

OCHANICA PARTIE

KEI-P88-0205.R11 April 15, 1996

Unocal Corporation 2000 Crow Canyon Place, Suite 400 P.O. Box 5155 San Ramon, CA 94583 5/1. OK to destroy wells Mw-1 ther mud-of and just month. 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 $6,600~\text{mg/m}^3$ to $110,000~\text{mg/m}^3$, 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 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 Two soil samples, labeled H1 and H2, were collected from table. 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. observed hydrocarbon-impacted soil in the vicinity of sample OWS(5.5), one additional soil sample, labeled OWS(10), 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 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 hydrocarbonimpacted 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 All soil samples were collected and handled as below grade. Sample point locations and areas of previously described. 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, semivolatile 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 hydrocarbonimpacted 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.

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

JOEL G. GREGER No. EG 1633 CERTIFIED ENGINEERING

GEOLOGIST

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

Rholl Dinger

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Attachments: Tables 1 through 4

Location Map Figures 1, 2 & 3 Laboratory Analyses

Chain of Custody documentation

TABLE 1 SUMMARY OF LABORATORY ANALYSES SOIL

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

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

Indicates analysis was not performed.
TOG was non-detectable.
TPH as hydraulic fluid was non-detectable.

ND = Non-detectable.

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TABLE 2
SUMMARY OF LABORATORY ANALYSES
(FUEL FINGERPRINT)

<u>Date</u>	Sample	Diesel (C10-C22)	JP-4 (C8-C14)	JP-5 (C10-C16)	Kerosene (C10-C16)	Motor Oil (>C16)		Thinner 0-C12)	Extra	entified actable acarbons
3/18/96	OWS-SW1	ИD	ND	ИД	ND	33		22		ИD
	OWS-SW2	ND	ND	ND	ND	27		37		ND
	OWS-SW3	ND	ND	ND	ИД	15		8.9		ND
<u>Date</u>	<u>Sample</u>	EPA Method Constituer	nts Co	Method 8270 nstituents (μg/kg)	<u>Cadmium</u>	<u>Chromium</u>	<u>Lead</u>	<u>Nickel</u>	<u>Zinc</u>	
3/08/96		ND		ND	ND	27	5.4	30	53	

ND = Non-detectable.

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

TABLE 3
SUMMARY OF LABORATORY ANALYSES
SOIL

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

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

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.

⁻⁻ Indicates analysis was not performed.

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TABLE 4
SUMMARY OF LABORATORY ANALYSES
SOIL

<u>Date</u>	Sample #	TPH as <u>Diesel</u>	TPH as <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	Ethyl- <u>benzene</u>	Xylenes
2/18/88	S1 S2 S2D	ND ND	14	0.8	ND	4.6	2.7
	53 54 54D	 83	14 1,700	1.1 8.0	ND 22	7.1 62 	0.7 340

ND = Non-detectable.

-- Indicates analysis was not performed.

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

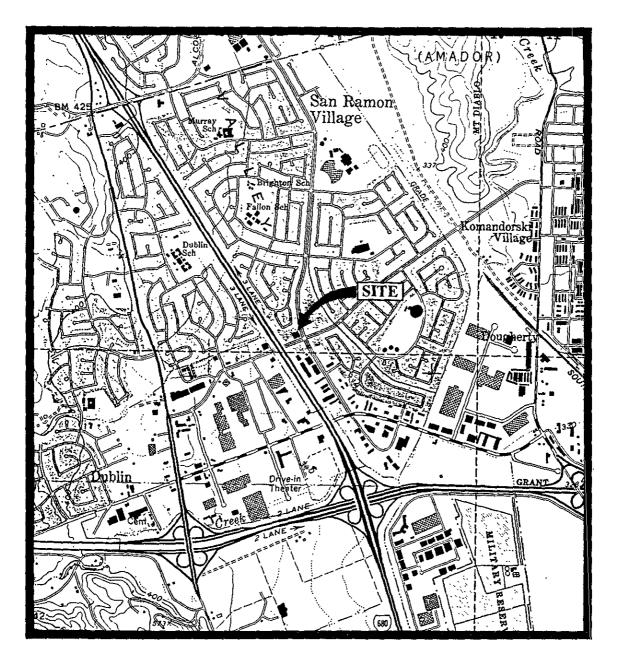
SUMMARY OF LABORATORY ANALYSES WATER

<u>Date</u>	Sample #	TPH as <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	Ethyl- <u>benzene</u>	Xylenes
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 ($\mu g/L$), unless otherwise indicated.



