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KEI-P88-1203.R9
April 22, 1991

Unocal Corporation
2000 Crow Canyon Place, Suite 400
San Ramon, CA 94583

Attention: Mr. Rick Sisk

RE: Ground Water Sampling Study
Unocal Service Station #3135
845 - 66th Avenue
Oakland, California

Dear Mr. Sisk:

This report presents the results of the ground water sampling study at the referenced site by Kaprealian Engineering, Inc. (KEI), per proposal KEI-P88-1203.P3 dated October 9, 1990. This report covers the work performed by CHIPS Environmental Consultants, Inc. (CEC) in February, 1991.

SITE DESCRIPTION AND BACKGROUND

The subject site is presently used as a gasoline station. The vicinity of the site is characterized by gently sloping, southwest trending topography, and is located approximately 3,400 feet northeast of the present shoreline of San Leandro Bay and approximately 500 feet northwest of Lion Creek. A Location Map, Site Vicinity Map, and Site Plans are attached to this report.

KEI's work at the site began on December 8, 1988 during modifications to the pump island located along San Leandro Street. Three soil samples were collected from undisturbed soil at depths ranging from 2 to 3 feet. The samples were analyzed by Sequoia Analytical Laboratory in Redwood City, California, for total petroleum hydrocarbons (TPH) as gasoline, and benzene, toluene, xylenes and ethylbenzene (BTX&E). Analytical results of the soil samples collected beneath the pump island indicated non-detectable levels of all constituents for all three samples. This work was previously presented in KEI's report (KEI-J88-1203.R1) dated December 16, 1988.

KEI returned to the site on November 29, 1989 when two 10,000 gallon underground fuel storage tanks, and one 280 gallon waste oil tank were removed from the site. The gasoline tanks and the waste oil tank were made of steel and no apparent holes or cracks were observed in any of the tanks.

Water was initially encountered in the fuel tank pit at a depth of approximately 10.5 feet, thus prohibiting the collection of any soil samples from immediately beneath the tanks. Six soil samples, labeled SW1 through SW6, were collected from the sidewalls of the fuel tank pit approximately 18 to 30-inches above the water table. One soil sample, labeled WO1, was collected from beneath the waste oil tank at a depth of 8.5 feet. The area beneath the waste oil tank was then excavated to ground water and two sidewall soil samples, labeled SWA and SWB, were collected from the waste oil tank pit sidewalls approximately 12-inches above the water table. Sample point locations are as shown on the attached Site Plan, Figure 2.

All soil samples were analyzed by Sequoia Analytical Laboratory in Redwood City, California. All of the fuel tank pit sidewall samples were analyzed for TPH as gasoline and BTX&E. Analytical results of the samples collected from the fuel tank pit showed TPH as gasoline levels ranging from non-detectable to 32 ppm, with benzene levels ranging from non-detectable to 1.2 ppm. The waste oil tank bottom and sidewall samples were analyzed for TPH as gasoline, BTX&E, TPH as diesel, total oil and grease (TOG), EPA method 8010 constituents, and the metals - cadmium, chromium, lead and zinc. Analytical results of the waste oil pit soil samples indicated less than 50 ppm of TOG, non-detectable levels of BTX&E, TPH as diesel and EPA method 8010 constituents, and less than 5.0 ppm of TPH as gasoline for all three samples. Metals concentrations were as indicated in Table 6.

KEI collected 11 pipe trench samples, labeled D1 through D6 and P1 through P5, at depths ranging from 3.5 to 6 feet on November 29, and December 5 & 29, 1989. Upon review of the analytical results for sample P2, KEI returned to the site on January 9, 1990, to collect additional soil samples. Following the trench excavation to a depth of 12 feet, one sample, labeled P2(12), was collected at a depth of 12 feet, and two samples, labeled SWP2E and SWP2W, were collected at a depth of 11 feet from the easterly and westerly sidewalls of the trench adjacent to sample point location P2(12). KEI completed the pipe trench sampling on January 10, 1990 when two samples, labeled P6 and P7, were collected at depths of 3 and 4 feet, respectively. Pipe trench sample point locations are as shown on the attached Site Plan, Figure 3. Analytical results of soil samples collected from the pipe trench indicated TPH as gasoline levels ranging from non-detectable to 15 ppm, with non-detectable to 0.13 ppm benzene for all samples except sample P2, which showed TPH as gasoline at 3,800 ppm and benzene at 6.1 ppm. Following the additional excavation in the area of sample point P2, analytical results of samples P2(12), SWP2E and SWP2W indicated non-detectable levels of TPH as gasoline and benzene for samples

P2(12) and SWP2W, while sample SWP2E showed TPH as gasoline at 20 ppm with non-detectable levels of benzene. Analytical results of the soil samples are summarized in Table 6.

After fuel tank pit soil sampling was completed, approximately 5,000 gallons of ground water was pumped from the fuel tank pit. On December 5, 1989, one water sample, labeled W1, was collected from the fuel tank pit. The water sample was analyzed for TPH as gasoline, BTX&E and EPA method 8010 constituents. Analytical results of the water sample collected from the fuel tank pit indicated 7,900 ppb of TPH as gasoline, 850 ppb of benzene, and non-detectable levels of EPA method 8010 constituents. Analytical results of the water sample are summarized in Table 7. The details of the soil and water sampling activities are presented in KEI's report (KEI-J88-1203.R2) dated January 15, 1990.

Based on the analytical results and in accordance with the guidelines established by the Regional Water Quality Control Board (RWQCB), KEI recommended the installation of three monitoring wells at the site to begin to define the extent of the soil and ground water contamination, and to determine the ground water flow direction.

On April 26 & 27, 1990, three two-inch diameter monitoring wells, designated as MW1, MW2 and MW3, were installed at the site. During drilling, an attempt was made to install MW2 near the pump island, however, drill bit refusal was encountered, and MW2 was installed at the modified location indicated on the attached Site Plan, Figure 1. The earlier attempts to install well MW2 resulted in the drilling of two shallow exploratory borings, designated as EB1 and EB2 on the attached Site Plan, Figure 1. The exploratory borings were backfilled to the surface with neat cement.

The three monitoring wells were drilled and completed to total depths ranging from 22 to 23 feet. The exploratory borings were drilled and/or sampled to depths of 8.5 and 10.5 feet. Ground water was encountered at depths ranging from 9.5 to 14.5 feet beneath the surface during drilling. The wells were developed on May 3 and 4, 1990, and initially sampled on May 11, 1990.

Water and selected soil samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California, for TPH as gasoline, and BTX&E. In addition, sample EB2(9), collected from boring EB2, was analyzed for TPH as diesel and TOG.

Analytical results of the soil samples, collected from the borings for monitoring wells (MW1 and MW3), indicated non-detectable levels of TPH as gasoline in all soil samples. Analytical results of the soil samples, collected from the boring for monitoring well MW2, indicated levels of TPH as gasoline ranging from 2.2 ppm to 6.8 ppm. However, analytical results of the soil samples collected from boring EB2 indicated levels of TPH as gasoline ranging from 2,400 ppm to 12,000 ppm. In sample EB2(9), TPH as diesel was detected at 1,400 ppm, and TOG at 7,000 ppm. Benzene was detected in all soil samples collected from MW1, MW2 and MW3, except for samples MW2(10) and MW2(12), at levels ranging from 0.0075 ppm to 0.012 ppm. However, benzene was detected in samples EB2(7) and EB2(9) at concentrations of 5.0 ppm and 84 ppm, respectively.

Analytical results of the ground water samples, collected from monitoring wells MW1 and MW2, indicated levels of TPH as gasoline at 22,000 ppb and 65,000 ppb, respectively. Benzene was detected in samples MW1 and MW2, at levels of 590 ppb and 3,300 ppb, respectively. Analytical results of the ground water sample collected from MW3 showed non-detectable levels of all constituents analyzed. Results of the soil analyses are summarized in Table 5, and the water analyses in Table 3.

Based on the analytical results, KEI recommended implementation of a monthly monitoring and quarterly sampling program. In addition, KEI recommended the installation of three additional monitoring wells to further define the extent of ground water contamination. Also, KEI recommended additional soil excavation be conducted in the vicinity of borings EB1 and EB2 because of the level of the soil contamination detected. Details of the subsurface exploration and monitoring well installation activities are summarized in KEI's report (KEI-P88-1203.R7) dated May 31, 1990.

On August 14, 1990, three additional two-inch diameter monitoring wells (designated as MW4, MW5 and MW6 on the attached Site Plan, Figure 1) were installed at the site. The three wells were each drilled and completed to a total depth of 26 feet except for well MW4, which was completed at a depth of 25 feet. Ground water was encountered at depths ranging from 13.5 to 16.5 feet beneath the surface during drilling. The new wells were developed on August 21, 1990, and all wells were sampled on August 28, 1990. Water from all wells and selected soil samples from MW4, MW5 and MW6 were analyzed at Sequoia Analytical Laboratory in Concord, California, for TPH as gasoline and BTX&E. In addition, soil samples collected from the boring for monitoring well MW6 and water samples collected from monitoring well MW2 and MW6 were analyzed for TPH as diesel and TOG.

The analytical results of the soil samples collected from the borings for wells MW4, MW5 and MW6 showed non-detectable levels of TPH as gasoline and benzene in all samples analyzed, except for MW6(10), MW6(12.5) and MW6(15.5), which showed levels of TPH as gasoline at 18 ppm, 160 ppm and 2.5 ppm, respectively, and levels of benzene at 0.24 ppm, 3.4 ppm and 0.43 ppm, respectively. In addition, TPH as diesel was detected only in samples MW6(10) and MW6(12.5), at levels of 5.1 ppm and 93 ppm, respectively. Also, TOG was detected in sample MW6(12.5) at a level of 200 ppm.

The analytical results of the water samples collected from monitoring wells MW3 and MW5 indicated non-detectable levels of TPH as gasoline and benzene. Levels of TPH as gasoline and benzene were detected in wells MW1, MW2, MW4 and MW6 at concentrations ranging from 1,700 ppb to 62,000 ppb for TPH as gasoline, with benzene concentrations ranging from 140 ppb to 2,600 ppb. Also, TPH as diesel was detected in MW2 and MW6 at levels of 3,100 ppb and 1,000 ppb, respectively. Results of the soil analyses are summarized in Table 4, and the water analyses in Table 3. Based on these results, KEI recommended that a Hydropunch study be performed at the site and its vicinity to aid in determining the extent of ground water contamination in the vicinity of the site. Also, KEI proposed that the possible influence of tidal action on the ground water table gradient be evaluated. For further details, refer to KEI's report (KEI-P88-1203.R8) dated September 24, 1990.

HYDROLOGY AND GEOLOGY

Based on the water level data gathered during the second quarter of monitoring, ground water flow direction appeared to be generally toward the north-northeast on February 21, 1991. The measured depth to ground water at the site on February 21, 1991 ranged between 8.47 and 11.76 feet. The monitoring data collected during the second quarter is presented in Table 2.

In response to a letter dated August 1, 1990 from the Alameda County Health Care Services Agency, KEI evaluated the effects of tidal action on ground water levels at the subject site. On January 18, 1991, a representative of KEI was at the site for an approximate seven-hour period to monitor any changes in the ground water table elevation which might be related to tidal effects. All six monitoring wells were monitored 13 times for depth to water. All monitoring data is presented as Table 2a. The water table continuously decreased in each well during the seven hour monitoring period, from 0.09 feet to 0.11 feet, which represents only a 0.02 feet differential. The constant decrease in the water table at the site may be related to tidal action; however, the near uniform decrease in the wells indicates that the ground water flow

were they at high tide when they started?

direction does not change appreciably in response to any tidal actions and therefore KEI recommended that no further study be conducted at the site in relation to the possible effects of tidal actions.

Based on review of regional geologic maps (U.S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning", 1979), the subject site is underlain by relatively unconsolidated alluvial deposits described as fine-grained alluvium (Qhaf) typically consisting of clay and silt materials. In addition, the site is closely adjacent to a mapped geologic contact with Bay Mud (Qhbm) to the west.

Based on inspection of the tank pit excavation, the site is underlain by artificial fill materials to a depth of about 7.5 feet below grade. The fill materials are underlain by about 1.5 feet of adobe topsoil materials, which appears to inturn be underlain by light brown sandy silt containing a trace of fine gravel and light brown very fine-grained sand.

The results of our subsurface study from the borings for MW1, MW2 and MW3 indicated the site is underlain by artificial fill materials to depths of about 7 to 8 feet. Locally, the fill materials extend to depths of at least 8.5 and 10.5 feet in the vicinity of borings EB1 and EB2 (maximum depth explored). The fill materials are generally underlain by a 1.5 to 2 foot thick bed of silt which is inturn underlain by a persistent coarse-grained sequence of clayey to sandy gravel interbedded with clayey to silty sand to the maximum depth explored (23 feet).

The results of our most recent subsurface study from the borings for MW4, MW5 and MW6 indicated that the site is underlain by artificial fill materials to depths below grade of about 2.5 to 4.4 feet. The fill materials are inturn underlain by silty clay materials to depths below grade of about 8 to 12.7 feet. This silty clay zone is inturn underlain by a coarse-grained zone composed of clayey gravel and/or clayey sand materials extending to depths below grade of about 12.1 to 14.3 feet. This coarse-grained zone is inturn underlain by a clayey silt bed varying from about 1 to 3 feet in thickness and extending to depths below grade of about 14.2 to 14.8 feet in wells MW4 and MW5, and about 17.3 feet in MW6. The ground water table encountered during drilling activities was detected within or immediately below the silt bed. This relatively thin clayey silt bed is underlain by a generally thick sequence of silty to clayey sand and gravel lenses extending to the maximum depth explored (26 feet), except in the boring for well MW5 where a second clayey silt bed was encountered at depths below grade of

about 15.6 to 19.5 feet and where a clay bed was encountered at approximately 24 feet extending to the total depth drilled (26 feet).

RECENT FIELD ACTIVITIES - GROUND WATER SAMPLING STUDY

On January 19 and 20, 1991, CEC of Sunnyvale, California, conducted a ground water sampling study under the direction of KEI. Sampling methods and the analytical results are presented in the attached CEC report dated February, 1991, and are summarized below.

Water Sampling Locations and Methods

Ground water samples were collected from seven locations, designated as P1 through P7 on the attached Site Vicinity Map. The ground water samples were collected from depths of about 14 to 17 feet below grade.

Each temporary sampling probe was constructed of one-inch diameter galvanized pipe, and was driven into the soil using an air actuated percussion driver. A 1-1/2 inch pilot probe was driven to a depth approximately 1 foot above the anticipated ground water level. The pilot probe was removed and a sampling probe was inserted into the pilot hole and driven an additional 3 to 4 feet, so that the temporary sampling probe was situated below ground water level. Water was extracted using a clean glass or plastic micro-bailer. Samples were stored in 20 or 40 ml VOA vials and 250 ml bottles with zero headspace. Samples were sealed and stored in a cooler on ice until delivery to the state certified laboratory. All wells were removed after sample collection, and the holes were grouted with a bentonite cement mixture.

ANALYTICAL RESULTS

Ground water samples collected from the probe holes were analyzed at CEC's laboratory in Sunnyvale, California, and were accompanied by properly executed Chain of Custody documentation. The samples were analyzed for TPH as diesel using EPA method 3550, TPH as gasoline using EPA method 5030 in conjunction with modified 8015, and BTX&E using EPA method 8020.

The analytical results of the water samples collected from the sample probes P2 through P7 show non-detectable levels of TPH as gasoline, BTX&E and TPH as diesel, except for sample P2 which showed 0.6 ppb of xylenes. The analytical results of the water sample collected from probe P1 indicates a level of TPH as gasoline at 92 ppb, a level of benzene at 0.8 ppb, and TPH as diesel was

non-detectable. Analytical results of the ground water samples are summarized in Table 1. Laboratory data sheets and Chain of Custody documentation are included in the attached CEC report.

DISCUSSION AND RECOMMENDATIONS

The analytical results of the ground water sampling studies indicate that the extent of the ground water contamination lies between the boundaries of the subject service station site and the contamination limits defined by probes P3 through P7 in the recent Hydropunch study, as shown on the attached Site Vicinity Map. Based on the analytical results of ground water samples collected from monitoring wells MW1 through MW6 on February 21, 1991 (see the attached Site Plan, Figure 1a), KEI recommends the installation of three off-site monitoring wells to verify the non-detectable levels found downgradient in the Hydropunch study, and one on-site monitoring well in the vicinity of probe P1 to verify the levels of contamination detected. Our work plan/proposal is attached for your review and consideration. KEI also proposes to investigate the adjacent property for possible sources of off-site contamination.

The subject site is currently in the process of extensive soil excavation at the eastern corner of the station. A report documenting the excavation activities will be prepared upon completion of the soil excavation.

DISTRIBUTION

A copy of this report should be sent to Ms. Cynthia Chapman of the Alameda County Health Care Services, and to the RWQCB, San Francisco Bay Region.

LIMITATIONS

Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

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

If you have any questions regarding this report, please do not hesitate to call me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

Wade P. Weston
Geologist

Thomas J. Berkins
Senior Environmental Engineer

Don R. Braun
Certified Engineering Geologist

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

Timothy R. Ross
Project Manager

\bam:jad

Attachments: Tables 1 through 7
Location Map
Site Vicinity Map
Site Plans - Figures 1, 1a, 2 & 3
CEC Report dated 2/91
Work Plan/Proposal

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TABLE 1

SUMMARY OF LABORATORY ANALYSES
WATER

(Collected on January 9 through 11, 1991 by CEC)

Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
P1	15	ND	90.0	0.8	0.6	2.4	0.5
P2	15	ND	ND	ND	ND	0.6	ND
P3	16	ND	ND	ND	ND	ND	ND
P4	17	ND	ND	ND	ND	ND	ND
P5	14	ND	ND	ND	ND	ND	ND
P6	15	ND	ND	ND	ND	ND	ND
P7	14	ND	ND	ND	ND	ND	ND
Detection Limits		1,000	50	0.5	0.5	0.5	0.5

ND = Non-detectable.

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

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TABLE 2

SUMMARY OF MONITORING DATA

Date	Well No.	Ground Water Elevation (feet)	Depth to Water (feet)	Product Thickness	Sheen	Water Bailed (gallons)
2/21/91	MW1	-6.40	11.58	0	None	55
	MW2	-6.23	10.06	0	None	55
	MW3	-5.17	8.47	0	None	15
	MW4	-6.49	11.76	0	None	55
	MW5	-6.35	10.96	0	None	15
	MW6	-6.24	10.55	0	None	55
1/21/91	MW1	-7.33	12.51	0	None	0
	MW2	-7.26	11.09	0	None	55
	MW3	-6.09	9.39	0	None	0
	MW4	-7.38	12.65	0	None	55
	MW5	-7.33	11.94	0	None	0
	MW6	-7.32	11.63	0	None	55
12/21/90	MW1	-7.48	12.66	0	None	55
	MW2	-7.27	11.10	0	None	55
	MW3	-6.59	9.89	0	None	0
	MW4	-7.59	12.86	0	None	55
	MW5	-7.43	12.04	0	None	0
	MW6	-7.29	11.60	0	None	55

who did the surveying? what's their reasoning for negative elevation?

Well #	Surface Elevation* (feet)
MW1	5.18
MW2	3.83
MW3	3.30
MW4	5.27
MW5	4.61
MW6	4.31

Check well screening report

* Elevation of top of well covers surveyed to Mean Sea Level.

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TABLE 2a

SUMMARY OF MONITORING DATA

(Conducted on January 18, 1991)

Well #	Time	Ground Water Elevation (feet)	Depth to Water (feet)
MW1	9:55 a.m.	-7.27	12.45
	10:22	-7.27	12.45
	10:34	-7.27	12.45
	10:55	-7.25	12.43
	11:29	-7.24	12.42
	11:57	-7.23	12.41
	12:29 p.m.	-7.21	12.39
	1:04	-7.21	12.39
	1:27	-7.21	12.39
	1:58	-7.20	12.38
	2:29	-7.18	12.36
	4:36	-7.19	12.37
	5:01	-7.19	12.37
MW2	9:37 a.m.	-7.21	11.04
	10:08	-7.20	11.03
	10:25	-7.20	11.03
	10:46	-7.18	11.01
	11:20	-7.17	11.00
	11:49	-7.15	10.98
	12:23 p.m.	-7.14	10.97
	12:55	-7.13	10.96
	1:18	-7.14	10.97
	1:50	-7.12	10.95
	2:22	-7.11	10.94
	4:24	-7.10	10.93
	4:53	-7.10	10.93
MW3	9:34 a.m.	-6.13	9.43
	10:04	-6.12	9.42
	10:23	-6.11	9.41
	10:43	-6.11	9.41
	11:18	-6.09	9.39
	11:47	-6.08	9.38
	12:21 p.m.	-6.07	9.37
	12:53	-6.06	9.36
	1:16	-6.06	9.36
	1:48	-6.05	9.35
	2:20	-6.04	9.34
	4:21	-6.02	9.32
	4:51	-6.02	9.32

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TABLE 2a (Continued)

SUMMARY OF MONITORING DATA

(Conducted on January 18, 1991)

Well #	Time	Ground Water Elevation (feet)	Depth to Water (feet)
MW4	9:51	-7.31	12.58
	10:17	-7.31	12:58
	10:31	-7.31	12.58
	10:53	-7.30	12.57
	11:27	-7.28	12:55
	11:55	-7.27	12.54
	12:27 p.m.	-7.24	12.51
	1:01	-7.24	12.51
	1:25	-7.25	12.52
	1:56	-7.23	12.50
	2:28	-7.22	12.49
	4:34	-7.22	12.49
	4:59	-7.22	12.49
MW5	9:47 a.m.	-7.27	11.88
	10:14	-7.27	11.88
	10:29	-7.26	11.87
	10:50	-7.25	11.86
	11:25	-7.23	11.84
	11:53	-7.22	11.83
	12:25 p.m.	-7.20	11.81
	1:00	-7.20	11.81
	1:23	-7.20	11.81
	1:54	-7.19	11.80
	2:26	-7.17	11.78
	4:30	-7.17	11.78
	4:57	-7.17	11.78
MW6	9:42 a.m.	-7.24	11.55
	10:11	-7.23	11.54
	10:27	-7.22	11.53
	10:48	-7.21	11.52
	11:23	-7.19	11.50
	11:50	-7.18	11.49
	12:24 p.m.	-7.17	11.48
	12:57	-7.17	11.48
	1:21	-7.17	11.48
	1:53	-7.14	11.45
	2:23	-7.14	11.45
	4:26	-7.14	11.45
	4:55	-7.14	11.45

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TABLE 3

SUMMARY OF LABORATORY ANALYSES
WATER

Sample Number	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	TOG
			(Collected on February 21, 1991)				
MW1	690	26,000	280	39	1,900	1,200	--
MW2	7,000	3,400	160	61	490	200	ND
MW3	--	ND	ND	ND	0.64	ND	--
MW4	4,100	33,000	210	21	12,000	3,800	--
MW5	--	56	ND	ND	4.7	ND	--
MW6	160	750	77	14	140	23	ND
MWD**	--	740	74	12	140	33	--
			(Collected on November 26, 1990)				
MW1	--	2,900	160	2.3	320	330	--
MW2	3,800	15,000	1,600	450	2,100	1,100	ND
MW3	--	ND	ND	ND	ND	ND	--
MW4	--	49,000	360	36	11,000	3,800	--
MW5	--	ND	ND	ND	ND	ND	--
MW6	320	4,800	1,000	200	650	340	ND
"MW7"**	--	4,000	800	120	440	250	--
			(Collected on August 28, 1990)				
MW1	--	1,700	140	1.4	150	180	--
MW2	3,100	27,000	2,600	1,300	3,000	1,900	ND
MW3	--	ND	ND	ND	0.70	ND	--
MW4	--	62,000	810	72	4,600	4,400	--
MW5	--	ND	ND	ND	1.2	ND	--
MW6	1,000	12,000	1,700	1,400	2,100	230	16
"MW7"*	--	2,600	180	3.0	270	810	--
			(Collected on May 11, 1990)				
MW1	--	22,000	590	42	3,600	1,200	--
MW2	--	65,000	3,300	3,300	12,000	4,100	--
MW3	--	ND	ND	ND	ND	ND	--
Detection Limits	50	30	0.30	0.30	0.3	0.3	5.0

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TABLE 3 (Continued)

SUMMARY OF LABORATORY ANALYSES
WATER

ND = Non-detectable.

-- Indicates analysis not performed.

* "MW7" is a duplicate sample from MW1.

** "MW7" and MWD are duplicate samples from MW6.

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

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TABLE 4

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on August 14, 1990)

Sample Number	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	TOG
MW4(14.5)	14.5	--	ND	ND	ND	ND	ND	--
MW5(13)	13	--	ND	ND	0.010	ND	ND	--
MW6(5)	5	ND	ND	ND	0.042	ND	ND	ND
MW6(10)		5.1	18	0.26	0.22	1.2	0.34	ND
MW6(12.5)	12.5	93	160	3.4	12	3.6	20	200
MW6(15.5)	15.5	ND	2.5	0.43	0.41	0.12	0.50	ND
Detection Limits		1.0	1.0	0.0050	0.0050	0.0050	0.0050	30

-- Indicates analysis not performed.

ND = Non-detectable.

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

KEI-P88-1203.R9
April 22, 1991

TABLE 5

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on April 26 & 27, 1990)

Sample Number	Depth (feet)	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
MW1(5)	5	ND	0.012	0.16	ND	ND
MW1(10)	10	ND	0.0094	0.024	ND	ND
MW1(14)	14	ND	0.0075	0.031	ND	ND
MW2(5)	5	2.4	0.075	0.0071	ND	ND
MW2(10)	10	2.2	ND	0.017	0.018	0.0088
MW2(12)	12	6.8	ND	0.028	0.015	0.10
MW3(5)	5	ND	0.0094	0.048	ND	ND
MW3(10)	10	ND	0.0088	0.015	ND	ND
EB2(7)	7	2,400	5.0	16	230	62
EB2(9)*	9	12,000	84	12	860	360
Detection Limits		1.0	0.0050	0.0050	0.0050	0.0050

ND = Non-detectable.

* TPH as diesel was 1,400 ppm, and TOG was 7,000 ppm.

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

KEI-P88-1203.R9
April 22, 1991

TABLE 6

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on November 29, and
December 5 & 29, 1989)

Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
SW1	9.0	--	1.6	ND	ND	ND	ND
SW2	9.0	--	3.8	ND	ND	ND	ND
SW3	9.0	--	5.6	ND	ND	2.3	0.42
SW4	9.0	--	32	1.2	ND	1.0	2.1
SW5	9.0	--	4.8	0.20	ND	0.11	ND
SW6	8.0	--	ND	ND	ND	ND	ND
D1	3.5	--	ND	ND	ND	ND	ND
D2	3.5	--	1.5	0.08	ND	ND	ND
D3	3.5	--	6.6	0.14	ND	0.31	ND
D4	3.5	--	7.4	0.11	ND	0.1	ND
D5	3.5	--	1.9	ND	ND	ND	ND
D6	3.5	--	2.0	ND	0.17	0.25	ND
P1	6.0	--	15	0.086	ND	8.5	0.18
P2	5.5	--	3,800	6.1	290	750	140
P2(12)	12.0	--	ND	ND	ND	ND	ND
P3	5.0	--	11	0.13	ND	1.3	0.18
P4	4.5	--	1.4	ND	ND	0.23	ND
P5	4.5	--	ND	ND	ND	ND	ND
P6	3.0	--	ND	ND	ND	ND	ND
P7	4.0	--	ND	ND	ND	ND	ND
SWP2E	11.0	--	20	ND	0.16	3.1	0.50
SWP2W	11.0	--	ND	ND	ND	ND	ND
WO1*	8.5	ND	1.6	ND	ND	ND	ND

KEI-P88-1203.R9
April 22, 1991

TABLE 6 (Continued)

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on November 29, and
December 5 & 29, 1989)

Sample	Depth (feet)	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene
SWA**	9.5	ND	2.1	ND	ND	ND	ND
SWB***	9.5	ND	3.9	ND	ND	ND	ND
Detection Limits		1.0	1.0	0.05	0.1	0.1	0.1

* TOG was <50 ppm, and all 8010 constituents were non-detectable. Metal concentrations were as follows: cadmium non-detectable, chromium 20 ppm, lead 75 ppm, and zinc 65 ppm.

** TOG was <50 ppm, and all 8010 constituents were non-detectable. Metals concentrations were as follows: cadmium non-detectable, chromium 20 ppm, lead 5.9 ppm and zinc 44 ppm.

*** TOG was <50 ppm and all 8010 constituents were non-detectable. Metals concentrations were as follows: cadmium non-detectable, chromium 15 ppm, lead 5.0 ppm, an zinc 39 ppm.

-- Indicates analysis not performed.

ND = Non-detectable.

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

KEI-P88-1203.R9
April 22, 1991

TABLE 7

SUMMARY OF LABORATORY ANALYSES
WATER

(Collected on December 5, 1989)

Sample #	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethylbenzene
W1	7,900	850	150	720	ND
Detection Limits	30.0	0.3	0.3	0.3	0.3

NOTE: All EPA method 8010 constituents were non-detectable.

ND = Non-detectable.

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

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Consulting Engineers
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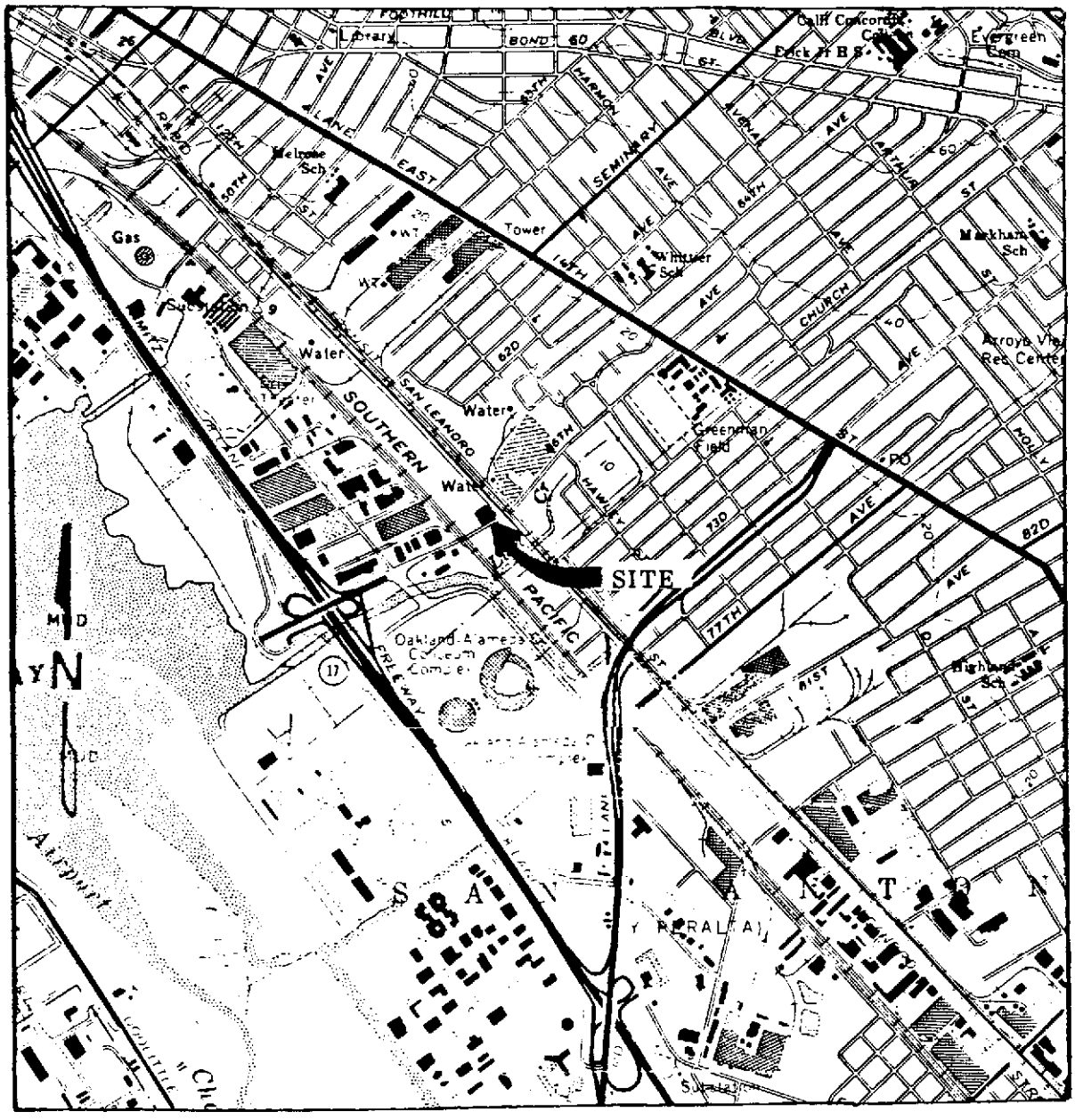
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581



LOCATION MAP

Unocal S/S #3135
845-66th Avenue
Oakland, CA

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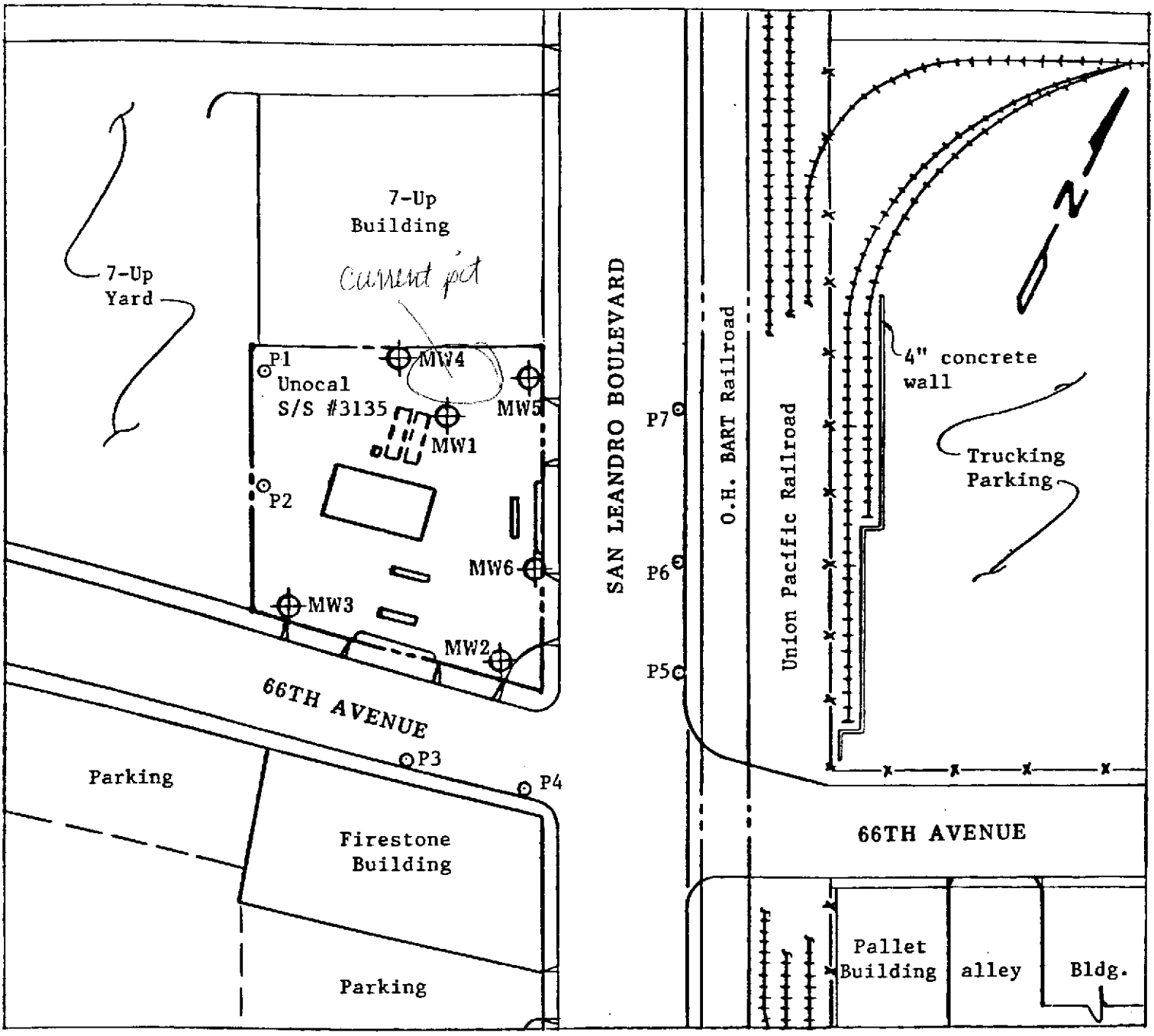

SITE VICINITY MAP

0 80 160
Approx. scale feet

LEGEND

⊕ Monitoring well

⊙ Ground water sample point location

Unocal S/S #3135
845 - 66th Avenue
Oakland, CA

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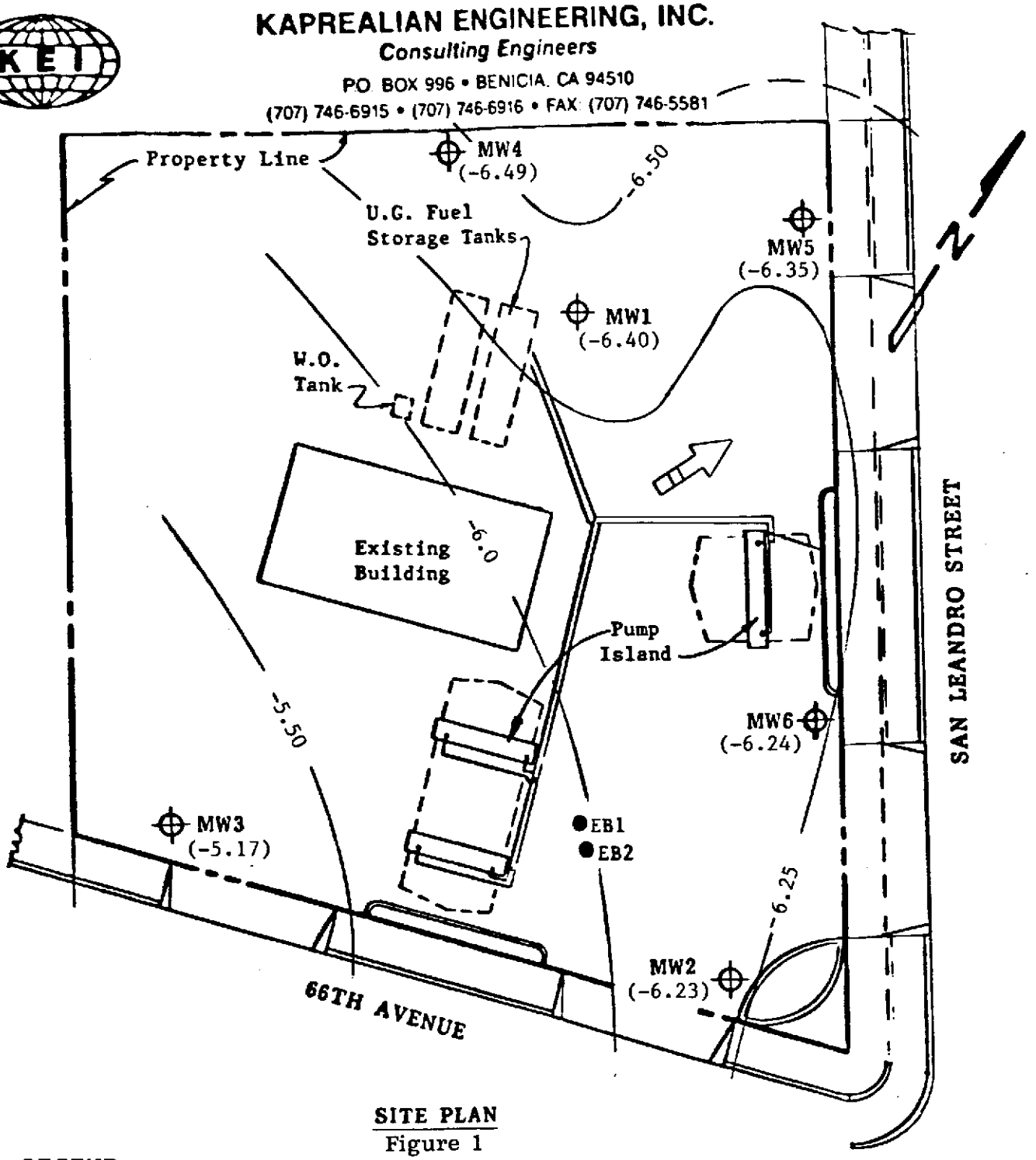

SITE PLAN
Figure 1

LEGEND

- ⊕ Monitoring Well
- ● Exploratory Boring
- ( ) Ground Water Elevation in feet above Mean Sea Level on 2/21/91
- Direction of ground water flow
- ——— Contours of ground water surface in feet above Mean Sea Level

Unocal Service Station #3135
845 - 66th Avenue
Oakland, California

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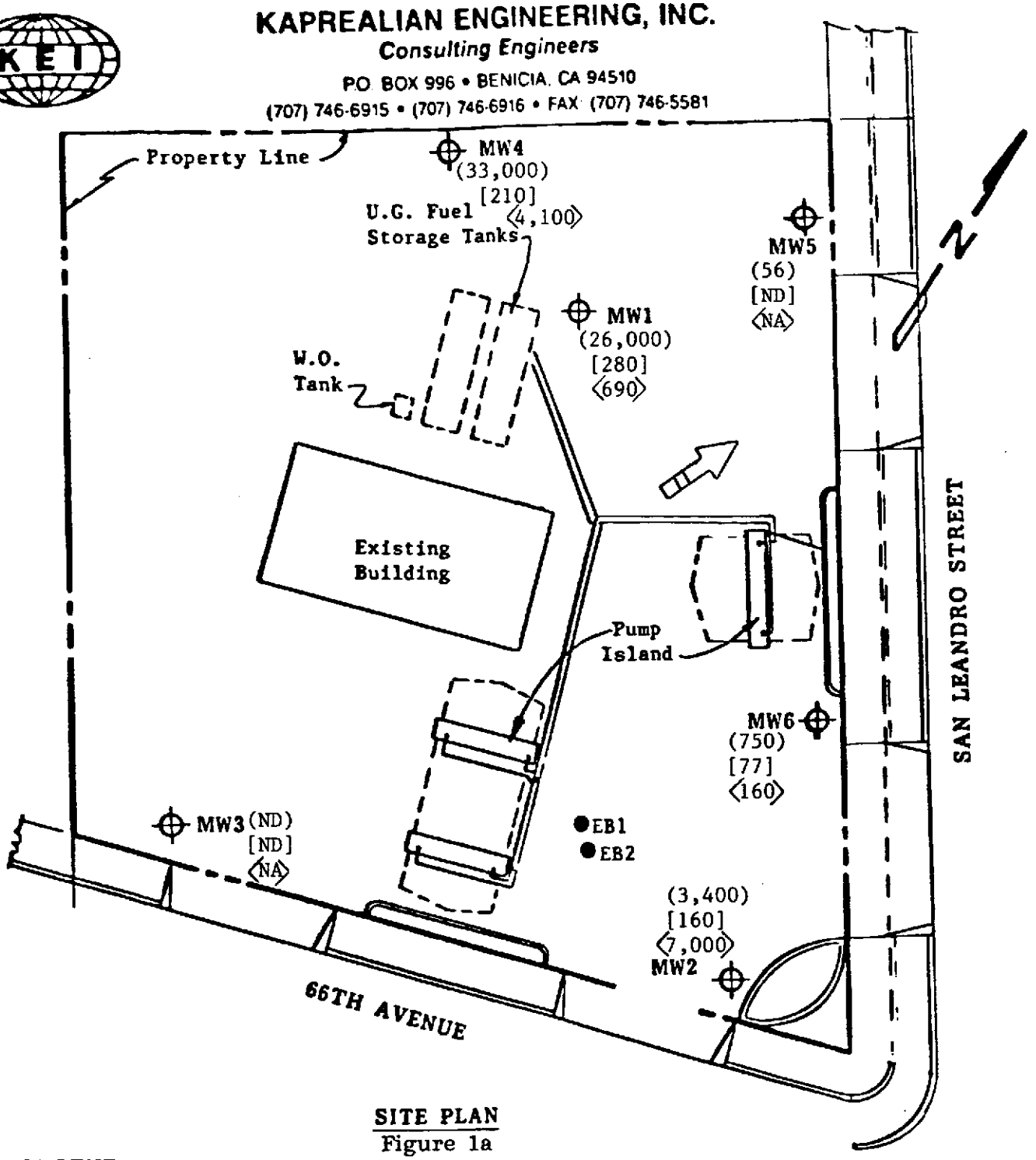

SITE PLAN
Figure 1a

LEGEND

- Monitoring Well
- Exploratory Boring
- ( ) Concentration of TPH as gasoline (ppb) on 2/21/91
- [ ] Concentration of benzene (ppb) on 2/21/91
- ⟨ ⟩ Concentration of TPH as diesel (ppb) on 2/21/91
- Direction of ground water flow
- ND = Non-detectable NA = Not analyzed

0 30 60
Approx. Scale feet

Unocal Service Station #3135
845 - 66th Avenue
Oakland, California

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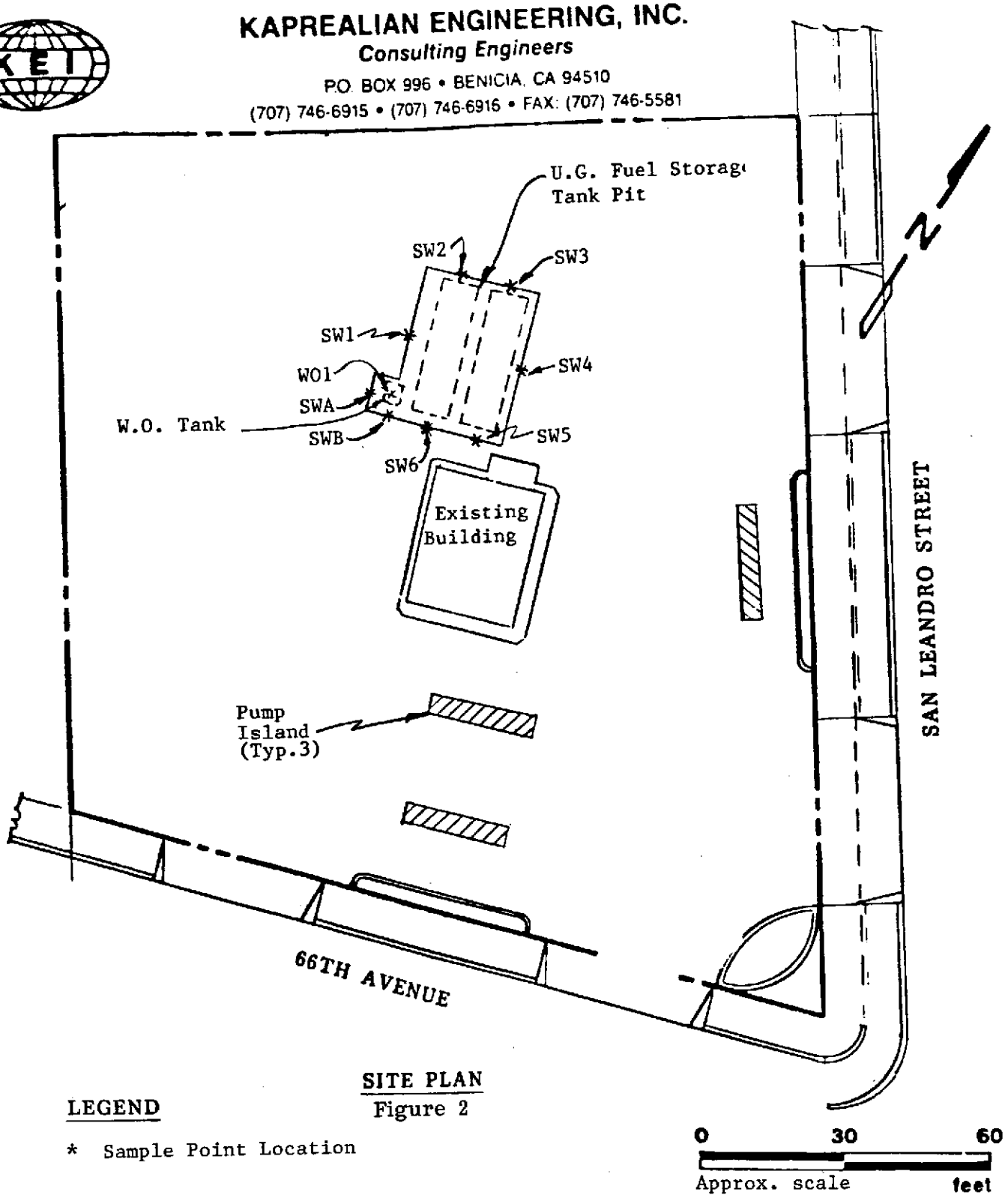

SITE PLAN
Figure 2

LEGEND

* Sample Point Location

Unocal S/S #3135
845 - 66th Avenue
Oakland, CA

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Consulting Engineers
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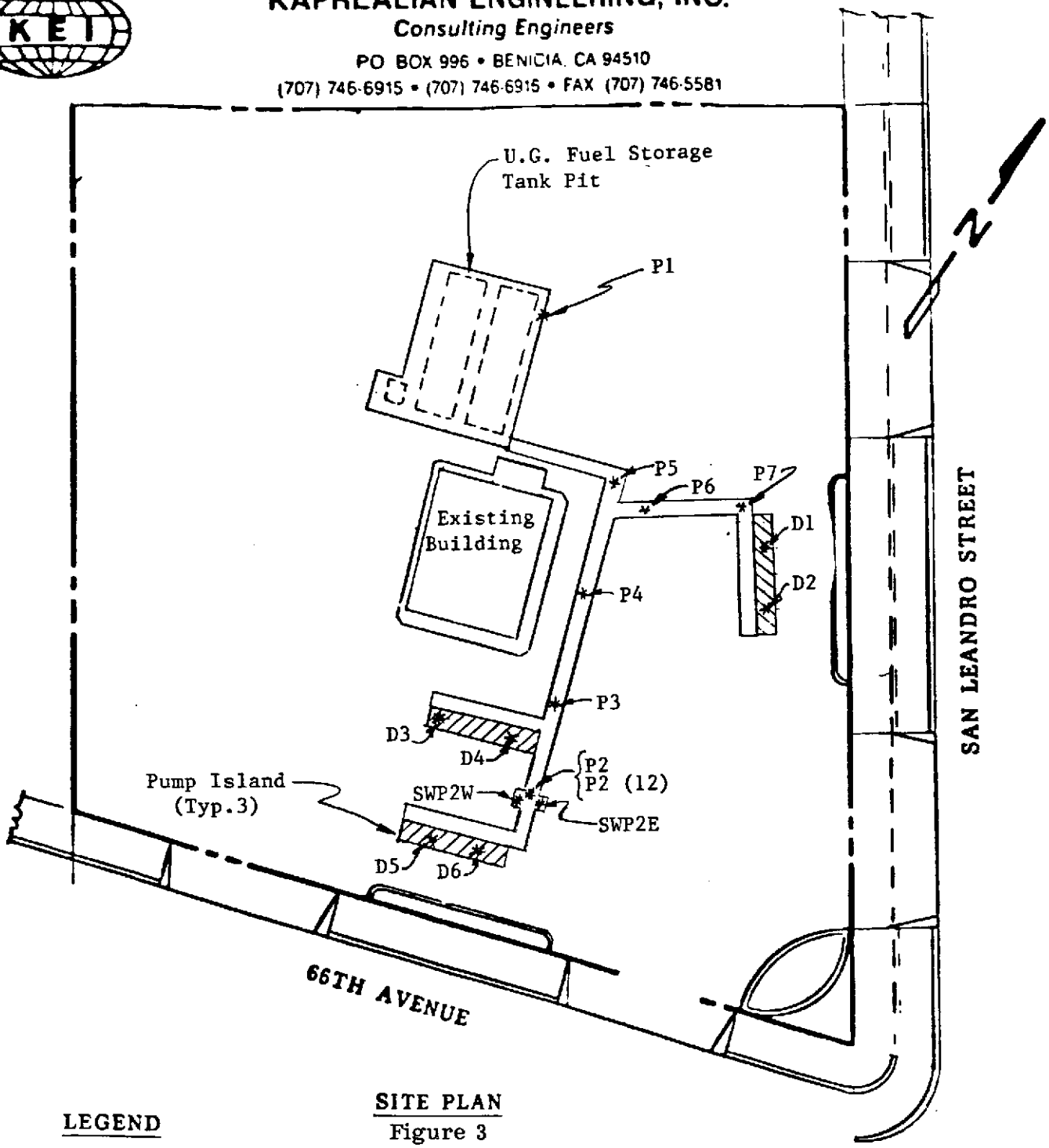

SITE PLAN
Figure 3

LEGEND

* Sample Point Location

Unocal S/S #3135
845 66th Avenue
Oakland, CA

CHIPS
Environmental
Consultants, Inc.

718 E. Evelyn Avenue
Sunnyvale, CA 94086

(408)736-1380
FAX (408)736-0887

DSK22 1127KP.DOC

GROUND WATER SAMPLING AT UNOCAL STATION #3135 OAKLAND, CALIFORNIA

Prepared by:
CHIPS Environmental Consultants, Inc.
718 East Evelyn Avenue
Sunnyvale, California 94086

Principal Investigators:
K. Porter
B. McEvers

Prepared for:
Kaprealian Engineering, Inc.
P.O. Box 996
Benicia, CA 94510

Project Officer: Wade P Weston
Project Number: 1127

FEBRUARY 91

DISCLAIMER

This report was furnished to Kaprealian Engineering, Inc. by CHIPS Environmental Consultants, Inc. under project number 1127. The contents and results were produced solely for the use of Kaprealian Engineering, Inc.

Any and all data generated by this program is considered confidential and shall not be released to a third party without the written consent of an authorized representative of Kaprealian Engineering, Inc.

ABSTRACT

The intent of this program was to obtain groundwater samples from the Unocal Station #3135 property located at 845 66th Avenue at San Leandro Blvd in Oakland, California. The sampling was performed on 2/19 and 2/20/91 at points selected by Kaprealian Engineering, Inc.

Groundwater sampling involved installation of 7 temporary sampling conduits into the saturated zone of the aquifer. All water samples were analyzed for TPH as Diesel, TPH as Gasoline, Benzene, Toluene, Ethyl Benzene and Xylenes.

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CONTENTS

Section 1

Introduction

At the request of Kaprealian Engineering, Inc., CHIPS Environmental Consultants, Inc. performed a ground water sampling on and around the property located at 845 66th Ave. at San Leandro Blvd. in Oakland, California on 2/19 and 2/20/91. All groundwater samples were analyzed for Gas BTEX using a Perkin Elmer 3920B gas chromatograph equipped with both an FID and a PID. Diesel analysis was performed using a Hewlett Packard 5890 gas chromatograph.

A brief description of the sampling methods can be found in Section 2. All ground water data results can be found in Section 3. Analysis sheets are in section 4. Quality assurance and quality control efforts are summarized in Section 5. A map of the subject facility is in section 6.

Section 2

Sampling Procedures

1) Groundwater sampling involves hydropunch methodology, which is as follows:

a) A galvanized pilot of appropriate diameter and length is driven to the area just above the aquifer using a percussion hammer or pneumatic driver.

b) A temporary groundwater sampling conduit is installed in the pilot hole and driven to the saturated zone of the aquifer, which in this case was 14' - 17' below grade. The conduit is a galvanized pipe with a forged end point and perforations running approximately the last 2'-3' of its' length.

c) Disposable Teflon and glass micro-bailers are used at each well to capture groundwater samples. Samples were stored in zero headspace 20 ml, 40 ml VOA vials and 250 ml bottles which were chilled for transport to Chips Environmental Consultants Laboratory (DHS certification #1418). Samples are identified using a standard three part label. Full chain of custody was maintained and remains on file.

d) Once the sampling is completed the temporary conduit is removed and the remaining hole is grouted with a bentonite clay slurry.

Section 3

Results* Summary

Probe	Depth**	Diesel	Gasoline	Benzene	Toluene	Ethyl Benzene	Xylenes
1	15'	ND	0.092	0.0008	0.0006	0.0005	0.0024
2	15'	ND	ND	ND	ND	ND	0.0006
3	16'	ND	ND	ND	ND	ND	ND
4	17'	ND	ND	ND	ND	ND	ND
5	14'	ND	ND	ND	ND	ND	ND
6	15'	ND	ND	ND	ND	ND	ND
7	14'	ND	ND	ND	ND	ND	ND

* Results reported in milligrams per liter (PPM).
** Below grade

Detection Limits, Water Sample Analysis

Diesel:	1.0 milligrams per liter (PPM)
Gasoline:	0.05 milligrams per liter (PPM)
Benzene:	0.0005 milligrams per liter (PPM)
Toluene:	0.0005 milligrams per liter (PPM)
Ethyl Benzene:	0.0005 milligrams per liter (PPM)
Xylenes:	0.0005 milligrams per liter (PPM)

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Section 4

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REPORT OF ANALYTICAL RESULTS
Cal DHS Certification # 1418

Sample Description: Water sample

Sample Integrity: Received sealed & chilled

Sample ID: P-1 CECI ID: 004367
Date Sampled: 2-19-91 CECI Project #: 1127
Date Received: 2-20-91
Date Analyzed: 2-22/25-91 (Gas BTEX)
2-27-91 (Diesel)

Method	Concentration Milligrams per Liter (PPM)	
	Conc. PPM	Det. Limit
EPA 3550		
DHS TPH as Diesel	ND	1.0
EPA 5030/8015 & 8020		
DHS TPH as Gasoline	0.09	0.05
Benzene	0.0008	0.0005
Toluene	0.0006	0.0005
Ethyl Benzene	0.0005	0.0005
Xylenes	0.0024	0.0005

Mark Chips: _____
Laboratory Director

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REPORT OF ANALYTICAL RESULTS
Cal DHS Certification # 1418

Sample Description: Water sample

Sample Integrity: Received sealed & chilled

Sample ID: P-2 CECI ID: 004366
Date Sampled: 2-19-91 CECI Project #: 1127
Date Received: 2-20-91
Date Analyzed: 2-22/25-91 (Gas BTEX)
2-27-91 (Diesel)

Method	Concentration Milligrams per Liter (PPM)	
	Conc. PPM	Det. Limit
EPA 3550		
DHS TPH as Diesel	ND	1.0
EPA 5030/8015 & 8020		
DHS TPH as Gasoline	ND	0.05
Benzene	ND	0.0005
Toluene	ND	0.0005
Ethyl Benzene	ND	0.0005
Xylenes	0.0006	0.0005

Mark Chips: _____
Laboratory Director

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REPORT OF ANALYTICAL RESULTS
Cal DHS Certification # 1418

Sample Description: Water sample

Sample Integrity: Received sealed & chilled

Sample ID: P-3 CECI ID: 004369
Date Sampled: 2-20-91 CECI Project #: 1127
Date Received: 2-20-91
Date Analyzed: 2-22/25-91 (Gas BTEX)
2-27-91 (Diesel)

Method	Concentration Milligrams per Liter (PPM)	
	Conc. PPM	Det. Limit
EPA 3550		
DHS TPH as Diesel	ND	1.0
EPA 5030/8015 & 8020		
DHS TPH as Gasoline	ND	0.05
Benzene	ND	0.0005
Toluene	ND	0.0005
Ethyl Benzene	ND	0.0005
Xylenes	ND	0.0005

Mark Chips: _____
Laboratory Director

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REPORT OF ANALYTICAL RESULTS
Cal DHS Certification # 1418

Sample Description: Water sample

Sample Integrity: Received sealed & chilled

Sample ID: P-4 CECI ID: 004310
Date Sampled: 2-20-91 CECI Project #: 1127
Date Received: 2-20-91
Date Analyzed: 2-22/25-91 (Gas BTEX)
2-27-91 (Diesel)

Method	Concentration Milligrams per Liter (PPM)	
	Conc. PPM	Det. Limit
EPA 3550		
DHS TPH as Diesel	ND	1.0
Duplicate	ND	
EPA 5030/8015 & 8020		
DHS TPH as Gasoline	ND	0.05
Duplicate	ND	
Benzene	ND	0.0005
Duplicate	ND	
Toluene	ND	0.0005
Duplicate	ND	
Ethyl Benzene	ND	0.0005
Duplicate	ND	
Xylenes	ND	0.0005
Duplicate	ND	

Mark Chips: _____
Laboratory Director

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REPORT OF ANALYTICAL RESULTS
Cal DHS Certification # 1418

Sample Description: Water sample

Sample Integrity: Received sealed & chilled

Sample ID: P-5 CECI ID: 004365
Date Sampled: 2-19-91 CECI Project #: 1127
Date Received: 2-20-91
Date Analyzed: 2-22/25-91 (Gas BTEX)
2-27-91 (Diesel)

Method	Concentration Milligrams per Liter (PPM)	
	Conc. PPM	Det. Limit
EPA 3550		
DHS TPH as Diesel	ND	1.0
EPA 5030/8015 & 8020		
DHS TPH as Gasoline	ND	0.05
Benzene	ND	0.0005
Toluene	ND	0.0005
Ethyl Benzene	ND	0.0005
Xylenes	ND	0.0005

Mark Chips: _____
Laboratory Director

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REPORT OF ANALYTICAL RESULTS
Cal DHS Certification # 1418

Sample Description: Water sample

Sample Integrity: Received sealed & chilled

Sample ID: P-6 CECI ID: 004368
Date Sampled: 2-20-91 CECI Project #: 1127
Date Received: 2-20-91
Date Analyzed: 2-22/25-91 (Gas BTEX)
2-27-91 (Diesel)

Method	Concentration Milligrams per Liter (PPM)	
	Conc. PPM	Det. Limit
EPA 3550		
DHS TPH as Diesel	ND	1.0
EPA 5030/8015 & 8020		
DHS TPH as Gasoline	ND	0.05
Benzene	ND	0.0005
Toluene	ND	0.0005
Ethyl Benzene	ND	0.0005
Xylenes	ND	0.0005

Mark Chips: _____
Laboratory Director

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REPORT OF ANALYTICAL RESULTS
Cal DHS Certification # 1418

Sample Description: Water sample

Sample Integrity: Received sealed & chilled

Sample ID: P-7 CECI ID: 004364
Date Sampled: 2-19-91 CECI Project #: 1127
Date Received: 2-20-91
Date Analyzed: 2-22/25-91 (Gas BTEX)
2-27-91 (Diesel)

Method	Concentration Milligrams per Liter (PPM)	
	Conc. PPM	Det. Limit
EPA 3550		
DHS TPH as Diesel	ND	1.0
EPA 5030/8015 & 8020		
DHS TPH as Gasoline	ND	0.05
Benzene	ND	0.0005
Toluene	ND	0.0005
Ethyl Benzene	ND	0.0005
Xylenes	ND	0.0005

Mark Chips: _____
Laboratory Director

Section 5

Quality Assurance/Quality Control

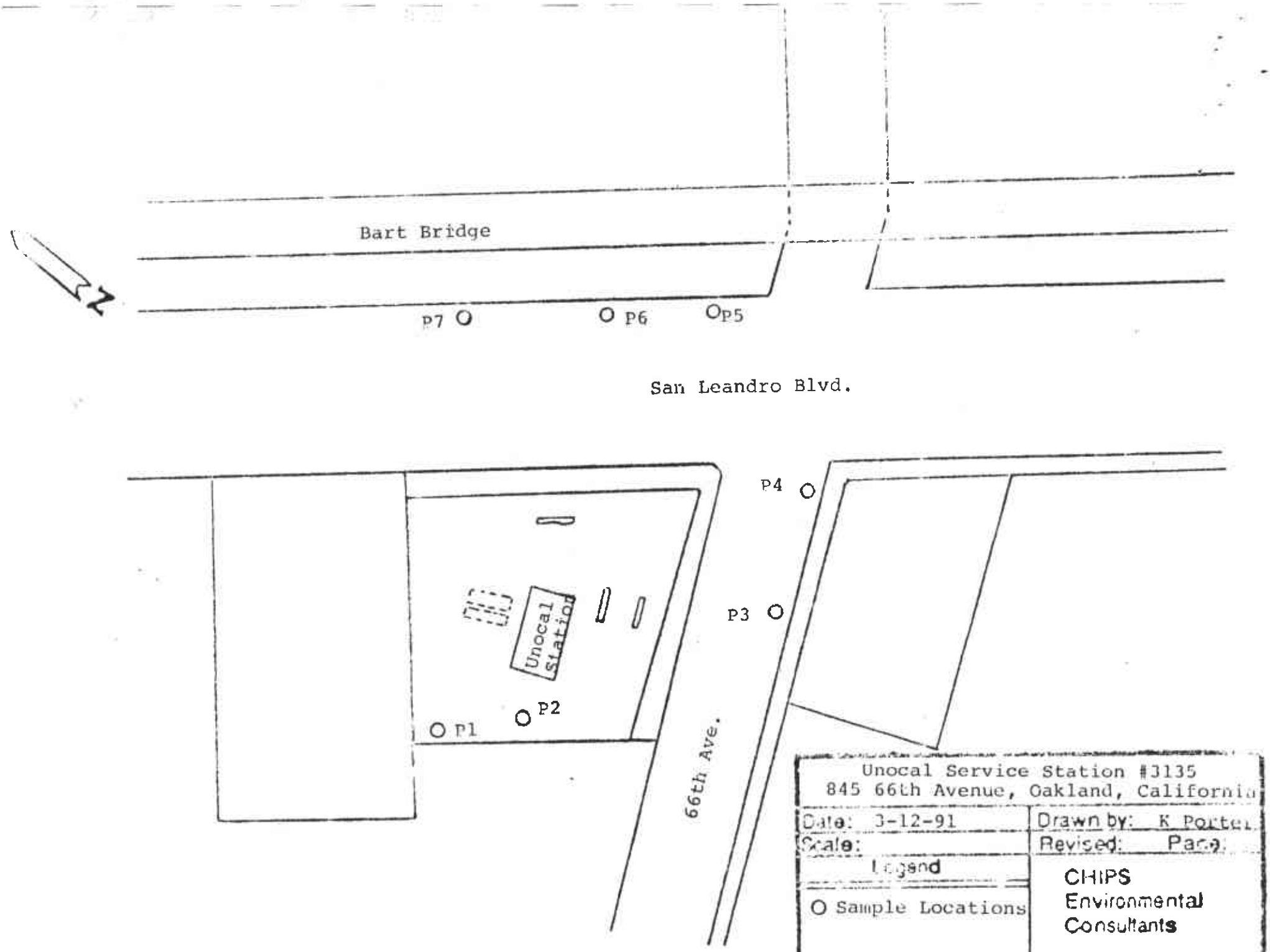
Quality assurance for groundwater sampling was maintained as follows:

1) All equipment that was in contact with the sample was cleaned through the following procedure:

   a) Each temporary well was washed with Alconox soap and water, scrubbed with a wire brush, rinsed with tap water and air dried.

2) A duplicate analysis was performed on at least one of the groundwater samples.

3) A spike & recovery is generally performed on at least one sample.


Bart Bridge
P7
P6
P5
San Leandro Blvd.
P4
P3
P2
P1
Unocal Station
66th Ave.
Unocal Service Station #3135
845 66th Avenue, Oakland, California
Date: 3-12-91
Drawn by: K Porter
Scale:
Revised: Page:
Legend
O Sample Locations
CHIPS
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Consultants

CHIPS ENVIRONMENTAL CONSULTANTS INC.
718 E. Evelyn Ave.
Sunnyvale, CA. 94086 (408) 736-1380 CHAIN OF CUSTODY

PROJECT#	PROJECT NAME	PROJECT SITE ADRESS	ANALYSIS REQ.
1127	KEI	845 66th Ave. Oakland	

SAMPLER: B. McEvoy, K. Porter

DATE	TIME	GRAB	COMP						REMARKS
2/19/91	12:05	X		004364	X	X			P-7 groundwater 14' below grade
2/19/91	13:46	X		004365	X	X			P-5 groundwater 14' Below grade
2/19/91	15:43	X		004366	X	X			P-2 groundwater at 15' Below grade.
2/19/91	16:17	X		004367	X	X			P-1 groundwater 15' Below grade.
2/20/91	10:00	X		004368	X	X			P-6 groundwater 15' Below grade.
2/20/91	12:01	X		004369	X	X			P-3 groundwater 16' Below grade.
2/20/91	12:10	X		004310	X	X			P-4 groundwater 17' Below grade

Relinquished by:	Recieved by Date Time	Relinquished by:	Recieved by: Date Time	
K. Porter	K. Porter 2/20/91 14:10			Page ____

Pacific Gas and Electric Company

Central Division
1919 Webster Street
Oakland CA 94612
415 874-2265

Robert L. Harris
Manager

[illegible]
[illegible] Master
[illegible]
[illegible]

[illegible]

[illegible]

The [illegible] which we received from USA indicates work will be done [illegible] ticket [illegible]:

2/5 [illegible] LEANDRO [illegible] 73 N/O 66TH AV
[illegible]
[illegible] OAKLAND

We will exercise due care to ensure that our markings are as complete and accurate as reasonably possible. As you can appreciate, the nature of underground installation and construction prohibits any guarantee as to the absolute accuracy of surface markings. The precise location of underground facilities can only be determined by you, through careful hand-digging in compliance with California Government Code Section 4216, and Cal/OSHA Construction Safety Orders, Article 6, and Fed/OSHA Construction Safety and Health Standards, Subpart P.

We would like to emphasize the requirements to contact the appropriate regional notification center (Underground Service Alert, a.k.a. USA), at least two working days prior to the start of actual excavation, and [illegible] excavation as specified in California Government Code Sections [illegible].

We call your attention to Section 1540 (a)(1) of the Construction Safety Orders (Title 8, California Administration Code Section 1540), [illegible] by the Occupational Safety and Health Standards Board, pursuant to the California Occupation Safety and Health Act of 1973, which states:

"Prior to opening an excavation, effort shall be made to determine whether underground installations (i.e., sewer, water, fuel, electric lines, etc.) will be encountered and, if so, where such underground installations are located. When the excavation approaches the approximate location of such an installations, the exact location shall be determined by careful probing or hand-digging; and, when it is uncovered, adequate protection shall be provided for the existing installation. All known owners of underground facilities in the area concerned shall be advised of proposed work at least 48 hours (2 working days) prior to the start of actual excavation." (Call USA toll free 1-800-642-2444.)

Any further information you may desire may be obtained by contacting Denise Lee at 437-2211 (Gas Mapping Dept.).

Sincerely,

JAMES C. DUNAWAY
Manager Gas & Electric Operations

JCD:dao

Pacific Gas and Electric Company

Central Division
1919 Webster Street
Oakland CA 94612
415 874-2065

[illegible]
Manager

[illegible]

[illegible]

The work site which we reviewed from our indicated work will be done for [illegible] in the vicinity of:

[illegible] SAN LEANDRO
[illegible]
OAKLAND

We will exercise due care to ensure that our markings are as complete and accurate as reasonably possible. As you can appreciate, the nature of underground installation and construction prohibits any guarantee as to the absolute accuracy of surface markings. The precise location of underground facilities can only be determined by you, through careful hand-digging in compliance with California Government Code section 4216, and Cal/OSHA Construction Safety Orders, Article 6, and Fed/OSHA Construction Safety and Health Standards, Subpart P.

We would like to emphasize the requirements to contact the appropriate regional notification center (Underground Service Alert, a.k.a. USA), at least two working days prior to the start of [illegible] [illegible] of other [illegible] [illegible] excavated as specified in California Government Code Sections 4216.2(and) and 4216.2(e).

We call your attention to section 1540 (a)(1) of the Construction Safety Orders (Title 8, California Administration Code section 1540), issued by the Occupational Safety and Health Standards Board, pursuant to the California Occupation Safety and Health Act of 1973, which states:

"Prior to opening an excavation, effort shall be made to determine whether underground installations (i.e., sewer, water, fuel, electric lines, etc.) will be encountered and, if so, where such underground installations are located. When the excavation approaches the approximate location of such an installations, the exact location shall be determined by careful probing or hand-digging; and, when it is uncovered, adequate protection shall be provided for the existing installation. All known owners of underground facilities in the area concerned shall be advised of proposed work at least 48 hours (2 working days) prior to the start of actual excavation." (Call USA toll free 1-800-642-2444.)

Any further information you may desire may be obtained by contacting Denise Lee at 437-2211 (Gas Mapping Dept.).

Sincerely,

JAMES C. DUNAWAY
Manager Gas & Electric Operations

JCD:dao

12 REV. 8/90

CITY OF OAKLAND

PERMIT TO EXCAVATE IN STREETS OR OTHER WORK AS SPECIFIED

LOCATION OF WORK: ____________ (Street or Address) BETWEEN ____________ (Specify) AND ____________ (Specify)

PERMISSION TO EXCAVATE IN THE PUBLIC RIGHT OF WAY IS HEREBY GRANTED TO:

APPLICANT ____________

ADDRESS ____________ PHONE # ____________

TYPE OF WORK: GAS ___ ELECTRIC ___ WATER ___ TELEPHONE ___ CABLE TV ___ SEWER ___ OTHER ___ (Specify)

NATURE OF WORK: ____________

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5, Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code) or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500).

[ ] I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

[ ] I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption in this subdivision on more than two structures more than once during any three year period. (Sec. 7044, Business and Professions Code).

[ ] I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law).

[ ] I am exempt under Sec. ________, B&PC for this reason ________

Signature ____________ Date ____________

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C.)

Policy # ____________ Company Name ____________

[ ] Certified copy is hereby furnished.

[ ] Certified copy is filed with the city building inspection dept.

Signature ____________ Date ____________

(This section need not be completed if the permit is for one hundred dollars ($100) or less.)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

Signature ____________ Date ____________

NOTICE TO APPLICANT: If, after making this Certificate of Exemption, you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

PERMIT VOID 90 DAYS FROM DATE OF ISSUE UNLESS EXTENSION GRANTED BY DIRECTOR OF PUBLIC WORKS.

Approximate Starting Date DATE ____________

Approximate Completion Date DATE ____________

HOLIDAY RESTRICTION (1 NOV — 1 JAN) YES ____ NO ____

LIMITED OPERATION AREA (7AM—9AM/4PM—6PM) YES ____ NO ____

DATE STREET LAST RESURFACED DATE ____________

SPECIAL PAVING DETAIL REQUIRED YES ____ NO ____

24 HOUR EMERGENCY PHONE NUMBER: ____________

PERMIT NOT VALID WITHOUT 24 HOUR NUMBER

Telephone 273-[illegible] Forty-eight (48) HOURS BEFORE ACTUAL CONSTRUCTION

ATTENTION

State law requires that contractor/owner call Underground Service Alert two working days before excavating to have below-ground utilities located. This permit is not valid unless applicant has secured an inquiry identification number issued by Underground Service Alert.

Call Toll Free: 800-642-2444 USA ID Number ____________

This permit issued pursuant to all provisions of Chapter [illegible] Article 2 of the Oakland Municipal Code.

This permit is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to, defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance.

CONTRACTOR

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

LICENSE # AND CLASS ____________ CITY BUSINESS TAX # ____________

X ____________ Date ____________

Signature of Contractor, Owner or Agent

[ ] Agent for [ ] Contractor [ ] Owner

OFFICIAL USE ONLY

UTILITY COMPANY REPORT

Supervisor ____________

Completion Date ____________

CITY INSPECTOR'S REPORT

	BACKFILL	PAVING
Initials		
Hours		
Date		
Concrete		
Asphalt		
Sidewalk		
Size of Cut: Sq. Ft.	Inches	

Paved by ____________ Type ____________

Bill No. ____________

Charges: Backfill ____________

Paving ____________

Paving Insp. ____________

Traffic Striping Replaced ____________ Date ____________

APPROVED

Engineering Services ____________ Date ____________

Planning ____________ Date ____________

Field Services ____________ Date ____________

Construction ____________ Date ____________

Traffic Engineering ____________ Date ____________

Electrical Engineering ____________ Date ____________

DIRECTOR OF PUBLIC WORKS

APPROVED BY ____________

DATE ____________

EXTENSION GRANTED BY ____________

DATE ____________

CITY OF OAKLAND
PERMIT TO EXCAVATE IN STREETS OR OTHER WORK AS SPECIFIED

LOCATION OF WORK: __________ (Street or Address) BETWEEN __________ (Cross Street) AND __________ (Specify)

PERMISSION TO EXCAVATE IN THE PUBLIC RIGHT-OF-WAY IS HEREBY GRANTED TO:

APPLICANT __________

ADDRESS __________ PHONE # __________

TYPE OF WORK: GAS ELECTRIC WATER TELEPHONE CABLE TV SEWER OTHER

NATURE OF WORK: __________

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[ ] I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

[ ] I, as owner of the property, am exempt from the sale requirements of the above due to: (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale, (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption in this subdivision on more than two structures more than once during any three-year period. (Sec. 7044, Business and Professions Code).

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[ ] I am exempt under Sec. __________, B&PC for this reason __________

Signature __________ Date __________

I hereby affirm that I have a certificate of consent to self insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec. 3800, Lab. C.)

Policy # __________ Company Name __________

[ ] Certified copy is hereby furnished

[ ] Certified copy is filed with the city building inspection dept.

Signature __________ Date __________

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Signature __________ Date __________

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PERMIT VOID 90 DAYS FROM DATE OF ISSUE UNLESS EXTENSION GRANTED BY DIRECTOR OF PUBLIC WORKS

Approximate Starting Date	DATE			
Approximate Completion Date	DATE			
HOLIDAY RESTRICTION (1 NOV — 1 JAN)	YES		NO	
LIMITED OPERATION AREA (7AM – 9AM/4PM – 6PM)	YES		NO	
DATE STREET LAST RESURFACED	DATE			
SPECIAL PAVING DETAIL REQUIRED	YES		NO	

24-HOUR EMERGENCY PHONE NUMBER __________

PERMIT NOT VALID WITHOUT 24-HOUR NUMBER.

Telephone 273-3[illegible] Forty-eight (48) HOURS BEFORE ACTUAL CONSTRUCTION.

ATTENTION

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Call Toll Free: 800/642-2444 USA ID Number __________

This permit issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code.

This permit is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance.

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LICENSE # AND CLASS __________ CITY BUSINESS TAX # __________

X __________ Date __________

(Signature of Contractor, Owner or Agent)

[ ] Agent for [ ] Contractor [ ] Owner

OFFICIAL USE ONLY

UTILITY COMPANY REPORT

Start Date __________

Completion Date __________

CITY INSPECTOR'S REPORT

	BACKFILL	PAVING
Initials		
Hours		
Date		
Concrete		
Asphalt		
Sidewalk		

Size of Cut: Sq. Ft. __________ Inches __________

Paved by __________ Type __________

Bill No. __________

Charges: Backfill __________

Paving __________

Paving Insp. __________

Traffic Striping Replaced __________ Date __________

APPROVED

Engineering Services __________ Date __________

Planning __________ Date __________

Field Services __________ Date __________

Construction __________ Date __________

Traffic Engineering __________ Date __________

Electrical Engineering __________ Date __________

DIRECTOR OF PUBLIC WORKS

APPROVED BY: __________

DATE: __________

EXTENSION GRANTED BY: __________

DATE: __________