



KAPREALIAN ENGINEERING
INCORPORATED

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KEI-P88-0205.R11
April 15, 1996

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

Slc. OK to destroy wells
MW-1 thru MW-4 and
just monitor MW-5

Attention: Mr. Edward C. Ralston

RE: Soil Sampling Report
Former Unocal Service Station #5366
7375 Amador Valley Boulevard
Dublin, California

Dear Mr. Ralston:

This report summarizes the results of the soil sampling performed by Kaprealian Engineering, Inc. (KEI) during the recent underground storage tank removal and associated piping removal project at the referenced site. All work was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB) and the Alameda County Health Care Services (ACHCS) Agency.

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

Coordination with regulatory agencies

Collection of soil samples from the sidewalls of the underground fuel and waste oil storage tank pits, from beneath the former hydraulic lifts, and from the excavations performed in the vicinity of the former oil/water separator, product pump islands, and piping trenches

Delivery of soil samples, including proper Chain of Custody documentation, to a certified analytical laboratory for analyses

Technical review of laboratory analyses and preparation of this report

SITE DESCRIPTION AND BACKGROUND

The subject site formerly contained a Unocal service station facility. The site is located near the center of the southeast end of San Ramon Valley. The site is situated at the west corner of the intersection of Village Parkway and Amador Valley Boulevard in Dublin, California. The station building, the canopy and all above ground improvements have been demolished and removed from the site. A Location Map and site plans are attached to this report.

KEI's initial work at the site began on February 18, 1988, and consisted of soil sampling following the removal of three underground fuel storage tanks. The tanks consisted of one 10,000 gallon unleaded gasoline tank, one 10,000 gallon super unleaded gasoline tank, and one 10,000 gallon diesel fuel tank. The tanks were made of steel and had several holes at the bottom of the tanks, which ranged in size from a quarter-inch to one-inch in diameter.

Ground water was encountered in the tank pit at a depth of 10.5 feet below grade, thus prohibiting the collection of soil samples from beneath the tanks. Six soil samples, labeled S1 through S4, S2D, and S4D, were collected from the sidewalls of the fuel tank pit. The soil sample collection points are shown on the attached Figure 3.

The fuel tank pit was then excavated to a depth of approximately 13 feet below grade. Additional soil excavation in the vicinity of soil sample S4 was not feasible due to the proximity of the existing pump islands. After 9,000 gallons of water were pumped from the former tank pit, one ground water sample, labeled W1, was collected. In addition, a second water sample, labeled W2, was collected from a second excavation where the new tanks were installed.

Samples were analyzed at HAZCAT Mobile Organics Laboratory in San Carlos, California, a state-certified laboratory. Soil samples S2, S3, and S4, and the water samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, and benzene, toluene, ethylbenzene, and xylenes (BTEX). Soil samples S1, S2D, and S4D, and the water samples were also analyzed for TPH as diesel. The analytical results of the soil and water samples are summarized in Table 4.

Based on the analytical results of the soil and water samples, KEI recommended the installation of four monitoring wells in order to define the extent of the soil and ground water contamination, and to determine the direction of ground water flow. Documentation of the tank removal procedures, sample collection techniques, and the analytical results are presented in KEI's report (KEI-J88-025) dated February 25, 1988.

On April 14, 1988, four two-inch diameter monitoring wells, designated as MW1 through MW4 on the attached Figure 1, were installed at the site. The wells were drilled and completed to total depths of 20 feet below grade. Ground water was encountered at depths ranging from 14 to 16 feet beneath the surface during drilling. The wells were developed on April 26, 1988, and were initially sampled on April 29, 1988.

The samples were analyzed at HAZCAT Organics Laboratory in San Carlos, California, for TPH as gasoline and BTEX. In addition, the soil samples collected from boring MW3 (adjacent to the waste oil tank) were analyzed for TPH as diesel, total oil and grease (TOG), and EPA method 8010 compounds. The analytical results of the soil samples are summarized in Table 3. Based on the analytical results, KEI recommended the implementation of a monthly monitoring and quarterly sampling program for the four wells. Documentation of the monitoring well installation protocol, sample collection techniques, and the analytical results are presented in KEI's report (KEI-J88-025A-1) dated May 11, 1988.

As previously indicated, some residual soil contamination remained at the site in the area between the old tank pit and the southwest side of the pump islands. As much contaminated soil as possible was removed during the tank replacement activities in February of 1988 without compromising the structural integrity of the pump islands.

KEI reviewed the files of the RWQCB on March 5, 1991, to obtain information regarding any subsurface investigations conducted at the sites adjacent to the intersection of Village Parkway and Amador Valley Boulevard. A summary of the information contained in the RWQCB files as of March 1991 was summarized in KEI's report (KEI-P88-0205.R9) dated April 5, 1994.

Based on the analytical results collected and evaluated through May of 1992, and no evidence of free product or sheen in any of the wells, KEI recommended reducing the frequency of monitoring of the existing wells from monthly to quarterly.

In KEI's quarterly report (KEI-P88-0205.QR19) dated March 29, 1993, KEI recommended the continuation of the joint monitoring program with the respective consultants for the BP and former Shell service stations. In addition, the Arco site located at 7249 Village Parkway (across the street and to the east of the Unocal site) was found to be on the RWQCB's list of fuel leak sites. Therefore, KEI proposed to review the file for that site during the following quarter, and to attempt to include Arco in future joint monitoring events.

On April 20, 1993, a representative of KEI reviewed the file for the Arco service station located at 7249 Village Parkway (across Village Parkway and east of Unocal, as shown on the attached Figure 3). The file review was conducted at the offices of the ACHCS Agency.

Based on a Quarterly Groundwater Monitoring report dated April 2, 1993, the direction of ground water flow at the Arco site varied from the south-southeast to the east-northeast during the last quarter of 1992. On the November 10, 1992, sampling event, the maximum concentration of TPH as gasoline in ground water was detected in MW1 at a concentration of 2,800 ppb. Based on a report by RESNA (the consultant for the Arco site) titled "Additional Onsite Subsurface Investigation and Vapor Extraction Test" dated January 29, 1993, there were six monitoring wells and four vapor extraction wells on-site for that date. Vapor extraction tests were performed at the Arco site on November 10, 1992. Based on the results of the test, RESNA concluded that vapor extraction appeared to be a viable soil remediation alternative for the Arco site.

In KEI's report (KEI-P88-0205.QR20) dated June 30, 1990, KEI recommended the installation of one additional monitoring well in the downgradient direction of MW1 in order to comply with the requirements of the ACHCS, and in order to further delineate the extent of soil and ground water contamination at and in the vicinity of the site. Due to space limitations in the vicinity of MW1, a site reconnaissance was proposed in order to determine a feasible location for the proposed additional monitoring well.

On August 16, 1993, a representative of KEI visited the Oakland office of the RWQCB and reviewed the file for the nearby Arco site. This file review was performed to determine the status and effectiveness of any remedial measures that have been performed at the Arco site. However, no new information was contained in the file.

On January 11, 1994, one additional two-inch diameter monitoring well (designated as MW5 on the attached Figure 1) was installed at the site. The well was drilled and completed to a total depth of 20 feet below grade. Ground water was encountered at a depth of 13 feet below grade during drilling.

The well was developed on January 17, 1994. All of the wells, including newly installed well MW5, were monitored and sampled on February 11, 1994, by MPDS Services, Inc., of Concord, California. Selected soil samples collected from the boring of monitoring well MW5 were analyzed at Sequoia Analytical Laboratory in Concord, California, for TPH as gasoline and BTEX. The analytical results of the soil samples are summarized in Table 3.

The analytical results of the ground water samples collected from all of the monitoring wells (MW1 through MW5) on February 11, 1994, are presented in MPDS Services, Inc. Quarterly Data Report (MPDS-UN5366-01) dated March 21, 1994.

On December 29, 1993, a KEI representative visited the Oakland office of the RWQCB and reviewed the file for the nearby Arco site located at 7249 Village Parkway. No new information was contained in the file.

On January 6, 1994, a KEI representative conducted a second file review for the Arco site at the office of the ACHCS in Oakland. This file review was performed to obtain and evaluate information on recent remediation work being conducted at the Arco site. A number of reports by RESNA (the consultant for the Arco site) were reviewed. The following is a summary of information obtained from a RESNA work plan dated September 3, 1993:

In June of 1990, one 550 gallon waste oil tank was removed from the site, and ten soil samples were collected from the tank excavation. The analytical results of the soil samples indicated non-detectable concentrations of TPH as gasoline, TPH as diesel, BTEX, TOG, and halogenated volatile organic compounds (HVOCs).

In September of 1990, an estimated 10 gallons of fuel was spilled on the ground near one of the dispenser pumps in the southeastern portion of the site.

In September of 1991, three monitoring wells (MW1 through MW3) were installed in an effort to investigate the spill noted above. The analytical results of the soil samples indicated TPH as gasoline concentrations of less than 100 ppm, except in one soil sample where TPH as gasoline was detected at 150 ppm. Ground water stabilized in the three wells at depths of approximately 9 to 11 feet below grade. Ground water flow was interpreted to be toward the southwest. The analytical results of the first encountered ground water samples indicated concentrations of TPH as gasoline at 990 ppb and benzene at 50 ppb.

In October of 1992, three additional monitoring wells (MW4 through MW6) and four vapor extraction wells (VW-1 through VW-4) were installed at the Arco site. The analytical results of the soil samples collected from the borings of the wells installed in the northwestern and southeastern portions of the site indicated non-detectable concentrations of TPH as gasoline and BTEX. The

analytical results of the soil samples collected from the borings for the wells installed in the southern portion of the site indicated TPH as gasoline concentrations ranging from non-detectable to 32,000 ppm, and BTEX concentrations ranging from non-detectable to 390 ppm. The analytical results of the ground water samples collected from monitoring wells MW4 through MW6 indicated non-detectable concentrations of TPH as gasoline and BTEX.

The analytical results of the air samples collected during a vapor extraction test (VET) from wells VW-1 through VW-4 indicated concentrations of TPH as gasoline ranging from 6,600 mg/m³ to 110,000 mg/m³, with the highest concentrations present in the vicinity of VW-4. The results of the VET indicated that vapor extraction was a viable soil remediation method for the site.