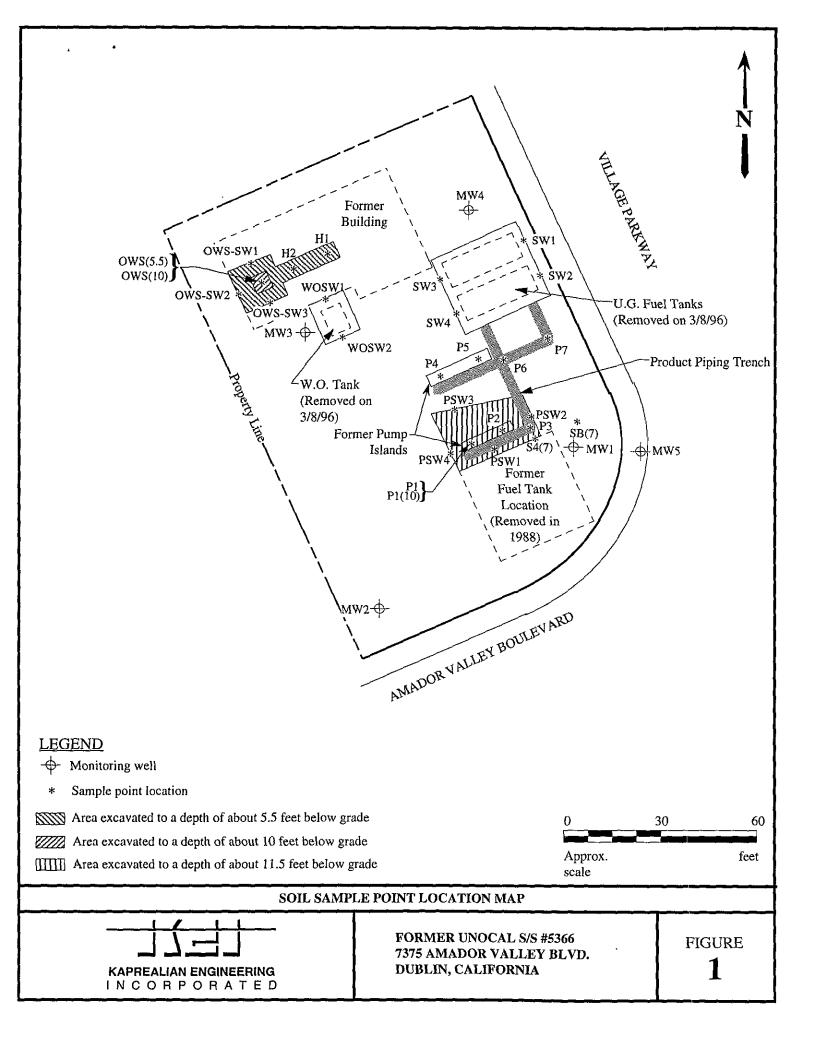
↑ N

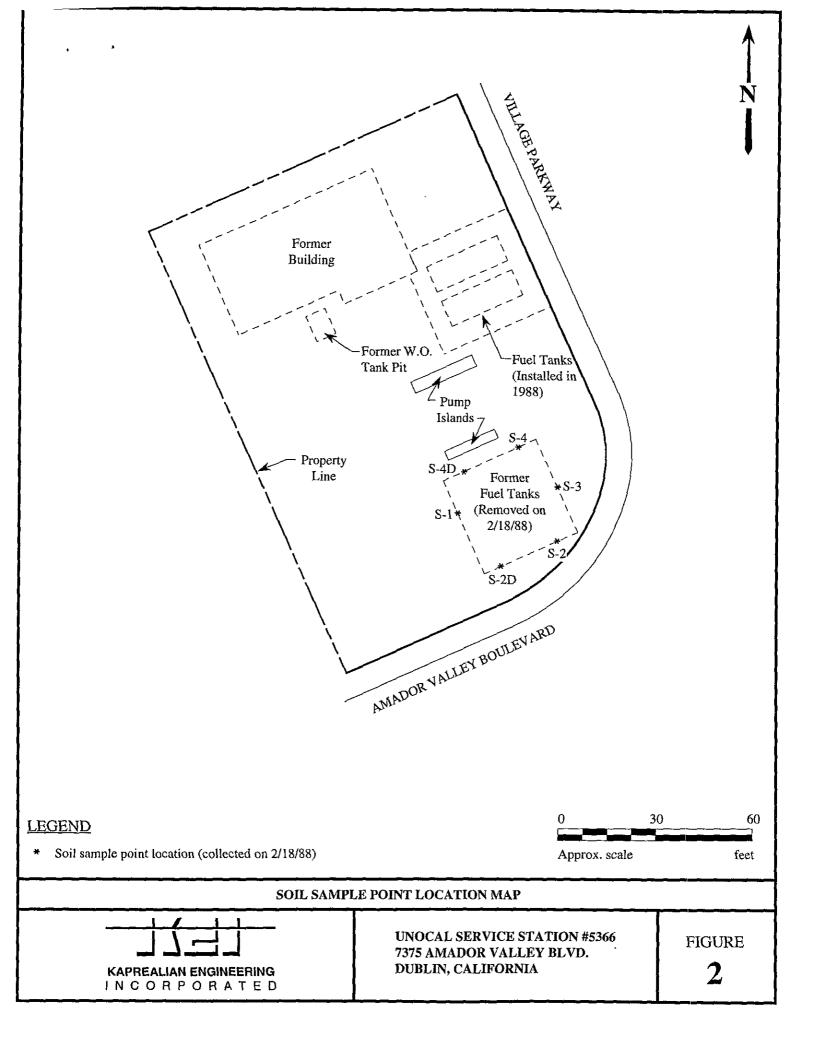
Base modified from 7.5 minute U.S.G.S. Dublin Quadrangle (photorevised 1980)

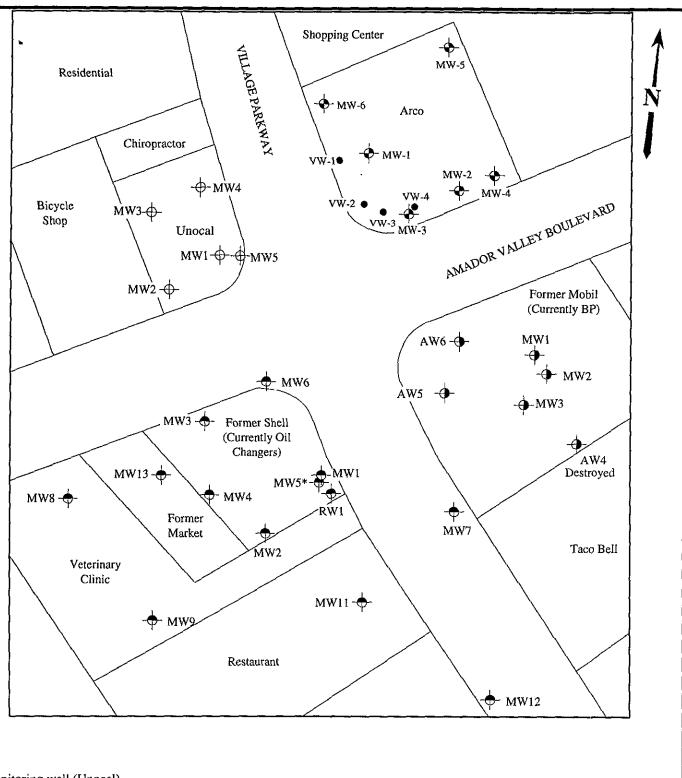




UNOCAL SERVICE STATION #5366-7375 AMADOR VALLEY BLVD. DUBLIN, CALIFORNIA LOCATION MAP

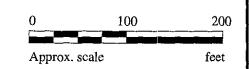






LEGEND

- → 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



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

enneder großer Geregeren Der Geregeren beschaften der Geregeren der Geregeren der Geregeren der Geregeren der Unocal 5366, 7375 Amador Valley Blvd., Client Project ID: Sample Matrix: Soil

Dublin

Sampled: Mar 8, 1996 Received: Mar 8, 1996

Analysis Method: First Sample #: maxxxxxan in accodente sassiva con estentem qui ma trattat est con attentat, e est for extrato esta tentata

EPA 5030/8015 Mod./8020 603-0485

Reported: Mar 12, 1996

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 Pa	ttern:	••	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



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

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

Matrix:

S Attention: Dennis Royce

QC Sample Group: 6030485-488 าง การทุกทางการ เราะบาน และ และ พื้นสุดเล่า การเราะสุดราชทางการ เราะสุดเราะสุดเราะสุดราชสาราสาราสาราสาราสาราสา

Reported: ritationagogoaesis (j. 1900a) est apartamente (j. 3. 2000a)

Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	
			Benzene		
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-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	
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		Angele with the first section of the			

