present during tank removal. Ground water was encountered in the fuel tank pit at a depth of about 7 feet below grade, and in the waste oil tank pit at a depth of about 6.5 feet below grade, thus prohibiting the collection of any soil samples from immediately beneath the tanks. Four soil samples, labeled F-SW1 through F-SW4, were collected from the sidewalls of the fuel tank pit at depths of about 6.5 feet below grade. Four soil samples, labeled WO-1 through WO-4, were collected from the sidewalls of the waste oil tank pit at depths of about 6 feet below grade. Two soil samples, labeled H1 and H2, were collected from beneath the former hydraulic lifts at depths of about 5 and 5.5 feet, respectively. Five soil samples, labeled PT-1 through PT-5, were collected from beneath the abandoned product piping found during excavation activities at depths of about 1.75 feet below grade, except for samples PT-1 and PT-2, which were collected at depths of approximately 11.5 feet and 5.0 feet below grade. The undisturbed samples were collected from bulk material excavated by backhoe. The sample point locations are as shown on the attached Figure 2. In addition, one water sample, labeled Water-1, was collected from the fuel tank pit. A second water sample, labeled Water-2, was collected from the waste oil tank pit.

Upon review of the analytical results, KEI returned to the site on June 15, 1992, in order to attempt to define the extent of soil contamination in the vicinity of sample points PT-1 and PT-2 (in the former product pipe trench) and H2 (the former hydraulic lift

area). Following additional soil excavation in the vicinity of the former product pipe trench (over an area of approximately 19 feet by 15 feet, and to a depth of about 16.5 feet below grade), four soil samples, labeled PT(SW1) through PT(SW4), were collected from the sidewalls of the new excavation at depths of about 12 feet below grade, and one soil sample, labeled PT(16.5), was collected from the bottom of the new excavation at a depth of approximately 16.5 feet below grade. Following additional soil excavation in the vicinity of the former hydraulic lift area (over an area of approximately 10 feet by 10 feet, and to a depth of about 6.5 feet below grade), four soil samples, labeled H2(SW1) through H2(SW4), were collected from the excavation sidewalls at depths of approximately 5.5 feet below grade, and one soil sample, labeled H2(6.5), was collected from beneath sample point location H2 at a depth of about 6.5 feet below grade. The sample point locations and the areas of additional excavation are shown on the attached Figure 2. After the soil sampling was completed, ground water was observed seeping through the former hydraulic lift area excavation.

On June 17, 1992, KEI returned to the site in order to collect one water sample from the former hydraulic lift area excavation. Water was stabilized at a depth of approximately 5.75 feet below grade. One water sample, labeled Water-3, was collected from the former hoist pit.

All soil and water samples were analyzed by Sequoia Analytical Laboratory in Concord, California. All soil and water samples were analyzed for TPH as gasoline and BTX&E. In addition, all initial soil samples, except samples PT-2 and H1, were also analyzed for total lead. Soil and water samples collected from the waste oil tank pit were also analyzed for TPH as diesel, TOG, EPA methods 8010 and 8270 constituents, and the metals cadmium, chromium, lead, nickel, and zinc. In addition to TPH as gasoline and BTX&E, the soil sample H2, collected from beneath the former hydraulic lift, was analyzed for TPH as hydraulic fluid, TOG, EPA method 8010 and 8270 constituents, and the metals cadmium, chromium, lead, nickel, and zinc. All additional soil samples collected from the former hoist pit were analyzed for TPH as gasoline, BTX&E, TPH as hydraulic fluid, TOG, and EPA method 8270 constituents. The water sample (Water-1) was analyzed for TPH as gasoline, BTX&E, and organic lead. The water sample (Water-3) collected from the former hoist pit was analyzed for TPH as gasoline, BTX&E, TPH as hydraulic fluid, TOG, EPA method 8270 constituents, and the metals cadmium, chromium, lead, nickel, and zinc.

Analytical results of the soil samples collected from the fuel and waste oil tank pits indicated non-detectable levels of all constituents analyzed, except for total lead, which ranged from 3.8 ppm to 7.4 ppm. Analytical results of the soil samples collected

from beneath the abandoned product piping indicated non-detectable levels of TPH as gasoline, except for samples PT-1 and PT-2, which showed 6.2 ppm and 940 ppm, respectively. Total lead ranged from 4 ppm to 6.5 ppm. However, after additional excavation in the vicinity of sample points PT-1 and PT-2, analyses of soil samples collected from the sidewalls and the bottom of the excavation indicated non-detectable levels of TPH as gasoline and BTX&E.

Analytical results of the soil sample H1, collected from beneath one of the former hydraulic lifts, showed non-detectable levels of TPH as gasoline and BTX&E. TPH as hydraulic fluid was detected at 1.3 ppm. Sample H2, collected from beneath the other former hydraulic lift, showed levels of TPH as gasoline at 230 ppm and TPH as hydraulic fluid at 120 ppm. However, after additional excavation in the vicinity of sample point H2, analyses of soil samples collected from the sidewalls and the bottom of the excavation indicated non-detectable levels of TPH as gasoline, TPH as hydraulic fluid, TOG and EPA 8270 constituents. Analytical results of the water samples showed non-detectable levels of all constituents analyzed, except for 2.7 ppb of xylenes detected in sample Water-1, and 86 ppb of TPH as diesel and 0.037 ppb of zinc detected in sample Water-2. Analytical results of the soil samples are summarized in Tables 3, 4, and 5, and the analytical results of the water samples are summarized in Table 6.

Based on the analytical results of the final soil samples collected during the removal of the underground storage tanks in both 1990 and 1992, KEI concluded that the majority of the hydrocarbon-contaminated soil has been removed from the site. The final soil samples collected from beneath the former underground storage tanks, the former hydraulic lifts, and the former pipe trenches in 1992 showed non-detectable concentrations of TPH as gasoline and benzene, except for 0.0078 ppm and 0.069 ppm of benzene detected in one of the pipe trench and hydraulic lift samples, respectively. Samples collected from the former waste oil tank pit showed non-detectable levels of TPH as diesel and TOG. In addition, the final soil samples collected from beneath the former hydraulic lifts showed non-detectable concentrations of TPH as hydraulic fluid and TOG.

In addition, the final soil samples collected from beneath the underground storage tanks and the product pipe trenches in 1990 showed concentrations of TPH as gasoline ranging from non-detectable to 37 ppm, and concentrations of benzene ranging from non-detectable to 0.78 ppm. The final soil samples collected from the waste oil tank pit excavation also showed non-detectable levels of TPH as diesel. TOG was detected at a concentration of 6,500 ppm in the sample collected between the former waste oil tank pit excavation and adjacent to the former building in 1990; however,

this contamination appears to have been removed in the 1992 tank removal and building demolition project.

Documentation of the tank removal procedures, sample collection techniques, and the analytical results of the soil samples collected from the fuel and waste oil tank excavations are summarized in KEI's report (KEI-J90-0606.R7) dated August 31, 1992. At the request of Unocal, and in accordance with Unocal's procedures for sites that have been designated for divestment, KEI proposed the installation of 11 exploratory borings at the site (KEI's work plan/proposal KEI-P90-0605.P5 dated July 31, 1992). In addition, due to the damage that was sustained by MW2 during the most recent tank removal, the destruction of MW2 was also proposed.

RECENT FIELD ACTIVITIES - EXPLORATORY BORING INSTALLATION

Per Unocal Corporation's procedure for potential site divestment locations, on August 24 and 25, 1992, 11 exploratory borings (designated as EB1 through EB11 on the attached Figure 1) were drilled at the site. The subsurface materials penetrated and the depths at which soil samples were collected are shown on the attached Boring Logs.

The 11 borings were drilled to depths of between 11 to 35.5 feet below grade. Ground water was encountered at depths between 10.5 and 35.5 feet below grade. Soil samples were collected at a maximum spacing of 5 foot intervals, at significant changes in lithology, at obvious areas of contamination, and at or within the soil/groundwater interface, beginning at a depth of 5 feet below grade in each of the borings. Undisturbed soil samples were collected by driving a California-modified split-spoon sampler (lined with brass liners) ahead of the augers. The clean, two inch diameter brass tubes holding the samples were then sealed with aluminum foil, plastic caps, and tape, and subsequently stored in a cooled ice chest for delivery to a state-certified laboratory. Ground water grab samples were collected from each borehole (through the hollow stem augers) by the use of a clean Teflon Bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflon-lined screw caps and subsequently stored in a cooled ice chest for delivery to the state-certified laboratory. After the ground water samples were collected, the borings were backfilled to the surface with neat cement grout.

RECENT FIELD ACTIVITIES - MONITORING WELL DESTRUCTION

On August 24, 1992, monitoring well MW2 was destroyed by fully drilling out the well seal, casing, and filter pack sand materials to a depth of 25 feet below grade. The borehole was then sealed

with neat cement grout, which was placed through the inside of the hollow-stem augers from the bottom of the boring up to the surface. Destruction of monitoring well MW2 was necessary because the well was damaged during the recent tank removal project.

ANALYTICAL RESULTS

All samples were analyzed at Sequoia Analytical Laboratory in Concord, California, and were accompanied by properly executed Chain of Custody documentation. Water and selected soil samples were analyzed for TPH as gasoline by EPA method 5030/modified 8015, and BTX&E by EPA method 8020. In addition, water and selected soil samples from exploratory borings EB3 and EB6 (adjacent to the former waste oil tank) were analyzed for TPH as diesel by EPA method 3510/modified 8015 (water) and 3550/modified 8015 (soil), TOG by Standard Methods 5520B&F (soil) and 5520E&F (water), and for EPA method 8010 constituents. The samples collected from borings EB4 and EB5 (drilled inside the former service bay facility) were also analyzed for TPH as hydraulic fluid by EPA methods 3510/modified 8015 (water) and 3550/modified 8015 (soil), TOG, and EPA method 8010 constituents. The results of soil analyses are summarized in Table 1, and the results of water analyses are summarized in Table 2. Because the water samples were collected during drilling, the results of the analyses may not be representative of formation water, and should be used for comparative purposes only. Copies of the laboratory analyses and Chain of Custody documentation are attached to this report.

HYDROLOGY AND GEOLOGY

Ground water was encountered in exploratory borings EB1 through EB11 at depths ranging from 10.5 to 35.5 feet below grade. It is not known at what levels the ground water levels stabilized in these borings after the termination of drilling operations. Based on the most recent quarter of monitoring conducted at the site (April 3, 1992) the groundwater flow direction appeared to be approximately north-northeast over the majority of the site. As discussed below, KEI infers that a splay of the Calaveras Fault crosses the site somewhere between well MW2 (destroyed on August 24, 1992) and MW3 (as shown on the attached Figure 1). There was an approximate 10 to 11 foot difference in the stabilized water table elevation of MW3 from those of the other three wells on April 3, 1992. A similar difference has been observed during previous monitoring events.

The subject site is situated within the Dublin Subbasin of the larger Livermore Valley Ground Water Basin, as defined by the Alameda County Flood Control and Water Conservation District. As of the spring of 1990, the regional ground water flow direction is toward the southeast.

Based on review of regional geologic maps (U.S. Geological Survey Professional Paper 943 "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning" by E.J. Helley and K.R. Lajoie, 1979), the subject site is underlain by Quaternary-age alluvium. The surficial alluvium has been mapped as Holocene coarse-grained alluvium (Qhac) that typically consists of unconsolidated, permeable sand and silt (with locally coarse sand and gravel materials) and that ranges in thickness from less than 10 feet to as much as 50 feet. This coarse-grained alluvium zone appears to have been deposited from sediments generated from erosion within Dublin Canyon, which is situated immediately west of the site. The site is also situated near a mapped geologic contact with Late-Pleistocene alluvium (Qpa). The Late Pleistocene alluvium is described as typically consisting of weakly consolidated, irregularly interbedded clay, silt, sand, and gravel materials. The overall thickness of the alluvium underlying the site is presently unknown to KEI.

In addition, the site is situated at or closely adjacent to the mapped trace of the active Calaveras Fault. The significant difference (about 10 to 11 feet on April 3, 1992) in the observed ground water table elevation at MW3 in comparison to the other wells may be related to a fault splay within the adjacent Calaveras Fault zone. This fault splay is inferred to cross the site between well MW3 and well MW2. On November 13, 1990, KEI conducted a review of available geologic fault study reports at the California Division of Mines and Geology (CDMG) in Pleasant Hill, California. Studies conducted at the adjacent parcel immediately north of the subject site encountered what is described as the western side of the Calaveras Fault zone. A fault was determined to be located between approximately 130 to 136 feet west of the curb along San Ramon Road, roughly parallel to San Ramon Road, and trending approximately N4°W. Significant changes in the color of the soil materials on opposite sides of the fault were noted, and the depth to ground water on the western side of the fault was noted to be significantly higher than on the eastern side of the fault. Geologic maps produced for this study project the trace of the Calaveras Fault onto the subject Unocal site.

Based on the results of our file review at the CDMG, and our monitoring activities of the four wells at the subject site, it is KEI's opinion that the trace of the active Calaveras Fault crosses the eastern portion of the site in such a manner that well MW3 is

east of the fault, while wells MW1, MW2, and MW4 are west of the fault, as shown on the attached Site Plan, Figure 1. Therefore, all future ground water gradient determinations at the site should be represented as two distinct ground water tables, with data from wells MW1, MW2, and MW4 representing one distinct ground water table, data from well MW3 representing a separate ground water table, and with the fault representing a significant ground water barrier.

Based on the results of our subsurface studies, the site is underlain by fill materials to a depth of between 1 and 6 feet below grade. The fill is in turn underlain by alluvium to the maximum depth explored of 24 feet below grade, except for exploratory boring EB9, which was drilled and sampled to a total depth of 35.5 feet below grade.

The alluvium underlying the site consists predominantly of silty clay and clayey silt layers that extend to a depth of at least 35.5 feet below grade. Based on ground water levels encountered in the existing monitoring wells at the site, the unsaturated zone west of the inferred trace of the Calaveras fault is approximately 6 feet thick. However, the unsaturated zone on the east side of the fault trace is about 16 feet thick.

The first water bearing unit underlying the site consists also of fine grained silty clay or clayey silt soils. However, in MW3, an approximately 1 foot thick silty gravel lens was encountered at a depth of 15 to 16 feet below grade, and at MW2, a 0.5 foot thick silty sand and sandy silt lens was encountered at a depth of 23.5 feet below grade. In the exploratory boring EB8, a 1 foot thick sandy gravel lens occurs at a depth of 17 feet below grade, and in EB9 a silty sand unit approximately 3 feet thick was encountered at a depth of 10.5 feet below grade. These four apparently discontinuous units are the only coarse-grained soils encountered during our subsurface studies.

During the drilling of the ten exploratory borings, ground water was first encountered at depths of 10.5 to 13 feet below grade in the borings situated on the west side of the Calaveras fault trace, and at depths of 16 to 35.5 feet below grade in the three borings located on the east side of the fault. However, within minutes of the termination of drilling of each exploratory boring, water levels were observed to rise, suggesting that a semi-confined condition may exist for the first aquifer underlying the site, on both sides of the inferred trace of the Calaveras fault.

needs further discussion

DISTRIBUTION

A copy of this report should be sent to Mr. Scott Seery of the ACHCS, and to the Regional Water Quality Control Board, 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 ground water levels and flow paths, thereby changing the extent and concentration of any contaminants. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

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

Should you have any questions on this report, please call me at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

for Thomas J. Berkins

Thomas J. Berkins
Senior Environmental Engineer

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

License No. 1633
Exp. Date 6/30/94

Timothy R. Ross
Project Manager

/bp

Attachments: Tables 1 through 12
Location Map
Exploratory Boring and Monitoring Well Location Map - Figure 1
Soil Sample Point Location Maps - Figures 2 through 6
Boring Logs
Laboratory Analyses
Chain of Custody documentation

KEI-P90-0606.R10
October 8, 1992

TABLE 1

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on August 24 & 25, 1992)

Sample Number	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	TOG
EB1(5)	5.0	--	ND	ND	ND	ND	ND	--
EB1(8)	8.0	--	ND	ND	ND	ND	ND	--
EB1(10)	10.0	--	2.3	ND	ND	0.11	0.0057	--
EB1(12.5)	12.5	--	ND	ND	ND	ND	ND	--
EB2(5)	5.0	--	ND	ND	ND	ND	ND	--
EB2(10.5)	10.5	--	ND	ND	ND	ND	ND	--
EB3(5)*	5.0	ND	ND	ND	ND	ND	ND	ND
EB3(10)*	10.0	ND	ND	ND	ND	ND	ND	ND
EB3(13)* perc	13.0	ND	ND	ND	ND	ND	ND	ND
EB4(5)*+	5.0	--	ND	ND	ND	ND	ND	ND
EB4(10)*+	10.0	--	ND	ND	ND	ND	ND	ND
EB5(5)*+	5.0	--	ND	ND	ND	ND	ND	ND
EB5(10.5)*+ perc	10.5	--	ND	ND	ND	ND	ND	ND
EB6(5.5)* perc	5.5	ND	ND	ND	ND	ND	ND	ND
EB6(10)* perc	10.0	ND	ND	ND	ND	ND	ND	ND
EB7(5)	5.0	--	ND	ND	ND	ND	ND	--
EB7(10)	10.0	--	ND	ND	ND	ND	ND	--
EB8(5)	5.0	--	ND	ND	ND	ND	ND	--
EB8(10)	10.0	--	ND	ND	ND	ND	ND	--
EB8(13)	13.0	--	ND	ND	ND	ND	ND	--
EB8(15.5)	15.5	--	ND	ND	ND	ND	ND	--
EB8(17.0)	17.0	--	ND	ND	ND	ND	ND	--
EB9(5)	5.0	--	ND	ND	ND	ND	ND	--
EB9(10)	10.0	--	ND	ND	ND	ND	ND	--
EB9(15)	15.0	--	ND	ND	ND	0.010	ND	--
EB9(17.5)	17.5	--	2.6	ND	0.010	0.018	0.015	--
EB9(20)	20.0	--	ND	ND	ND	ND	ND	--
EB9(25)	25.0	--	10	0.028	0.032	2.1	0.41	--
EB9(30)	30.0	--	ND	ND	ND	ND	ND	--
EB9(35)	35.0	--	ND	ND	ND	ND	ND	--

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TABLE 1 (Continued)

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on August 24 & 25, 1992)

Sample Number	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	TOG
EB10(5)	5.0	--	ND	ND	ND	ND	ND	--
EB10(10)	10.0	--	ND	ND	ND	ND	ND	--
EB10(15.5)	15.5	--	ND	ND	ND	ND	ND	--
EB11(5.5)	5.5	--	ND	ND	ND	ND	ND	--
EB11(10)	10.0	--	ND	ND	ND	ND	ND	--
EB11(15.5)	15.5	--	ND	ND	ND	ND	ND	--

* All EPA method 8010 constituents were non-detectable, except in samples EB3(13), EB5(10.5), and EB6(10), where tetrachloroethene was detected at a concentration of 11 ppb in each case. Tetrachloroethene was also detected in sample EB6(5.5) at a concentration of 19 ppb.

\+ TPH as Hydraulic Fluid was non-detectable.

ND = Non-detectable.

-- Indicates analysis was not performed.

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

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TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

(Collected on August 24 & 25, 1992)

Sample Number	TPH as Hydraulic Fluid	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	TOG (ppm)
EB1	--	--	ND	ND	ND	ND	ND	--
EB2	--	--	ND	ND	ND	ND	ND	--
EB3*	--	ND	ND	ND	ND	ND	ND	ND
EB4*	510	--	ND	ND	ND	ND	ND	ND
EB5*	ND	--	ND	ND	ND	ND	ND	ND
EB6*	--	500**	ND	ND	ND	ND	ND	ND
EB7	--	--	ND	ND	ND	ND	ND	--
EB8	--	--	ND	ND	ND	ND	ND	--
EB9	--	--	840***	0.70	ND	98	ND	--
EB10	--	--	ND	ND	ND	ND	ND	--
EB11	--	--	ND	ND	ND	ND	ND	--

-- Indicates analysis was not performed.

ND = Non-detectable.

* All EPA method 8010 constituents were non-detectable.

** 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 gasoline.

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

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TABLE 3

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample Number	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	Total Lead
5/21/92	F-SW1	6.5	--	ND	ND	ND	ND	ND	7.4
	F-SW2	6.5	--	ND	ND	ND	ND	ND	4.1
	F-SW3	6.5	--	ND	ND	ND	ND	ND	4.9
	F-SW4	6.5	--	ND	ND	ND	ND	ND	3.8
	PT-1	11.5	--	6.2	0.0072	0.072	0.33	0.054	4.0
	PT-2	5.0	--	940	ND	0.81	100	12	--
	PT-3	1.75	--	ND	0.0078	0.061	0.14	0.026	5.1
	PT-4	1.75	--	ND	ND	ND	ND	ND	6.5
	PT-5	1.75	--	ND	ND	ND	ND	ND	4.8
	WO-1*	6.0	ND	ND	ND	ND	ND	ND	4.9
	WO-2*	6.0	ND	ND	ND	ND	ND	ND	5.2
	WO-3*	6.0	ND	ND	ND	ND	ND	ND	5.0
	WO-4*	6.0	ND	ND	ND	ND	ND	ND	5.3
	H1**	5.0	--	ND	ND	ND	ND	ND	--
	H2***	5.5	--	230	ND	ND	0.66	1.3	4.4
Detection Limits			1.0	1.0	0.0050	0.0050	0.0050	0.0050	2.5

-- Indicates analysis was not performed.

ND = Non-detectable.

* TOG, EPA method 8010 and 8270 constituents were all non-detectable.

** TPH as hydraulic fluid was 1.3 ppm.

*** TOG was non-detectable. TPH as hydraulic fluid was detected at a concentration of 120 ppm. EPA methods 8010 and 8270 constituents were non-detectable, except for bis(2-ethylhexyl)phthalate at 670 ppb, 2-methylnaphthalane at 5,800 ppb, naphthalene at 4,100 ppb, phenanthrene at 240 ppb, and pyrene at 120 ppb.

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

TABLE 4

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample Number	Cadmium	Chromium	Nickel	Zinc
5/21/92	WO-1	ND	29	35	44
	WO-2	ND	24	27	37
	WO-3	ND	24	26	39
	WO-4	ND	32	39	49
	H2	ND	33	43	55
Detection Limits		0.25	0.25	1.3	0.25

ND = Non-detectable.

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

TABLE 5

SUMMARY OF LABORATORY ANALYSES
SOIL

Date	Sample Number	Depth (feet)	TPH as Hydraulic Fluid	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	TOG
6/15/92	PT(16.5)	16.5	--	ND	ND	ND	ND	ND	--
	PT(SW1)	12	--	ND	ND	ND	ND	ND	--
	PT(SW2)	12	--	ND	ND	ND	ND	ND	--
	PT(SW3)	12	--	ND	ND	ND	ND	ND	--
	PT(SW4)	12	--	ND	ND	ND	ND	ND	--
	H2(6.5)*	6.5	ND	ND	ND	ND	ND	ND	ND
	H2(SW1)*	5.5	ND	ND	ND	ND	ND	ND	ND
	H2(SW2)*	5.5	ND	ND	ND	0.0098	0.022	ND	ND
	H2(SW3)*	5.5	ND	ND	0.069	0.068	0.21	0.064	ND
	H2(SW4)*	5.5	ND	ND	ND	ND	ND	ND	ND
Detection Limits			1.0	1.0	0.005	0.005	0.005	0.005	30

-- Indicates analysis was not performed.

ND = Non-detectable.

* EPA method 8270 constituents were all non-detectable

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

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TABLE 6

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Sample	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	Organic Lead
5/21/92	Water-1	--	ND	ND	ND	2.7	ND	ND
	Water-2*	86	ND	ND	ND	ND	ND	--
6/17/92	Water-3**	--	ND	ND	ND	ND	ND	--

-- Indicates analysis was not performed.

ND = Non-detectable.

* TOG, cadmium, chromium, lead, nickel, EPA method 8010 and 8270 constituents were all non-detectable. Zinc was detected at 0.037 ppb.

** TPH as hydraulic fluid, TOG, EPA method 8270 constituents, and the metals cadmium, chromium, lead, nickel, and zinc were all non-detectable.

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

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TABLE 7

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on June 13, 15, 20 & 26, 1990)

Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
SW1	6.0	--	5,700	2.1	41	640	110
SW1(3)	6.0	--	2,200	1.8	6.3	76	30
SW1(6.5)	6.0	--	32	0.020	0.14	0.17	0.13
SW2	6.0	--	1,500	0.35	0.57	56	8.0
SW2(3)	6.0	--	360	ND	1.0	2.0	3.0
SW2(6.5)	6.5	--	6.8	0.020	0.052	0.063	0.029
SW3	6.0	--	ND	ND	ND	ND	ND
SW4	6.0	--	8.0	0.019	0.088	0.16	0.0071
SW5	6.5	--	340	0.80	0.26	3.6	2.5
SW5(2.5)	6.0	--	11	0.027	0.054	0.12	0.070
SW6	6.5	--	120	ND	0.21	0.14	0.19
SW6(3)	6.0	--	1.2	0.0084	0.012	0.021	0.012
P1	6.0	--	2.5	0.099	0.079	0.034	ND
P2	6.0	--	37	0.78	0.14	3.8	0.43
P3	6.0	--	8.5	0.028	0.016	0.080	0.35
P4	6.0	--	16	0.091	ND	1.3	0.52
SW11*	6.0	--	ND	ND	ND	0.0079	ND
SW12	6.0	--	ND	ND	ND	ND	ND
SW13	6.0	--	ND	ND	0.022	ND	ND
SW14	6.0	--	ND	ND	ND	0.020	ND
WQ1**	6.5	120	36	0.091	0.17	1.8	0.38
SWA***	6.0	--	--	--	--	--	--
Detection Limits		1.0	1.0	0.0050	0.0050	0.0050	0.0050

-- Indicates analysis was not performed.

ND = Non-detectable.

* TOG was 78 ppm.

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

*** TOG was 3,500 ppm.

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

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TABLE 8

SUMMARY OF LABORATORY ANALYSES
WATER

(Collected on June 20 & July 3, 1990)

Sample #	TOG	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethylbenzene
W1*	--	2,300	3.1	0.88	250	0.39
W2**	ND	ND	ND	0.96	ND	ND

* Collected from the former fuel storage tank pit.

** Collected from the new fuel storage tank pit.

-- Indicates analysis was not performed.

ND = Non-detectable.

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

TABLE 9

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on July 16 & 20, 1990)

Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
SWB(13)*	6.0	ND	ND	ND	0.0095	ND	ND
SWC(10)*	6.0	ND	1.1	0.0061	0.0330	0.044	0.024
SWD(14)*	6.0	ND	ND	0.0052	0.015	ND	ND
SWE*	6.3	ND	ND	ND	0.031	ND	ND
SWF*	6.3	ND	ND	ND	0.029	0.013	0.0059
SWG*	6.3	ND	ND	ND	0.028	ND	ND
SWH*	6.3	ND	ND	ND	0.015	ND	ND
Detection Limits		1.0	1.0	0.005	0.005	0.005	0.005

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

ND = Non-detectable.

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

TABLE 10

SUMMARY OF LABORATORY ANALYSES
WATER

(Collected on July 19, 1990)

Sample #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
W3*	ND	ND	ND	ND	ND	ND
Detection Limits	50	30	0.30	0.30	0.30	0.30

ND = Non-detectable.

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

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

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TABLE 11

SUMMARY OF LABORATORY ANALYSES
WATER

Date	Sample Number	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethylbenzene
4/03/92	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
1/02/92	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3**	--	38	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
10/03/91	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	32	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
7/02/91	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
4/01/91	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND
11/16/90	MW1*	ND	ND	ND	ND	ND	ND
	MW2	--	ND	ND	ND	ND	ND
	MW3	--	ND	ND	ND	ND	ND
	MW4	--	ND	ND	ND	ND	ND

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

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

ND = Non-detectable.

-- Indicates analysis was not performed.

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

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TABLE 12

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on November 6 & 7, 1990)

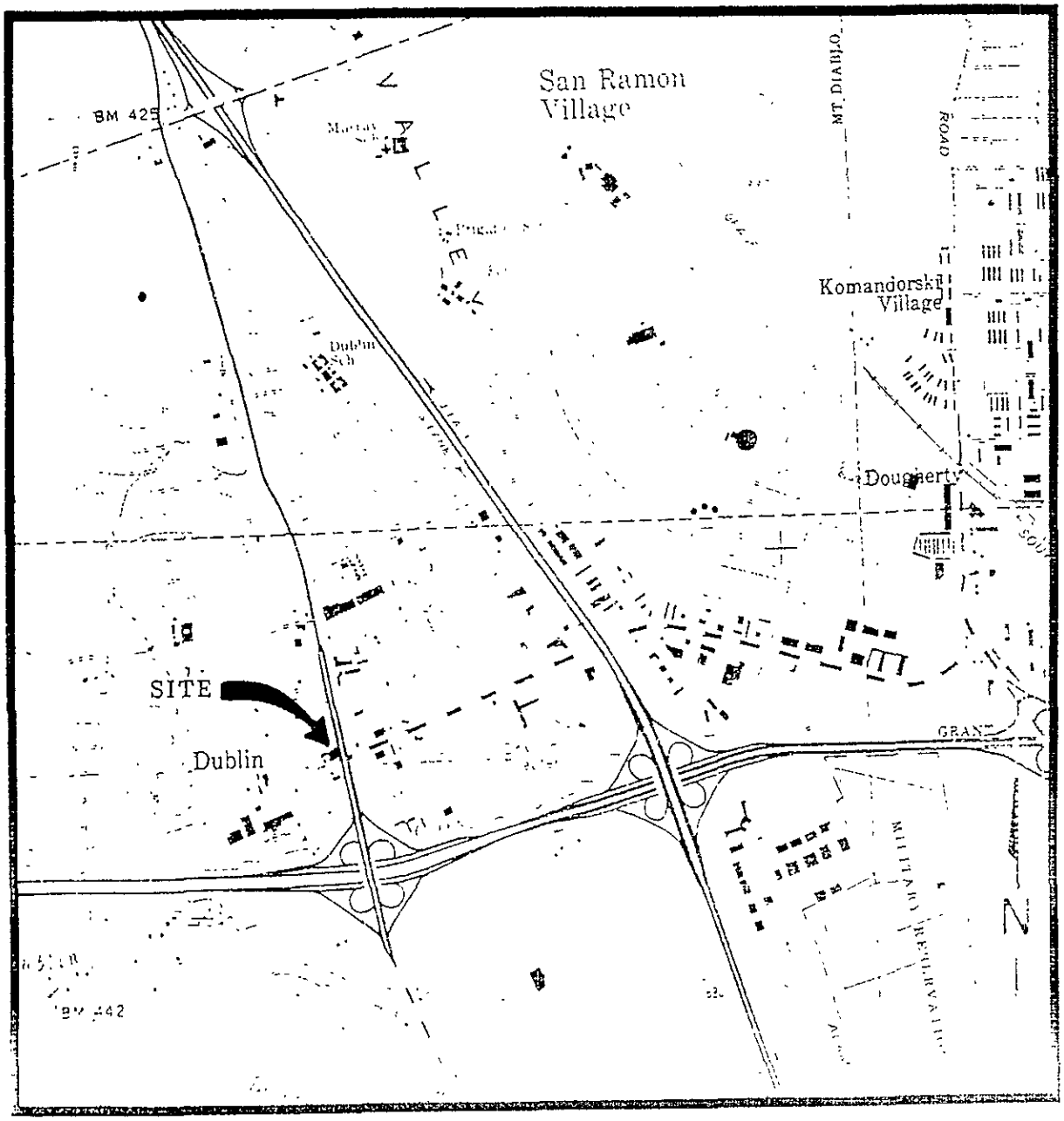
Sample Number	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
MW1(5)*	5.0	ND	ND	ND	ND	ND	ND
MW1(8)	8.0	--	ND	ND	ND	ND	ND
MW2(5)	5.0	--	ND	ND	ND	ND	ND
MW2(7.5)	7.5	--	ND	ND	ND	ND	ND
MW2(9)	9.0	--	ND	ND	ND	ND	ND
MW3(5)	5.0	--	ND	ND	ND	ND	ND
MW3(10)	10.0	--	ND	ND	ND	ND	ND
MW3(15)	15.0	--	ND	ND	ND	ND	ND
MW4(5)	5.0	--	ND	ND	ND	ND	ND
Detection Limits		1.0	1.0	0.0050	0.0050	0.0050	0.0050

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

ND = Non-detectable.

-- Indicates analysis was not performed.

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



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

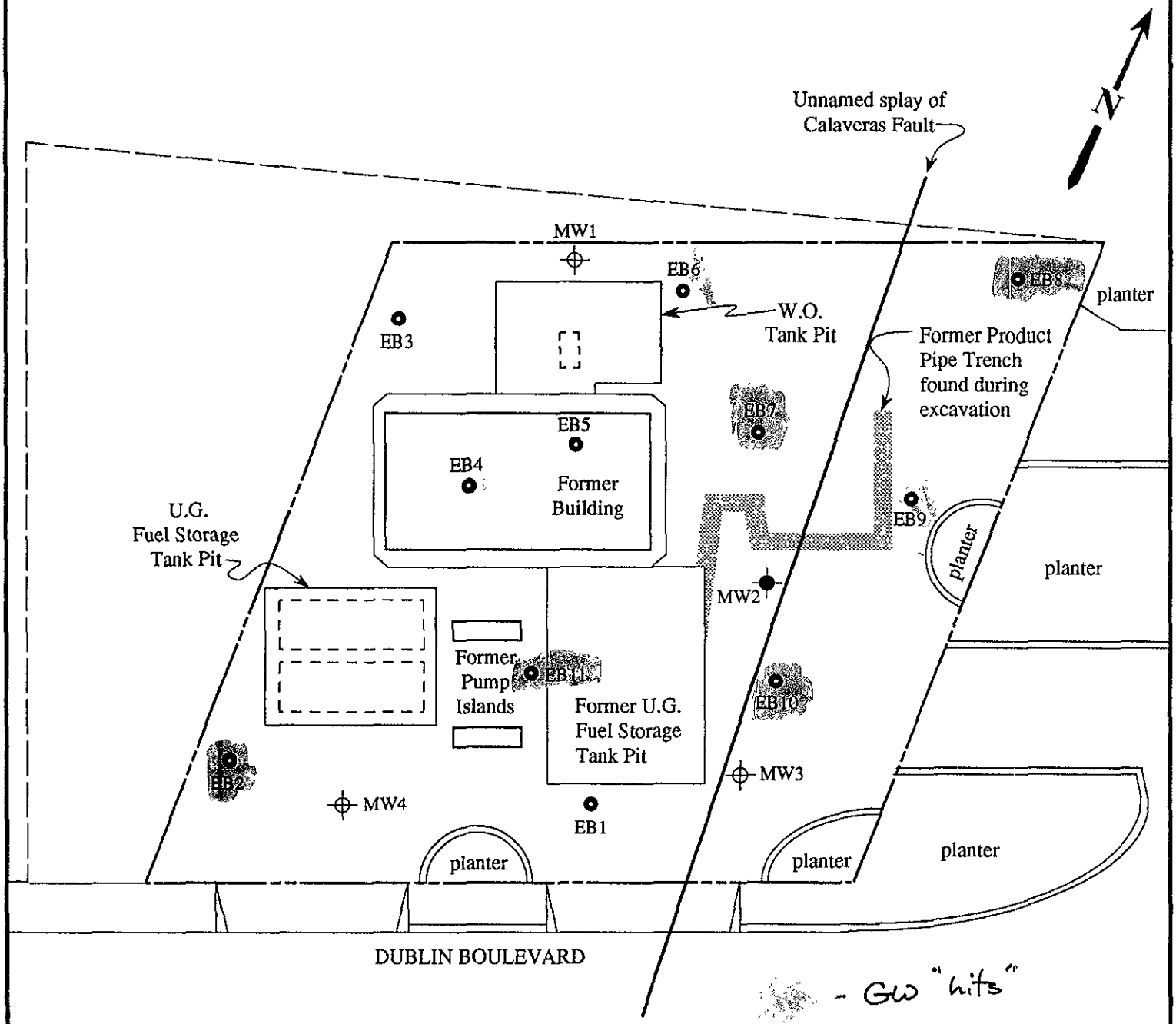
0 2000 4000

Approx. scale feet

KAPREALIAN ENGINEERING
INCORPORATED

FORMER UNOCAL S/S #5901
11976 DUBLIN BOULEVARD
DUBLIN, CA

LOCATION
MAP



LEGEND

- Monitoring well
- Monitoring well (recently destroyed)
- Exploratory boring (recently installed)

0 30 60

Approx. scale feet

EXPLORATORY BORING AND MONITORING WELL LOCATIONS

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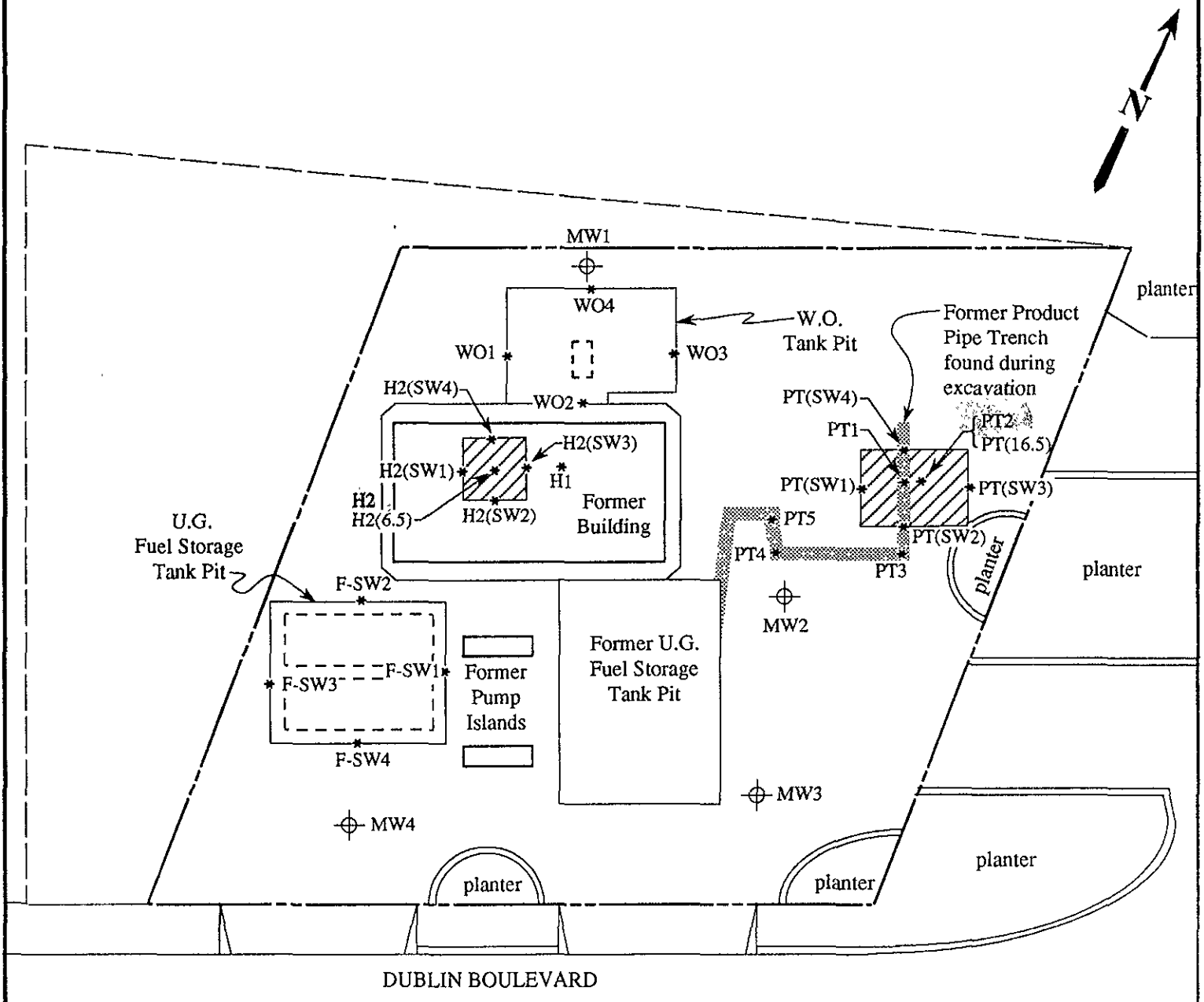
INCORPORATED

FORMER UNOCAL S/S #5901
11976 DUBLIN BOULEVARD
DUBLIN, CA

FIGURE
1



LEGEND

- Monitoring well
- * Sample point location
- Area of additional excavation

Samples collected on May 21 and June 15, 1992

0 30 60

Approx. scale feet

SOIL SAMPLE POINT LOCATIONS MAP

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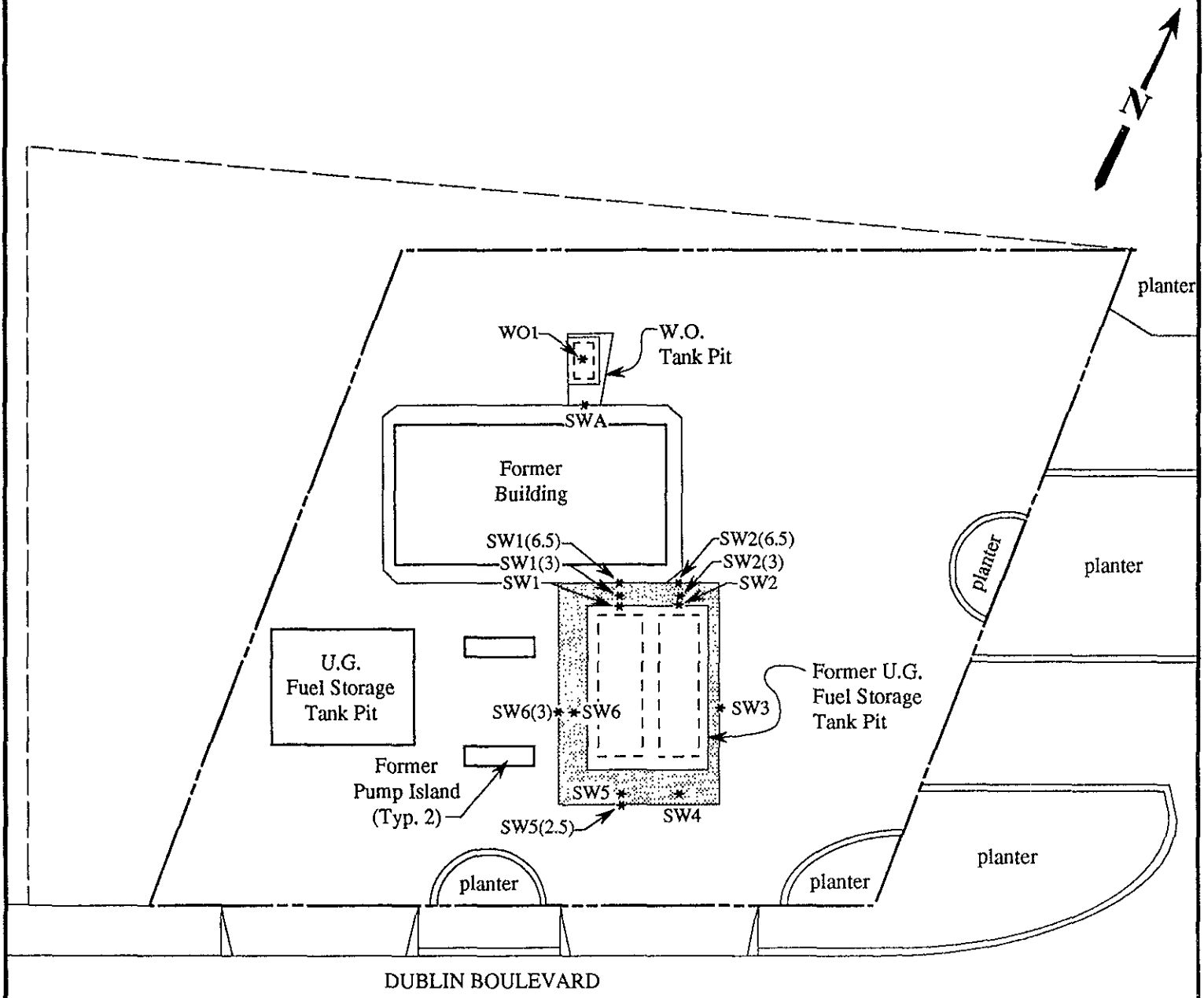
INCORPORATED

FORMER UNOCAL S/S #5901
11976 DUBLIN BOULEVARD
DUBLIN, CA

FIGURE
2



LEGEND

* Sample point location

Additional area of excavation

Samples collected on June 13, 15 & 20, 1990

0 30 60

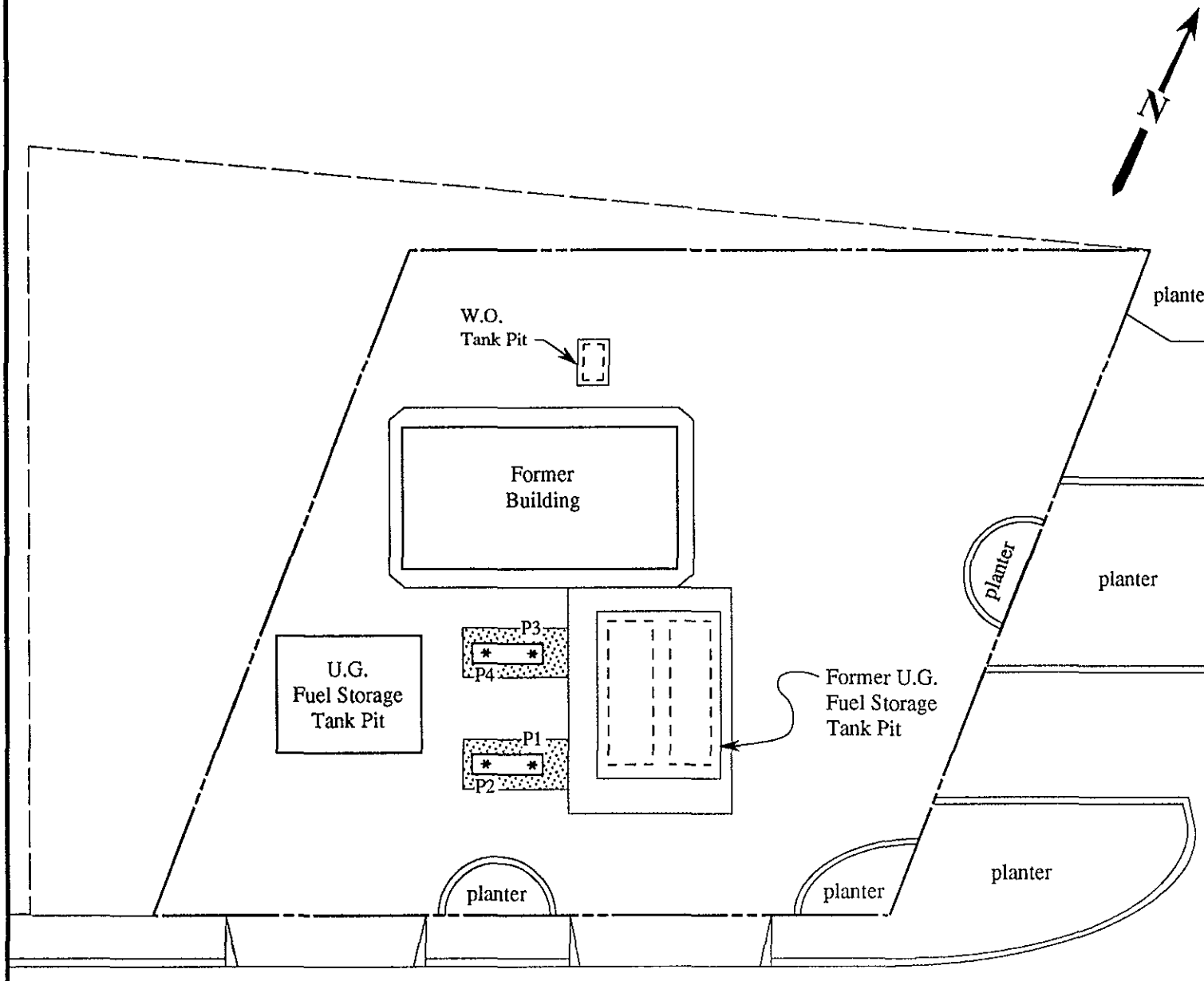
Approx. scale feet

SOIL SAMPLE POINT LOCATIONS MAP

KAPREALIAN ENGINEERING
INCORPORATED

FORMER UNOCAL S/S #5901
11976 DUBLIN BOULEVARD
DUBLIN, CA

FIGURE
3



LEGEND

* Sample point location

Area of additional Tank Pit excavation

Area of additional Pipe Trench excavation to depth of GW

Samples collected on June 15, 1992

0 30 60

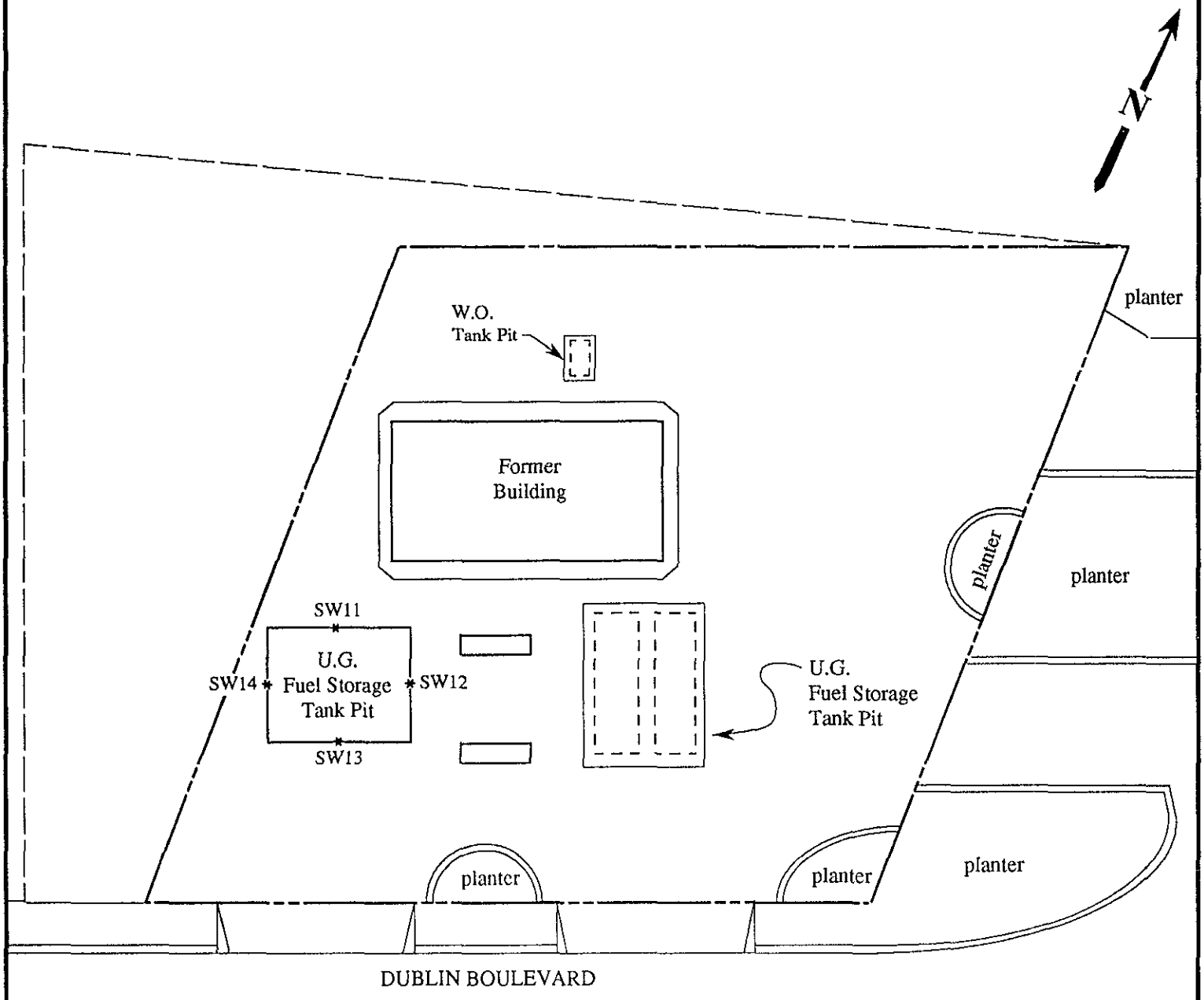
Approx. scale feet

SOIL SAMPLE POINT LOCATIONS MAP

KAPREALIAN ENGINEERING
INCORPORATED

FORMER UNOCAL S/S #5901
11976 DUBLIN BOULEVARD
DUBLIN, CA

FIGURE
4



LEGEND

* Sample point location

Samples collected on June 26, 1990

0 30 60

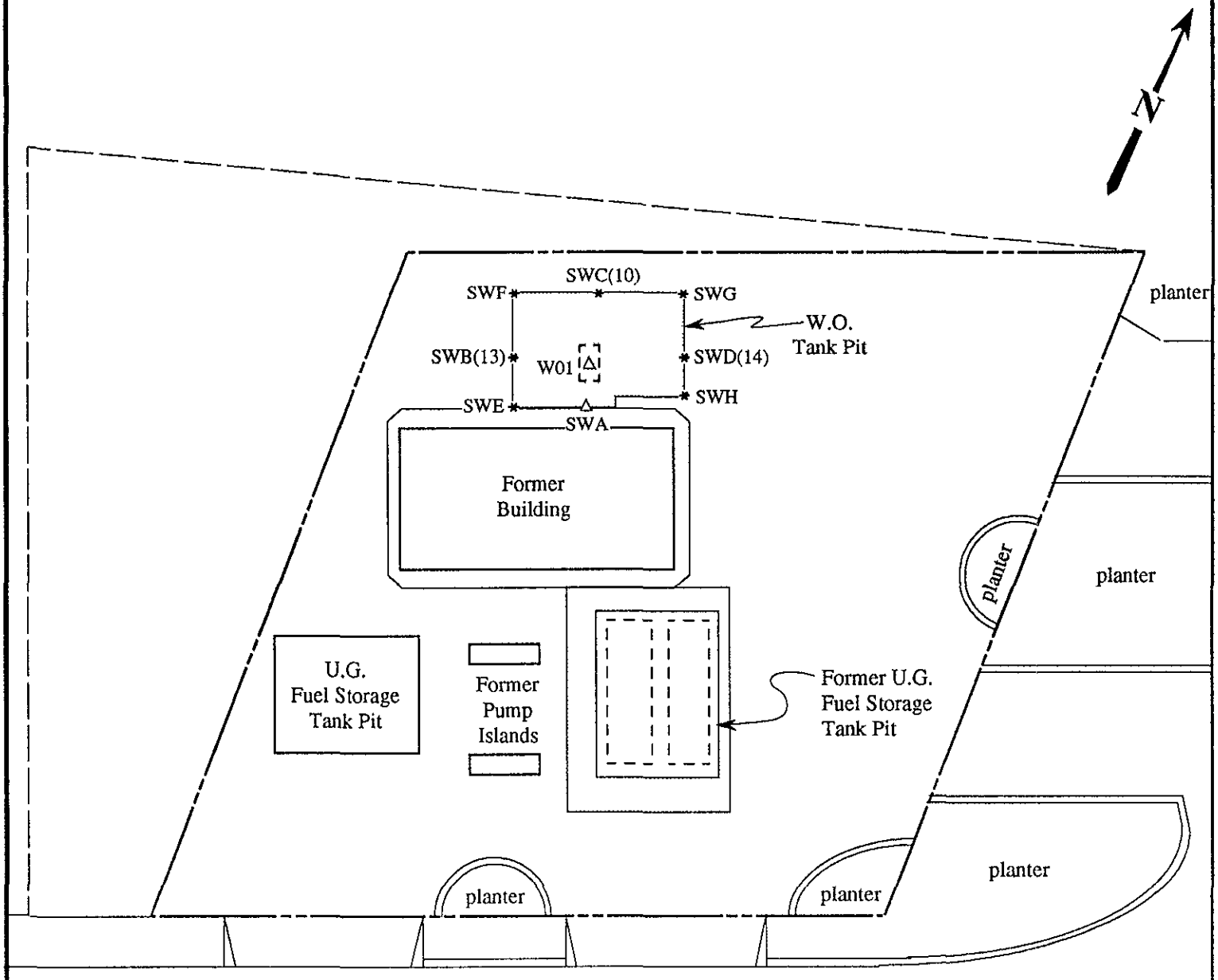
Approx. scale feet

SOIL SAMPLE POINT LOCATIONS MAP

KAPREALIAN ENGINEERING
INCORPORATED

FORMER UNOCAL S/S #5901
11976 DUBLIN BOULEVARD
DUBLIN, CA

FIGURE
5



LEGEND

* Sample point location

△ Previous sample point location

Area of additional Tank Pit excavation

Samples collected on July 16 & 20, 1990

0 30 60

Approx. scale feet

SOIL SAMPLE POINT LOCATIONS MAP

KAPREALIAN ENGINEERING
INCORPORATED

FORMER UNOCAL S/S #5901
11976 DUBLIN BOULEVARD
DUBLIN, CA

FIGURE
6

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** JGG W.W. LEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/24/92
Boring No. EB1	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Road base (fill).
				Silty clay, estimated at 25-30% silt, stiff, moist, dark gray (5Y4/1), trace sand and rootlets.
4/8/12		5	CL/ML	Silty clay, trace sand, very stiff, moist, dark gray (5Y44/1), trace pores.
6/10/18				Silty clay, estimated at 25% silt, 5% sand, and 5% gravel to 1/2 inches in diameter, very stiff, moist, dark gray (5Y4/1), to dark greenish gray (5GY4/1), rootlets common.
6/8/10	▽	10		Silty clay, estimated at 15% silt and trace sand, very stiff, moist, greenish gray (5GY5/1), rootlets and caliche in voids common.
6/8/10	▼			Silty clay, estimated at 35% silt, very stiff, very moist, greenish gray (5GY5/1), trace rootlets and caliche.
				TOTAL DEPTH 13.5'
		15		
		20		

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" / **Casing Diameter**	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/24/92
Boring No. EB2	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Road base.
7/7/7		5	CL/ML	Silty clay, estimated at 30% silt, stiff, moist, grayish brown (5/2) and dark yellowish brown (4/4) mottled, trace rootlets.
3/3/7	▼	10		Silty clay, estimated at 25% silt, and 5% fine sand, stiff, greenish gray (5GY5/1) with slight dark yellowish brown (4/4), mottling trace caliche and rootlets.
		15		Silty clay, estimated at 30% silt, stiff, very moist, dark yellowish brown (4/4) with greenish gray (5GY5/1) mottling, trace rootlets.
		20		TOTAL DEPTH 12'

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/24/92
Boring No. EB3	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel with sand base.
				Silty clay, firm, moist, very dark grayish brown.
3/3/5		5	CL/ML	Silty clay, estimated at 30% silt and 5-10% sand, firm to stiff, moist, black (2.5/1), trace rootlets.
3/5/8		10		Silty clay, estimated at 35% silt, trace sand, stiff, moist. dark gray (4/1) and gray (5Y5/1) mottled, trace rootlets.
3/5/6	▽			Silty clay, estimated at 40% silt and 5-10% fine sand, stiff, very moist, gray (5Y6/1), trace caliche and rootlets.
		15		TOTAL DEPTH 13.5'
		20		

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** JGG W.W. CEG/1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/24/92
Boring No. EB4	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel, subangular gravels to 1 inch in diameter (fill from building removal).
25/8/9		5	CL/ML	Silty clay, estimated at 25-35% silt and trace sand, very stiff, moist, very dark gray (N3/), caliche and pores.
3/5/7	▼	10		Silty clay, estimated 35-40% silt and trace sand, stiff, very moist. olive gray (5/2), trace rootlets and caliche.
				TOTAL DEPTH 11'
		15		
		20		

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter** 2"	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/24/92
Boring No. EB5	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel base (fill from building removal of hoists).
5/5/7		5	CL/ML	Silty clay, estimated at 30-40% silt and trace sand, stiff, moist, gray (5Y5/1), rootlets and caliche common.
4/4/6	▽	10		Silty clay, estimated at 40% silt, stiff, moist to very moist, gray (5Y6/1) with slight brown (5/3) mottling.
		15		TOTAL DEPTH 11'
		20		

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** W.W. JGG LEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/24/92
Boring No. EB6	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel with sand, subangular gravel to 3/4 inch in diameter (fill from building and hoist removal).
26/24/22		5		
			CL/ML	Silty clay, estimated at 15-20% silt, trace sand and gravel, gravel to 3/8 inch in diameter, dense, moist, gray (5Y5/1), rootlets and caliche common.
4/4/4		10		Silty clay, estimated at 30% silt, trace sand, firm to stiff, very moist to saturated, gray (5/1) with slight dark yellowish brown (4/4) mottling, rootlets common, trace caliche.
		15		TOTAL DEPTH 11'
		20		

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/25/92
Boring No. EB7	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Sand and gravel base.
			CL/ML	Silty clay, stiff, moist, very dark gray.
3/3/5		5		Silty clay, estimated at 25% silt, trace sand, firm to stiff, moist, greenish gray (5GY5/1), caliche common.
3/3/6	▽	10		Silty clay, estimated at 25-35% silt, 5% sand and trace gravel to 1/2 inch in diameter, stiff, very moist, dark greenish gray (5GY4/1) with dark grayish brown (4/2) mottling, trace rootlets and organic matter.
	▽			TOTAL DEPTH 10.5'
		15		
		20		

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/25/92
Boring No. EB8	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Sand gravel base.
				Silty clay, estimated at 15% silt, trace sand, stiff, moist, very dark gray (N3/), rootlets common.
				Clay, estimated at 25% silt, trace sand, very stiff, moist, dark gray (5Y 4/1).
10/10/14		5		
			CL/ML	Silty clay, estimated at 25% silt and 5% sand, 5% gravel to 1/2 inch in diameter, stiff, moist, dark gray (5Y 4/1).
5/5/10		10		
5/5/12				Clay, estimated at 20% silt and 5% fine sand, very stiff, moist, gray (5Y 6/1).
5/8/11		15		Silty clay, estimated at 25% silt, 10 to 15% fine sand and trace gravel to 1/2 inch diameter, very stiff, very moist, gray (5Y 5/1).
				Silty clay as above, very moist to saturated.
17/13/22	▽		GW	Well graded gravel with sand, estimated at 10-15% silt, dense, saturated, gray (5Y 5/1) gravel to 1-1/4 inches in diameter.
			CL/ML	Silty clay, estimated at 25% silt and 10% fine sand, hard, very moist, gray (5Y 5/1).
		20		TOTAL DEPTH 18.5'

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/25/92
Boring No. EB9	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
		0		Sand and gravel base.
				Silty clay, estimated at 30% silt and trace sand, moist, grayish brown (5/2), rootlets common.
5/6/16		5	CL/ML	Silty clay, estimated at 25% silt and trace sand and gravel, very stiff, moist, grayish brown (5/2), rootlets.
				Silty clay, estimated at 40% silt and 5 to 10% sand, very stiff, moist, brown (5/3).
6/12/13		10		
			SM	Silty sand with gravel, estimated at 20% silt and 15% gravel to 3/4 inch in diameter, sand is well graded, medium dense, moist, grayish brown (5/2).
16/20/22		15		Silty clay with sand, estimated at 25% silt, 10-15% sand, and 5% gravel to 1 inch in diameter, hard, moist, grayish brown (5/2), trace caliche.
			CL/ML	
17/17/17				Silty clay with sand, estimated at 30% silt, 15% sand and 10% gravel to 1/2 inch in diameter, hard, moist to very moist, grayish brown (5/2).
7/16/17		20		Silty clay, estimated at 25% silt and 5-10% sand, hard, very moist, grayish brown (5/2).

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** JGG W.W. CEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/25/92
Boring No. EB9	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/8/13		25	CL/ML	Silty clay, estimated at 25% silt, 5-10% sand and trace gravel to 1/2 inch in diameter, very stiff, moist, pale brown (6/3) with slight greenish gray mottling, trace caliche and pores.
18/18/23		30		Silty clay, estimated at 25-30% fine silt and 5% sand, hard, moist, pale brown (6/3), trace caliche and pores, trace organic matter.
6/12/12	▽ 20 min.	35	CL/CH	Clay, estimated at 5-10% silt, very stiff, moist, grayish brown (5/2), trace sand and caliche.
		40		TOTAL DEPTH 35.5'

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** W.W. JG 6 CEG 1633
Project Name Unocal S/S #5901 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/25/92
Boring No. EB10	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Silty gravel with sand (fill).
				Silty clay, stiff, moist, very dark gray (3/1), trace pores.
8/9/14		5		Silty clay, estimated at 25% silt, very stiff, moist, greenish gray (5GY 5/1) with slight dark yellowish brown (4/4) mottling, trace organic matter.
			CL/ML	
6/8/12		10		Silty clay, estimated at 20-25% silt and 5% sand, very stiff, moist, greenish gray (5GY 5/1), very dark gray (3/1), and grayish brown mottled (5/2).
7/9/12				Silty clay as above.
9/12/14		15		Silty clay with sand, estimated at 25% silt, 15% fine sand, and trace gravel to 1 inch in diameter, very stiff, very moist, gray (5Y 6/1).
	(Water rose 2 inches in 20 minutes.)			TOTAL DEPTH 16'
		20		

BORING LOG

Project No. KEI-P90-0606	**Boring Diameter** 9" **Casing Diameter**	**Logged By** W.W. JG6 CEG 1633
Project Name *Unocal S/S #5901* 11976 Dublin Blvd, Dublin	**Well Cover Elevation**	**Date Drilled** 8/25/92
Boring No. EB11	**Drilling Method** Hollow-stem Auger	**Drilling Company** West Hazmat

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Sandy gravel with silt (fill from building removal). Angular gravel to 1 inch in diameter.
23/16/5		5		Silty clay, estimated at 25% silt, 5-10% sand and trace gravel, stiff, moist, gray (5Y 5/1).
6/1215		10	CL/ML	Silty clay, very stiff, dark greenish gray (5GY 4/1) with dark yellowish brown (4/4) mottling, caliche and rootlets common.
5/9/14				Silty clay as above, very stiff, moist, dark greenish gray (5GY 41).
3/3/9	▼	15		Silty clay, estimated at 30% silt, trace sand, stiff, moist to very moist, greenish gray (5GY 5/1) and gray (5Y 5/1) mottled, caliche and rootlets common.
		20		TOTAL DEPTH 16-5'

SEQUOIA ANALYTICAL

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

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Water	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1154		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 208-1154 EB 1	Sample I.D. 208-1155 EB 2	Sample I.D. 208-1156 EB 3	Sample I.D. 208-1157 EB 4	Sample I.D. 208-1158 EB 5	Sample I.D. 208-1159 EB 6
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	9/3/92	9/3/92	9/3/92	9/3/92	9/3/92	9/3/92
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	108	104	106	103	104	105

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 25, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Water	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 14, 1992
Attention: Mardo Kaprealian, P.E.	First Sample #:	208-1160		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 208-1160 EB 7	Sample I.D. 208-1161 EB 8	Sample I.D. 208-1162 EB 9	Sample I.D. 208-1163 EB 10	Sample I.D. 208-1164 EB 11	Sample I.D. Matrix Blank
Purgeable Hydrocarbons	50	N.D.	N.D.	840	N.D.	N.D.	
Benzene	0.5	N.D.	N.D.	0.70	N.D.	N.D.	
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	
Total Xylenes	0.5	N.D.	N.D.	98	N.D.	N.D.	
Chromatogram Pattern:		--	--	Non-Gasoline Mixture (>C10)	--	--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	9/3/92	9/3/92	9/3/92	9/3/92	9/3/92	9/3/92
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	100	101	127	101	95	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

for Scott A. Chieffo
Project Manager

Please Note:
Revised Report - 9/24/92

2081154.KEI <2>

SEQUOIA ANALYTICAL

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Water	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1156		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 208-1156 EB 3	Sample I.D. 208-1159 EB 6	Sample I.D. Matrix Blank
Extractable Hydrocarbons	50	N.D.	500	
Chromatogram Pattern:		--	Diesel & Non-Diesel Mixture (>C20)	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	9/1/92	9/1/92	9/1/92
Date Analyzed:	9/9/92	10-Sep	9/9/92
Instrument Identification:	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

for Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Water	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015	Reported:	Sep 14, 1992
Attention: Mardo Kaprealian, P.E.	First Sample #:	208-1157		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS AS HYDRAULIC FLUID

Analyte	Reporting Limit µg/L	Sample I.D. 208-1157 EB 4	Sample I.D. 208-1158 EB 5	Sample I.D. Matrix Blank
Extractable Hydrocarbons	250	510	N.D.	
Chromatogram Pattern:		Hydraulic Fluid	--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	9/1/92	9/1/92	9/1/92
Date Analyzed:	9/8/92	9/8/92	9/8/92
Instrument Identification:	HP-3B	HP-3B	HP-3B

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

for Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Matrix Descript:	Water	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	SM 5520 B&F (Gravimetric)	Extracted:	Aug 31, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1156	Analyzed:	Sep 2, 1992
			Reported:	Sep 14, 1992

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
208-1156	EB 3	N.D.
208-1157	EB 4	N.D.
208-1158	EB 5	N.D.
208-1159	EB 6	N.D.

Detection Limits:	**5.0**

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

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Water, EB 3	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Sep 1, 1992
Attention: Mardo Kapreallan, P.E.	Lab Number:	208-1156	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

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

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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(510) 686-9600 • FAX (510) 686-9689

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Water, EB 4	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Sep 1, 1992
Attention: Mardo Kapreallan, P.E.	Lab Number:	208-1157	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

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

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

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Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Water, EB 5	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Sep 1, 1992
Attention: Mardo Kapreallan, P.E.	Lab Number:	208-1158	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

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

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

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Project Manager

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Water, EB 6	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Sep 1, 1992
Attention: Mardo Kaprealian, P.E.	Lab Number:	208-1159	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

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

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

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Scott A. Chieffo
Project Manager

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Kaprealian Engineering, Inc.
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kaprealian, P.E.

Client Project ID: Unocal #5901, Dublin
QC Sample Group: 2081154-1164
Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Diesel	Oil and Grease
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA8015	SM5520
Analyst:	A.P.	A.P.	A.P.	A.P.	K.Wimer	D. Newcomb
Reporting Units:	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
Date Analyzed:	Sep 3, 1992	Sep 3, 1992	Sep 3, 1992	Sep 3, 1992	Sep 4, 1992	Aug 31, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	20	20	20	60	300	100
Conc. Matrix Spike:	19	19	20	62	345	96
Matrix Spike % Recovery:	95	95	100	103	115	96
Conc. Matrix Spike Dup.:	19	19	20	62	339	93
Matrix Spike Duplicate % Recovery:	95	95	100	103	113	93
Relative % Difference:	0.0	0.0	0.0	0.0	1.8	3.0

Laboratory blank contained the following analytes: None Detected

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

$$\% \text{ Recovery:} \quad \frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$$

$$\text{Relative \% Difference:} \quad \frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}} \times 100$$

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Kaprealian Engineering, Inc. Client Project ID: Unocal #5901, Dublin
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kaprealian, P.E. QC Sample Group: 2081154-1164 Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	K.Nill	K.Nill	K.Nill
Reporting Units:	µg/L	µg/L	µg/L
Date Analyzed:	Sep 1, 1992	Sep 1, 1992	Sep 1, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10
Conc. Matrix Spike:	8.7	10	9.2
Matrix Spike % Recovery:	87	100	92
Conc. Matrix Spike Dup.:	8.7	9.6	9.0
Matrix Spike Duplicate % Recovery:	87	96	90
Relative % Difference:	0.0	4.1	2.2

Laboratory blank contained the following analytes: None Detected
Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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Scott A. Chieffo
Project Manager

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

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Kapreallan Engineering, Inc. Client Project ID: Unocal #5901, Dublin
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kapreallan, P.E. QC Sample Group: 2081154-164 Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA8015	EPA8015	EPA8015
Analyst:	K.Wimer	K.Wimer	K.Wimer
Reporting Units:	µg/L	µg/L	µg/L
Date Analyzed:	Sep 4, 1992	Sep 4, 1992	Sep 4, 1992
Sample #:	208-1156	208-1159	Blank
Surrogate % Recovery:	116	*	100

* Due to matrix interference, the surrogate recovery for this sample could not be quantified.

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for Scott A. Chieffo
Project Manager

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

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Kaprealian Engineering, Inc. Client Project ID: Unocal #5901, Dublin
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kaprealian, P.E. QC Sample Group: 2081154-1164 Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8010	EPA 8010	EPA 8010	EPA 8010	EPA 8010
Analyst:	K.Nill	K.Nill	K.Nill	K.Nill	K.Nill
Reporting Units:	µg/L	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Sep 1, 1992	Sep 1, 1992	Sep 1, 1992	Sep 1, 1992	Sep 1, 1992
Sample #:	208-1156	208-1157	208-1158	208-1159	Blank
Surrogate #1 % Recovery:	107	129	129	101	130
Surrogate #2 % Recovery:	98	104	110	101	103

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for Scott A. Chieffo
Project Manager

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

KAPREALIAN ENGINEERING
INCORPORATED

CHAIN OF CUSTODY

SAMPLER: Wade Weston
WITNESSING AGENCY:

SITE NAME & ADDRESS: Unocal #5901 Dublin

ANALYSES REQUESTED: TPH-g/BTXE; TPH-D; TOG(5520 E&E); 8010 Hydraulic Fluid TPH-; 208

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	REMARKS
EB 1	8/24/92			✓	✓		2 Voas	See Sample ID *	1154 AB
EB 2	"			✓	✓		2 Voas		1155 AB
EB 3	"			✓	✓		2 L 4 Voas		1156 AF
EB 4	"			✓	✓		2 L 4 Voas		1157 AF
EB 5	"			✓	✓		2 L 4 Voas		1158 AF
EB 6	"			✓	✓		2 L 4 Voas		1159 AF
EB 7	8/25/92			✓	✓		2 Voas		1160 AB
EB 8	"			✓	✓		2 Voas		1161 AB
EB 9	"			✓	✓		2 Voas	✓	1162 AB

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Wade Weston	8/26/92 1125	Dennis Newcomb
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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

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

Signature: Dennis Title: Courier Date: 8/26/92

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel 510 602 5100 Fax 510 687 0602

KAPREALIAN ENGINEERING
INCORPORATED

CHAIN OF CUSTODY

SAMPLER: Wade Weston
WITNESSING AGENCY:

SITE NAME & ADDRESS: Unocal #5901 Dublin

ANALYSES REQUESTED

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G	BTXE						REMARKS
EB 10	8/25/92			✓	✓		2 Voas	See Sample ID*	✓	✓			208163	AB		
EB 11	"			✓	✓		2 Voas	"	✓	✓			208164	AB*		

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Wade Weston	8/26/92 1125	Denise Newcomb
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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

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

Signature: Denise Title: Supervisor Date: 8/26/92

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel 510 602 5100 Fax 510 687 0602

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1118		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 208-1118 EB1-(5)	Sample I.D. 208-1119 EB1-(8)	Sample I.D. 208-1120 EB1-(10)	Sample I.D. 208-1121 EB1-(12.5)	Sample I.D. 208-1122 EB2-(5)	Sample I.D. 208-1123 EB2-(10.5)
Purgeable Hydrocarbons	1.0	N.D.	N.D.	2.3	N.D.	N.D.	N.D.
Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.005	N.D.	N.D.	0.0057	N.D.	N.D.	N.D.
Total Xylenes	0.005	N.D.	N.D.	0.11	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	Gasoline	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	8/30/92	8/30/92	8/30/92	8/30/92	8/31/92	8/30/92
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-4	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	105	98	104	102	102	101

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled: Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received: Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported: Sep 14, 1992
Attention: Mardo Kaprealian, P.E.	First Sample #:	208-1124	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 208-1124 EB3-(5)	Sample I.D. 208-1125 EB3-(10)	Sample I.D. 208-1126 EB3-(13)	Sample I.D. 208-1127 EB4-(5)	Sample I.D. 208-1128 EB4-(10)	Sample I.D. 208-1129 EB5-(5)
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	8/31/92	8/31/92	8/31/92	8/31/92	8/31/92	8/31/92
Instrument Identification:	HP-4	HP-2	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	101	109	105	100	103	105

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled: 8/24 - 8/25/92
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received: Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported: Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1130	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 208-1130 EB5-(10.5)	Sample I.D. 208-1131 EB6-(5.5)	Sample I.D. 208-1132 EB6-(10)	Sample I.D. 208-1133 EB7-(5)	Sample I.D. 208-1134 EB7-(10)	Sample I.D. 208-1135 EB8-(5)
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	8/31/92	8/31/92	8/31/92	8/31/92	8/31/92	8/31/92
Instrument Identification:	HP-4	HP-4	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	108	100	102	104	104	102

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 25, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1136		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 208-1136 EB8-(10)	Sample I.D. 208-1137 EB8-(13)	Sample I.D. 208-1138 EB8-(15.5)	Sample I.D. 208-1139 EB8-(17)	Sample I.D. 208-1140 EB9-(5)	Sample I.D. 208-1141 EB9-(10)
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	8/31/92	8/31/92	8/31/92	9/2/92	9/4/92	9/2/92
Instrument Identification:	HP-4	HP-4	HP-2	HP-4	HP-4	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	103	106	101	107	110	101

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 25, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1142		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 208-1142 EB9-(15)	Sample I.D. 208-1143 EB9-(17.5)	Sample I.D. 208-1144 EB9-(20)	Sample I.D. 208-1145 EB9-(25)	Sample I.D. 208-1146 EB9-(30)	Sample I.D. 208-1147 EB9-(35)
Purgeable Hydrocarbons	1.0	N.D.	2.6	N.D.	10	N.D.	N.D.
Benzene	0.005	N.D.	N.D.	N.D.	0.028	N.D.	N.D.
Toluene	0.005	N.D.	0.010	N.D.	0.032	N.D.	N.D.
Ethyl Benzene	0.005	N.D.	0.015	N.D.	0.41	N.D.	N.D.
Total Xylenes	0.005	0.010	0.018	N.D.	2.1	N.D.	N.D.
Chromatogram Pattern:		--	Gasoline	--	Gasoline	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	9/3/92	9/3/92	9/3/92	9/3/92	9/3/92	9/4/92
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	98	101	103	94	103	110

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

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Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 25, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1148		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 208-1148 EB10-(5)	Sample I.D. 208-1149 EB10-(10)	Sample I.D. 208-1150 EB10-(15.5)	Sample I.D. 208-1151 EB11-(5.5)	Sample I.D. 208-1152 EB11-(10)	Sample I.D. 208-1153 EB11-(15.5)
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.005	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	9/2/92	9/2/92	9/2/92	9/2/92	9/2/92	9/2/92
Instrument Identification:	HP-4	HP-4	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	105	105	104	104	105	104

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

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for Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	8/24 - 8/25/92
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	Matrix Blank		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. Matrix Blank
Purgeable Hydrocarbons	1.0	
Benzene	0.005	
Toluene	0.005	
Ethyl Benzene	0.005	
Total Xylenes	0.005	

Chromatogram Pattern:

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Analyzed:	8/30/92
Instrument Identification:	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	101

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

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Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1124		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 208-1124 EB3-(5)	Sample I.D. 208-1125 EB3-(10)	Sample I.D. 208-1126 EB3-(13)	Sample I.D. 208-1131 EB6-(5.5)	Sample I.D. 208-1132 EB6-(10)	Sample I.D. Matrix Blank
Extractable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	
Chromatogram Pattern:		--	--	--	--	--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1 0
Date Extracted:	9/4/92	9/4/92	9/4/92	9/4/92	9/4/92	9/4/92
Date Analyzed:	9/10/92	9/9/92	9/9/92	9/10/92	9/9/92	9/10/92
Instrument Identification:	HP-3A	HP-3B	HP-3B	HP-3A	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.

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Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Matrix:	Soil	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported:	Sep 14, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1127		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS as HYDRAULIC FLUID

Analyte	Reporting Limit mg/kg	Sample I.D. 208-1127 EB4-(5)	Sample I.D. 208-1128 EB4-(10)	Sample I.D. 208-1129 EB5-(5)	Sample I.D. 208-1130 EB5-(10.5)	Sample I.D. Matrix Blank
Extractable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	
Chromatogram Pattern:		--	--	--	--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0
Date Extracted:	9/9/92	9/9/92	9/9/92	9/9/92	9/4/92
Date Analyzed:	9/11/92	9/11/92	9/11/92	9/11/92	9/10/92
Instrument Identification:	HP-3B	HP-3B	HP-3B	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.

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Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Matrix Descript:	Soil	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	SM 5520 E&F (Gravimetric)	Extracted:	Sep 1, 1992
Attention: Mardo Kapreallan, P.E.	First Sample #:	208-1124	Analyzed:	Sep 3, 1992
			Reported:	Sep 14, 1992

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
208-1124	EB3-(5)	N.D.
208-1125	EB3-(10)	N.D.
208-1126	EB3-(13)	N.D.
208-1127	EB4-(5)	N.D.
208-1128	EB4-(10)	N.D.
208-1129	EB5-(5)	N.D.
208-1130	EB5-(10.5)	N.D.
208-1131	EB6-(5.5)	N.D.
208-1132	EB6-(10)	N.D.

Detection Limits:	**30**

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

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for Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB3-(5)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Aug 28, 1992
Attention: Mardo Kapreallan, P.E.	Lab Number:	208-1124	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB3-(10)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Aug 28, 1992
Attention: Mardo Kapreallan, P.E.	Lab Number:	208-1125	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

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(510) 686-9600 • FAX (510) 686-9689

Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB3-(13)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Aug 28, 1992
Attention: Mardo Kapreallan, P.E.	Lab Number:	208-1126	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	**5.0**	**11**
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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(510) 686-9600 • FAX (510) 686-9689

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB4-(5)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Aug 28, 1992
Attention: Mardo Kaprealian, P.E.	Lab Number:	208-1127	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB4-(10)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Aug 28, 1992
Attention: Mardo Kaprealian, P.E.	Lab Number:	208-1128	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Scott A. Chieffo
Project Manager

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB5-(5)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Aug 28, 1992
Attention: Mardo Kaprealian, P.E.	Lab Number:	208-1129	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB5-(10.5)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Sep 1, 1992
Attention: Mardo Kaprealian, P.E.	Lab Number:	208-1130	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	11
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB6-(5.5)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Sep 1, 1992
Attention: Mardo Kapreallan, P.E.	Lab Number:	208-1131	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	19
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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Kapreallan Engineering, Inc.	Client Project ID:	Unocal #5901, Dublin	Sampled:	Aug 24, 1992
2401 Stanwell Drive, Suite 400	Sample Descript:	Soil, EB6-(10)	Received:	Aug 26, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8010	Analyzed:	Sep 1, 1992
Attention: Mardo Kapreallan, P.E.	Lab Number:	208-1132	Reported:	Sep 14, 1992

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	**5.0**	**11**
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

2081118.KEI <19>

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
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Kapreallan Engineering, Inc. Client Project ID: Unocal #5901, Dublin
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kapreallan, P.E. QC Sample Group: 2081118-1153 Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Diesel	Oil and Grease
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA8015	SM5520
Analyst:	A.P.	A.P.	A.P.	A.P.	K.Wimer	D. Newcomb
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Sep 4, 1992	Sep 4, 1992	Sep 4, 1992	Sep 4, 1992	Sep 10, 1992	Sep 1, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	0.40	0.40	0.40	1.2	10	5000
Conc. Matrix Spike:	0.41	0.41	0.41	1.3	10	4700
Matrix Spike % Recovery:	103	103	103	108	100	94
Conc. Matrix Spike Dup.:	0.39	0.40	0.40	1.3	9.2	4600
Matrix Spike Duplicate % Recovery:	98	100	100	108	92	92
Relative % Difference:	2.5	2.5	2.5	0.0	8.3	2.0

Laboratory blank contained the following analytes: None Detected

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

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

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SEQUOIA ANALYTICAL

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Kapreallan Engineering, Inc.
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kapreallan, P.E.

Client Project ID: Unocal #5901, Dublin
QC Sample Group: 2081118-1153
Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	K.Nill	K.Nill	K.Nill
Reporting Units:	µg/kg	µg/kg	µg/kg
Date Analyzed:	Aug 28, 1992	Aug 28, 1992	Aug 28, 1992
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10
Conc. Matrix Spike:	7.7	10	9.4
Matrix Spike % Recovery:	77	100	94
Conc. Matrix Spike Dup.:	7.7	10	9.5
Matrix Spike Duplicate % Recovery:	77	100	95
Relative % Difference:	0.0	0.0	1.1

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.
Laboratory Blank contained the following analytes: None detected.

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

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

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Kaprealian Engineering, Inc. Client Project ID: Unocal #5901, Dublin
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kaprealian, P.E. *QC Sample Group:* 2081118-1153 Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015
Analyst:	K. Wimer	K. Wimer	K. Wimer	K. Wimer	K. Wimer	K. Wimer
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Sep 10, 1992	Sep 9, 1992	Sep 9, 1992	Sep 10, 1992	Sep 9, 1992	Sep 9, 1992
Sample #:	208-1124	208-1125	208-1126	208-1131	208-1132	Matrix Blank
Surrogate % Recovery:	118	98	103	110	104	101

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

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

2081118.KEI <22>

SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kaprealian, P.E.

Client Project ID: Unocal #5901, Dublin
QC Sample Group: 2081118-1153
Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8010	EPA 8010	EPA 8010	EPA 8010	EPA 8010	EPA 8010	EPA 8010
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill	K. Nill
Reporting Units:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Date Analyzed:	Aug 28, 1992	Aug 28, 1992	Aug 28, 1992	Aug 28, 1992	Aug 28, 1992	Aug 28, 1992	Sep 1, 1992
Sample #:	208-1124	208-1125	208-1126	208-1127	208-1128	208-1129	208-1130
Surrogate #1 % Recovery:	116	71	90	130	94	85	87
Surrogate #2 % Recovery:	94	103	95	86	98	104	99

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

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

2081118.KEI <23>

SEQUOIA ANALYTICAL
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(510) 686-9600 • FAX (510) 686-9689

Kaprealian Engineering, Inc. Client Project ID: Unocal #5901, Dublin
2401 Stanwell Drive, Suite 400
Concord, CA 94520
Attention: Mardo Kaprealian, P.E. QC Sample Group: 2081118-1153 Reported: Sep 14, 1992

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	*EPA 8010*	*EPA 8010*	*EPA 8010*
Analyst:	K. Nill	K. Nill	K. Nill
Reporting Units:	µg/kg	µg/kg	µg/kg
Date Analyzed:	Sep 1, 1992	Sep 1, 1992	Aug 28, 1992
Sample #:	208-1131	208-1132	Matrix Blank
Surrogate #1 % Recovery:	105	128	129
Surrogate #2 % Recovery:	111	107	86

SEQUOIA ANALYTICAL

for Scott A. Chieffo
Project Manager

% Recovery: $\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}} \times 100$

KAPREALIAN ENGINEERING
INCORPORATED

CHAIN OF CUSTODY

SAMPLER: Wade Weston
WITNESSING AGENCY:

SITE NAME & ADDRESS: Unocal #5901 Dublin

ANALYSES REQUESTED: TPH-G/BTXE; TPH-D; TOG(5520B+F); 8010

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G/BTXE	TPH-D	TOG(5520B+F)	8010				REMARKS
EB1-(5)	8/24/92		✓		✓		1	See Samp/ID*	✓					208	118	
EB1-(8)	"		✓		✓		1		✓						119	
EB1-(10)	"		✓		✓		1		✓						120	
EB1-(12.5)	"		✓		✓		1		✓						121	
EB2-(5)	"		✓		✓		1		✓						122	
EB2-(10.5)	"		✓		✓		1		✓						123	
EB3-(5)	"		✓		✓		1		✓	✓	✓	✓			124	
EB3-(10)	"		✓		✓		1		✓	✓	✓	✓			125	
EB3-(13)	"		✓		✓		1	✓	✓	✓	✓	✓			126	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Wade Weston	8/26/92 1130	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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

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

[signature] Signature — [signature] Title — 8/26/92 Date

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel 510 602 5100 Fax 510 687 0602

KAPREALIAN ENGINEERING
INCORPORATED

CHAIN OF CUSTODY

SAMPLER: Wade Weston
WITNESSING AGENCY:

SITE NAME & ADDRESS: Unocal #5901 Dublin

ANALYSES REQUESTED: TPH-G/BTXE; TPH-Hydraulic fluid; TOG/5520 BHE; 8010; TPH-D

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	REMARKS
EB4-(5)	8/24/92		✓		✓		1	See Sample ID #	2081127
EB 4-(10)	"		✓		✓		1		1128
EB 5-(5)	"		✓		✓		1		1129
EB 5-(10.5)	"		✓		✓		1		1130
EB 6-(5.5)	"		✓		✓		1		1131
EB 6-(10)	"		✓		✓		1		1132
EB 7-(5)	8/25/92		✓		✓		1		1133
EB 7-(10)	"		✓		✓		1		1134
EB 8-(5)	"		✓		✓		1		1135

	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
1	Wade Weston	8/26/92 1130	
2	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
3	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
4	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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

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

Signature | Title | 8/26/92 Date

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel 510 602 5100 Fax 510 687 0602

KAPREALIAN ENGINEERING
INCORPORATED

CHAIN OF CUSTODY

SAMPLER: Wade Weston
WITNESSING AGENCY:

SITE NAME & ADDRESS: Unocal #5901 Dublin

ANALYSES REQUESTED: TPH-G/BTXE

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G/BTXE	REMARKS
EB8-(10)	8/25/92		✓		✓		1	See Sample ID #	✓	2081136
EB8-(13)	"		✓		✓		1		✓	1137
EB8-(15.5)	"		✓		✓		1		✓	1138
EB8-(17)	"		✓		✓		1		✓	1139
EB9-(5)	"		✓		✓		1		✓	1140
EB9-(10)	"		✓		✓		1		✓	1141
EB9-(15)	"		✓		✓		1		✓	1142
EB9-(17.5)	"		✓		✓		1		✓	1143
EB9-(20)	"		✓		✓		1		✓	1144

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Wade Weston	8/26/92 1130	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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

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

Signature Title Date 8/26/92

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel 510 602 5100 Fax 510 687 0602

KAPREALIAN ENGINEERING
INCORPORATED

CHAIN OF CUSTODY

SAMPLER: Wade Weston
WITNESSING AGENCY:

SITE NAME & ADDRESS: Unocal #5901 Dublin

ANALYSES REQUESTED: TPH-G/BTEX

TURN AROUND TIME: Regular

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G/BTEX	REMARKS
EB9-(25)	8/25/92		✓		✓		1	See Sample ID #	✓	20801145
EB9-(30)	"		✓		✓		1		✓	1146
EB9-(35)	"		✓		✓		1		✓	1147
EB10-(5)	"		✓		✓		1		✓	1148
EB10-(10)	"		✓		✓		1		✓	1149
EB10-(15.5)	"		✓		✓		1		✓	1150
EB11-(5.5)	"		✓		✓		1		✓	1151
EB11-(10)	"		✓		✓		1		✓	1152
EB11-(15.5)	"		✓		✓		1		✓	1153

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Wade Weston	8/26/92 1130	Dennis Newcomb
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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

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

Signature: Dennis Title: Courier Date: 8/26/92

2401 Stanwell Drive, Suite 400
Concord, California 94520
Tel 510 602 5100 Fax 510 687 0602