A review of ground water monitoring and sampling activities at the Arco site indicates that monthly ground water monitoring began in October of 1991, and quarterly sampling was initiated in December 1992. TPH as gasoline has been detected in ground water samples collected from wells MW1 through MW3 at concentrations of up to 6,400 ppb. However, TPH as gasoline has been non-detectable in ground water samples collected from wells MW4 through MW6 since the wells were installed in November of 1992. The interpreted ground water flow direction appeared to be variable with a flat gradient. In a quarterly ground water monitoring and sampling report by RESNA (dated September 8, 1993), ground water flow direction at the Arco site appeared to be to the northeast in April of 1993, and to the west-southwest in May and June of 1993. The average gradient for the same period was reportedly less than 0.004 ft/ft.

Lastly, the RESNA work plan referenced above contains a proposal for the installation of two air-sparging wells and one additional vapor extraction well, for the purpose of conducting an air-sparging test and a combined air-sparging and vapor extraction test at the Arco site. At present, it is not known to KEI if these tests have been carried out.

The analytical results of the soil samples collected from the boring of monitoring well MW5 indicated elevated concentrations of petroleum hydrocarbons (see Table 3) at depths of 10 to 12.5 feet below grade (capillary fringe zone).

Based on the analytical results of the ground water samples collected from the monitoring wells to date, KEI recommended the continuation of the current ground water monitoring and sampling program. All of the wells are currently monitored on a quarterly basis. Monitoring wells MW1 and MW5 are sampled on a quarterly basis, and monitoring wells MW2, MW3, and MW4 are sampled on an annual basis. The results of the most recent quarter of monitoring and sampling of the monitoring wells are presented in MPDS Services, Inc's. Quarterly Data Report (MPDS-UN5366-09) dated March 29, 1996.

RECENT FIELD ACTIVITIES

KEI's recent field work began on March 8, 1996, when two 12,000 gallon underground unleaded gasoline storage tanks and one 520 gallon waste oil storage tank were removed from the site. The tanks were installed in 1988, and were made of fiberglass-lined, double-walled steel. No apparent holes or cracks were observed in the tanks. Tank removal and subsequent soil sampling were performed in the presence of Mr. Scott Seery of the ACHCS. Mr. Russell Reid of Dougherty Regional Fire Department was also present during tank removal operations.

Water was encountered in the fuel tank pit at a depth of approximately 10 feet below grade, and in the waste oil tank pit at a depth of about 9.5 feet below grade, thus prohibiting the collection of any soil samples from immediately beneath the tanks. Four soil samples, labeled SW1 through SW4, were collected from the sidewalls of the fuel tank pit and two soil samples, labeled WOSW1 and WOSW2, were collected from the sidewalls of the waste oil tank pit, at depths of approximately six-inches above the observed water table. Two soil samples, labeled H1 and H2, were collected from beneath two former hydraulic lifts located inside the former building at depths of about 8.5 feet below grade. One soil sample, labeled OWS(5.5), was collected from beneath the former oil/water separator at a depth of about 5.5 feet below grade. Due to observed hydrocarbon-impacted soil in the vicinity of sample OWS(5.5), one additional soil sample, labeled OWS(10), was collected from beneath sample OWS(5.5) at a depth of approximately 10 feet below grade. Seven soil samples, labeled P1 through P7, were collected from beneath the product pump islands and piping trenches at depths of about 3 feet below grade.

The undisturbed soil samples were collected from bulk material excavated by backhoe. The soil samples were placed in clean, two-inch diameter brass tubes, then sealed with Teflon-lined plastic caps, and stored in a cooled ice chest for delivery to a state-certified laboratory. Sample point locations are shown on the attached Figure 1.

Upon review of the analytical results, on March 18, 1996, additional excavation was performed in the vicinity of sample point OWS(5.5). Three soil samples, labeled OWS-SW1 through OWS-SW3, were collected from the sidewalls of the excavation at depths of approximately 5.5 feet below grade. One soil sample, labeled S4(7), was collected from near the location of sample S4, which had shown an elevated concentration of TPH as gasoline. In addition, one background soil sample, labeled SB(7), was collected in an attempt to define the lateral extent of hydrocarbon-impacted soil. These two soil samples were collected at depths of about 7 feet below grade. Ms. Eva Chu of the ACHCS was present during sampling activities. All samples were collected and handled as described above. Sample point locations and areas excavated are shown on the attached Figure 1.

KEI returned to the site on March 20, 1996, in order to perform additional sampling following additional excavation in the vicinity of sample locations P1 and P2 (pump island area where hydrocarbon-impacted soil was detected). One soil sample, labeled P1(10), was collected from beneath sample point P1 at a depth of about 10 feet below grade. Moisture, indicating the proximity of ground water, was observed in the bottom of the excavation. Four soil samples, labeled PSW1 through PSW4, were collected from the sidewalls of the pump island excavation at depths of about 9.5 feet below grade. The entire area of the pump island (next to the former fuel tank location) was overexcavated to a depth of approximately 11.5 feet below grade. All soil samples were collected and handled as previously described. Sample point locations and areas of additional excavation are shown on the attached Figure 1.

Excavated soil from each area was stockpiled separately on-site and sampled for further disposition. Documentation of stockpiled soil sampling and disposal is presented in KEI's report (KEI-P88-0205.R10) dated April 1, 1996.

Prior to backfilling the excavations, approximately 30,000 gallons of ground water were pumped from the fuel tank pit, 3,000 gallons from the waste oil tank pit, and 4,000 gallons from the pump island excavation. All purged ground water (a cumulative total of approximately 37,000 gallons) was transported by RUST of Benicia, California, to the Unocal Refinery located in Rodeo, California,

for treatment and discharge to San Pablo Bay under NPDES permit. All excavations were backfilled and compacted with clean imported fill by the contractor, Gettler-Ryan, Inc. of Dublin, California.

SUBSURFACE CONDITIONS

The subsurface soils exposed in the excavations consisted primarily of silt. The subsurface soils exposed in the product piping trenches consisted primarily of clayey silt. Ground water was encountered in the excavations at depths ranging from 9.5 to 10 feet below grade.

ANALYTICAL RESULTS

All soil samples were analyzed by Sequoia Analytical Laboratory in Walnut Creek, California, and were accompanied by properly executed Chain of Custody documentation. All samples were analyzed for TPH as gasoline by EPA method 5030/modified 8015, and BTEX by EPA method 8020. The samples collected from the waste oil tank pit and from beneath the oil/water separator were also analyzed for TPH as diesel by EPA method 3550/modified 8015, and TOG by Standard Methods 5520E&F. In addition, sample WOSW1, collected from the northwest sidewall of the waste oil tank pit, was also analyzed for halogenated volatile organic compounds by EPA method 8010, semi-volatile organic compounds by EPA method 8270, and the metals cadmium, chromium, lead, nickel, and zinc. The samples collected from the sidewalls of the oil/water separator excavation, were analyzed for TPH as gasoline, BTEX, and fuel fingerprint by EPA method 3550/modified 8015. The samples collected from beneath the hydraulic lifts were analyzed for TPH as gasoline, BTEX, and TPH as hydraulic fluid by EPA 3550/modified 8015. The analytical results are summarized in Tables 1 and 2. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

DISCUSSION AND RECOMMENDATIONS

Based upon the analytical results of the soil samples collected during the recent removal of the fuel and waste oil storage tanks, associated piping, during the removal of the hydraulic lifts and the oil/water separator (Tables 1 and 2), during underground tank replacement in 1988 (Table 4), during the installation of the monitoring wells (Table 3), and based upon the visual inspection of the condition of the tanks and all excavations performed at the site, it appears that the majority of the known hydrocarbon-impacted soil that was initially detected in the vicinity of the pump island and the oil/water separator has been excavated and removed from the site. The hydrocarbon-impacted soil detected in

monitoring wells MW1 and MW5 at depths of 10 to 12.5 feet below grade (Table 3) appears to be confined to the capillary fringe zone. Therefore, it is KEI's technical opinion that no further sampling work associated with the recent tank and piping removal project is warranted at the site.

As set forth in the conditions described in the recent Lawrence Livermore National Laboratory Report pertaining to petroleum releases from underground storage tanks, and KEI's interpretation of the resultant interim guidelines of the RWQCB, San Francisco Bay Region, this site appears to meet the criteria for classification as a "low risk" site.

The analytical results of the ground water samples collected from wells MW2, MW3, and MW4 have consistently indicated non-detectable concentrations of TPH as gasoline and BTEX over the three previous hydrologic cycles. Additionally, as seen in the attached Figure 1, well MW1 is located approximately 20 feet laterally from MW5.

Therefore, based on a relatively consistent easterly gradient, ND non-detectable sample results in MW2, MW3, and MW4, and the relatively close proximity of MW1 and MW5, KEI recommends the proper destruction of wells MW1, MW2, MW3, and MW4 in order to facilitate site development. The remaining MW5 can be sampled during the quarterly joint monitoring event with the adjacent Arco, BP, and Shell sites.

DISTRIBUTION

A copy of this report should be sent to Ms. Eva Chu of the ACHCS, and to the RWQCB, San Francisco Bay Region.

LIMITATIONS

Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in the extent and concentration of any contaminants. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.


The results of this study are based on the data obtained from the field 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.

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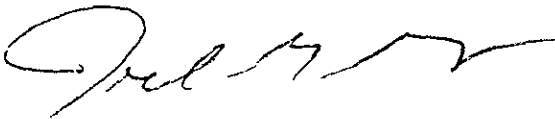
Should you have any questions regarding this report, please feel free to call our office at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.