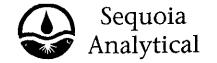
LCS Batch#:	2LC\$031196	2LCS031196	2LCS031196	2LCS031196
Date Prepared:	3/11/96	3/11/96	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96	3/11/96	3/11/96
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS %				
Recovery:	19	19	19	58
% Recovery				
Control Limits:	55-145	47-149	47-155	56-140

SEQUOIA ANALYTICAL, #1271

Project Manager

Please Note:





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

Client Project ID:

: Unocal 5366, 7375 Amador Valley Blvd., Dublin

Matrix:

Solid

Attention: Dennis Royce

QC Sample Group: 6030485-488 รายาทาง พระบาทพายาทาง สามารถสมาคามารถสมาคามารถสมาคามารถสมาคามารถสามารถสมาคามารถสมาคามารถสมาคามารถสมาคามารถสมาค

Reported:

Mar 14, 1996;

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	Lead	
			Benzene			
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 7420	
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn	T. Le	
MS/MSD						
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	
nstrument l.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:	55-145	47-149	47-155	56-140	75-125	
L					140	

SEQUOIA ANALYTICAL, #1271

Project Manager

Please Note:

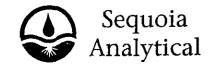


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UNOCA	L 76	□ 819 Stril × 404 N. W	ker Ave., liget Lane	Suite 8 • Sa • Walnut Cre	cramento, CA 958 eek, CA 94598 • (5	334 • (9 10) 988-	16) 921- 9600									99) 924-9200 03) 624-9800
Company Name:	EI				F	Project	Name:	Fol	3MF	R (INOC	·nL:	#5	366	5-Du	RIIN
Address: 2401	STAN	WFL	L D	R. #	400						D			TON		0 0 0
city: CONC	ORD State:	CA			745201					=	<u> </u>	1 (()	<u></u> _	101		
Telephone: 602	2-5100		FAX #:	687-	0602 5	Site #: 5	536	6 -	73	75	AMF	[DO]	R V	ALL	EY F	3LVD,
Report To: KE	Ĺ	Sampler	: He	JG K	EVORK	C Dat	a: ⊠íi	evel l	D (Stand	dard)	□lev	el C		Level B		Level A
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Time: 🔲 2 Wo	ork Days 🔀 1 1	Nork Day	<u> </u>	3 Hours	🗓 Wa	_		(-)	/_ /	7	7	<u> </u>	/ dudda	9		7
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Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #		S/4	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	//						/ c	comments
1. SWI	3/8/96	SOIL	1	TUBE	6030485	1	10							1	£	
2. SW2					6030486	L	1		1			1				
3. SW3			_ \		6030487	1	1									
4. SW4-					6030488	V	U		1							
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Relinquished By	ce hook	o politalio	/ Date:	3/8/96	Time: 1815	Rece	eived B	ly:				D	ate:		Time:	
Relinquished By:	(30)		Date:		Time:	Rece	eived B	y:				D	ate:		Time:	
Relinquished By:	···	·	Date:		Time:	Rece	eived B	y Lab	: Ch	or Li		2 c	ate:3	18/96	Time:	218
Vere Samples Receive	ed in Good Condi	tion? 🗆 Ye	s 🖸 No	Sa	mples on Ice?	🔾 Yes	□ No	Meth	nod of	Shipm	ent				Page	of
To be completed upon 1) Were the analy 2) Was the report	ses requested or	n the Chair	n of Cus I turnard	tody repor ound time?	ted? 🖸 Yes 🗖 t O Yes O No I	No Ifn fno, w	o, wha hat wa	t anai	yses a turnaro	re still ound ti	neede me?	d?		,		
Approved by:			S	ignature:				Com	nanv:						Date	۵,

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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

Kapreallan Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 9452 Attention: Dennis I Concord, CA 94520 Attention: Dennis Royce

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd. rigationis Charagolis y Brigatis any ba Sample Matrix:

Soil

Sampled: Dublin

Mar 8, 1996. Mar 8, 1996

and the completion of the contraction is the contraction of the contra

EPA 5030/8015 Mod./8020 Analysis Method: First Sample #: 603-0489

Received: Reported:

Mar 12, 1996

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 Pat	tern:	Gasoline	Gasoline	

Quality Control Data

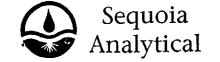
Report Limit Multiplication Factor:	20	20
Date Analyzed:	3/11/96	3/11/96
Instrument Identification:	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	105	88

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

Project Manager





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

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

Solid

Attention: Dennis Royce

Concord, CA 94520

QC Sample Group: 6020489-495

Reported:

Mar 14, 1996 THE PROPERTY OF THE PROPERTY O

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes
			Benzene	-
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

1LCS031196	1LCS031196	1LCS031196	1LCS031196		
3/11/96	3/11/96	3/11/96	3/11/96		
3/11/96	3/11/96	3/11/96	3/11/96		
HP-2	HP-2	HP-2	HP-2		
115	110	110	115		
55-145	47-149	47-155	56-140		
	3/11/96 3/11/96 HP-2 115	3/11/96 3/11/96 3/11/96 3/11/96 HP-2 HP-2	3/11/96 3/11/96 3/11/96 3/11/96 3/11/96 3/11/96 HP-2 HP-2 HP-2	3/11/96 3/11/96 3/11/96 3/11/96 3/11/96 3/11/96 3/11/96 HP-2 HP-2 HP-2 HP-2 115 110 110 115	3/11/96 3/11/96 3/11/96 3/11/96 3/11/96 3/11/96 HP-2 HP-2 HP-2 HP-2

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp Project Manager Please Note:





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: Sample Matrix: Analysis Method:

Soil EPA 5030/8015 Mod./8020

Received:

Mar 8, 1996 Mar 8, 1996.

First Sample #: 603-0491 a and the contract of the second of the contract of the contra

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 Pat	tern:	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

Alen'B. Kemp **Project Manager**



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 Blvd., Dublin

Matrix:

QC Sample Group: 6030491-495

Reported:

Mar 14, 1996

QUALITY CONTROL DATA REPORT

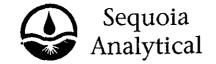
ANALYTE Benzene Toluene Ethyl Xylenes Method: EPA 8020 S. Chullakorn S. Chullakorn S. Chullakorn S. Chullakorn
Method: EPA 8020 EPA 8020 EPA 8020 EPA 8020 EPA 8020 EPA 8020 Analyst: S. Chullakorn
Analyst: S. Chullakorn S. Chullakorn S. Chullakorn S. Chullakorn S. Chullakorn MS/MSD Batch#: 6030487 6030487 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
MS/MSD Batch#: 6030487 6030487 6030487 6030487 Date Prepared: 3/11/96 3/11/96 3/11/96 Date Analyzed: 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
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
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
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 3/11/96 Instrument I.D.#: HP-2 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
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 HP-2 Conc. Spiked: 0.40 mg/kg 0.40 mg/kg 0.40 mg/kg 1.2 mg/kg
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 HP-2 Conc. Spiked: 0.40 mg/kg 0.40 mg/kg 0.40 mg/kg 1.2 mg/kg
Instrument I.D.#: HP-2 HP-2 HP-2 HP-2 HP-2 HP-2 HP-2 Instrument I.D.#: HP-2 HP-2 HP-2 HP-2 HP-2 HP-2 HP-2 HP-3 Instrument I.D.#: Instrument I.
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Matrix Spika
% Recovery: 143 138 148 142
110000000000000000000000000000000000000
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	

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp Project Manager Please Note:





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

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

Matrix: Solid

Attention: Dennis Royce QC Sample Group: 6030491-495 amo wano wane walimpo amete ingawang siwaratniwa sasana wanawa tala mpa ta walionwa wani aya na waya wilanji bib

Reported:

Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE Benzene Toluene Ethyl Xyfenes Benzene
Delizette
Method: EPA 8020 EPA 8020 EPA 8020 EPA 802
Analyst: S. Chullakorn S. Chullakorn S. Chullakorn S. Chullakorn
140 /440 D
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
Conc. Spiked: 0.40 mg/kg 0.40 mg/kg 0.40 mg/kg 1.2 mg/k
Matrix Spike
% Recovery: 120 120 127 125
70 Hebbvery: 120 120 121 125
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	<u></u>			
Control Limits:	55-145	47-149	47-155	56-140

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp Project Managér Please Note:

UNOCAL	76
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UNOCAL 76	□ 819 Strik ¥ 404 N. W	er Ave., S liget Lane	Suite 8 • Sa • Walnut Cr	ecramento, CA eek, CA 94598	95834 • (510) 98	(916) 921 8-9600								99206 • (5 97222 • (
Company Name: KEI					Projec	ct Name	: Fo	RMI=	RUI	JOC4		に つ	6.0	Du	131	<i>t</i> []	
Address: 24-01 5T	ANWEL	ı D'	R. #	400	UNO	CAL Pro	iect M	anager	_	D					<u>UL</u>	IN	
	tate: CA			94520					- 1	· V		}LS	> 1 0	N			-
Telephone: (602 - 51			627	-0600	Sito #	. 53	66	_ 17'	21/4	- Δι	v Ar	MR	1/41	184	Di	_VD	1
Report To: KE I	Sampler:		116	KEVOR	C D	- <u></u>			<i></i>	<u> </u>	•••						
Turnaround 🖸 10 Work Days 🕽			ork Davs	, , , , , , , , , , ,	YCC Di	Mater	Level	D (Stand	lard) (Leve	el C		evel B		Lev	el A	أ لـــ
Time: 🔲 2 Work Days 🕽	1 Work Day	☐ 2-8	Hours		Drinking Waste V					Analy	ses He	queste	a	, ,		7	
CODE: A Misc. Detect.				losure	Other	raies	(Q)	<u>S/</u>							/	•	
Client Date/Tim Sample I.D. Sample	. 1 1	# of Cont.	Cont. Type	Laborato Sample			65/	//				//.			Comr	nents	7
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3. P3				603049	1 1	ー	 -	1						公 士		<u>45</u> 45	aboratora
4. P4		1		603049	2 ~	1/	 			i						12	
5. P5				603049	3 2	1	 	1									
6. PG				603049		1	1								-		\dashv
7. P7		1	\/	603049		1	†						-+		_	<u> </u>	
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Relinquished By:		Date:	,	Time:	Red	eived B	Ву:				Da	te:		Time:			White
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To be completed upon receipt of re 1) Were the analyses requeste 2) Was the report issued within	ed on the Chain	of Custo	ody repor	ted? 🖸 Yes 🖟	O No If	ло, wha	t analy	/ses ar	e still n	eeded	?						_]
Approved by:									uriu Wi	n e :	- ~			Dat			-

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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: Sample Matrix: Analysis Method:

Unocal #5366, 7375 Amador Valley Blvd. Soil

EPA 5030/8015 Mod./8020

Sampled: Dublin Received:

Mar 8, 1996 Mar 8, 1996

First Sample #: 603-0496

Reported:

Mar 12, 1996

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 Da	ata	·			·		
Report Limit Multip	lication 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 Identific	ation:	HP-5	HP-5	HP-5	HP-2	HP-5	HP-5
Surrogate Recover (QC Limits = 70-13		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

Alari-B. Kemp Project Manager



680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063 Walnut Creek, CA 94598

(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

Sample Matrix:

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd. Soil

Sampled: Dublin Received: Mar 8, 1996 Mar 8, 1996

Analysis Method: First Sample #:

EPA 3550/8015 Mod. 603-0496

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 Pa	ttern:	Unidentified Hydrocarbons >C20	••	Unidentified Hydrocarbons <c15>C18</c15>	Unidentified Hydrocarbons <c12>C20</c12>	

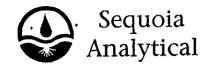
Quality Control Data

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:	НР-ЗА	НР-ЗА	НР-ЗА	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



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(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:

Client Project ID: Sample Matrix: Analysis Method:

*** Wasser 1975 Amador Valley Blvd. Sampled: Unocal #5366, 7375 Amador Valley Blvd. Soil

Received: Dublin

Mar 8, 1996 Mar 8, 1996

Attention: Dennis Royce First Sample #:

EPA 3550/8015 Mod. 603-0500

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 Pa	ttern:			

Quality Control Data

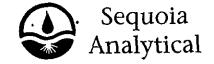
Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	3/11/96	3/11/96
Date Analyzed:	3/11/96	3/11/96
Instrument Identification:	HP-3B	HP-3B

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



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

Client Project ID: Matrix Descript: Analysis Method:

First Sample #:

Representation of the property of the particles of the property of the propert

Unocal #5366, 7375 Amador Valley Blvd.

SM 5520 E&F (Gravimetric) 603-0496

Sampled: Mar 8, 1996 Dublin Received: Extracted: Analyzed:

Reported:

Mar 8, 1996 Mar 11, 1996[∛] Mar 12, 1996" Mar 12, 1996

That work is before the shall

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.

ȘEQUOIA ANALYTICAL, #1271

Alan B. Kemp Project Manager



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

Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400

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

Solid Matrix:

Concord, CA 94520 Attention: Dennis Royce

QC Sample Group: 6030496-501 d of the control of t

Reported: renning i migre vændi

Mar 14, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes
			Benzene	
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	K. Nill	K. Nill	K. Nill	K. Nill
BAC /BACD				
MS/MSD	0000407	0000407	6030407	6030487
Batch#:	6030487	6030487	6030487	0030407
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
70 (1000) (1	120			
Matrix Spike				
Duplicate %				
Recovery:	115	115	120	125
necovery.	110	113	120	120
Relative %				
Difference:	4,3	4.3	6.1	0.0
Dinici ciice.	4.0	7.0	Ų. i	5.5

LCS Batch#:	3LCS031196	3LCS031196	3LCS031196	3LC\$031196		
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			474	50.110	50.450	00.440
l Control Limits:	55-145	47-149	47-155	56-140	50-150	60-140

Please Note:

SEQUOIA ANALYTICAL, #1271

Alan B. Kemb Project Manager



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 Blvd., Dublin

Solid Matrix:

QC Sample Group: 6030485-488 Barronnes e 👉 morano el la carte de la regiona de la compaño de la Comp

Reported:

Mar 14, 1996.

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	Diesel	Oil & Grease
			Benzene			
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	EPA 5520
Analyst:				S. Chullakorn	J. Dìnsay	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: Date Analyzed: Instrument I.D.#:	3/11/96 3/11/96 HP-2	3/11/96 3/11/96 HP-2	3/11/96 3/11/96 HP-2	3/11/96 3/11/96 HP-2	3/11/96 3/11/96 GCHP-3A	3/11/96 3/11/96 Manual
LCS % Recovery:	115	110	110	115	78	100
% Recovery Control Limits:	55-145	47-149	47-155	56-140	50-150	60-140

SEQUOIA ANALYTICAL, #1271

Project Manager

Please Note:





Approved by:

Company Name: KEI		****			P	roject l	vame:	FOF	ME	RU	Moc	AL:	#5	360	6- Du	BLIN	
Address: 2401 ST	ANWE	LL D	R, #	40									ST				
city: CONCORD S	State: CA		Zip Code:	94!	520 R	elease	#:] "
Telephone: 602 - 51	00	FAX #: (-1786	060	92 s	ite #: "	53(66-	<u>- 7</u>	345	5 AN	1AD	OR	JAV	LEY	BLVD	Client
Report To: KE D	Sample	r: Hf	416 k	(EV	ORKa	C Data	:	evel D	(Stand	ard)	Leve	I C		evel B		Level A	Pink -
Turnaround 🛄 10 Work Days		s 🗋 3 W	ork Days		☐ Drin			· · · · · · · · · · · · · · · · · · ·			Analys						<u> </u>
Time: 2 Work Days	⊠(1 Work Day	☐ 2-8	Hours		□ Was	_		61/	/_ /	$\frac{1}{2}$		-00	/	/		7	
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Client Date/Tir Sample I.D. Sample		# of Cont.	Cont. Type	L	boratory ample #			5/2	X							Comments	
1.WOSW1 3/8/	96 SOIL	1	TUBE	603	0496	V	V	V	/								- Laboratory
2. WOSW2		1		<u> </u>	0497	1	V	レ	~								ge
3. OWS(5.5)		1			30498		V	1	/								
4. OWS (10)				603	0499	V	V	1	/								Yellow
5.		1		603	30500	<i>\'</i>	V			~							*
6. H2 V		1	V	603	0501	V	1 /			1 /							
7.																	15 38
8.				<u> </u>				<u> </u>									
9.																	_
10.				<u> </u>													aboratory
			210101			1		<u>.</u>				- 1					
Relinquished By:	NKGM 4	Date:	3/8/46	Time	: 1815	Rece	ived E	By:				Da	ate:		Time:		
Relinquished By:	7	Date:	, (Time:	:	Rece	ived E	By:				Da	ate:		Time:		White -
Relinguished By:		Date:		Time	•	Rece	eived E	By Lab;	06	dorl	10		ate:ろ	18/96	Time.	315	
Were Samples Received in Good	Condition? □ \	es □ No	Sa	mples	on Ice?	🗅 Yes	□ No	Meth	od of s	Shipme	ent					e of	

Signature: ____Company: _____

Date: ___



Redwood City, CA 94063 Walnut Creek, CA 94598 (415) 364-9600 (510) 988-9600 (916) 921-9600

Dublin

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

Sample Matrix:

First Sample #:

ទុក ពួកម្មគំនាក់នេះ

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

Soil Analysis Method: EPA 5030/8015 Mod./8020

603-1367

Sampled: Received: Mar 18, 1996 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 Pa	ttern:	Gasoline & Unidentified Hydrocarbons > C8	Gasoline & Unidentified Hydrocarbons > C8	Gasoline & Unidentified Hydrocarbons > C8	
Quality Control D	ata				
Report Limit Multip	olication Factor:	5.0	5.0	1.0	
Date Analyzed:		3/25/96	3/25/96	3/25/96	
Instrument Identific	cation:	HP-5	HP-5	HP-5	
Surrogate Recove (QC Limits = 70-1		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

Alam B. Kemp Project Manager



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

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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

2-12-6

Sample Matrix:

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

Soil

Analysis Method: EPA 3550/8015 Modified First Sample #: 603-1367

Dublin

Sampled: Received:

Reported:

Mar 18, 1996 Mar 18, 1996. 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.L	NJ.	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 Quality Control Da	1.0 ata	N.I.	N.I.	N.1.	
Report Limit Multip		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 Identific	cation:	НРЗА	НР3А	НР3А	

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

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Redwood City, CA 94063 Walnut Creek, CA 94598 (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, Dublin

Solid Matrix:

Reported: Mar 27, 1996 QC Sample Group: 6031367-69

QUALITY CONTROL DATA REPORT

					Direct	$\neg \neg$
ANALYTE	Benzene	Toluene	Ethyl	Xylenes	Diesel	\ \
			Benzene			
					GDA 2045	
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	-
Analyst:	L. Huang	L. Huang	L. Huang	L. Huang	J. Dinsay	
MS/MSD					0001007	
Batch#:	6031954	6031954	6031954	6031954	6031367	
					2/00/06	
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	
					•	
		•				
					1.00000000	
LCS Batch#:	3LCS032596	3LCS032596	3LC\$032596	3LCS032596	LC2032296	
				0.105.100	0/00/06	
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 %					20	
Recovery:	110	110	110	110	89	
% Recovery				50.450	EO 150	
Control Limits:	50-150	50-150	50-150	50-150	50-150.	

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp Project Manager Please Note:

UNOCAL	76
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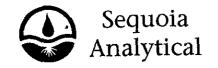
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a	680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600	☐ 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200

□ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 □ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200

×	404 N. Wig	get Lane •	Walnut	Creek, CA	94598 •	(510)	988-960
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☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

11,	FORMER 1110001 # 52// 5
Company Name: ドラエ	Project Name: FORMER UNOCAL #5366-DUBLIN
Address: 2401 STANWELL DR. # 400	UNOCAL Project Manager: ED RALSTON
City: CONCORD State: CA Zip Code: 945	520Release #:
Telephone: 602-5100 FAX#: 687-060	DE Site #: 5366-7375 AMADOR VALUEY BUD,
Report To: KEI Sampler: HAIG KEVO	QC Data: Level D (Standard) Level C Level B Level A
· · · · · · · · · · · · · · · · · · ·	☐ Drinking Water Analyses Requested
Tíme: 2 Work Days 1 Work Day 2-8 Hours	
CODE: Misc. Detect. Deval. Remed. Demol. Closure	Other // // // // // // // // // // // // //
= 119111	coratory mple # Comments
1. OWS-SW1 3/18/96 SOIL 1 TUBE 6031	1367 / / /
2. OWS-SW2 1 603:	1367 V V V V V V V V V V V V V V V V V V V
3. OWS - SW3 V V 1 V 6031	1369
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Relinquished By: 1000 Date:3/18/9 Time:	Pate: Time:
Helindulshed by: Act The Polly Marie: 7 (1/ 1/4) There.	
Relinquished By: Date: Time:	
Relinquished By: Date: Time:	Received By Lab. 100 June: 3/15/94 Time: 530
Were Samples Received in Good Condition? ☐ Yes ☐ No Samples of	on Ice?
To be completed upon receipt of report:	
1) Were the analyses requested on the Chain of Custody reported?	Yes O No If no, what analyses are still needed?
•	es D No If no, what was the turnaround time? Date:
Approved by: Signature:	Outparty, 1



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: Sample Matrix:

First Sample #:

D: Unocal #5366, 7375 Amador Valley Blvd., Soil

Mar 18, 1996 Sampled: Mar 18, 1996 Received:

603-1151

Analysis Method: EPA 5030/8015 Mod./8020

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Reported: Mar 19, 1996

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 Pat	tern:	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, %: 90 82 (QC Limits = 70-130%)

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



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

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Kaprealian Engineering, Inc. 2401 Stanwell Dr., Ste. 400 Concord, CA 94520

145066 7375 Amador Vallev Bivd., Dublin Client Project ID: Unocal #5366, 7375 Amador Valley Blvd., Dublin

Matrix:

Attention: Dennis Royce QC Sample Group: 6031151-152 ran promis e sarsante franças.

Reported: Mar 21, 1996:

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes
			Benzene	-
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Chullakorn	S. Chullakorn	S. Chullakorn	S. Chullakorn
MS/MSD				
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#:	3LCS031896	3LCS031896	3LCS031896	3LCS031896	
Date Prepared: Date Analyzed: Instrument I.D.#:	3/18/96 3/18/96 HP-5	3/18/96 3/18/96 HP-5	3/18/96 3/18/96 HP-5	3/18/96 3/18/96 HP-5	
LCS % Recovery:	90	90	90	95	
% Recovery Control Limits:	55-145	47-149	47-155	56-140	

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp **Project Manager** Please Note:

UNOCAL	76
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ONOGAL		₹ 404 N. W	iget Lane	Walnut Cre	ek, CA	94598 • (51	10) 988-9	600	۵	15055 S	.W. Seq	uoia Pkw	vy, Suite	110 • Por	tland, OF	97222•((503) 624-980	ю.
Company Name: KE						P	roject i	Vame:	FOR	ME	R U	N OC	AL	# =	526	6-1	uBLI	17
Address: 2401	STANU	JELL	DR.	#	400)	NOCA	L Proj	ect Ma	nager:	E	D	BA	LS	T01	J		~
city: CONCOR	D State:	CA		Zip Code:	94	520 F	lelease	#:					10,1		<u>. v.</u>			\neg
	- 5100								66	_73	375	AM	A D (RV	MLI	ISY	BLV	D,
Report To: KEI		Sampler	HF	716-1	KEV	2RKc	C Data	, pki	evel [) (Stand	ard) [TH AV	el C		_evel E		Level A	•
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Time: 🔲 2 Work [Days 🗵 1 W	ork Day	☐ 2-8	Hours		☐ Wa			CK	1011		/	7	/	/	//		
CODE: Misc. Det	ect. 🛭 Eval.	Remed	i. 🖵 De	emol. 🖵 Cl	osure) (Oth	er		/_f	Y /								
Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type		boratory ample #		\$\{	?/ ?/								Commen	
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Relinguished By:			Date:		Time:	· · ·	Rece	ived B	v Lab:		Joel	10)	ر کی ا) ate: 3	118	Time:	1330	
Were Samples Received in	Good Conditi	ion? 🔾 Ye	s 🔾 No	Sa	mples	on Ice?				od of S	hipme	nt					e of	
To be completed upon rec 1) Were the analyses 2) Was the report issues	requested on	the Chair	of Cus	tody repor	ted? □ ' □ Ye	iYes⊡ N s⊡ Noli	No If no	o, wha	t analy	/ses ar urnaro	e still i	needed	d?					
Approved by:										pany: _						Da	ite:	

☐ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 ☐ East 11115 Montgomery, Suite 8 • Spokane, WA 99206 • (509) 924-9200

18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200

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

Redwood City, CA 94063 Walnut Creek, CA 94598

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

Sample Matrix:

Client Project ID: Unocal #5366, 7375 Amador Valley Blvd. Soil

Dublin

Mar 20, 1996 Sampled: Mar 20, 1996 · Received:

First Sample #:

Analysis Method: EPA 5030/8015 Mod./8020 603-1524

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 Pa	ttern:	Gasoline	Gasoline	Gasoline	Gasoline	Gasoline	
Quality Control Da	ata						
Report Limit Multip	lication 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 Identific	cation:	HP-5	HP-5	HP-5	HP-5	HP-5	
Surrogate Recover (QC Limits = 70-13		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



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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:

QC Sample Group: 6031524-528

Reported:

ed: Mar 29, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl	Xylenes	
			Benzene		
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	
Analyst:	K, Nill	K. Nill	K. Nill	K. NIII	
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	
	And the second			, ,	

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	

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp Project Manager Please Note:



UNOCAL	76
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UNOCAL 76	0 819 Strik	er Ave., S		crament	to, CA 958 94598 • (51	34 • (91 0) 988-9	6) 921- 600	9600 🗅	East 111	115 Mon .W. Sequ	ntgomery uoia Pkw	y, Suite y, Suite	B•Spok 110•Po	ane, WA rtland, OF	99206 • (50 1 97222 • (5	03) 624-9800 -	1
Company Name: KEI					P	roject l	Vame:	1-0f	ME	<u>Ru</u>	<u> NOC</u>	ML	#5	<u> 36</u>	<u>6 – P</u>	UBLIN	
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city: CONCORD State	e: CA		Zip Code:	94	520 P	elease	#:		,								_
Telephone: 602-510	0 1		687-					66-	17-	375	A	nAi	DOR	VAL	LEY	BUN	Client
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Were Samples Received in Good Con	ıdition? □ Ye				on Ice?				od of S	Shipme	ent					e of	_
To be completed upon receipt of report 1) Were the analyses requested 2) Was the report issued within the	on the Chair											d?					

_Company: _

Date: _



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

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:

Dublin

Mar 8, 1996 Mar 15, 1996

Digested: Analyzed:

Sampled:

Relogged:

Mar 26, 1996

Reported: ที่ทางกระการและ กระการทางเคียงทางเพ<mark>างสมพัฒนาการพร</mark>ะพรรษาเพาะพระพรรษาทางกระทางกระทางเพาะพระพระพระพระพระทางการพร

Mar 26, 1996 Apr 10, 1996

LUFT METALS

603-0496

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**



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

Dublin

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., Sample Descript: Analysis Method: Lab Number:

Soil, WOSW 1 EPA 5030/8010 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
Bromodichioromethane	5.0	***************************************	N.D.
Bromoform	5.0	***************************************	N.D. N.D.
Bromomethane	10	***************************************	N.D.
Carbon tetrachloride	5.0	***************************************	N.D. N.D.
Chlorobenzene	5.0		
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 5.0	***************************************	N.D.
1,3-Dichlorobenzene		***************************************	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.
ois 1.2 Dighteroothers	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	4,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	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

Alàn B. Kemp Project Manager





680 Chesapeake Drive 404 N. Wiget Lane

Redwood City, CA 94063 Walnut Creek, CA 94598 819 Striker Avenue, Suite 8 Sacramento, CA 95834

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

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

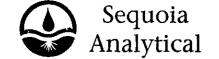
603-0496

Mar 8, 1996 Mar 15, 1996 Sampled: Dublin Relogged: Mar 26, 1996 Extracted: Analyzed: Apr 9, 1996. Reported: de marginale charette not a l'especial sub-legeles despendentes de l'especial de l'especial de l'especial de l Reference Apr 10, 1996

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

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Acenaphthene	400		
Acenaphthylene	100	***************************************	N.D.
Aniline	100	***************************************	N.D.
Anthracene	100		N.D.
Renzidine	100	***************************************	N.D.
Benzoic Acid	2,500		N.D.
Benzo(a)anthrooppe	500		N.D.
Benzo(a)anthracene	100		N.D.
Benzo(b)fluoranthene	100	***************************************	N.D.
Benzo(k)fluoranthene	100		N.D.
Benzo(g,h,i)perylene	100		N.D.
Benzo(a)pyrene	100	***************************************	N.D.
Benzyl alcohol	100	******************************	N.D.
Bis(2-chloroethoxy)methane	100		N.D.
Bis(2-chloroethyl)ether	100	****************************	N.D.
Bis(2-chloroisopropyl)ether	100		N.D.
Bis(2-ethylhexyl)phthalate	500	***************************************	N.D.
4-Bromophenyl phenyl ether	100		N.D.
Butyl benzyl phthalate	100	******************************	N.D.
4-Chloroaniline	100	***************************************	N.D.
2-Chloronaphthalene	100	***************************************	N.D.
4-Chloro-3-methylphenol	100		N.D.
2-Chlorophenol	100	***************************************	N.D. N.D.
4-Chlorophenyl phenyl ether	100	***************************************	N.D. N.D.
Chrysene	100	***************************************	N.D. N.D.
Dibenz(a,h)anthracene	100		
Dibenzofuran	100	*************************	N.D.
Di-N-butyl phthalate	500	***************************************	N.D.
1,3-Dichlorobenzene.	100		N.D.
1,4-Dichlorobenzene	100	***************************************	N.D.
1,2-Dichlorobenzene.	100	***************************************	N.D.
3,3-Dichlorobenzidine			N.D.
2,4-Dichlorophenol	500	***************************************	N.D.
Diethyl phthalate	100	***************************************	N.D.
2,4-Dimethylphenol	100	••••••	N.D.
Dimethyl phthalate	100	***************************************	N.D.
4,6-Dinitro-2-methylphenol	100	***************************************	N.D.
2,4-Dinitrophenol	500	***************************************	N.D.
2,4-Dinitrotoluene	500	***************************************	N.D.
2,6-Dinitrotoluene.	100	***************************************	N.D.
Di-N-octyl phthalate	100	***************************************	N.D.
- · · · · · · · · · · · · · · · · ·	100	***************************************	N.D.





Redwood City, CA 94063 Walnut Creek, CA 94598

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 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., Sample Descript: Soil, WOSW 1 Analysis Method: EPA 8270 Lab Number: 603-0496

Dublin

Mar 8, 1996 Sampled: Received: Mar 15, 1996 Extracted: Mar 26, 1996

Analyzed: Apr 9, 1996 Reported: поролем. Удругима на посед миро от при вогам вета и видена и закон на након при сего и надржидения и поролем. Apr 10, 1996

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

Analyte	Detection Limit µg/kg		Sample Results µg/kg
Fluoranthene	100		ND
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		***************************************	N.D.
2-Nitroaniline.	100	***************************************	N.D.
3-Nitroaniline	500		N.D.
3-Nitroaniline4-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.
rentachiorophenol	500	***************************************	N.D.
Phenanthrene	100	***************************************	N.D.
Phenol	100	***************************************	N.D.
Pyrene	100	***************************************	N.D.
1,2,4-Trichlorobenzene	100	***************************************	N.D. N.D.
2,4,5-trichiorophenol	500	•	· ··-
2,4,6-Trichlorophenol	100	***************************************	N.D.
	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

Page 2 of 2





Redwood City, CA 94063 Walnut Creek, CA 94598

(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

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

Matrix:

QC Sample Group: 603-0496 and the first of the many of the control of the second of the second of the control of the contr

Reported:

Apr 10, 1996;

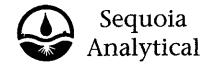
QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloro-	Trichloro-	Chloro-	
	•			
	ethene	ethene	benzene	
Method:	EPA 8010	EPA 8010	EPA 8010	
Analyst:	I. Dalvand	I. Dalvand	I. Dalvand	
MS/MSD				
Batch#:	6031993	6031993	6031993	
2010(1); 1	4401444	0001000	0001000	
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	10	4.5	
Dillerence:	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		

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp **Project Manager** Please Note:



680 Chesapeake Drive 404 N. Wiget Lane

Redwood City, CA 94063 Walnut Creek, CA 94598 819 Striker Avenue, Suite 8 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

Law Company

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-Dichlaro-	N-Nitroso-Di-	1,2,4-Trichloro-	4-Chloro-3-	·-···
			benzene	N-propylamine	benzene	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							
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:	67	58	56	64	64	70	
Matrix Spike Duplicate %							
Recovery:	69	58	54	72	66	81	
Relative % Difference:							
RPD Limit:	2.9	0.0	3.6	12 [編集] [1] [1] [2]	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:	15-115	30-120	30-120	30-120	40-120	40-120	

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp Project Manager Please Note:





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

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:

QC Sample Group: 603-0496 ту. Гуру жарту қолын ойуғақтын бийерінен бийекінен күліпісін құлақының ойын жарымының ақтыры жұлық құлық құлыс

Reported:

QUALITY CONTROL DATA REPORT

ANALYTE	A 1.45.	4 5 111	0.4 50.11			
ANALTIE	Acenaphthene	4-Nitrophenol	2,4-Dinitro-	Pentachloro-	Pyrene	
Part Martin			toluene	phenol		
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						
Batch#:	0001010	0001010	*****	2001010		
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	
cono. opinea.	2000 pg/kg	ουσο μαγικά	2000 pg/kg	Jooo pg/kg	2000 µg/kg	
Matrix Spike						
% Recovery:	68	73	70	93	102	
•						
Matrix Spike						
Duplicate %						
Recovery:	80	66	74	91	106	
Relative %						
Difference:						
RPD Limit:	16	40	F.6	0.0	2.0	
	16	10	5.6	2.2		n ** n.
			. (취임 개의 설명): -			
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	3/20/96 4/9/96	4/9/96	3/26/96 4/9/96	
Instrument I.D.#:	GC/MS 1	4/9/90 GC/MS 1	4/9/90 GC/MS 1	4/9/96 GC/MS 1	4/9/96 GC/MS 1	
modunion hom.	GO/MG 1	COMMO	GUNIO I	GCNN9 I	GO/NO 1	
LCS %						
Recovery:	88	70	78	92	112	
,				_	·-	
% Recovery						
Control Limits:	50-140	20-120	40-130	30-110	50-115	ı

SEQUOIA ANALYTICAL, #1271

Alàn 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.

Page 2 of 2





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

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

Kapreallan Engineering, Inc. Client Project ID: 2401 Stanwell Dr., Ste. 400 Concord, CA 94520

Matrix:

Unocal #5366, 7375 Amador Valley Blvd., Dublin Solid

Attention: Dennis Royce

QC Sample Group: 603-0496 уу у таан тим бол үү. Түү ийтанжын айныны бол тааны ий, туучуу уулын байын болгон болгон болгон болгон уу уу у

Reported:

Apr 10, 1996

QUALITY CONTROL DATA REPORT

ANALYTE	Chromium	Nickel	Zinc	Lead	Cadmium	
Method:	EPA 6010					
Analyst:	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	
nstrument I.D.#:	MV-3	MV-3	MV-3	MV-3	MV-3	
Conc. Spiked:	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	

SEQUOIA ANALYTICAL, #1271

Project Manager

Please Note:



UNOCAL 76 St 40

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

Li 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200

B19 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 U East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200

404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9	600 LI
--	--------

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

Company Name:	Project Name: FORMER UNOCAL #5366- DUBLIN.
Address: 2401 STANWELL DR, #400	UNOCAL Project Manager: FD RALSTAN
City: CONCORD State: C(+ Zip Code: いしちの	O Release #:
Telephone: $602 - 5100$ FAX #: $681 - 0602$	Site #: 5366-7375 AMADOR VALLEY BIVD
Report To: KEL Sampler: HAIG KEVOK	K QC Data: Level D (Standard) Level C Level B Level A
Trumaround 10 Work Days 15 Work Days 1 3 Work Days	Drinking Water Analyses Requested
Ime: ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours ☐	Waste Water
CODE: Misc. Detect. Eval. Remed. Demol. Closure	
Client Date/Time Matrix # of Cont. Labora Sample I.D. Sampled Desc. Cont. Type Sampl	
1.WOSW1 3/8/96 SOIL 1 TUBE 60304	
2. W0 S W 2 1 60304	
3. OWS(5.5) 1 60304	98 2 2 2
4. OWS (10)	99 / / / /
5. H G0305	
6. H2 V V 1 V 60305	01 0 0 0
7.	## I2
8.	
9.	
10.	
Relinquished By: Sell Mark No. 181 Date: 3/8/96 Time: 181	
TO MAKE THE THE THE THE THE THE THE THE THE TH	Received By: Date: Time:
Relinquished By: Date: Time:	Received By: Date: Time:
Relinquished By: Date: Time;	Received By Laby Receiv
Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ic	e? ☐ 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 2) Was the report issued within the requested turnaround time? ☐ Yes ☐ N	s □ No If no, what analyses are still needed?
Approved by: Signature:	Company: Date:

, "	SEQL	JOIA ANALYTICA	L/UNOCAL	RELOG SHEET	54.03.157
CLIENT:	KEI	DATE	RELOG:	3/15/96	
PROJECT ID:	Unocal #5366, Dublin	DATE	_	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			arasia kan bara da kan bar Bara bara bara bara bara bara bara bara	
X TAT Change st	atus to: 10d				and the second s
	atus as of Day: 3/15/	'96 Time	- 4:36 PM		
X CHANGE ANALYSES			4.001101		
CHANGE ANALTSES	•				
Add Analyses	X				r
Cancel Analyses					
'					
Sequoia Project ID:	9603141				
Sample Number	Analyses				
6030496	8010, 8270, Cd, Cr	, Pb, Ni, Zn	6031	l6 1 2	
NA	NA				
NA	NA		•	 -	
NA	NA				
NA	NA				
NA	NA				
NA	NA				
NA	NA				
AMPLES ON HOLD Add analys	ses				
Sample Description	Analyses				
NA NA	NA NA				
NA	NA NA				
NA NA	NA				
NA	NA				
NA NA	NA				
NA NA	NA				
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NA			- -		
IVA	NA				
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ient Authorization (Perso	- 15 - 1 (m) \ = 1 \ 1	zarian			
contribution (i elac	n/Date/Time): Bob Ke	ezenan	3/15/96	4:36 PM	
oject Manager:	n/Date/Time): Bob Ke	ezeriari	3/15/96	4:36 PM	

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: