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KAPREALIAN ENGINEERING
INCORPORATED

STD 4252

April 11, 1994

Alameda County Health Care Services
80 Swan Way, Room 200
Oakland, CA 94621

Attention: Ms. Susan Hugo

RE: Wells Fargo Bank
(Walter Blumert Co., Inc.)
490 - 43rd Street
Oakland, California

Dear Ms. Hugo:

Per the request of Mr. Paul Paradiso of Paradiso Mechanical, Inc., enclosed please find our report dated April 8, 1994, for the above referenced site.

If you should have any questions, please feel free to call our office at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey

jad\82

Enclosure

cc: Paul Paradiso, Paradiso



KAPREALIAN ENGINEERING
INCORPORATED

KEI-P91-1201.QR2
April 8, 1994

Wells Fargo Bank
525 Market Street, 18th Floor
MAC #0103-181
San Francisco, CA 94105

Attention: Mr. Jeffrey Hirsch

RE: Quarterly Report
Wells Fargo Bank
(Walter Blumert Co., Inc.)
490 - 43rd Street
Oakland, California

Dear Mr. Hirsch:

This report presents the results of the most recent quarter of monitoring and sampling of the monitoring wells at the referenced site by Kaprealian Engineering, Inc. (KEI). The wells are currently monitored monthly and sampled on a quarterly basis.

SITE DESCRIPTION AND BACKGROUND

The subject site formerly contained one underground gasoline storage tank and one underground paint thinner storage tank. The two underground storage tanks were removed from the site in December of 1991. The underground storage tank pit was subsequently overexcavated in order to remove contaminated soil. Three monitoring wells (one on-site and two off-site) have been installed at and in the vicinity of 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-P91-1201.R3) dated June 2, 1993.

RECENT FIELD ACTIVITIES

The three monitoring wells (MW1 through MW3) were monitored three times and were sampled once during the quarter. During monitoring, the wells were checked for depth to water and the presence of free product. Prior to sampling, the wells were also checked for the presence of a sheen. No free product or sheen was noted in any of the wells during the quarter. The monitoring data collected this quarter are summarized in Table 1.

Ground water samples were collected from the wells on March 15, 1994. Prior to sampling, the wells were each purged of 10 gallons of water 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 on March 15, 1994, ranged between 10.13 and 10.61 feet. Based on the water level data gathered during the quarter, the ground water flow direction appeared to be to the east, southwest, and south during the three monitoring events, as shown on the attached Ground Water Flow Direction Maps, Figures 1, 2, and 3. The southwest and south flow directions are similar to the flow direction reported since April of 1993. The average hydraulic gradient at the site on March 15, 1994, was approximately 0.006.

Based on review of regional geologic maps (USGS, Miscellaneous Geologic Investigations, Map I-239, Areal and Engineering Geology of the Oakland West Quadrangle, California, by D.H. Radbruch, 1957), the subject site is underlain by the Quaternary-age alluvial fan deposits of the Temescal formation (Qt_c). These deposits are described as typically consisting of clayey gravel, sandy and silty clays, and sand-clay-silt mixtures. The depth to bedrock at the subject site is presently unknown to KEI.

Based on the results of our subsurface study, the site is underlain by alluvium to the maximum depth explored (23 feet below grade). The alluvium underlying the site consists predominantly of clayey or sandy silt, with lesser amounts of clayey or silty gravel and clayey or silty sand.

As of December of 1993, the unsaturated zone beneath the site is approximately 11 feet thick and consists mainly of clayey or sandy silt, clayey gravel, clayey or silty sand, and clay, in order of decreasing abundance.

The first water bearing units beneath the site (first aquifer) also consist largely of sandy or clayey silt, with subordinate amounts of silty gravel and silty sand. The units immediately above and below the water table consist of gravelly or sandy silt in MW1 and MW3, and silty or clayey gravel in MW2.

The particle size analysis (sieve and hydrometer) of the soil sample collected from the saturated zone in monitoring well MW3 at a depth of 14 to 15 feet below grade indicates that the sample is composed of approximately 65% sand, 33% silt and clay, and 2% gravel. The sample is classified as silty sand with gravel (SM).

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 TPH as gasoline by EPA method 5030/modified 8015, BTEX by EPA method 8020, and TPH as paint thinner by EPA method 3510/modified 8015.

Analytical results for 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 paint thinner detected in the ground water samples collected this quarter are shown on the attached Figure 4. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

DISCUSSION

Based on the analytical results for the ground water samples collected and evaluated to date, and no evidence of free product or sheen in any of the wells, KEI recommends the continuation of the current monitoring and sampling program. The wells are currently monitored monthly and sampled on a quarterly basis.

KEI previously recommended the installation of three additional monitoring wells, labeled MW4, MW5, and MW6 on the attached Figure 5. The additional wells were proposed in order to further delineate the extent of contamination at the subject site. KEI is currently in the process of obtaining the required well and encroachment permits. The proposed wells are tentatively scheduled to be installed in May of 1994.

DISTRIBUTION

A copy of this report should be sent to the ACHCS, and to the Regional Water Quality Control Board, 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 these 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.

KEI-P91-1201.QR2
April 8, 1994
Page 5

If you have any questions regarding this report, please do not hesitate to call at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

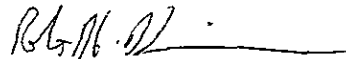
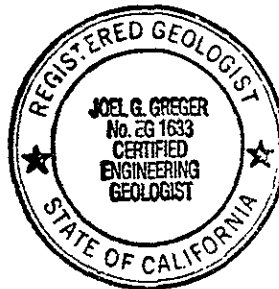


Sarkis A. Soghomonian
Staff Engineer



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

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



Robert H. Kezerian
Project Manager

\jad

Attachments: Tables 1 & 2
Location Map
Ground Water Flow Direction Maps - Figures 1, 2 & 3
Petroleum Hydrocarbon Concentrations - Figure 4
Existing and Proposed Monitoring Well Location
Map - Figure 5
Laboratory Analyses
Chain of Custody documentation

KEI-P91-1201.QR2
 April 8, 1994

TABLE 1

SUMMARY OF MONITORING DATA

<u>Well #</u>	<u>Ground Water Elevation (feet)</u>	<u>Depth to Water (feet)</u>	<u>Product Thickness (feet)</u>	<u>Sheen</u>	<u>Water Purged (gallons)</u>
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(Monitored and Sampled on March 15, 1994)

MW1	80.44	10.58	0	No	10
MW2	80.42	10.13	0	No	10
MW3	80.29	10.61	0	No	10

(Monitored on February 15, 1994)

MW1	81.16	9.86	0	--	0
MW2	80.97	9.58	0	--	0
MW3	81.25	9.65	0	--	0

(Monitored on January 21, 1994)

MW1	78.98	12.04	0	--	0
MW2	78.83	11.72	0	--	0
MW3	78.84	12.06	0	--	0

<u>Well #</u>	<u>Top of Casing Elevation (MSL)*</u>
MW1	91.02
MW2	90.55
MW3	90.90

-- Sheen determination was not performed.

* Based on City of Oakland Benchmark #2859 (elevation = 83.05 feet MSL).

TABLE 2
SUMMARY OF LABORATORY ANALYSES
WATER

<u>Sample Number</u>	<u>TPH as Paint Thinner</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethylbenzene</u>	<u>Xylenes</u>
(Collected on March 15, 1994)						
MW1	1,200	2,100	250	12	27	38
MW2	11,000	18,000	2,100	ND	200	70
MW3	4,700	7,700	910	ND	86	50
(Collected on December 13, 1993)						
MW1	820*	1,700♦	170	22	19	48
MW2	2,600	11,000♦	1,400	66	150	94
MW3	3,500	6,200♦	580	120	65	120
(Collected on April 29, 1993)						
MW1**	600	290	31	1.9	2.7	5.4
MW2**	4,100	11,000	2,400	51	76	160
MW3**	5,800	8,500	840	17	40	42

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

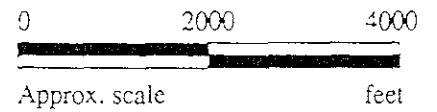
* Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a paint thinner and non-paint thinner mixture.


** TPH as diesel was detected in MW1, MW2, and MW3 at concentrations of 650 ppb, 3,600 ppb, and 4,300 ppb, respectively; however, Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be diesel.

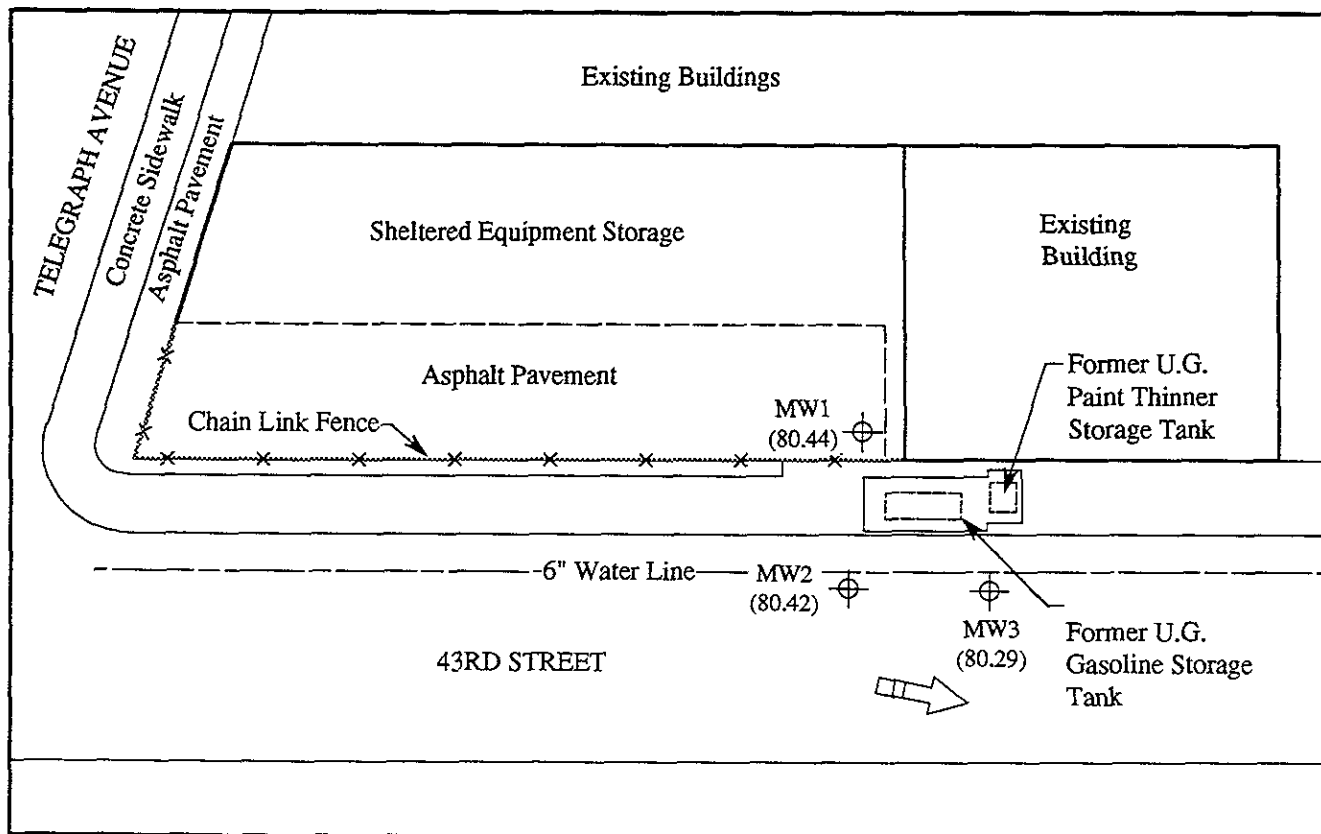
Results in parts per billion (ppb), unless otherwise indicated.






Base modified from 7.5 minute U.S.G.S Oakland East and West Quadrangles
 (both photorevised 1980)

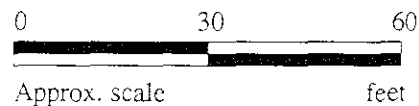


 <p>KAPREALIAN ENGINEERING INCORPORATED</p>	<p>WELLS FARGO BANK (WALTER BLUMERT CO., INC.) 490 43RD STREET OAKLAND, CA</p>	<p>LOCATION MAP</p>
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LEGEND

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



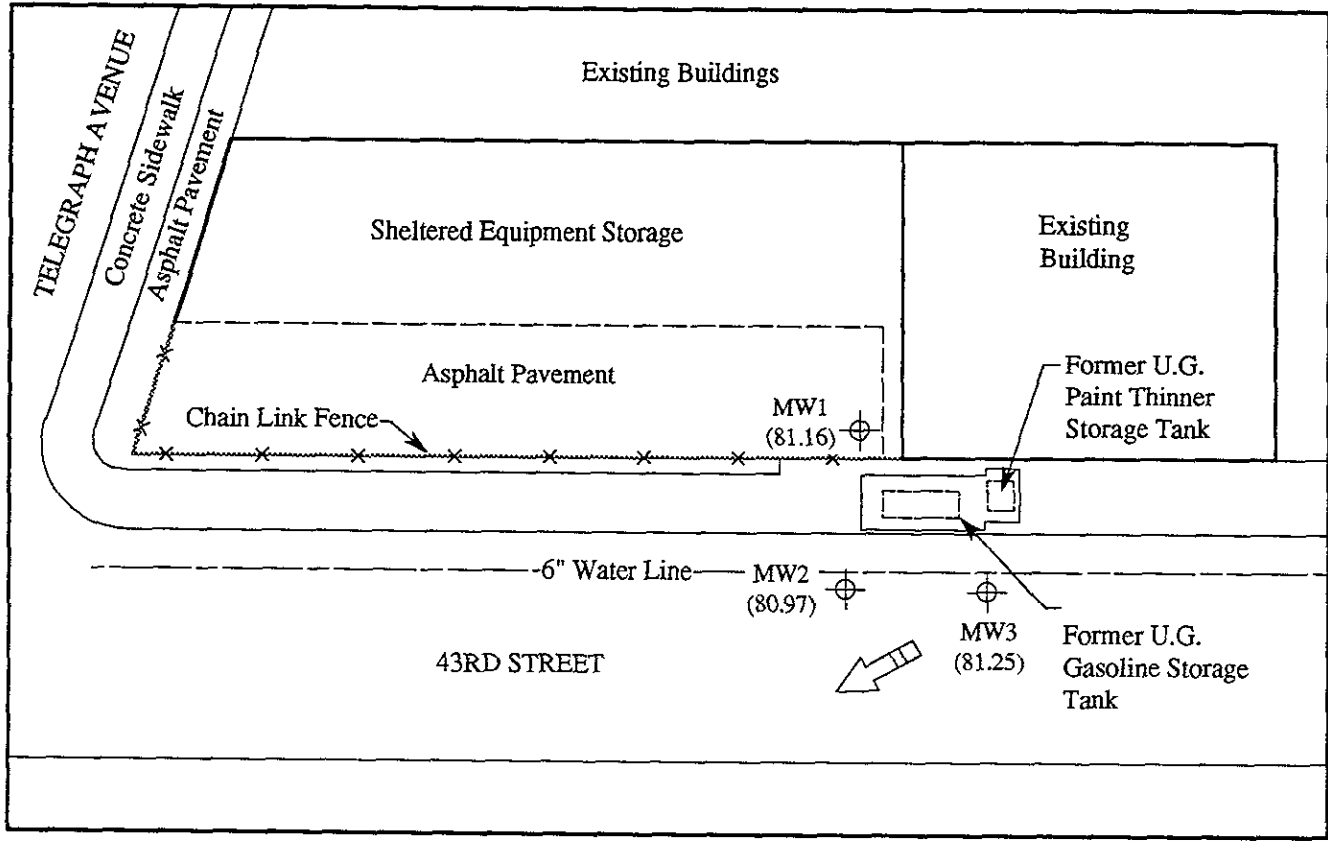
GROUND WATER FLOW DIRECTION MAP FOR THE MARCH 15, 1994 MONITORING EVENT






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INCORPORATED

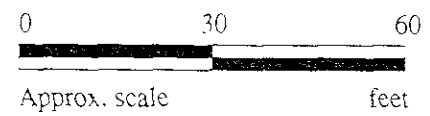
WELLS FARGO BANK
(WALTER BLUMERT CO, INC.)
490 43RD STREET
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

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

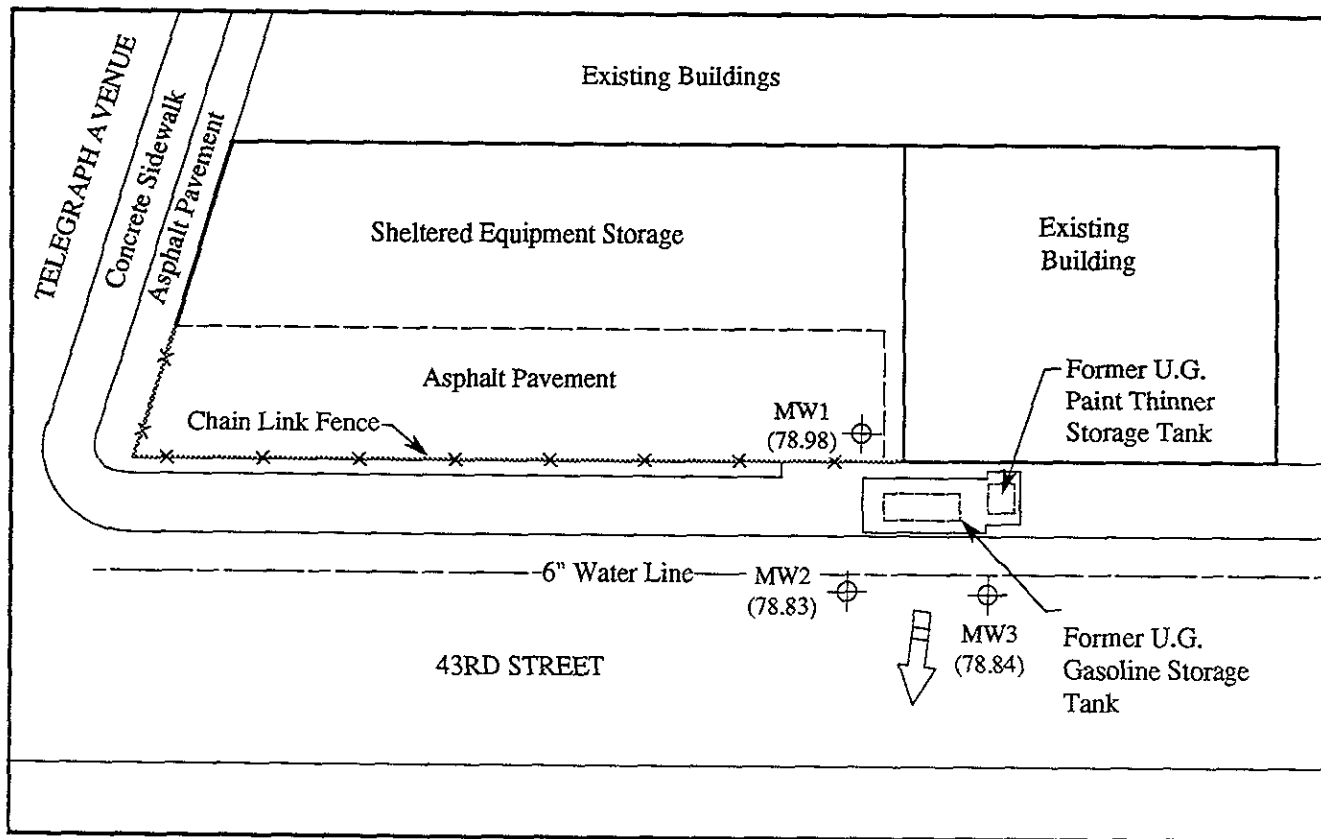


GROUND WATER FLOW DIRECTION MAP FOR THE FEBRUARY 15, 1994 MONITORING EVENT






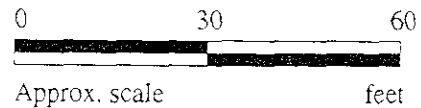
WELLS FARGO BANK
(WALTER BLUMERT CO, INC.)
490 43RD STREET
OAKLAND, CALIFORNIA

FIGURE
2



LEGEND

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



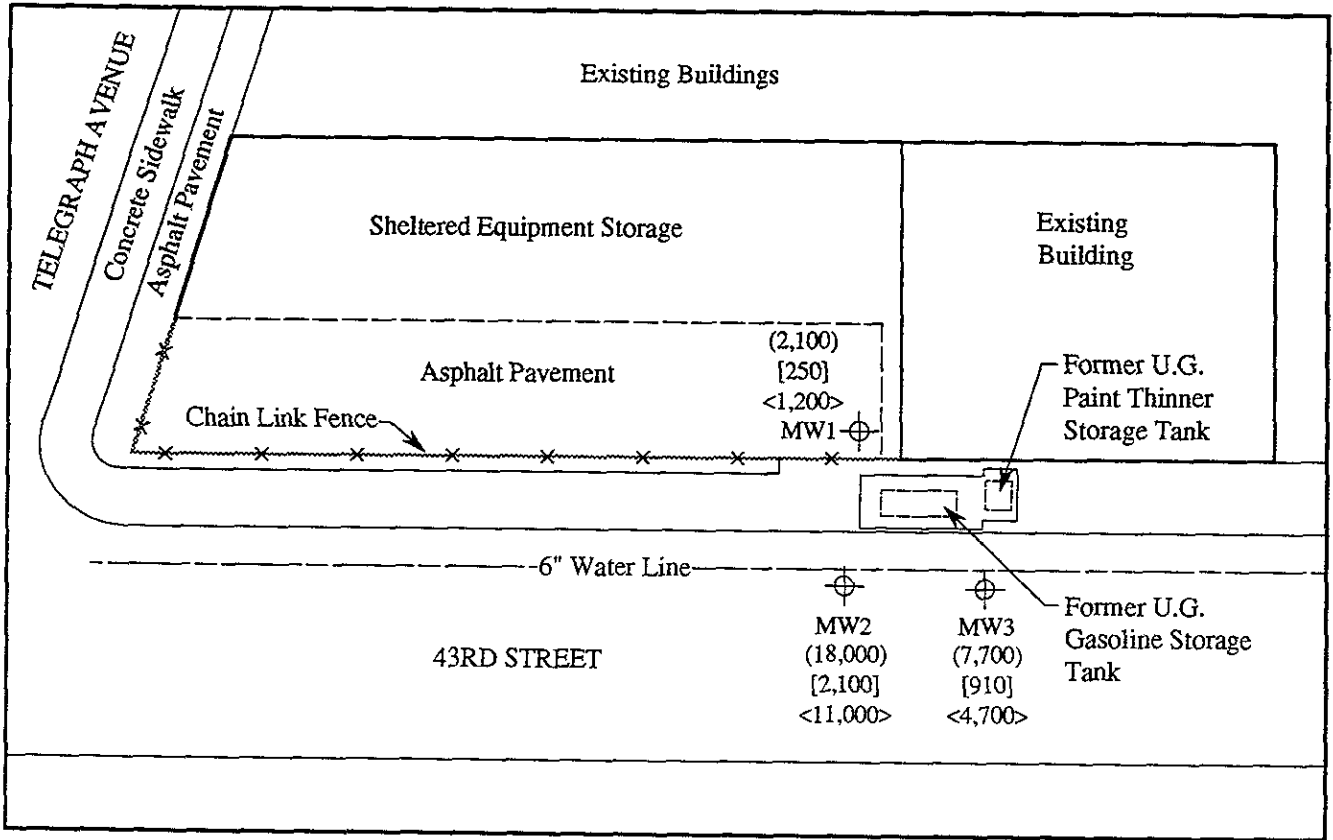
GROUND WATER FLOW DIRECTION MAP FOR THE JANUARY 21, 1994 MONITORING EVENT



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INCORPORATED

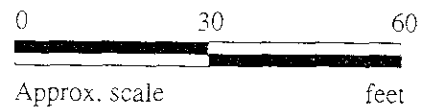
WELLS FARGO BANK
(WALTER BLUMERT CO. INC.)
490 43RD STREET
OAKLAND, CALIFORNIA

FIGURE
3



LEGEND

- ⊕ Monitoring well
- () Concentration of TPH as gasoline in ppb
- [] Concentration of benzene in ppb
- < > Concentration of TPH as paint thinner in ppb

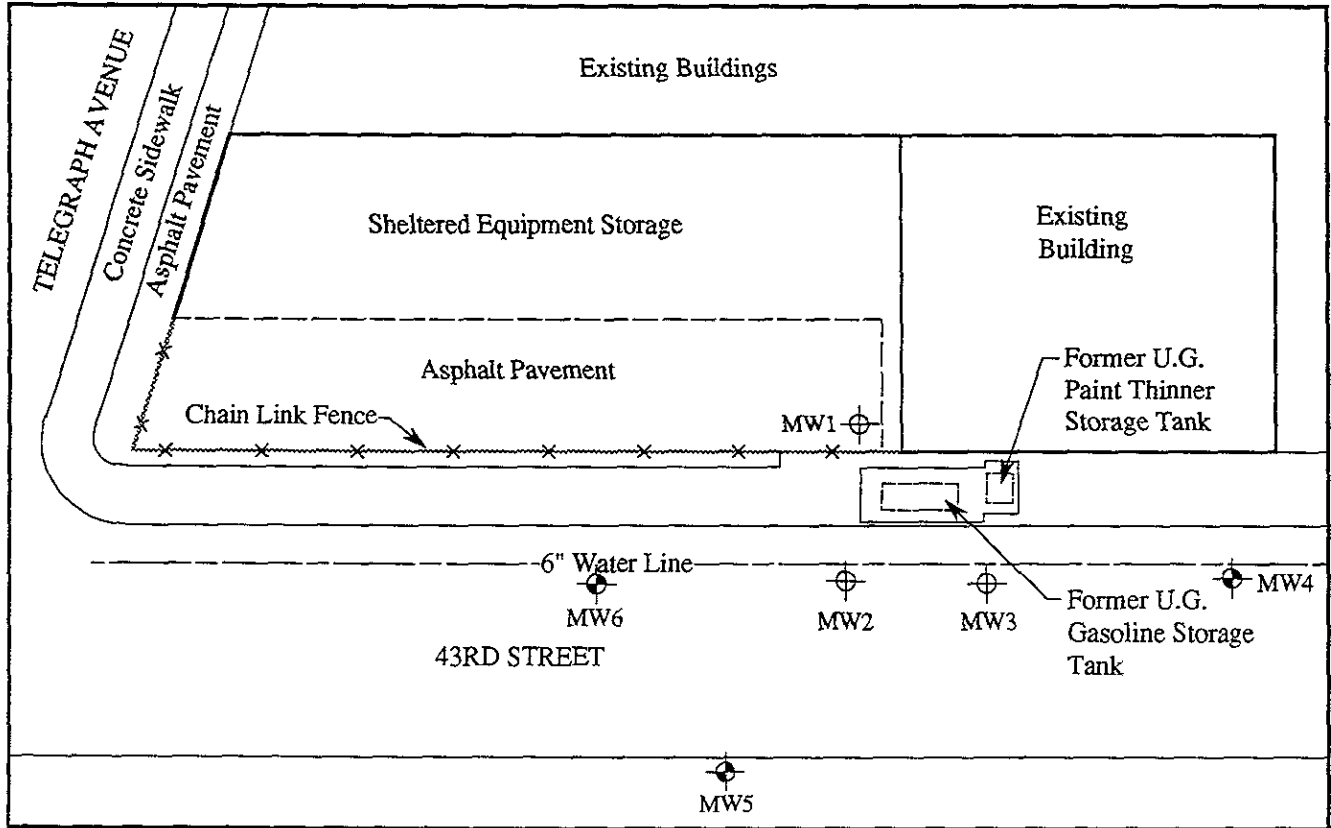


PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON MARCH 15, 1994



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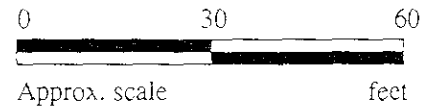
WELLS FARGO BANK
(WALTER BLUMERT CO, INC.)
490 43RD STREET
OAKLAND, CALIFORNIA

FIGURE
4



LEGEND

-  Monitoring well (existing)
-  Monitoring well (proposed)



EXISTING AND PROPOSED MONITORING WELL LOCATION MAP



KAPREALIAN ENGINEERING
INCORPORATED

WELLS FARGO BANK
(WALTER BLUMERT CO. INC.)
490 43RD STREET
OAKLAND, CALIFORNIA

FIGURE
5



Kaprealian Engineering, Inc. Client Project ID: Wells Fargo Bank, 490 43rd St., Oakland, CA Sampled: Mar 15, 1994
 2401 Stanwell Dr., Ste. 400 Sample Matrix: Water Received: Mar 16, 1994
 Concord, CA 94520 Analysis Method: EPA 5030/8015/8020 Reported: Mar 30, 1994
 Attention: Avo Avedissian First Sample #: 403-0727

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 403-0727 MW 1	Sample I.D. 403-0728 MW 2	Sample I.D. 403-0729 MW 3	Sample I.D. Matrix Blank
Purgeable Hydrocarbons	50	2,100	18,000	7,700	
Benzene	0.5	250	2,100	910	
Toluene	0.5	12	N.D.	N.D.	
Ethyl Benzene	0.5	27	200	86	
Total Xylenes	0.5	38	70	50	
Chromatogram Pattern:		Gasoline	Gasoline	Gasoline	

Quality Control Data

Report Limit Multiplication Factor:	20	100	100	1.0
Date Analyzed:	3/25/94	3/25/94	3/25/94	3/25/94
Instrument Identification:	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	100	99	100	104

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

SEQUOIA ANALYTICAL, #1271


 Alan B. Kemp
 Project Manager





Kaprealian Engineering, Inc. Client Project ID: Wells Fargo Bank, 490 43rd St., Oakland, CA Sampled: Mar 15, 1994
 2401 Stanwell Dr., Ste. 400 Sample Matrix: Water Received: Mar 16, 1994
 Concord, CA 94520 Analysis Method: EPA 3510/3520/8015 Reported: Mar 30, 1994
 Attention: Avo Avedissian First Sample #: 403-0727

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS AS PAINT THINNER

Analyte	Reporting Limit µg/L	Sample I.D. 403-0727 MW 1	Sample I.D. 403-0728 MW 2	Sample I.D. 403-0729 MW 3	Sample I.D. Matrix Blank
Extractable Hydrocarbons	50	1,200	11,000	4,700	
Chromatogram Pattern:		Paint Thinner	Paint Thinner	Paint Thinner	

Quality Control Data

Report Limit Multiplication Factor:	1.0	10	1.0	1.0
Date Extracted:	3/21/94	3/21/94	3/21/94	3/21/94
Date Analyzed:	3/28/94	3/28/94	3/28/94	3/23/94
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3B

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

SEQUOIA ANALYTICAL. #1271


 Alan B. Kemp
 Project Manager





Kaprealian Engineering, Inc. Client Project ID: Wells Fargo Bank, 490 43rd St., Oakland, CA
 2401 Stanwell Dr., Ste. 400 Matrix: Liquid
 Concord, CA 94520
 Attention: Avo Avedissian QC Sample Group: 4030727-29 Reported: Mar 30, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Paint Thinner
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Analyst:	J. Fontecha	J. Fontecha	J. Fontecha	J. Fontecha	K. Wimer

MS/MSD					
Batch#:	4030722	4030722	4030722	4030722	BLK032194
Date Prepared:	3/25/94	3/25/94	3/25/94	3/25/94	3/21/94
Date Analyzed:	3/25/94	3/25/94	3/25/94	3/25/94	3/23/94
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3B
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	300 µg/L
Matrix Spike					
% Recovery:	95	95	95	98	92
Matrix Spike Duplicate %					
Recovery:	100	100	105	105	85
Relative % Difference:	5.1	5.1	10	6.9	7.5

LCS Batch#:	2LCS032594	2LCS032594	2LCS032594	2LCS032594	BLK032194
Date Prepared:	3/25/94	3/25/94	3/25/94	3/25/94	3/21/94
Date Analyzed:	3/25/94	3/25/94	3/25/94	3/25/94	3/23/94
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	HP-3B
LCS % Recovery:	82	82	82	82	92

% Recovery Control Limits:	71-133	72-128	72-130	71-120	28-122
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Please Note
 The LCS is a control sample of known intererent free matrix that is analyzed using the same reagents preparation and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the factor.

SEQUOIA ANALYTICAL, #1271

Alan B. Kemp
 Alan B. Kemp
 Project Manager





**Sequoia
Analytical**

680 Chesapeake Drive
1900 Bates Avenue, Suite L
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Concord, CA 94520
Sacramento, CA 95834

(415) 364-9600
(510) 686-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 686-9689
FAX (916) 921-0100

Kaprealian Engineering, Inc.
2401 Stanwell Dr., Ste. 400
Concord, CA 94520
Attention: Avo Avedissian

Client Project ID: Wells Fargo Bank, 490 43rd St., Oakland, CA

QC Sample Group: 4030727-29

Reported: Mar 30, 1994

QUALITY CONTROL DATA REPORT

SURROGATE

Method:	EPA 8015	EPA 8015	EPA 8015	EPA 8015
Analyst:	K. Wimer	K. Wimer	K. Wimer	K. Wimer
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	3/28/94	3/28/94	3/28/94	3/23/94
Sample #:	403-0727	403-0728	403-0729	Matrix Blank

Surrogate

% Recovery:	73	82	85	95
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SEQUOIA ANALYTICAL, #1271


Alan B. Kemp
Project Manager

% Recovery	$\frac{\text{Conc of MS} - \text{Conc of Sample}}{\text{Spike Conc Added}} \times 100$
Relative % Difference	$\frac{\text{Conc of MS} - \text{Conc of MSD}}{(\text{Conc of MS} + \text{Conc of MSD}) / 2} \times 100$



CHAIN OF CUSTODY

SAMPLER <i>Diran Melkoun</i>			SITE NAME & ADDRESS <i>Wells Fargo Bank 490 - 43rd street, Oakland, Ca.</i>						ANALYSES REQUESTED						TURN AROUND TIME: <i>Regular</i>	
WITNESSING AGENCY			SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G	BTXE	TPH as per <i>thinner</i>					REMARKS
<i>MW1</i>	<i>3/15/94</i>			<input checked="" type="checkbox"/>			<i>3</i>	<i>monitoring well</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<i>40</i>	<i>30727 A-C</i>
<i>MW2</i>	<i>3/15/94</i>			<input checked="" type="checkbox"/>			<i>3</i>	<i>"</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<i>↓</i>	<i>0728</i>
<i>MW3</i>	<i>3/15/94</i>			<input checked="" type="checkbox"/>			<i>3</i>	<i>"</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				<i>↓</i>	<i>0729 ↓</i>
Relinquished by: (Signature) <i>Diran Melkoun</i>			Date/Time <i>3/15/94</i>		Received by: (Signature) <i>DP Miller</i>		Date/Time <i>3-16-94 9:00</i>		The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <i>YES</i> 2. Will samples remain refrigerated until analyzed? <i>YES</i> 3. Did any samples received for analysis have head space? <i>NO</i> 4. Were samples in appropriate containers and properly packaged? <i>YES</i> <i>DP Miller</i> Signature <i>D-3</i> Title <i>3-16-94</i> Date							
Relinquished by: (Signature)			Date/Time		Received by: (Signature)		Date/Time									
Relinquished by: (Signature)			Date/Time		Received by: (Signature)		Date/Time									
Relinquished by: (Signature)			Date/Time		Received by: (Signature)		Date/Time									