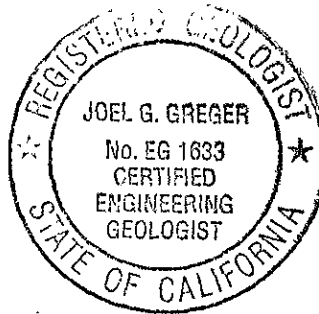


Hagop Kevork
Staff Engineer



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

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



Robert H. Kezerian
Project Manager

/jad

Attachments: Tables 1 through 4
Location Map
Figures 1, 2 & 3
Laboratory Analyses
Chain of Custody documentation

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TABLE 1
 SUMMARY OF LABORATORY ANALYSES
 SOIL

<u>Date</u>	<u>Sample</u>	<u>Depth (feet)</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl- benzene</u>	<u>Xylenes</u>	
3/08/96	SW1	9.5	--	ND	0.013	0.011	ND	0.021	
	SW2	9.5	--	1.2	0.0093	0.068	0.021	0.15	
	SW3	9.5	--	ND	ND	ND	ND	ND	
	SW4	9.5	--	ND	0.0057	0.0097	ND	0.023	
	WOSW1*	9.0	2.2	ND	ND	ND	ND	0.0070	
	WOSW2*	9.0	ND	ND	ND	ND	ND	ND	
	H1**	8.5	--	ND	ND	ND	ND	0.011	
	H2**	8.5	--	ND	ND	ND	ND	ND	
	OWS(5.5)*	5.5	3,500	4,100	ND	ND	7.3	70	
	OWS(10)*	10.0	8.6	18	ND	ND	ND	0.55	
	P1	3.0	--	160	1.1	5.5	7.7	39	
	P2	3.0	--	97	0.44	0.43	5.2	14	
	P3	3.0	--	6.5	0.040	0.019	0.29	0.015	
	P4	3.0	--	3.7	0.092	ND	0.56	0.019	
	P5	3.0	--	11	0.066	ND	0.41	0.30	
	P6	3.0	--	1.2	0.0093	ND	0.040	0.030	
	P7	3.0	--	2.1	0.013	0.0091	0.13	0.17	
	3/18/96	OWS-SW1	5.5	ND	12	0.033	ND	ND	0.089
		OWS-SW2	5.5	ND	20	0.032	ND	0.038	0.36
		OWS-SW3	5.5	ND	4.5	0.031	0.014	0.0084	0.064
		S4(7)	7.0	--	1.0	0.043	0.059	0.0055	0.023
SB(7)		7.0	--	2.3	0.0057	0.010	0.0051	0.0073	
3/20/96	P1(10)	10.0	--	87	0.49	0.52	0.46	0.11	
	PSW1	9.5	--	21	0.026	0.055	0.060	0.040	
	PSW2	9.5	--	13	0.018	0.047	0.40	0.016	
	PSW3	9.5	--	1.7	0.023	ND	ND	0.019	
	PSW4	9.5	--	6.0	0.031	0.025	0.021	0.011	

-- Indicates analysis was not performed.

* TOG was non-detectable.

** TPH as hydraulic fluid was non-detectable.

ND = Non-detectable.

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

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TABLE 2
 SUMMARY OF LABORATORY ANALYSES
 (FUEL FINGERPRINT)

<u>Date</u>	<u>Sample</u>	<u>Diesel (C10-C22)</u>	<u>JP-4 (C8-C14)</u>	<u>JP-5 (C10-C16)</u>	<u>Kerosene (C10-C16)</u>	<u>Motor Oil (>C16)</u>	<u>Paint Thinner (C10-C12)</u>	<u>Unidentified Extractable Hydrocarbons</u>
3/18/96	OWS-SW1	ND	ND	ND	ND	33	22	ND
	OWS-SW2	ND	ND	ND	ND	27	37	ND
	OWS-SW3	ND	ND	ND	ND	15	8.9	ND

<u>Date</u>	<u>Sample</u>	<u>EPA Method 8010 Constituents (µg/kg)</u>	<u>EPA Method 8270 Constituents (µg/kg)</u>	<u>Cadmium</u>	<u>Chromium</u>	<u>Lead</u>	<u>Nickel</u>	<u>Zinc</u>
3/08/96	WOSW1	ND	ND	ND	27	5.4	30	53

ND = Non-detectable.

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

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TABLE 3
SUMMARY OF LABORATORY ANALYSES
SOIL

<u>Date</u>	<u>Sample Number</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
4/14/88	MW1(10)	340	ND	ND	ND	ND
	MW1(15)	11	ND	ND	ND	ND
	MW2(10)	ND	ND	ND	ND	ND
	MW3(5)*	ND	ND	ND	ND	ND
	MW3(10)*	--	--	--	--	--
	MW4(10)	4.9	ND	ND	ND	ND
1/11/94	MW5(5)	ND	ND	ND	0.012	0.017
	MW5(10)	1,100	7.1	1.2	39	140
	MW5(12.5)	950	7.0	2.7	24	87

* TOG and TPH as diesel were non-detectable; MW3(10) had non-detectable levels of EPA methods 8010 and 8020 priority pollutants.

-- Indicates analysis was not performed.

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

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

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TABLE 4
SUMMARY OF LABORATORY ANALYSES
SOIL

<u>Date</u>	<u>Sample #</u>	<u>TPH as Diesel</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
2/18/88	S1	ND	--	--	--	--	--
	S2	--	14	0.8	ND	4.6	2.7
	S2D	ND	--	--	--	--	--
	S3	--	14	1.1	ND	7.1	0.7
	S4	--	1,700	8.0	22	62	340
	S4D	83	--	--	--	--	--

ND = Non-detectable.

-- Indicates analysis was not performed.

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

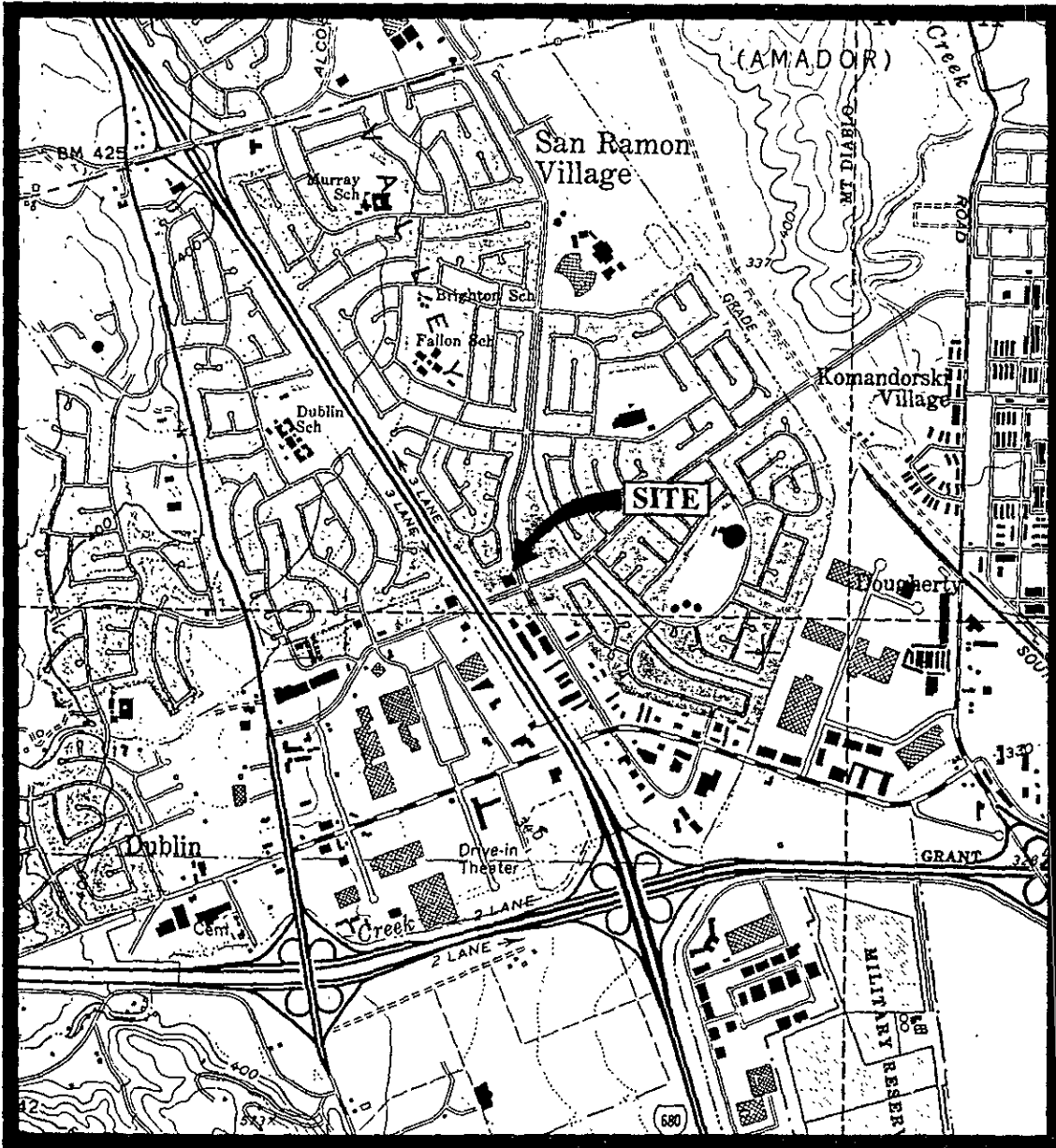
SUMMARY OF LABORATORY ANALYSES
WATER

<u>Date</u>	<u>Sample #</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-benzene</u>	<u>Xylenes</u>
2/19/88	W1	91,000	8,200	1,200	4,300	5,300
	W2	120	ND	5.0	2.4	12

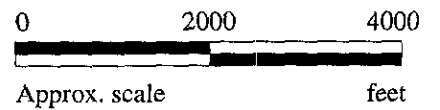
ND = Non-detectable.

-- Indicates analysis was not performed.

Results are in micrograms per liter ($\mu\text{g/L}$), unless otherwise indicated.



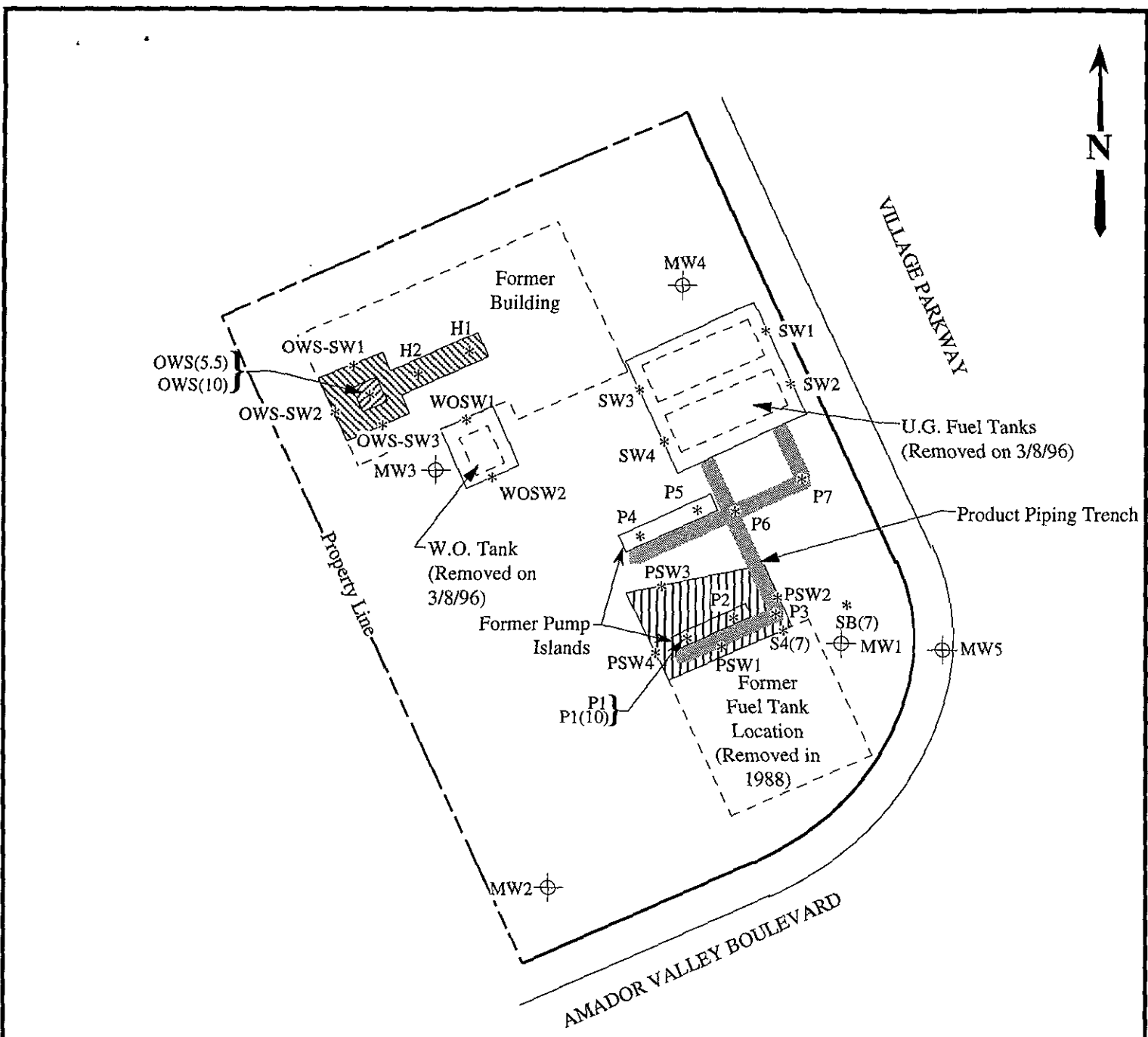
Base modified from 7.5 minute U.S.G.S. Dublin Quadrangle
 (photorevised 1980)



K E I
**KAPREALIAN ENGINEERING
 INCORPORATED**

**UNOCAL SERVICE STATION #5366
 7375 AMADOR VALLEY BLVD.
 DUBLIN, CALIFORNIA**

**LOCATION
 MAP**



LEGEND

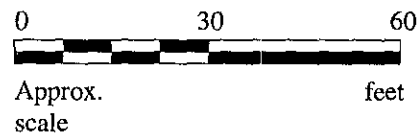
⊕ Monitoring well

* Sample point location

▨ Area excavated to a depth of about 5.5 feet below grade

▧ Area excavated to a depth of about 10 feet below grade

▩ Area excavated to a depth of about 11.5 feet below grade

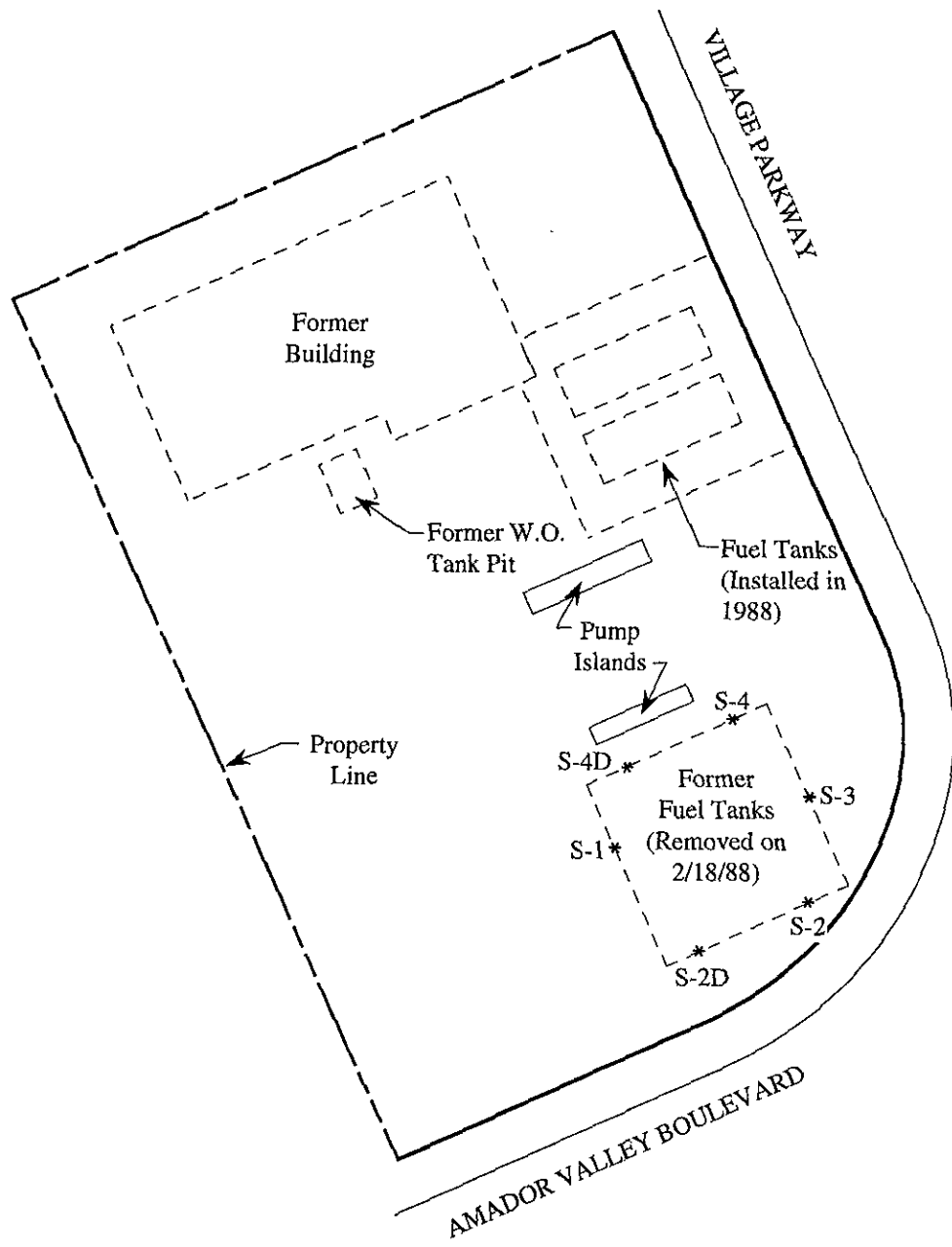


SOIL SAMPLE POINT LOCATION MAP



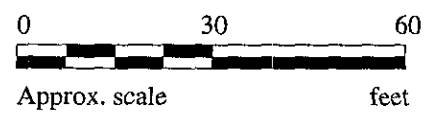
**FORMER UNOCAL S/S #5366
7375 AMADOR VALLEY BLVD.
DUBLIN, CALIFORNIA**

**FIGURE
1**

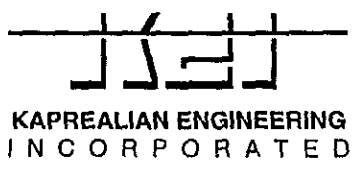


LEGEND

* Soil sample point location (collected on 2/18/88)



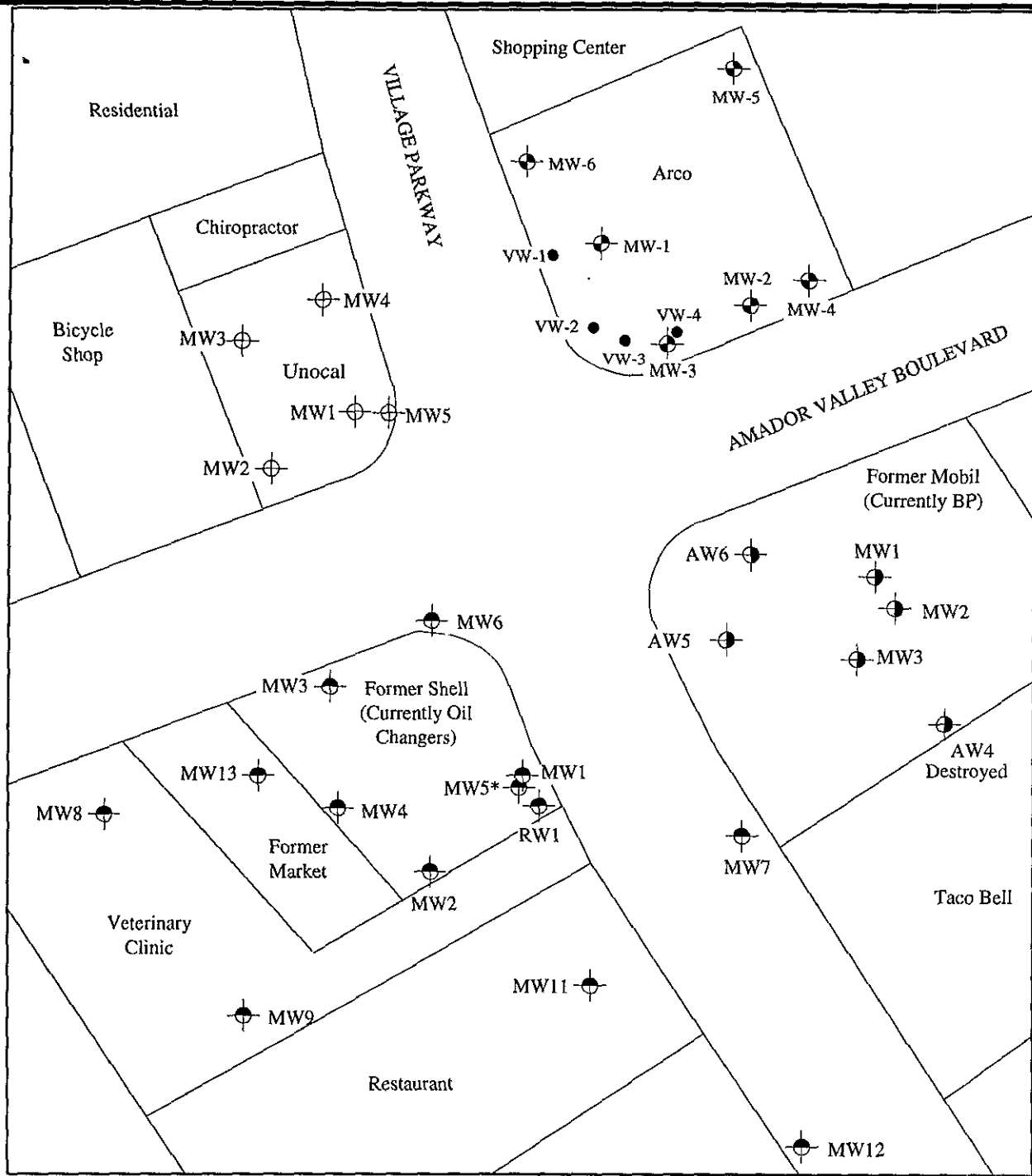
SOIL SAMPLE POINT LOCATION MAP



**KAPREALIAN ENGINEERING
INCORPORATED**

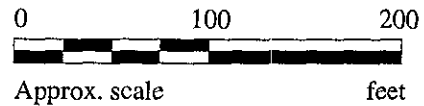
**UNOCAL SERVICE STATION #5366
7375 AMADOR VALLEY BLVD.
DUBLIN, CALIFORNIA**

**FIGURE
2**



LEGEND

- ⊕ Monitoring well (Unocal)
- ⊙ Monitoring well (BP)
- ⊗ Monitoring well (Shell)
- ⊖ Monitoring well (Arco)
- Vapor extraction well (Arco)



SITE VICINITY MAP



**FORMER UNOCAL S/S #5366
7375 AMADOR VALLEY BLVD.
DUBLIN, CALIFORNIA**

**FIGURE
3**



Kaprealian Engineering, Inc. Client Project ID: Unocal 5366, 7375 Amador Valley Blvd., Sampled: Mar 8, 1996
 2401 Stanwell Dr., Ste. 400 Sample Matrix: Soil Dublin Received: Mar 8, 1996
 Concord, CA 94520 Analysis Method: EPA 5030/8015 Mod./8020 Reported: Mar 12, 1996
 Attention: Dennis Royce First Sample #: 603-0485

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 603-0485 SW1	Sample I.D. 603-0486 SW2	Sample I.D. 603-0487 SW3	Sample I.D. 603-0488 SW4
Purgeable Hydrocarbons	1.0	N.D.	1.2	N.D.	N.D.
Benzene	0.0050	0.013	0.0093	N.D.	0.0057
Toluene	0.0050	0.011	0.068	N.D.	0.0097
Ethyl Benzene	0.0050	N.D.	0.021	N.D.	N.D.
Total Xylenes	0.0050	0.021	0.15	N.D.	0.023
Chromatogram Pattern:		--	Gasoline	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument Identification:	HP-2	HP-2	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	105	106	90	88

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

SEQUOIA ANALYTICAL, #1271


 Alan B. Kemp
 Project Manager





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

Client Project ID: Unocal 5366, 7375 Amador Valley Blvd., Dublin
 Matrix: Solid

QC Sample Group: 6030485-488

Reported: Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	6030487	6030487	6030487	6030487
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike % Recovery:	120	120	128	125
Matrix Spike Duplicate % Recovery:	115	115	120	125
Relative % Difference:	4.3	4.3	6.1	0.0

LCS Batch#:	2LCS031196	2LCS031196	2LCS031196	2LCS031196
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	19	19	19	58

% Recovery Control Limits:	55-145	47-149	47-155	56-140
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SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
 Project Manager

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





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

Client Project ID: Unocal 5366, 7375 Amador Valley Blvd., Dublin
 Matrix: Solid

QC Sample Group: 6030485-488

Reported: Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Lead
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 7420
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn	T. Le

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes	Lead
Batch#:	6030487	6030487	6030487	6030487	6030502
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	MV-1
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	50 mg/kg
Matrix Spike % Recovery:	143	138	148	142	98
Matrix Spike Duplicate % Recovery:	143	140	150	150	90
Relative % Difference:	0.0	1.8	1.7	5.7	8.5

LCS Batch#:	1LCS031196	1LCS031196	1LCS031196	1LCS031196	BLK031196
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	MV-1
LCS % Recovery:	115	110	110	115	108

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes	Lead
	55-145	47-149	47-155	56-140	75-125

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

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
 Project Manager



UNOCAL 76

- 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
 East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: **KEI** Project Name: **FORMER UNOCAL #5366-DUBLIN**
 Address: **2401 STANWELL DR. #400** UNOCAL Project Manager: **ED RALSTON**
 City: **CONCORD** State: **CA** Zip Code: **94520** Release #: _____
 Telephone: **602-5100** FAX #: **687-0602** Site #: **5366-7375 AMADOR VALLEY BLVD.**
 Report To: **KEI** Sampler: **HAIG KEVORK** QC Data: Level D (Standard)
 Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days
 Time: 2 Work Days 1 Work Day 2-8 Hours
CODE: Misc. Detect. Eval. Remed. Demol. Closure Other

Drinking Water Waste Water Other
 Analyses Requested:

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	PH-BTXE										Comments			
1. SW1	3/8/96	SOIL	1	TUBE	6030485	✓	✓												
2. SW2	↓	↓	1	↓	6030486	✓	✓												
3. SW3	↓	↓	1	↓	6030487	✓	✓												
4. SW4	↓	↓	1	↓	6030488	✓	✓												
5.																			
6.																			
7.																			SF 12
8.																			
9.																			
10.																			

Relinquished By: <i>[Signature]</i>	Date: 3/8/96	Time: 1815	Received By:	Date:	Time:
Relinquished By: _____	Date:	Time:	Received By:	Date:	Time:
Relinquished By: _____	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 3/8/96	Time: 1815

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

To be completed upon receipt of report:

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

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



Kapreallan Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #5366, 7375 Amador Valley Blvd. Sample Matrix: Soil Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 603-0489	Sampled: Mar 8, 1996 Received: Mar 8, 1996 Reported: Mar 12, 1996
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 603-0489 P1	Sample I.D. 603-0490 P2
Purgeable Hydrocarbons	1.0	160	97
Benzene	0.0050	1.1	0.44
Toluene	0.0050	5.5	0.43
Ethyl Benzene	0.0050	7.7	5.2
Total Xylenes	0.0050	39	14
Chromatogram Pattern:		Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	20	20
Date Analyzed:	3/11/96	3/11/96
Instrument Identification:	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	105	88

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
Matrix: Solid

QC Sample Group: 6020489-495

Reported: Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn

MS/MSD				
Batch#:	6030487	6030487	6030487	6030487
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike				
% Recovery:	143	138	148	142
Matrix Spike Duplicate				
% Recovery:	143	140	150	150
Relative % Difference:	0.0	1.8	1.7	5.7

LCS Batch#:	1LCS031196	1LCS031196	1LCS031196	1LCS031196
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	115	110	110	115

% Recovery Control Limits:	55-145	47-149	47-155	56-140
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Please Note:

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.,
Sample Matrix: Soil Dublin
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 603-0491

Sampled: Mar 8, 1996
Received: Mar 8, 1996
Reported: Mar 14, 1996

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 603-0491 P 3	Sample I.D. 603-0492 P 4	Sample I.D. 603-0493 P 5	Sample I.D. 603-0494 P 6	Sample I.D. 603-0495 P 7
Purgeable Hydrocarbons	1.0	6.5	3.7	11	1.2	2.1
Benzene	0.0050	0.040	0.092	0.066	0.0093	0.013
Toluene	0.0050	0.019	N.D.	N.D.	N.D.	0.0091
Ethyl Benzene	0.0050	0.29	0.56	0.41	0.040	0.13
Total Xylenes	0.0050	0.015	0.019	0.30	0.030	0.17
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Instrument Identification:	HP-5	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	76	107	107	106	108

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
Matrix: Solid

QC Sample Group: 6030491-495

Reported: Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	6030487	6030487	6030487	6030487
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike % Recovery:	143	138	148	142
Matrix Spike Duplicate % Recovery:	143	140	150	150
Relative % Difference:	0.0	1.8	1.7	5.7

LCS Batch#:	1LCS031196	1LCS031196	1LCS031196	1LCS031196
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	115	110	110	115

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes
	55-145	47-149	47-155	56-140

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SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
Matrix: Solid

QC Sample Group: 6030491-495

Reported: Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	6030487	6030487	6030487	6030487
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike % Recovery:	120	120	127	125
Matrix Spike Duplicate % Recovery:	115	115	120	125
Relative % Difference:	4.3	4.3	6.1	0.0

LCS Batch#:	Benzene	Toluene	Ethyl Benzene	Xylenes
LCS Batch#:	3LCS031196	3LCS031196	3LCS031196	3LCS031196
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	95	95	95	97

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes
% Recovery Control Limits:	55-145	47-149	47-155	56-140

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Alan B. Kemp
Project Manager

Please Note:

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



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- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
- East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
- 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: **KEI** Project Name: **FORMER UNOCAL # 5366 - DUBLIN**

Address: **2401 STANWELL DR. # 400** UNOCAL Project Manager: **ED RALSTON**

City: **CONCORD** State: **CA** Zip Code: **94520** Release #:

Telephone: **602-5100** FAX #: **687-0602** Site #: **5366 - 7375 AMADOR VALLEY BLVD.**

Report To: **KEI** Sampler: **HAIG KEVORK** QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days Drinking Water

Time: 2 Work Days 1 Work Day 2-8 Hours Waste Water

CODE: Misc. Detect. Eval. Remed. Demol. Closure Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Analyses Requested										Comments		
						TPH	G	B	T	X	LE							
1. P1	3/8/96	SOIL	1	TUBE	6030489	✓	✓											24 Hrs
2. P2			1		6030490	✓	✓											24 Hrs
3. P3			1		6030491	✓	✓											5 DAYS
4. P4			1		6030492	✓	✓											
5. P5			1		6030493	✓	✓											
6. P6			1		6030494	✓	✓											
7. P7	✓	✓	1	✓	6030495	✓	✓											✓ 8/12/89
8.																		
9.																		
10.																		

Relinquished By: *[Signature]* Date: **3/8/96** Time: **1815** Received By: _____ Date: _____ Time: _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

Relinquished By: _____ Date: _____ Time: _____ Received By Lab: *[Signature]* Date: **3/8/96** Time: **1815**

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

To be completed upon receipt of report:

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

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

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

Pink - Client
Yellow - Laboratory
White - Laboratory



Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #5366, 7375 Amador Valley Blvd. Sample Matrix: Soil Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 603-0496	Sampled: Mar 8, 1996 Received: Mar 8, 1996 Reported: Mar 12, 1996
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 603-0496 WOSW1	Sample I.D. 603-0497 WOSW2	Sample I.D. 603-0498 OWS(5.5)	Sample I.D. 603-0499 OWS(10)	Sample I.D. 603-0500 H1	Sample I.D. 603-0501 H2
Purgeable Hydrocarbons	1.0	N.D.	N.D.	4,100	18	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	7.3	N.D.	N.D.	N.D.
Total Xylenes	0.0050	0.0070	N.D.	70	0.55	0.011	N.D.
Chromatogram Pattern:	--	--	Gasoline & Unidentified Hydrocarbons >C8	Unidentified Hydrocarbons >C8	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1,000	5.0	1.0	1.0
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Instrument Identification:	HP-5	HP-5	HP-5	HP-2	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	93	95	89	100	82	91

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

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.
Sample Matrix: Soil
Analysis Method: EPA 3550/8015 Mod.
First Sample #: 603-0496

Sampled: Mar 8, 1996
Received: Mar 8, 1996
Reported: Mar 12, 1996

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

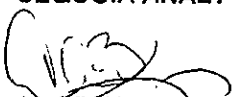
Analyte	Reporting Limit mg/kg	Sample I.D. 603-0496 WOSW1	Sample I.D. 603-0497 WOSW2	Sample I.D. 603-0498 OWS(5.5)	Sample I.D. 603-0499 OWS(10)
Extractable Hydrocarbons	1.0	2.2	N.D.	3,500	8.6
Chromatogram Pattern:		Unidentified Hydrocarbons >C20	--	Unidentified Hydrocarbons <C15 >C18	Unidentified Hydrocarbons <C12 >C20

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	50	1.0
Date Extracted:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3B

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.
Sample Matrix: Soil
Analysis Method: EPA 3550/8015 Mod.
First Sample #: 603-0500

Sampled: Mar 8, 1996
Received: Mar 8, 1996
Reported: Mar 12, 1996

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS AS HYDRAULIC FLUID

Analyte	Reporting Limit mg/kg	Sample I.D. 603-0500 H1	Sample I.D. 603-0501 H2
Extractable Hydrocarbons	10	N.D.	N.D.
Chromatogram Pattern:		--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96
Instrument Identification:	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, #1271


Alan B. Kemp
Project Manager





**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

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(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.
Matrix Descript: Soil
Analysis Method: SM 5520 E&F (Gravimetric)
First Sample #: 603-0496

Sampled: Mar 8, 1996
Received: Mar 8, 1996
Extracted: Mar 11, 1996
Analyzed: Mar 12, 1996
Reported: Mar 12, 1996

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)	Detection Limit Multiplication Factor
603-0496	WOSW1	N.D.	1.0
603-0497	WOSW2	N.D.	1.0
603-0498	OWS(5.5)	N.D.	1.0
603-0499	OWS(10)	N.D.	1.0

Detection Limits:	50
--------------------------	-----------

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd. Dublin
Matrix: Solid

QC Sample Group: 6030496-501

Reported: Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill

MS/MSD Batch#:	6030487	6030487	6030487	6030487
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike % Recovery:	120	120	130	125
Matrix Spike Duplicate % Recovery:	115	115	120	125
Relative % Difference:	4.3	4.3	6.1	0.0

LCS Batch#:	3LCS031196	3LCS031196	3LCS031196	3LCS031196
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	95	95	95	97

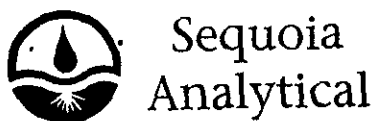
% Recovery Control Limits:	55-145	47-149	47-155	56-140	50-150	60-140
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Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Alan B. Kemp
Project Manager





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

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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
 Matrix: Solid

QC Sample Group: 6030485-488

Reported: Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel	Oil & Grease
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	EPA 5520
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn	J. Dinsay	D. Newcomb

MS/MSD Batch#:	6030487	6030487	6030487	6030487	6030496	6030498
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	GCHP-3A	Manual
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 mg/kg	5000 mg/kg
Matrix Spike % Recovery:	143	138	148	142	--	71
Matrix Spike Duplicate % Recovery:	143	140	150	150	--	82
Relative % Difference:	0.0	1.8	1.7	5.7	--	14

LCS Batch#:	1LCS031196	1LCS031196	1LCS031196	1LCS031196	LCS031196	BLK031196
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	GCHP-3A	Manual
LCS % Recovery:	115	110	110	115	78	100

% Recovery Control Limits:	55-145	47-149	47-155	56-140	50-150	60-140
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Please Note:

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

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
 Project Manager



Company Name: **KEI** Project Name: **FORMER UNOCAL #5366-DUBLIN**
 Address: **2401 STANWELL DR, #400** UNOCAL Project Manager: **ED RALSTON**
 City: **CONCORD** State: **CA** Zip Code: **94520** Release #:
 Telephone: **602-5100** FAX #: **687-0602** Site #: **5366-7375 AMADOR VALLEY BLVD,**
 Report To: **KEI** Sampler: **HAIG KEVORK** QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days
 Time: 2 Work Days 1 Work Day 2-8 Hours
 CODE: Misc. Detect. Eval. Remed. Demol. Closure

Drinking Water Waste Water Other
Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Analyses Requested										Comments						
1. WOSW1	3/8/96	SOIL	1	TUBE	6030496	✓	✓	✓	✓													
2. WOSW2			1		6030497	✓	✓	✓	✓													
3. OWS(5.5)			1		6030498	✓	✓	✓	✓													
4. OWS(10)			1		6030499	✓	✓	✓	✓													
5. H1			1		6030500	✓	✓															
6. H2	↓	↓	1	↓	6030501	✓	✓															
7.																						
8.																						
9.																						
10.																						

Relinquished By:	Date: 3/8/96	Time: 1815	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: 3/8/96	Time: 1815

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

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

Pink - Client
 Yellow - Laboratory
 White - Laboratory



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

Client Project ID: Unocal #5366, 7375 Amador Valley Rd,
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 603-1367

Dublin
Sampled: Mar 18, 1996
Received: Mar 18, 1996
Reported: Mar 27, 1996

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 603-1367 OWS-SW1	Sample I.D. 603-1368 OWS-SW2	Sample I.D. 603-1369 OWS-SW3
Purgeable Hydrocarbons	1.0	12	20	4.5
Benzene	0.0050	0.033	0.032	0.031
Toluene	0.0050	N.D.	N.D.	0.014
Ethyl Benzene	0.0050	N.D.	0.038	0.0084
Total Xylenes	0.0050	0.089	0.36	0.064

Chromatogram Pattern:

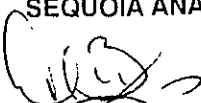
Gasoline & Unidentified Hydrocarbons > C8	Gasoline & Unidentified Hydrocarbons > C8	Gasoline & Unidentified Hydrocarbons > C8
--	--	--

Quality Control Data

Report Limit Multiplication Factor:	5.0	5.0	1.0
Date Analyzed:	3/25/96	3/25/96	3/25/96
Instrument Identification:	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	81	84	98

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

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

Client Project ID: Unocal #5366, 7375 Amador Valley Rd,
Sample Matrix: Soil, Dublin
Analysis Method: EPA 3550/8015 Modified
First Sample #: 603-1367

Sampled: Mar 18, 1996
Received: Mar 18, 1996
Reported: Mar 27, 1996

FUEL FINGERPRINT

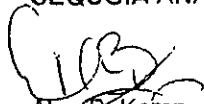
Analyte	Reporting Limit mg/kg	Sample I.D. 603-1367 OWS-SW1	Sample I.D. 603-1368 OWS-SW2	Sample I.D. 603-1369 OWS-SW3
Diesel (C10-C22)	1.0	N.I.	N.I.	N.I.
JP-4 (C8-C14)	1.0	N.I.	N.I.	N.I.
JP-5 (C10-C16)	1.0	N.I.	N.I.	N.I.
Kerosene (C10-C16)	1.0	N.I.	N.I.	N.I.
Motor Oil (>C16)	10	33	27	15
Paint Thinner (C10-C12)	1.0	22	37	8.9
Unidentified Extractable Hydrocarbons	1.0	N.I.	N.I.	N.I.

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	3/22/96	3/22/96	3/22/96
Date Analyzed:	3/25/96	3/25/96	3/25/96
Instrument Identification:	HP3A	HP3A	HP3A

Unidentified Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.I. (None Identified) were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager

6031367.KEI <2>





**Sequoia
Analytical**

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Walnut Creek, CA 94598
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FAX (916) 921-0100

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

Client Project ID: Unocal #5366, 7375 Amador Valley Rd, Dublin
Matrix: Solid

QC Sample Group: 6031367-69

Reported: Mar 27, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	L. Huang	L. Huang	L. Huang	L. Huang	J. Dinsay

MS/MSD Batch#:	6031954	6031954	6031954	6031954	6031367
Date Prepared:	3/25/96	3/25/96	3/25/96	3/25/96	3/22/96
Date Analyzed:	3/25/96	3/25/96	3/25/96	3/25/96	3/25/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	GCHP-3B
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg	10 ppm
Matrix Spike % Recovery:	93	90	93	92	40
Matrix Spike Duplicate % Recovery:	88	88	90	92	10
Relative % Difference:	5.6	2.8	2.7	0.0	12

LCS Batch#:	3LCS032596	3LCS032596	3LCS032596	3LCS032596	LC2032296
Date Prepared:	3/25/96	3/25/96	3/25/96	3/25/96	3/22/96
Date Analyzed:	3/25/96	3/25/96	3/25/96	3/25/96	3/25/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5	GCHP-3B
LCS % Recovery:	110	110	110	110	89

% Recovery Control Limits:	50-150	50-150	50-150	50-150	50-150
---------------------------------------	--------	--------	--------	--------	--------

Please Note:

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager



UNOCAL 76

- 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
- 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
- East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
- 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI			Project Name: FORMER UNOCAL #5366-DUBLIN		
Address: 2401 STANWELL DR. # 400			UNOCAL Project Manager: ED RALSTON		
City: CONCORD	State: CA	Zip Code: 94520	Release #:		
Telephone: 602-5100		FAX #: 687-0602	Site #: 5366-7375 AMADOR VALLEY BLDG.		
Report To: KEI	Sampler: HAIG KEVORK		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A		

Turnaround <input type="checkbox"/> 10 Work Days <input checked="" type="checkbox"/> 5 Work Days <input type="checkbox"/> 3 Work Days	<input type="checkbox"/> Drinking Water	Analyses Requested
Time: <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2-8 Hours	<input type="checkbox"/> Waste Water	
CODE: <input type="checkbox"/> Misc. <input type="checkbox"/> Detect. <input type="checkbox"/> Eval. <input type="checkbox"/> Remed. <input type="checkbox"/> Demol. <input type="checkbox"/> Closure		<input checked="" type="checkbox"/> Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Analyses Requested										Comments				
1. OWS-SW1	3/18/96	SOIL	1	TUBE	6031367	✓	✓	✓												
2. OWS-SW2	↓	↓	1	↓	6031368	✓	✓	✓												
3. OWS-SW3	↓	↓	1	↓	6031369	✓	✓	✓												
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				

Relinquished By: <i>[Signature]</i>	Date: 3/18/96	Time: 1530	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 3/18/96	Time: 1530

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

To be completed upon receipt of report:

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

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

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

Pink - Client
Yellow - Laboratory
White - Laboratory



Kapreallan Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520 Attention: Dennis Royce	Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Sample Matrix: Soil Analysis Method: EPA 5030/8015 Mod./8020 First Sample #: 603-1151	Sampled: Mar 18, 1996 Received: Mar 18, 1996 Reported: Mar 19, 1996
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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 603-1151 S4 (7)	Sample I.D. 603-1152 SB (7)
Purgeable Hydrocarbons	1.0	1.0	2.3
Benzene	0.0050	0.043	0.0057
Toluene	0.0050	0.059	0.010
Ethyl Benzene	0.0050	0.0055	0.0051
Total Xylenes	0.0050	0.023	0.0073
Chromatogram Pattern:		Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	3/18/96	3/18/96
Instrument Identification:	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	90	82

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
Matrix: Solid

QC Sample Group: 6031151-152

Reported: Mar 21, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	6030733	6030733	6030733	6030733
Date Prepared:	3/18/96	3/18/96	3/18/96	3/18/96
Date Analyzed:	3/18/96	3/18/96	3/18/96	3/18/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike % Recovery:	93	93	95	98
Matrix Spike Duplicate % Recovery:	113	110	113	115
Relative % Difference:	92	17	17	16

LCS Batch#:	Benzene	Toluene	Ethyl Benzene	Xylenes
	3LCS031896	3LCS031896	3LCS031896	3LCS031896
Date Prepared:	3/18/96	3/18/96	3/18/96	3/18/96
Date Analyzed:	3/18/96	3/18/96	3/18/96	3/18/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	90	90	90	95

% Recovery Control Limits:	Benzene	Toluene	Ethyl Benzene	Xylenes
	55-145	47-149	47-155	56-140

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
Project Manager

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



UNOCAL 76

- 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
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- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
- East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
- 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: KEI		Project Name: FORMER UNOCAL # 5366-DUBLIN	
Address: 2401 STANWELL DR. # 400		UNOCAL Project Manager: ED RALSTON	
City: CONCORD State: CA Zip Code: 94520	Release #:		
Telephone: 602-5100 FAX #: 687-0602	Site #: 5366-7375 AMADOR VALLEY BLVD.		
Report To: KEI	Sampler: HAIG KEVORK	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

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

Analyses Requested
 Drinking Water
 Waste Water
 Other

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

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G BTX-E										Comments			
1. S4 (7)	3/18/96	SOIL	1	TUBE	6031151	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												24 Hrs
2. SB (7)	↓	↓	1	↓	6031152	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>												5 DAYS
3.																			
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			

Relinquished By: <i>[Signature]</i>	Date: 3/18/96	Time: 1330	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 3/18	Time: 1330

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

To be completed upon receipt of report:

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

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

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

Pink - Client
Yellow - Laboratory
White - Laboratory



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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 603-1524

Sampled: Mar 20, 1996
Received: Mar 20, 1996
Reported: Mar 29, 1996

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

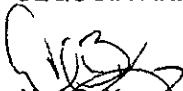
Analyte	Reporting Limit mg/kg	Sample I.D. 603-1524 P1 (10)	Sample I.D. 603-1525 PSW1	Sample I.D. 603-1526 PSW2	Sample I.D. 603-1527 PSW3	Sample I.D. 603-1528 PSW4
Purgeable Hydrocarbons	1.0	87	21	13	1.7	6.0
Benzene	0.0050	0.49	0.026	0.018	0.023	0.031
Toluene	0.0050	0.52	0.055	0.047	N.D.	0.025
Ethyl Benzene	0.0050	0.46	0.060	0.40	N.D.	0.021
Total Xylenes	0.0050	0.11	0.040	0.016	0.019	0.011
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	20	2.5	2.5	1.0	1.0
Date Analyzed:	3/27/96	3/28/96	3/28/96	3/27/96	3/27/96
Instrument Identification:	HP-5	HP-5	HP-5	HP-5	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	84	75	68	105	74

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
Matrix: Solid

QC Sample Group: 6031524-528

Reported: Mar 29, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill

MS/MSD Batch#:	6031527	6031527	6031527	6031527
Date Prepared:	3/27/96	3/27/96	3/27/96	3/27/96
Date Analyzed:	3/27/96	3/27/96	3/27/96	3/27/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	0.40 mg/kg	0.40 mg/kg	0.40 mg/kg	1.2 mg/kg
Matrix Spike % Recovery:	103	103	98	101
Matrix Spike Duplicate % Recovery:	88	88	85	87
Relative % Difference:	16	16	14	15

LCS Batch#:	5LCS032796	5LCS032796	5LCS032796	5LCS032796
Date Prepared:	3/27/96	3/27/96	3/27/96	3/27/96
Date Analyzed:	3/27/96	3/27/96	3/27/96	3/27/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	95	95	95	95

% Recovery Control Limits:	55-145	47-149	47-155	56-140
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SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager



UNOCAL 76

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

Company Name: **KEI** Project Name: **FORMER UNOCAL #5366 - DUBLIN**
 Address: **2401 STANWELL DR. #400** UNOCAL Project Manager: **ED RALSTON**
 City: **CONCORD** State: **CA** Zip Code: **94520** Release #:
 Telephone: **602-5100** FAX #: **687-0602** Site #: **5366-7375 AMADOR VALLEY BLVD**
 Report To: **KEI** Sampler: **HAIK KEVORK** QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days
 Time: 2 Work Days 1 Work Day 2-8 Hours
 CODE: Misc. Detect. Eval. Remed. Demol. Closure

Drinking Water Waste Water Other
 Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	IPH-3 BIXLE										Comments				
1. PI (10)	3/20/96	SOIL	1	TUBE	6031524	✓	✓													
2. PSW1			1		6031525	✓	✓													
3. PSW2			1		6031526	✓	✓													
4. PSW3			1		6031527	✓	✓													
5. PSW4			1		6031528	✓	✓													
6.																				
7.																				
8.																				
9.																				
10.																				

Relinquished By: <i>[Signature]</i>	Date: 3/20/96	Time: 1606	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 3/20/96	Time: 1606

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

To be completed upon receipt of report:

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

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

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

Pink - Client
Yellow - Laboratory
White - Laboratory



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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.,
 Sample Descript: Soil, WOSW 1
 Lab Number: 603-0496

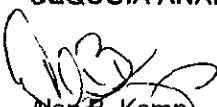
Sampled: Mar 8, 1996
 Relogged: Mar 15, 1996
 Digested: Mar 26, 1996
 Analyzed: Mar 26, 1996
 Reported: Apr 10, 1996

LUFT METALS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Cadmium.....	0.50	N.D.
Chromium.....	0.50	27
Lead.....	1.0	5.4
Nickel.....	1.0	30
Zinc.....	1.0	53

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

SEQUOIA ANALYTICAL, #1271


 Alan B. Kemp
 Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.,
Sample Descript: Soil, WOSW 1
Analysis Method: EPA 5030/8010
Lab Number: 603-0496

Sampled: Mar 8, 1996
Relogged: Mar 15, 1996
Analyzed: Mar 26, 1996
Reported: Apr 10, 1996

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, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.,
Sample Descript: Soil, WOSW 1
Analysis Method: EPA 8270
Lab Number: 603-0496

Sampled: Mar 8, 1996
Relogged: Mar 15, 1996
Extracted: Mar 26, 1996
Analyzed: Apr 9, 1996
Reported: Apr 10, 1996

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Table with 3 columns: Analyte, Detection Limit (µg/kg), and Sample Results (µg/kg). Lists various organic compounds and their corresponding detection limits and results.





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Attention: Dennis Royce

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd.,
Sample Descript: Soil, WOSW 1
Analysis Method: EPA 8270
Lab Number: 603-0496

Sampled: Mar 8, 1996
Received: Mar 15, 1996
Extracted: Mar 26, 1996
Analyzed: Apr 9, 1996
Reported: Apr 10, 1996

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Fluoranthene.....	100	N.D.
Fluorene.....	100	N.D.
Hexachlorobenzene.....	100	N.D.
Hexachlorobutadiene.....	100	N.D.
Hexachlorocyclopentadiene.....	100	N.D.
Hexachloroethane.....	100	N.D.
Indeno(1,2,3-cd)pyrene.....	100	N.D.
Isophorone.....	100	N.D.
2-Methylnaphthalene.....	100	N.D.
2-Methylphenol.....	100	N.D.
4-Methylphenol.....	100	N.D.
Naphthalene.....	100	N.D.
2-Nitroaniline.....	500	N.D.
3-Nitroaniline.....	500	N.D.
4-Nitroaniline.....	500	N.D.
Nitrobenzene.....	100	N.D.
2-Nitrophenol.....	100	N.D.
4-Nitrophenol.....	500	N.D.
N-Nitrosodimethylamine.....	100	N.D.
N-Nitrosodiphenylamine.....	100	N.D.
N-Nitroso-di-N-propylamine.....	100	N.D.
Pentachlorophenol.....	500	N.D.
Phenanthrene.....	100	N.D.
Phenol.....	100	N.D.
Pyrene.....	100	N.D.
1,2,4-Trichlorobenzene.....	100	N.D.
2,4,5-Trichlorophenol.....	500	N.D.
2,4,6-Trichlorophenol.....	100	N.D.

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

SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
Matrix: Solid

QC Sample Group: 603-0496

Reported: Apr 10, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-ethene	Trichloro-ethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	I. Dalvand	I. Dalvand	I. Dalvand

MS/MSD			
Batch#:	6031993	6031993	6031993
Date Prepared:	3/26/96	3/26/96	3/26/96
Date Analyzed:	3/26/96	3/26/96	3/26/96
Instrument I.D.#:	HP-7	HP-7	HP-7
Conc. Spiked:	100 µg/kg	100 µg/kg	100 µg/kg
Matrix Spike			
% Recovery:	84	75	65
Matrix Spike Duplicate			
% Recovery:	100	66	68
Relative % Difference:	17	13	4.5

LCS Batch#:	LCS032696	LCS032696	LCS032696
Date Prepared:	3/26/96	3/26/96	3/26/96
Date Analyzed:	3/26/96	3/26/96	3/26/96
Instrument I.D.#:	HP-7	HP-7	HP-7
LCS % Recovery:	65	84	90

% Recovery Control Limits:	28-167	35-146	38-150
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SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager

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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
 Matrix: Solid

QC Sample Group: 603-0496

Reported: Apr 10, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	T. Granicher	T. Granicher	T. Granicher	T. Granicher	T. Granicher	T. Granicher

MS/MSD	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
Batch#:	6031612	6031612	6031612	6031612	6031612	6031612
Date Prepared:	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96
Date Analyzed:	4/9/96	4/9/96	4/9/96	4/9/96	4/9/96	4/9/96
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
Conc. Spiked:	5000 µg/kg	5000 µg/kg	2500 µg/kg	2500 µg/kg	2500 µg/kg	5000 µg/kg

Matrix Spike % Recovery:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
	67	58	56	64	64	70

Matrix Spike Duplicate % Recovery:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
	69	58	54	72	66	81

Relative % Difference: RPD Limit:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
	2.9	0.0	3.6	12	3.1	15

LCS Batch#:	LCS032696	LCS032696	LCS032696	LCS032696	LCS032696	LCS032696
Date Prepared:	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96
Date Analyzed:	4/9/96	4/9/96	4/9/96	4/9/96	4/9/96	4/9/96
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
LCS % Recovery:	93	82	78	106	88	92

% Recovery Control Limits:	Phenol	2-Chlorophenol	1,4-Dichloro- benzene	N-Nitroso-Di- N-propylamine	1,2,4-Trichloro- benzene	4-Chloro-3- Methylphenol
	15-115	30-120	30-120	30-120	40-120	40-120

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
 Project Manager

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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
 Matrix: Solid

QC Sample Group: 603-0496

Reported: Apr 10, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	T. Granicher	T. Granicher	T. Granicher	T. Granicher	T. Granicher

MS/MSD	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Batch#:	6031612	6031612	6031612	6031612	6031612
Date Prepared:	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96
Date Analyzed:	4/9/96	4/9/96	4/9/96	4/9/96	4/9/96
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1
Conc. Spiked:	2500 µg/kg	5000 µg/kg	2500 µg/kg	5000 µg/kg	2500 µg/kg

Matrix Spike % Recovery:	68	73	70	93	102
--------------------------	----	----	----	----	-----

Matrix Spike Duplicate % Recovery:	80	66	74	91	106
------------------------------------	----	----	----	----	-----

Relative % Difference:					
RPD Limit:	16	10	5.6	2.2	3.9

LCS Batch#:	LCS032696	LCS032696	LCS032696	LCS032696	LCS032696
Date Prepared:	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96
Date Analyzed:	4/9/96	4/9/96	4/9/96	4/9/96	4/9/96
Instrument I.D.#:	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1	GC/MS 1

LCS % Recovery:	88	70	78	92	112
-----------------	----	----	----	----	-----

% Recovery Control Limits:	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
	50-140	20-120	40-130	30-110	50-115

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SEQUOIA ANALYTICAL, #1271

 Alan B. Kemp
 Project Manager





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

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin
 Matrix: Solid

QC Sample Group: 603-0496

Reported: Apr 10, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Chromium	Nickel	Zinc	Lead	Cadmium
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	J. Kelly	J. Kelly	J. Kelly	J. Kelly	J. Kelly

MS/MSD					
Batch#:	6031612	6031612	6031612	6031612	6031612
Date Prepared:	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96
Date Analyzed:	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96
Instrument I.D.#:	MV-3	MV-3	MV-3	MV-3	MV-3
Conc. Spiked:	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg
Matrix Spike					
% Recovery:	96	82	66	93	94
Matrix Spike Duplicate %					
Recovery:	100	92	114	99	96
Relative %					
Difference:	2.6	6.8	24	5.6	2.1

LCS Batch#:	BLK032696	BLK032696	BLK032696	BLK032696	BLK032696
Date Prepared:	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96
Date Analyzed:	3/26/96	3/26/96	3/26/96	3/26/96	3/26/96
Instrument I.D.#:	MV-3	MV-3	MV-3	MV-3	MV-3
LCS %					
Recovery:	102	98	96	98	96

% Recovery					
Control Limits:	75-125	75-125	75-125	75-125	75-125

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

SEQUOIA ANALYTICAL, #1271


 Alan B. Kemp
 Project Manager



Company Name: KEI **Project Name:** FORMER UNOCAL #5366-DUBLIN
Address: 2401 STANWELL DR. #400 **UNOCAL Project Manager:** ED RALSTON
City: CONCORD **State:** CA **Zip Code:** 94520 **Release #:**
Telephone: 602-5100 **FAX #:** 687-0602 **Site #:** 5366-7375 AMADOR VALLEY BLVD.
Report To: KEI **Sampler:** HAIG KEVORK **QC Data:** Level D (Standard) Level C Level B Level A

Turnaround 10 Work Days 5 Work Days 3 Work Days Drinking Water
Time: 2 Work Days 1 Work Day 2-8 Hours Waste Water
CODE: Misc. Detect. Eval. Remed. Demol. Closure Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Analyses Requested										Comments				
						IPH-G	BIXE	IPH-D	TOG	IPH-Ca	Hydrofluid									
1. WOSW1	3/8/96	SOIL	1	TUBE	6030496	✓	✓	✓	✓											
2. WOSW2			1		6030497	✓	✓	✓	✓											
3. OWS(5.5)			1		6030498	✓	✓	✓	✓											
4. OWS(10)			1		6030499	✓	✓	✓	✓											
5. H1			1		6030500	✓	✓						✓							
6. H2	✓	✓	1	✓	6030501	✓	✓						✓							
7.																				
8.																				
9.																				
10.																				

Relinquished By: <i>[Signature]</i>	Date: 3/8/96	Time: 1815	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 3/8/96	Time: 1815

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

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

Client
 Pink
 Laboratory
 Yellow
 Laboratory
 White
 Laboratory

SEQUOIA ANALYTICAL/UNOCAL RELOG SHEET

5/11/3:57

CLIENT: KEI DATE RELOG: 3/15/96
 PROJECT ID: Unocal #5366, Dublin DATE DUE: 3/29/96
 PROJ. MANAGER: Alan Kemp DATE SAMP: 3/8/96
 DATE REC'D: 3/11/96 MATRIX: Soil T.A.T. 10d

PREVIOUSLY LOGGED SAMPLES

TAT Change status to: 10d
 Change status as of Day: 3/15/96 Time: 4:36 PM

CHANGE ANALYSES

Add Analyses
 Cancel Analyses

L

Sequoia Project ID:	9603141	Analyses
Sample Number	6030496	8010, 8270, Cd, Cr, Pb, Ni, Zn
		6031612
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	
NA	NA	

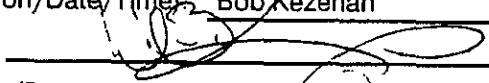
SAMPLES ON HOLD

Add analyses

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

TAT 0

Client Authorization (Person/Date/Time): Bob Kezerian 3/15/96 4:36 PM

Project Manager: 

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

To be completed upon receipt of report:

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

Approved by:

Signature:

Company: