PARADISO CONSTRUCTION
GENERAL & PETROLEUM CONTRACTORS

2600 WILLIAMS ST. P.O. BOX 1836
SAN LEANDRO, CA 94577
(510)614-8390 FAX (510)614-8396
CONTRACTORS LICENSE #259820

93 SEP 22 PM 12:47

LETTER OF TRANSMITTAL

DATE 9/20/93	JOB NO. 2263
ATTENTION JULIET SHIN	
RE: BERKELEY FARMS	
23555 SAKLAN RD.	
HAYWARD	

TO ALAMEDA COUNTY ENVIRONMENTAL HEALTH
80 SWAN WAY, ROOM 200
OAKLAND, CA 94621

WE ARE SENDING YOU ☐ Attached ☐ Under Separate Cover via _____ the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of Letter ☐ Change Order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
1	9/13/93		LETTER FROM PARADISO CONSTRUCTION TO BERKELEY FARMS, ADDRESSED TO NORMAN ALBERTS

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit ____ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☐ For review and comment ☐ _____

☐ FOR BIDS DUE _____, 19___ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS _____

COPY TO REGIONAL WATER QUALITY CONTROL BOARD

SIGNED: Cheri Gill
Cheri Gill

PARADISO CONSTRUCTION CO.

GENERAL & PETROLEUM CONTRACTORS

LICENSE NO. 259820
P.O. BOX 1836
2600 WILLIAMS ST.
SAN LEANDRO, CA 94577
(510) 614-8390

September 13, 1993

Berkeley Farms
4550 San Pablo Ave.,
Emeryville, ca 94608

Attention: Mr. Norman Alberts

Subject: Quarterly Report, Berkeley Farms
23555 Saklan Road, Hayward, California
Paradiso Job 93-2263

Dear Mr. Alberts:

This report presents the results of the first quarter of monitoring and sampling of the monitoring wells at the referenced site by Kaprealian Engineering, Inc. (KEI). All of the wells are currently monitored monthly and sampled on a quarterly basis. This report covers the work performed by KEI from May through August of 1993.

BACKGROUND

The subject site occupies the northeast corner of the intersection of Saklan Road and Middle Lane in Hayward, California, and is situated approximately two miles from the shores of the San Francisco Bay. The site is located in a mixed light industrial and residential area. A Location Map is attached to this report. A large part of the site is used by Quality Tow, an automobile towing operation, for the storage of used vehicles.

In June of 1988, an underground fuel storage tank was removed from the site. On February 27, 1990, and March 1, 1990, two exploratory borings were drilled at the site. During the drilling of the borings, a six-inch diameter water well was discovered adjacent to the former underground fuel storage tank pit. On May 30, 1990, four exploratory borings were drilled and five monitoring wells installed at the site. On June 1 and 2, 1993, seven exploratory borings, in conjunction with a hydropunch study, were drilled at the site. A total of 13 borings have been drilled and five monitoring wells have been installed at the site.

A site description, detailed background information including a summary of all of the soil and ground water subsurface investigation/remediation work conducted to date, site hydrogeologic conditions, and tables that summarize all of the soil and ground water sample analytical results are presented in KEI's report (KEI-P88-1110.R2) dated July 12, 1993.

RECENT FIELD ACTIVITIES

The five monitoring wells (MW1 through MW5) were monitored four times and were sampled twice during the quarter, except for well MW1, which was monitored three times. Water well WW1 was also purged of 194 ounces of product during the quarter. During monitoring, the wells were checked for depth to water and the presence of free product. Prior to sampling, the monitoring wells were also checked for the presence of a sheen. No free product or sheen was noted in any of the monitoring wells during the quarter; however, free product was noted in water well WW1 on three occasions. The monitoring data collected this quarter are summarized in Table 1.

Ground water samples were collected from all of the monitoring well on July 12, 1993, and August 20, 1993. Prior to sampling, the wells were each purged of between 21 and 37 gallons of water on July 12, 1993, and between 17 and 35 gallons of water on August 20, 1993, by the use of a surface pump. The samples were collected by the use of a clean Teflon bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory.

HYDROLOGY

The measured depth to ground water at the site ranged between 12.64 and 14.70 feet below grade on July 12, 1993, and between 13.43 and 15.17 feet below grade on August 20, 1993. The water levels in all of the wells have shown net decreases ranging from 1.07 to 1.87 feet during the period from February 25, 1993, to August 20, 1993. Based on the water level data gathered during the quarter, the ground water flow direction appeared to be predominantly towards the southwest, as shown on the attached Potentiometric Surface Maps, Figures 1, 2, 3, and 4. The hydraulic gradient at the site on August 20, 1993, ranged from approximately 0.004 to 0.008.

ANALYTICAL RESULTS

The ground water samples collected this quarter were analyzed at sequoia Analytical Laboratory and were accompanied by properly executed chain of Custody documentation. The samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline by EPA method 5030/modified 8015, TPH as diesel by EPA method 3510/modified 8015, and benzene, toluene, ethylbenzene, and xylenes by EPA method 8020.

The analytical results of all of the ground water samples collected from the monitoring wells to date are summarized in Table 2. The concentrations of TPH as gasoline, benzene, and TPH as diesel detected in the ground water samples collected this quarter are shown on the attached Figure 5. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

DISCUSSION

Based on the analytical results of the soil and ground water samples collected and evaluated to date, Paradiso Construction and KEI recommend the continuation of the current ground water monitoring and sampling program. The five wells are currently monitored monthly and sampled on a quarterly basis. Ground water samples are analyzed for TPH as gasoline, TPH as diesel, and BTEX.

In August of 1992, a sample of free product was collected from the on-site water well and submitted to the Chevron Research and Technology Laboratory in Richmond, California. Based on Chevron's analysis, the product consisted of diesel fuel #2. The report also stated that the diesel was not "weathered" and that the diesel was fresh (less that one month old). On December 30, 1992, the well cover was secured with a lock by Paradiso Construction to prevent unauthorized access. KEI subsequently recommended that an additional sample of the free product be collected and submitted to the same Chevron laboratory for analysis of content and condition (age). The free product sample was collected on September 2, 1993. Analysis of the sample is in process as of the date of this report.

In order to obtain information regarding the construction of the on-site water well, KEI also recommended conducting a down-hole camera survey of the well. The down-hole survey was conducted on September 2, 1993. KEI will submit the results of the survey in the next quarterly report.

KEI is currently in the process of conducting a survey of all wells within a 1/2-mile radius of the Berkeley Farms site. In addition, on August 19, 1993, a representative of KEI conducted a historical air photo analysis of the site and vicinity at the offices of the U.S. Geological Survey in Menlo Park , California. the well survey and the air photo analysis were previously recommended by KEI in order to identify any potential off-site sources which may be contributing to the contamination at the Berkeley Farms site. KEI will review the files of the Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, in the upcoming quarter for any sites identified in the well survey an/or the air photo analysis.

Lastly, KEI previously recommended purging the free product (diesel) from the water well on a weekly basis for a period of one month. The weekly purging of the water well was initiated on September 2, 1993.

DISTRIBUTION

A copy of this report should be sent to the Alameda County Health Care Services Agency, 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. KEI has analyzed this data using what they believe to be currently applicable engineering techniques and principles in the Northern California region. They make no warranty, either expressed or implied, regarding the above, including laboratory analyses, except that their 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.

Sincerely,

Paul Paradiso

PP:mlg
enclosures

September 13, 1993

TABLE 1

Well #	Ground Water Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Sheen	Water Purged (gallons)	Product Purged (ounces)
		(Monitored and Sampled on August 20, 1993)				
MW1	19.58	15.17	0	No	29	0
MW2	20.39	14.42	0	No	17	0
MW3	19.14	14.84	0	No	30	0
MW4	19.10	13.50	0	No	35	0
MW5	19.81	13.43	0	No	22	0
WW1*	N/A	14.95	0.98	N/A	0	130
		(Monitored and Sampled on July 12, 1993)				
MW1	20.05	14.70	0	No	30	0
MW2	20.41	14.40	0	No	35	0
MW3	20.06	13.92	0	No	20	0
MW4	19.96	12.64	0	No	37	0
MW5	20.27	12.97	0	No	21	0
		(Monitored on June 10, 1993)				
MW1	WELL WAS INACCESSIBLE					
MW2	20.93	13.88	0	--	0	0
MW3	20.53	13.45	0	--	0	0
MW4	20.42	12.18	0	--	0	0
MW5	20.77	12.47	0	--	0	0
WW1	N/A	14.75	1.2	N/A	0	0
		(Monitored on May 12, 1993)				
MW1	20.87	13.88	0	--	0	0
MW2	21.31	13.50	0	--	0	0
MW3	20.87	13.11	0	--	0	0
MW4	20.78	11.82	0	--	0	0
MW5	21.12	12.12	0	--	0	0
WW1	N/A	14.45	1.0	N/A	0	64

September 13, 1993

TABLE 1 (CONTINUED)

SUMMARY OF MONITORING DATA

Well No.	Well Cover Elevation** (feet)
MW1	34.75
MW2	34.81
MW3	33.98
MW4	32.60
MW5	33.24

N/A = Not Applicable.

-- Sheen determination was not performed

* Monitored only.

** The elevations of the tops of the well covers have been surveyed relative to Mean Sea Level (MSL), per Alameda County Benchmark (elevation = 33.16 MSL).

September 13, 1993

TABLE 2

SUMMARY OF LABORATORY ANALYSES
WATER

DATE	Sample Well #	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
7/12/93+	MW1	200*	150	1.1	ND	ND	0.51
&	MW2	ND	ND	ND	ND	ND	ND
8/20/93	MW3	ND	ND	ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND	ND
	MW5	ND	ND	ND	ND	ND	ND
2/25/93	MW1	5,900*	4,600**	45	18	ND	750
	MW2	ND	ND	ND	ND	ND	ND
	MW3	200	ND	ND	ND	ND	ND
	MW4	ND	ND	ND	ND	ND	ND
	MW5	ND	ND	ND	ND	ND	ND

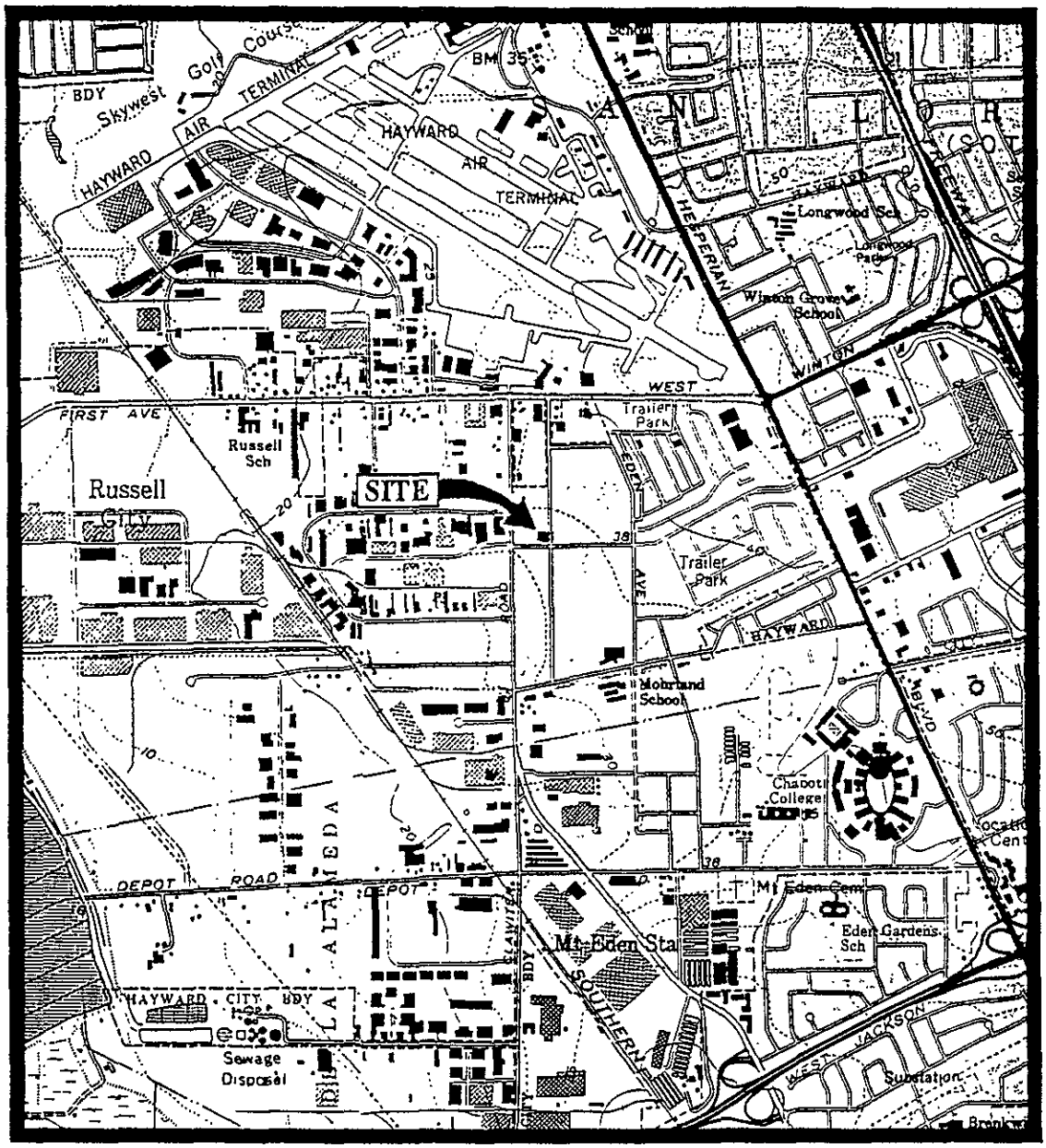
\+ Samples collected on July 12, 1993, were analyzed for TPH as gasoline and BTEX. Samples collected on August 20, 1993, were analyzed for TPH as diesel.

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

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

ND = Non-detectable.

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



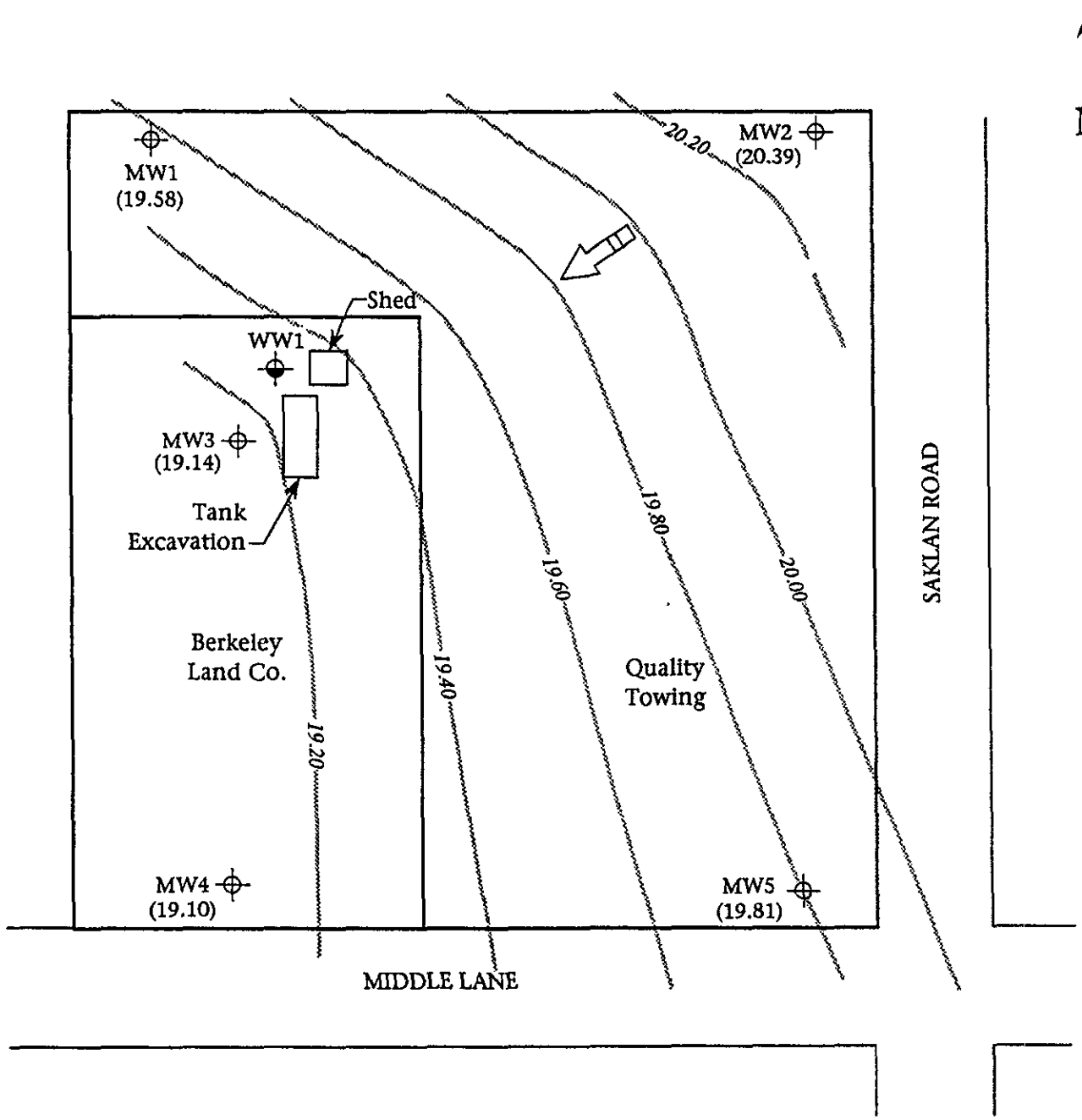
Base modified from 7.5 minute U.S.G.S.
Hayward & San Leandro Quadrangles
(both photorevised 1980)

0 2000 4000
Approx. scale feet

KAPREALIAN ENGINEERING
INCORPORATED

BERKELEY FARMS
23555 SAKLAN ROAD
HAYWARD, CA

LOCATION MAP



LEGEND

- Monitoring well
- Water well
- ( ) Ground water elevation in feet above Mean Sea Level
- Direction of ground water flow
- Contours of ground water elevation

0 40 80

Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE AUGUST 20, 1993 MONITORING EVENT

KAPREALIAN ENGINEERING
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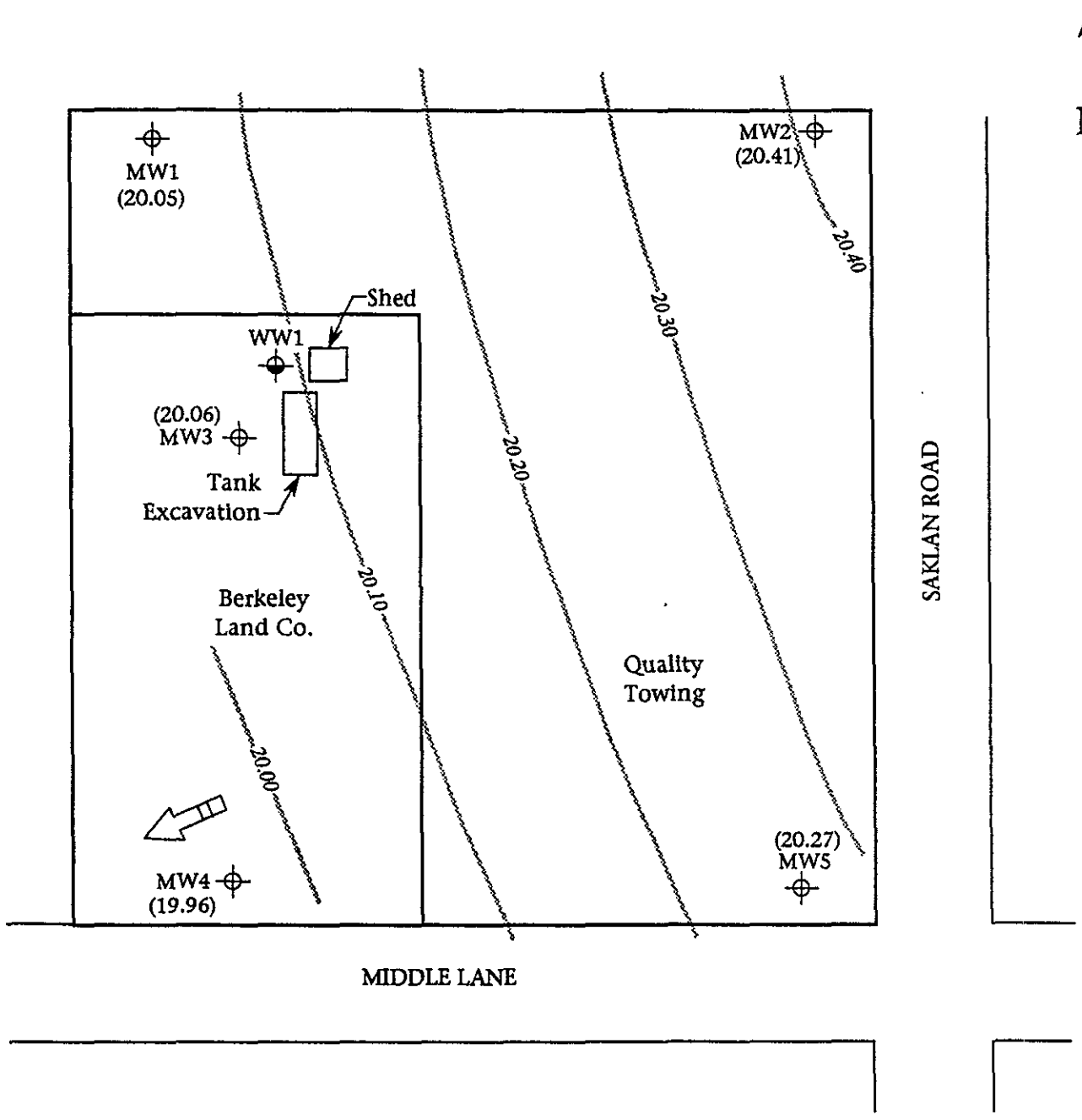
BERKELEY FARMS
23555 SAKLAN ROAD
HAYWARD, CA

FIGURE
1



LEGEND

- Monitoring well
- Water well
- ( ) Ground water elevation in feet above Mean Sea Level
- Direction of ground water flow
- Contours of ground water elevation

0 40 80

Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE JULY 12, 1993 MONITORING EVENT

KAPREALIAN ENGINEERING
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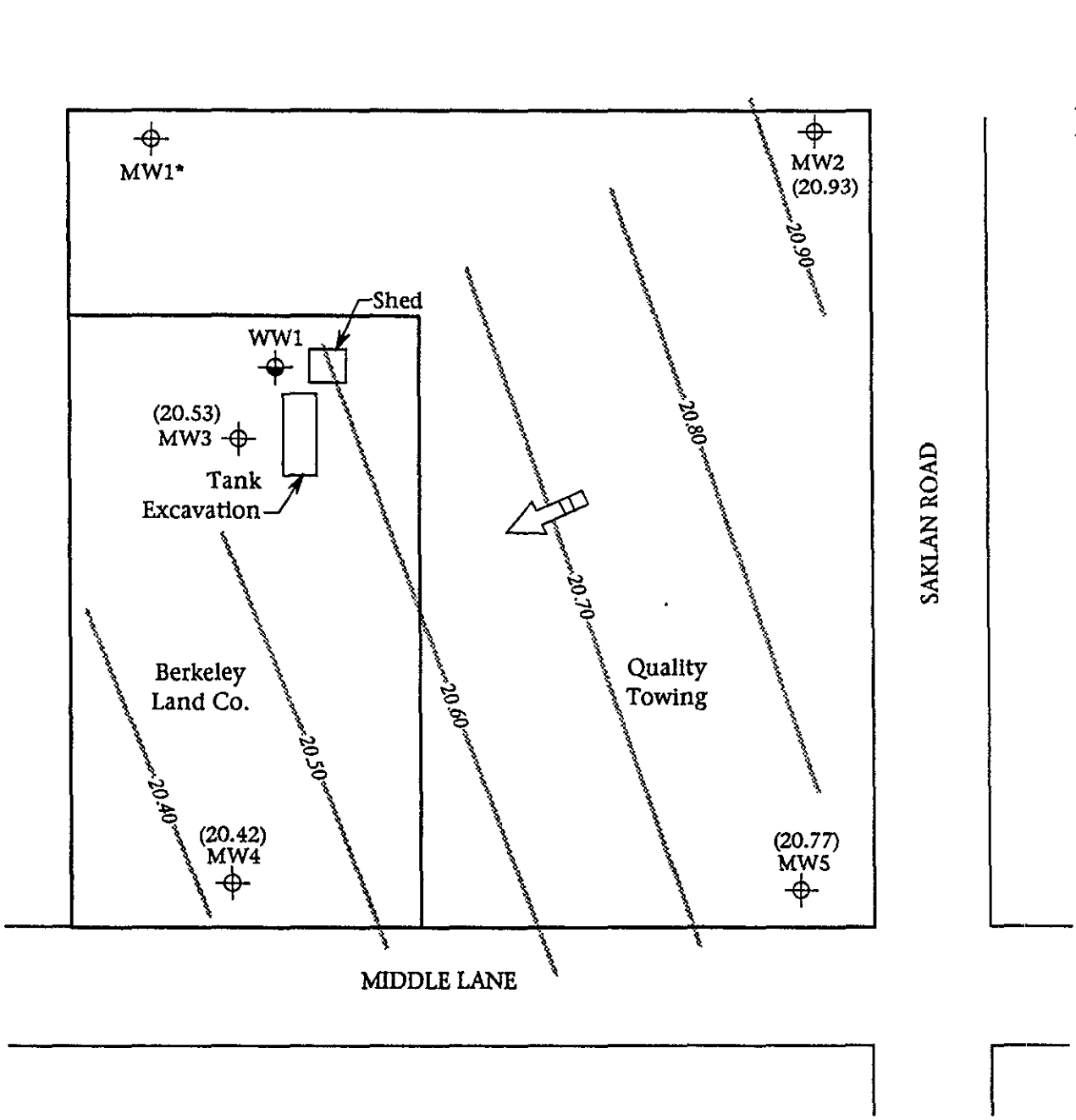
BERKELEY FARMS
23555 SAKLAN ROAD
HAYWARD, CA

FIGURE
2



LEGEND

- Monitoring well
- Water well
- ( ) Ground water elevation in feet above Mean Sea Level
- Direction of ground water flow
- Contours of ground water elevation
- * Well was inaccessible

0 40 80

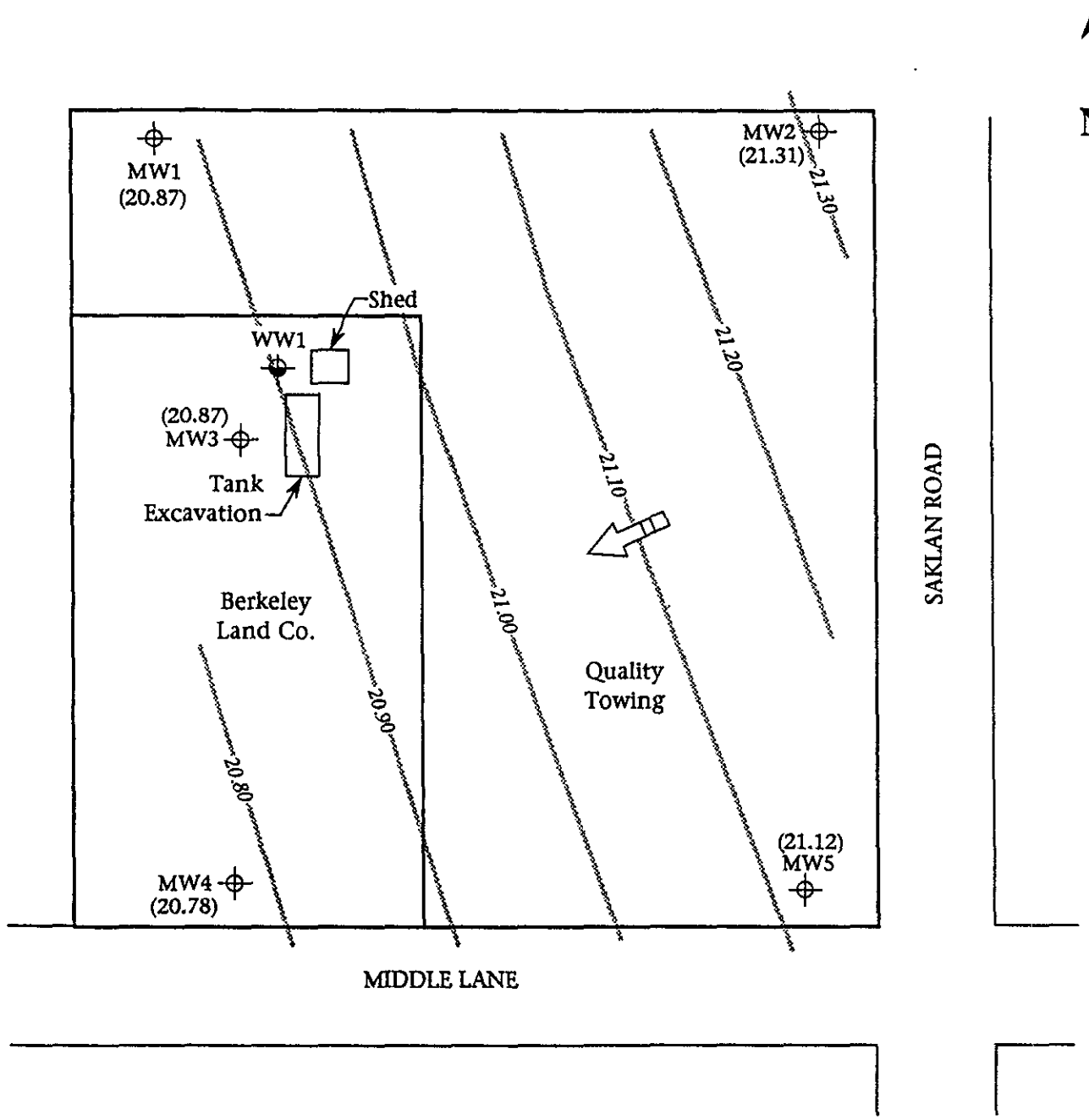
Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE JUNE 10, 1993 MONITORING EVENT

KAPREALIAN ENGINEERING
INCORPORATED

BERKELEY FARMS
23555 SAKLAN ROAD
HAYWARD, CA

FIGURE
3



LEGEND

- Monitoring well
- Water well
- ( ) Ground water elevation in feet above Mean Sea Level
- Direction of ground water flow
- Contours of ground water elevation

0 40 80

Approx. scale feet

POTENTIOMETRIC SURFACE MAP FOR THE MAY 12, 1993 MONITORING EVENT

KAPREALIAN ENGINEERING
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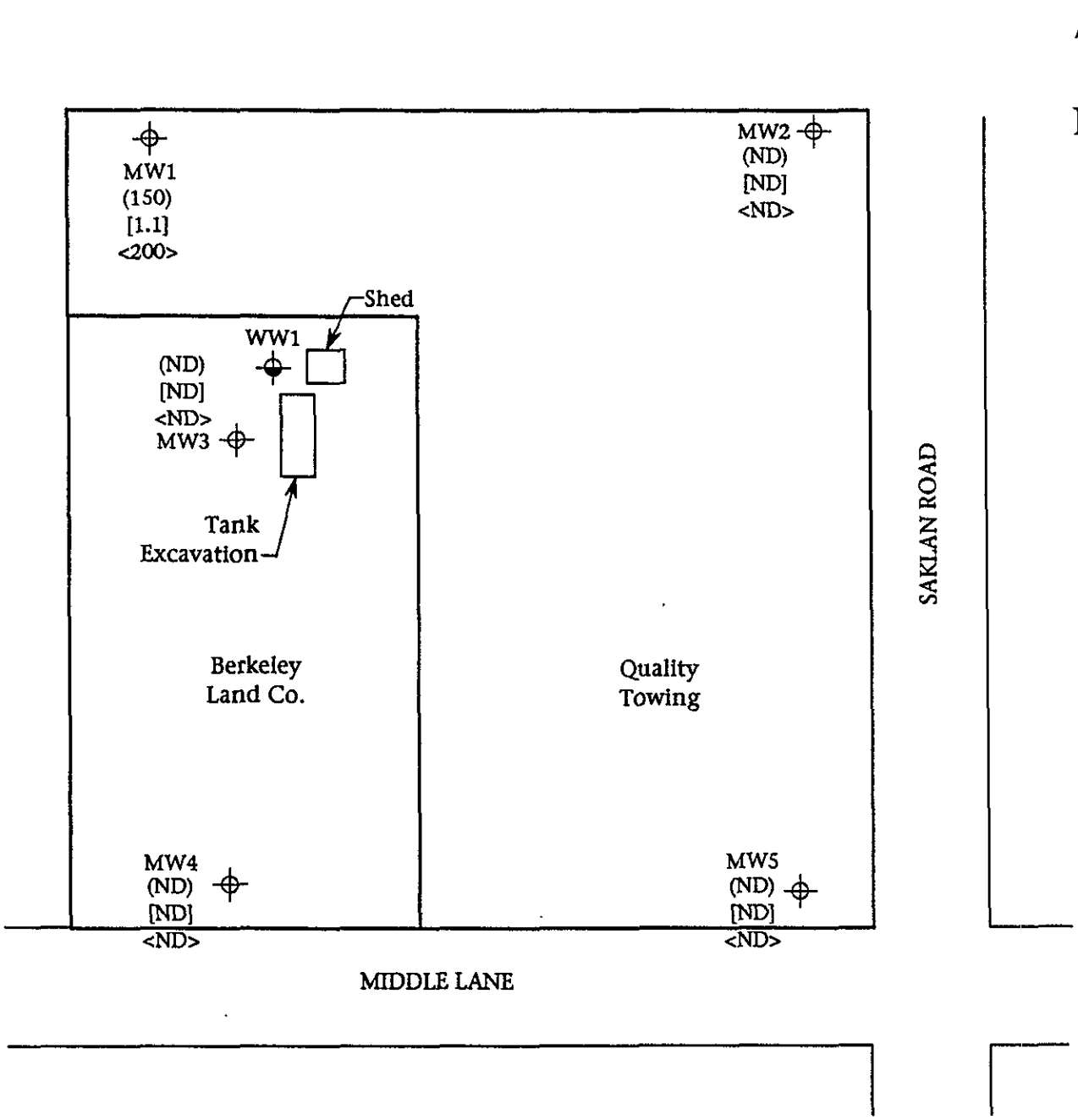
BERKELEY FARMS
23555 SAKLAN ROAD
HAYWARD, CA

FIGURE
4



LEGEND

- Monitoring well
- Water well
- ( ) Concentration of TPH as gasoline in ppb
- [ ] Concentration of benzene in ppb
- < > Concentration of TPH as diesel in ppb
- ND = Non-detectable

0 40 80

Approx. scale feet

PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON JULY 12 & AUGUST 20, 1993

KAPREALIAN ENGINEERING
INCORPORATED

BERKELEY FARMS
23555 SAKLAN ROAD
HAYWARD, CA

FIGURE
5

SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd., Hayward	Sampled:	Jul 12, 1993
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Jul 12, 1993
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Jul 22, 1993
Attention: Avo Avedessian	First Sample #:	307-0535		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 307-0535 MW-1	Sample I.D. 307-0536 MW-2	Sample I.D. 307-0537 MW-3	Sample I.D. 307-0538 MW-4	Sample I.D. 307-0539 MW-5	Sample I.D. Sample Matrix
Purgeable Hydrocarbons	50	150	N.D.	N.D.	N.D.	N.D.	
Benzene	0.5	1.1	N.D.	N.D.	N.D.	N.D.	
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	
Total Xylenes	0.5	0.51	N.D.	N.D.	N.D.	N.D.	
Chromatogram Pattern:		Gasoline	--	--	--	--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	7/19/93	7/19/93	7/19/93	7/19/93	7/19/93	7/19/93
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	92	100	98	100	98	100

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

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

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

Kaprealian Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd., Hayward
2401 Stanwell Dr., Ste. 400	Matrix:	Water
Concord, CA 94520		
Attention: Avo Avedessian	QC Sample Group: 3070535-539	Reported: Jul 22, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J.F.	J.F.	J.F.	J.F.
Conc. Spiked:	20	20	20	60
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	1LCS071993	1LCS071993	1LCS071993	1LCS071993
Date Prepared:	7/19/93	7/19/93	7/19/93	7/19/93
Date Analyzed:	7/19/93	7/19/93	7/19/93	7/19/93
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	95	93	96	98
Control Limits:	70-130	70-130	70-130	70-130
MS/MSD Batch #:	3070453	3070453	3070453	3070453
Date Prepared:	7/19/93	7/19/93	7/19/93	7/19/93
Date Analyzed:	7/19/93	7/19/93	7/19/93	7/19/93
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Matrix Spike % Recovery:	100	95	100	100
Matrix Spike Duplicate % Recovery:	100	95	100	100
Relative % Difference:	0.0	0.0	0.0	0.0

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

KAPREALIAN ENGINEERING
INCORPORATED

CHAIN OF CUSTODY

SAMPLER: Ray (KEI)
WITNESSING AGENCY:
SITE NAME & ADDRESS: BERKELEY FARMS HAYWARD - 23555 SAKLAND RD

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	ANALYSES REQUESTED: TPH GAS
MW1	7-12			X	X		2	VOA's	X
MW2	"			X	X		"	"	X
MW3	"			X	X		"	"	X
MW4	"			X	X		"	"	X
MW5	"			X	X		"	"	X

TURN AROUND TIME: REGULAR

REMARKS: 3070535 AB
0536
0537
0538
0539

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Ray (KEI)	7-12-93	1520
Relinquished by: (Signature)	Date/Time 7/13/93 1115	Received by: (Signature)
Relinquished by: (Signature)	Date/Time 7:13:93 1413	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

The following MUST BE completed by the laboratory accepting samples for analysis:
1. Have all samples received for analysis been stored in ice? YES
2. Will samples remain refrigerated until analyzed? YES
3. Did any samples received for analysis have head space? NO
4. Were samples in appropriate containers and properly packaged? YES

Signature: [illegible] Title: Analyst Date: 7/13/93

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

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(510) 686-9600 • FAX (510) 686-9689

Kaprealian Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd.	Sampled:	Aug 20, 1993
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Water	Received:	Aug 20, 1993
Concord, CA 94520	Analysis Method:	EPA 3510/3520/8015	Reported:	Aug 27, 1993
Attention: Avo Avedessian	First Sample #:	308-0893		

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 308-0893 MW-1*	Sample I.D. 308-0894 MW-2	Sample I.D. 308-0895 MW-3	Sample I.D. 308-0896 MW-4	Sample I.D. 308-0897 MW-5	Sample I.D. Matrix Blank
Extractable Hydrocarbons	50	200	N.D.	N.D.	N.D.	N.D.	
Chromatogram Pattern:		Diesel & Non-Diesel Mixture (<C14)	--	--	--	--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Extracted:	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93	8/26/93
Date Analyzed:	8/27/93	8/27/93	8/27/93	8/27/93	8/27/93	8/27/93
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A	HP-3A

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

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

Please Note:
*Non-Diesel Mixture, <C14, refers to unidentified peaks in Kerosene/Stoddard Solvent Range.

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(510) 686-9600 • FAX (510) 686-9689

Kaprealian Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd.
2401 Stanwell Dr., Ste. 400	Matrix:	Water
Concord, CA 94520		
Attention: Avo Avedessian	QC Sample Group: 3080893-897	Reported: Aug 27, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel
Method:	EPA 8015
Analyst:	K.W.
Conc. Spiked:	300
Units:	µg/L
LCS Batch#:	BLK082693
Date Prepared:	8/26/93
Date Analyzed:	8/27/93
Instrument I.D.#:	HP-3A
LCS % Recovery:	92
Control Limits:	80-120

MS/MSD Batch #:	BLK082693
Date Prepared:	8/26/93
Date Analyzed:	8/27/93
Instrument I.D.#:	HP-3A
Matrix Spike % Recovery:	92
Matrix Spike Duplicate % Recovery:	91
Relative % Difference:	1.1

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SEQUOIA ANALYTICAL
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Kapreallan Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedessian

Client Project ID: Berkeley Farms, 23555 Saklan Rd.

QC Sample Group: 3080893-897

Reported: Aug 27, 1993

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015
Analyst:	K.W.	K.W.	K.W.	K.W.	K.W.	K.W.
Reporting Units:	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Aug 27, 1993	Aug 27, 1993	Aug 27, 1993	Aug 27, 1993	Aug 27, 1993	Aug 27, 1993
Sample #:	308-0893	308-0894	308-0895	308-0896	308-0897	Blank
Surrogate % Recovery:	106	107	102	101	102	106

SEQUOIA ANALYTICAL

Alan B. Kemp
Project Manager

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

KAPREALIAN ENGINEERING INCORPORATED

CHAIN OF CUSTODY

SAMPLER: Joe

WITNESSING AGENCY:

SITE NAME & ADDRESS: Beckeley Farms, 23555 Saklan Rd.

ANALYSES REQUESTED: TPHG

TURN AROUND TIME: ~~Regular~~ 5d TAT AS PER BOB 8-23-93 2:05p ABK

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPHG							REMARKS
mw-1	8/20/93	11:00 A.M		✓	✓		1	mw	✓							3080893
mw-2	"			✓	✓		1	"	✓							0894
mw-3	"			✓	✓		1	"	✓							0895
mw-4	"			✓	✓		1	"	✓							0896
mw-5	"	3:00 P.M		✓	✓		1	"	✓							0897

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Joe [signature]	8-20-93/1646	[signature]
[signature]	8-23-93 1500	[signature]
[signature]	8-23-93 1617	[signature]

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

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

Signature: [signature] Title: DM Date: 8-20-93

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

PARADISO CONSTRUCTION CO.

GENERAL & PETROLEUM CONTRACTORS

LICENSE NO. 259820
P.O. BOX 1836
2600 WILLIAMS ST.
SAN LEANDRO, CA 94577
(510) 614-8390

September 13, 1993

Berkeley Farms
4550 San Pablo Ave.
Emeryville, Ca 94608

Attention: Norman Alberts

Subject: Sampling and Approval for Disposal of Drill Cutting Soil at Berkeley Farms, 23555 Saklan Road, Hayward, California

Dear Mr. Alberts:

This report summarizes the analytical results of the composite soil sample that was collected from the drill cutting soil at the referenced site. The soil analyses were conducted to comply with the local regulatory agency requirements for proper disposal of potentially contaminated soil.

On June 2, 1993, a soil sample from approximately two cubic yards of soil (including one drum of rinsate) that had been generated during drilling activities was collected to determine proper disposal of the soil. One composite sample consisted of four individual grab samples taken at various locations within the stockpile. The individual samples were collected in two-inch diameter, clean brass tubes, which were then sealed with aluminum foil, plastic caps and tape, and placed in a cooled ice chest for delivery to a certified laboratory for analysis. The individual samples were subsequently composited by the lab. The sample was analyzed by Sequoia Analytical Laboratory in Concord, California, and was accompanied by properly executed Chain of Custody documentation.

The composite soil sample was analyzed to determine concentrations of total petroleum hydrocarbons (TPH) as gasoline by EPA method 5030/modified 8015, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA method 8020, TPH as diesel by EPA method 3550/modified 8015, STLC lead, Reactivity, Corrosivity, and Ignitability. The results of the soil analyses are summarized in Table 1. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

Based on the analytical results of the composite soil sample, approximately two cubic yards of soil (including one drum of rinsate), represented by sample Comp S1, were profiled and approved for disposal on June 23, 1993, at the BFI Landfill in Livermore, California, an approved Class III disposal facility (Approval #CAD405/062393/53371).

Should you have any questions on this report, please do not hesitate to contact me.

Sincerely,

Paul Paradiso

pp:mlg
enclosures

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(COLLECTED ON JUNE 2, 1993)

Sample	TPH as Diesel	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	STLC Lead	Reactivity	Corrosivity (pH)	Ignitability
Comp S1	2.6	ND	ND	ND	ND	ND	0.23	ND	9.0	>100°c

ND = Non-detectable.

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

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Kapreallan Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd., Hayward	Sampled:	Jun 2, 1993
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received:	Jun 3, 1993
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Reported:	Jun 16, 1993
Attention: Mardo Kapreallan, P.E.	First Sample #:	306-0113		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 306-0113 Comp. S1	Sample I.D. Matrix Blank
Purgeable Hydrocarbons	1.0	N.D.	
Benzene	0.005	N.D.	
Toluene	0.005	N.D.	
Ethyl Benzene	0.005	N.D.	
Total Xylenes	0.005	N.D.	
Chromatogram Pattern:		--	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	6/9/93	6/9/93
Instrument Identification:	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	103	103

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

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

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Kapreallan Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd., Hayward	Sampled: Jun 2, 1993
2401 Stanwell Dr., Ste. 400	Sample Matrix:	Soil	Received: Jun 3, 1993
Concord, CA 94520	Analysis Method:	EPA 3550/8015	Reported: Jun 16, 1993
Attention: Mardo Kapreallan, P.E.	First Sample #:	306-0113	

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 306-0113 Comp. S1	Sample I.D. Matrix Blank
Extractable Hydrocarbons	1.0	2.6	
Chromatogram Pattern:		Diesel & Non-Diesel Mixture (>C20)	

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	6/10/93	6/10/93
Date Analyzed:	6/11/93	6/11/93
Instrument Identification:	HP-3B	HP-3B

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

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Scott A. Chierro
Project Manager

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Kaprealian Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd., Hayward	Sampled:	Jun 2, 1993
2401 Stanwell Dr., Ste. 400	Sample Descript:	STLC Extract of Soil	Received:	Jun 3, 1993
Concord, CA 94520	Analysis for:	STLC Lead	Extracted:	Jun 7, 1993
Attention: Mardo Kaprealian, P.E.	First Sample #:	306-0113	Analyzed:	Jun 10, 1993
			Reported:	Jun 16, 1993

LABORATORY ANALYSIS FOR: STLC Lead

Sample Number	Sample Description	Detection Limit mg/L	Sample Result mg/L
306-0113	Comp. S1	0.0050	0.23

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

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Scott A. Chieffo
Project Manager

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Kapreallan Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd., Hayward	Sampled: Jun 2, 1993
2401 Stanwell Dr., Ste. 400	Sample Descript:	Comp. S1	Received: Jun 3, 1993
Concord, CA 94520			Analyzed: 6/4 - 6/10/93
Attention: Mardo Kapreallan, P.E.	Lab Number:	306-0113	Reported: Jun 16, 1993

CORROSIVITY, IGNITABILITY, AND REACTIVITY

Analyte	Detection Limit	Sample Results
Corrosivity:		
pH	N.A.	9.0
Ignitability:		
Flashpoint (Pensky-Martens), °C	N.A.	> 100 °C
Reactivity:		
Sulfide, mg/kg	10	N.D.
Cyanide, mg/kg	0.50	N.D.
Reaction with water	N.A.	Negative

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

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

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Kaprealian Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd., Hayward
2401 Stanwell Dr., Ste. 400	Matrix:	Soil
Concord, CA 94520		
Attention: Mardo Kaprealian, P.E.	QC Sample Group	306-0113

Reported: Jun 16, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Diesel	STLC Lead	Sulfide
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015	EPA 7421	EPA 9030
Analyst:	J.F.	J.F.	J.F.	J.F.	K.Wimer	K.V.S.	K. Newberry
Conc. Spiked:	0.40	0.40	0.40	1.2	10	1.0	1300
Units:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/L	mg/Kg
LCS Batch#:	1LCS060993	1LCS060993	1LCS060993	1LCS060993	BLK061093	BLK060793	LCS061093
Date Prepared:	6/9/93	6/9/93	6/9/93	6/9/93	6/10/93	6/7/93	6/10/93
Date Analyzed:	6/9/93	6/9/93	6/9/93	6/9/93	6/11/93	6/10/93	6/10/93
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B	SpectrAA-400	N/A
LCS % Recovery:	102	100	104	105	110	78	88
Control Limits:	70-130	70-130	70-130	70-130	80-120	75-125	80-120
MS/MSD Batch #:	3060183	3060183	3060183	3060183	3060129	3060113	9306372-1
Date Prepared:	6/9/93	6/9/93	6/9/93	6/9/93	6/10/93	6/7/93	6/9/93
Date Analyzed:	6/9/93	6/9/93	6/9/93	6/9/93	6/11/93	6/9/93	6/9/93
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2	HP-3B	SpectrAA-400	N/A
Matrix Spike % Recovery:	88	88	90	92	107	104	96
Matrix Spike Duplicate % Recovery:	88	85	90	92	106	112	96
Relative % Difference:	0.0	3.7	0.0	0.0	0.90	7.4	0.0

SEQUOIA ANALYTICAL

Scott A. Chieffo
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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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Kaprealian Engineering, Inc.	Client Project ID:	Berkeley Farms, 23555 Saklan Rd., Hayward
2401 Stanwell Dr., Ste. 400	Matrix:	Soil
Concord, CA 94520		
Attention: Mardo Kaprealian, P.E.	QC Sample Group: 306-0113	Reported: Jun 16, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Cyanide
Method:	EPA 9010
Analyst:	A. Savva
Conc. Spiked:	3.4
Units:	mg/Kg
LCS Batch#:	LCS060993
Date Prepared:	6/9/93
Date Analyzed:	6/9/93
Instrument I.D.#:	N/A
LCS % Recovery:	100
Control Limits:	80-120

MS/MSD Batch #:	93061801A
Date Prepared:	6/9/93
Date Analyzed:	6/9/93
Instrument I.D.#:	N/A
Matrix Spike % Recovery:	100
Matrix Spike Duplicate % Recovery:	100
Relative % Difference:	0.0

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Scott A. Chieffo
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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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Kaprealian Engineering, Inc.
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Attention: Mardo Kaprealian, P.E.

Client Project ID: Berkeley Farms, 23555 Saklan Rd., Hayward
QC Sample Group: 306-0113
Reported: Jun 16, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Corrosivity-pH	Ignitability
Method:	EPA 9045	EPA 1010
Analyst:	M.Nguyen	S. Phillips
Reporting Units:	N/A	°C
Date Analyzed:	Jun 4, 1993	Jun 4, 1993
QC Sample #:	306-0113	Xylene; Flashpoint =29°
Sample Conc.:	9.0	26
Spike Conc. Added:	N/A	N/A
Conc. Matrix Spike:	N/A	N/A
Matrix Spike % Recovery:	N/A	N/A
Conc. Matrix Spike Dup.:	8.7	25
Matrix Spike Duplicate % Recovery:	N/A	N/A
Relative % Difference:	3.4	3.9

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Scott A. Chieffo
Project Manager

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

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

Client Project ID: Berkeley Farms, 23555 Saklan Rd., Hayward
QC Sample Group: 306-0113
Reported: Jun 16, 1993

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015	EPA 8015
Analyst:	K. Wimer	K. Wimer
Reporting Units:	mg/Kg	mg/Kg
Date Analyzed:	Jun 11, 1993	Jun 11, 1993
Sample #:	306-0113	Blank
Surrogate % Recovery:	118	107

SEQUOIA ANALYTICAL

Scott A. Chierro
Project Manager

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

KAPREALIAN ENGINEERING
INCORPORATED

CHAIN OF CUSTODY

SAMPLER: [signature]
WITNESSING AGENCY:
SITE NAME & ADDRESS: BERKELEY FARMS/HAYWARD 23555 SAKLAN RD.
TURN AROUND TIME: REGULAR

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH G	TPH D	BTEX	OIL & GREASE	VOC			REMARKS
COMP.S1	6-2-93		X			X	4	STOCKPILED DRILL CUTTINGS	X	X	X	X	X			306011BAD

Relinquished by: (Signature) [signature] (KE)	Date/Time 6/3/93 1650	Received by: (Signature) [signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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

1. Have all samples received for analysis been stored in ice? Y
2. Will samples remain refrigerated until analyzed? Y
3. Did any samples received for analysis have head space? N
4. Were samples in appropriate containers and properly packaged? Y

[signature] Signature — PC Title — 6/3/93 Date

2401 Stanwell Drive, Suite 400
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Tel: 510 602 5100 Fax: 510 687 0602