

January 8, 1993
SCI 430.010

98 JAN 11 PM 2:57

Ms. Jennifer Eberle
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, California 94621

3623

**Quarterly Groundwater Monitoring
Gasoline Contamination
1330 Martin Luther King Jr. Way
Oakland, California**

Dear Ms. Eberle:

This letter presents quarterly groundwater monitoring results for the referenced site. Groundwater monitoring has been performed as a result of an underground gasoline tank release. Subsurface Consultants, Inc. (SCI) has been providing consulting services for this project since 1989. The location of the site is presented on Plate 1.

Contaminated soil and groundwater resulting from the gasoline release is presently being remediated. Site remediation consists of (1) vapor extraction, and (2) groundwater extraction and treatment. The vapor extraction system has removed all measurable free product in the area. The groundwater extraction system has significantly lowered dissolved product concentrations and reduced the extent of the dissolved product plume. Vapor extraction and groundwater treatment are ongoing.

During this event, Wells 11, 31, 39, 42, 43, 45 and 58 were sampled. The groundwater monitoring events consist of (1) measuring groundwater levels and free product thicknesses, (2) purging water from each well until pH, conductivity and temperature have stabilized, and (3) sampling the wells with pre-cleaned disposable samplers. The samples were retained in glass containers and preserved with hydrochloric acid. The containers were placed in an ice filled cooler and remained iced until delivery to the analytical laboratory. Chain-of-custody documents accompanied the samples to the laboratory.

Analytical testing was performed by Eureka Laboratories, Inc. a State of California Department of Health Services certified

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laboratory for hazardous waste and water testing. The analytical tests included:

1. Total volatile hydrocarbons (TVH), sample preparation and analysis using EPA Methods 5030 (purge and trap) and 8015 modified (gas chromatograph coupled to a flame ionization detector), and
2. Benzene, toluene, xylenes and ethylbenzene (BTXE), sample preparation and analysis using EPA Methods 5030 and 8020 (gas chromatograph coupled to a flame ionization detector).

A summary of the current and previous analytical test results and groundwater elevation data are presented in the attached Tables 1 and 2. Analytical test reports and chain-of-custody documents are also attached.

Conclusions

The groundwater level data indicate that the regional groundwater flow direction is toward the west-northwest at a gradient of approximately 1 percent. This groundwater flow direction and gradient remain consistent with previous measurements. However, locally groundwater is flowing toward the extraction wells shown on Plate 1.

In general, the analytical test results indicate that dissolved hydrocarbon concentrations in groundwater are continuing to decline. However, gasoline was detected in Well 31 at a concentration of 43 ug/l, for the first time since monitoring began in September 1988. Well 31 was resampled on December 17, 1992. Analytical test results confirmed the presence of gasoline. At the present time, we are uncertain of the source of the gasoline contamination. Groundwater monitoring will continue on a quarterly basis. Conditions in Well 31 will be carefully reviewed.

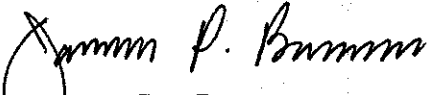
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If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.


James P. Bowers

Geotechnical Engineer 157 (expires 3/31/95)

MK:JPB:egh

Attachments: Table 1. - Contaminate Concentrations in Groundwater
Table 2. - Groundwater Elevation Data
Plate 1. - Site Plan
Analytical Test Reports
Chain-of-Custody Documents

cc: Mr. Eddy So
Regional Water Quality Control Board
2101 Webster Street, Room 500
Oakland, California 94612

Ms. Lois Parr
Oakland Redevelopment Agency
1333 Broadway, Suite 900
Oakland, California 94612

Ms. Julie Carver
City of Oakland
Environmental Affairs
1333 Broadway, Suite 800
Oakland, California 94612

Mr. Donnell Choy
City of Oakland
905 14th Street, 12th Floor
Oakland, California 94612

Table 1. Contaminant Concentrations In Groundwater

Test Boring	Sample Date	TVH ¹ (ug/L) ⁵	B ² (ug/L)	T ² (ug/L)	X ² (ug/L)	E ² (ug/L)	Total Organic Lead (ug/L)	EDB ³ (ug/L)	1,2 DCA ⁴ (ug/L)
11	07/05/88	10,000	1,800	ND ⁶	1,200	ND	-- ⁷	--	--
	04/03/89	53,000	7,100	4,000	2,400	380	--	--	--
	07/06/89	22,000	5,300	3,200	2,300	390	ND	26	--
	11/08/89	120,000	18,000	8,000	21,000	4,500	ND	37	--
	07/18/90	26,000	950	19	98	ND	--	--	--
	10/23/90	4,200	1,600	8.5	170	28	--	0.2	--
	01/21/91	1,900	600	6.2	84	60	--	0.15	--
	04/24/91	4,800	1,100	3.5	46	120	--	--	--
	07/24/91	950	330	0.9	1.8	12	--	--	--
	10/24/91	970	350	1.6	1.6	14	--	ND	--
	01/23/92	ND	ND	ND	ND	ND	--	--	--
	05/01/92	340	77	0.6	0.6	ND	--	--	--
	08/06/92	220	54	ND	ND	ND	--	--	--
	11/16/92	159	ND	ND	ND	ND	--	--	--
28	09/02/88	890	431	75.4	84	ND	ND	9.2	--
	07/06/89	13,000	4,900	1,500	1,300	100	ND	27	--
29	09/02/88	ND	ND	8.1	ND	ND	ND	ND	--
	04/03/89	450	ND	2.0	6.7	2.0	--	--	--
	07/06/89	ND	ND	15	ND	ND	ND	ND	--
	11/08/89	780	ND	14	32	7.9	ND	ND	--
	10/23/90	1,800	1.2	6.5	4.8	2.7	--	--	--
	01/21/91	1,100	ND	3.7	4.9	1.3	--	ND	--
	03/28/91	500	ND	1.6	0.8	ND	--	--	--
31	09/02/88	ND	ND	ND	ND	ND	ND	ND	--
	04/03/89	ND	ND	ND	ND	ND	--	--	--
	07/06/89	ND	ND	ND	ND	ND	ND	ND	--
	11/08/89	ND	ND	ND	ND	ND	ND	ND	--
	07/18/90	ND	ND	ND	ND	ND	--	--	--
	01/21/91	ND	ND	0.6	2.1	ND	--	ND	--
	04/24/91	ND	ND	ND	ND	ND	--	--	--
	07/24/91	ND	ND	ND	ND	ND	--	--	--
	10/24/91	ND	ND	ND	ND	ND	--	--	--
	01/23/92	ND	ND	ND	ND	ND	--	--	--
	05/01/92	ND	ND	ND	ND	ND	--	--	--
	08/07/92	ND	ND	ND	ND	ND	--	--	--
	11/16/92	43	ND	ND	ND	ND	--	--	--
12/17/92 ⁸	35.3	ND	ND	ND	ND	--	--	--	
32	10/23/90	48,000	7,600	8,200	5,600	150	--	3.8	--
	01/21/91	96,000	9,600	15,000	16,000	2,000	--	ND	--
	04/24/91	170	ND	ND	ND	ND	--	--	--

Table 1. Contaminant Concentrations In Groundwater (continued)

Test Boring	Sample Date	TVH ¹ (ug/L) ⁵	B ² (ug/L)	T ² (ug/L)	X ² (ug/L)	E ² (ug/L)	Total Organic	EDB ³ (ug/L)	1,2
							Lead (ug/L)		DCA ⁴ (ug/L)
39	04/03/89	2,000	250	11	210	ND	--	--	--
	07/06/89	7,900	2,700	1,300	860	97	ND	3.0	--
	11/08/89	9,300	4,500	760	310	150	ND	4.0	36
	07/18/90	ND	4.1	ND	ND	ND	--	--	--
	10/23/90	160	12	6.4	5.0	ND	--	ND	ND
	01/21/90	200	23	0.9	2.0	1.2	--	ND	--
	03/28/91	ND	ND	ND	ND	ND	--	--	--
	04/24/91	ND	ND	ND	ND	ND	--	--	--
	07/24/91	ND	1.4	ND	ND	ND	--	--	--
	10/24/91	ND	ND	ND	ND	ND	--	ND	--
	01/23/92	ND	ND	ND	ND	ND	--	--	--
	05/01/92	ND	ND	ND	ND	ND	--	--	--
	08/07/92	ND	ND	ND	ND	ND	--	--	--
11/16/92	ND	ND	ND	ND	ND	--	--	--	
42	07/06/89	13,000	4,500	100	1,000	ND	ND	8.0	--
	10/23/90	8,800	420	580	910	91	--	0.7	--
	07/24/91	21,000	2,200	300	650	180	--	--	--
	10/24/91	18,000	2,300	1,100	1,000	260	--	16	--
	01/23/92	10,000	1,100	280	430	300	--	--	--
	05/01/92	16,000	1,200	330	580	220	--	--	--
	08/07/92	12,000	890	510	1,000	340	--	--	--
	11/16/92	587	1.2	4.3	43	ND	--	--	--
43	10/24/91	6,300	ND	ND	130	9.1	--	--	--
	05/01/92	930	ND	ND	3.8	ND	--	--	--
	08/07/92	450	ND	2.4	3.5	1.5	--	--	--
	11/16/92	614	ND	2.0	34.4	1.6	--	--	--
45	12/05/89	ND	ND	ND	ND	ND	ND	ND	--
	10/23/90	ND	0.9	1.4	1.8	ND	--	--	--
	01/21/91	ND	ND	ND	ND	ND	--	ND	--
	04/24/91	ND	ND	ND	ND	ND	--	--	--
	07/24/91	ND	ND	ND	ND	ND	--	--	--
	10/24/91	ND	ND	ND	ND	ND	--	--	--
	01/24/92	ND	ND	ND	ND	ND	--	--	--
	05/01/92	ND	ND	ND	ND	ND	--	--	--
	08/06/92	ND	ND	ND	ND	ND	--	--	--
	11/16/92	ND	ND	ND	ND	ND	--	--	--

Table 1. Contaminant Concentrations In Groundwater (continued)

Test Boring	Sample Date	TVH ¹ (ug/L) ⁵	B ² (ug/L)	T ² (ug/L)	X ² (ug/L)	E ² (ug/L)	Total Organic Lead (ug/L)	EDB ³ (ug/L)	1,2 DCA ⁴ (ug/L)
46	11/30/89	ND	2.1	1.9	2.0	ND	ND	ND	--
	07/18/90	ND	ND	ND	ND	ND	--	--	--
	10/23/90	ND	ND	0.6	ND	0.5	--	--	--
	01/21/91	ND	ND	ND	ND	ND	--	ND	--
	04/24/91	ND	ND	ND	ND	ND	--	--	--
	07/24/91	ND	ND	ND	ND	ND	--	--	--
	10/24/91	ND	ND	ND	ND	ND	--	--	--
58	01/30/91	ND	ND	ND	ND	ND	--	--	--
	03/28/91	ND	ND	ND	ND	ND	--	--	--
	04/24/91	ND	ND	ND	ND	ND	--	--	--
	07/24/91	ND	ND	ND	ND	ND	--	--	--
	10/24/91	ND	ND	ND	ND	ND	--	--	--
	01/24/92	ND	ND	ND	ND	ND	--	--	--
	05/01/92	ND	ND	ND	ND	ND	--	--	--
	08/06/92	ND	ND	ND	ND	ND	--	--	--
11/16/92	ND	ND	ND	ND	ND	--	--	--	

¹ TVH = Total Volatile Hydrocarbons

² BTXE = Benzene, Toluene, Xylene, and Ethylbenzene

³ EPA 8011, ethylene dibromide

⁴ EPA 8010, 1, 2-dichloroethane

⁵ ug/L = micrograms per liter

⁶ ND = None detected, chemicals not present at concentrations above the detection limits

⁷ -- = Test not requested

⁸ Well resampled

Table 2. Groundwater Elevation Data

Monitoring Well	TOC Elev ¹ (feet)	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)	Free Product Thickness (feet)
11	99.66	01/19/89	26.82	72.84	--
		04/03/89	26.35	73.31	--
		07/05/89	26.95	72.71	--
		11/09/89	27.28	72.83	--
		01/24/89	27.40	72.26	--
		04/30/90	27.56	72.10	--
		07/03/90	28.89	70.77	--
		10/23/90	28.93	70.73	--
		01/21/91	27.75	71.97	--
		04/24/91	28.14	71.52	--
		07/24/91	28.78	70.88	--
		10/24/91	29.09	70.57	--
		01/23/92	29.85	69.81	--
		05/01/92	27.44	72.22	--
		08/07/92	27.86	71.80	--
11/16/92	27.84	71.82	--		
28	98.99	01/19/89	26.16	72.83	--
		04/03/89	25.70	73.29	--
		07/05/89	26.26	72.73	--
		11/08/89	26.59	72.40	--
		01/24/90	26.81	72.18	--
		05/10/90	31.83	65.96	1.22
	97.79	07/03/90	31.95	65.84	0.04
		10/23/90	31.25	66.54	1.38
		01/21/91	28.00	69.79	0.00
		10/24/91	27.26	70.53	0.00
		01/23/92	32.99	64.89	0.00
		08/07/92	26.95	70.84	-- ²
		11/16/92	25.95	71.84	--
29	97.95	01/19/89	26.14	71.81	--
		04/03/89	25.88	72.07	--
		07/05/89	26.19	71.76	--
		11/09/89	26.51	71.44	--
		01/24/90	26.66	71.29	--
		04/30/90	26.73	71.22	--
		07/03/90	27.22	70.73	--
		10/23/90	27.40	70.55	--
		01/21/91	26.89	71.06	--
		03/28/91	27.04	70.91	--
		10/24/91	27.47	70.48	--
		01/23/92	27.89	70.06	--
		11/16/92	26.78	71.17	--

Table 2. Groundwater Elevation Data (continued)

<u>Monitoring Well</u>	<u>TOC Elev¹ (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Free Product Thickness (feet)</u>
30	99.30	01/19/89	27.50	71.80	1.56
		04/03/89	28.44	70.86	2.56
		07/05/89	28.90	70.40	3.38
		11/09/89	29.52	69.78	3.67
		04/30/90	27.23	72.07	0.29
		07/03/90	29.07	70.23	0.57
		10/23/90	29.07	70.23	1.27
		01/21/91	29.09	70.23	2.27
		04/24/91	27.80	71.50	0.19
		05/31/91	28.08	71.23	0.49
		10/24/91	28.94	70.36	0.00
		11/16/92	27.29	72.01	--
31	98.90	01/19/89	26.15	72.75	--
		04/03/89	25.90	73.00	--
		07/05/89	26.28	72.76	--
		11/09/89	26.64	72.26	--
		01/24/90	26.84	72.06	--
		04/30/90	26.87	72.03	--
		07/03/90	27.50	71.40	--
		09/23/90	27.52	71.36	--
		01/21/91	27.09	71.81	--
		04/24/91	27.12	71.78	--
		07/24/91	27.60	71.30	--
		10/24/91	28.81	70.09	--
		01/23/92	28.31	70.59	--
		05/01/92	26.70	72.20	--
		08/07/92	27.00	71.90	--
11/16/92	27.04	71.86	--		
32	98.53	01/24/90	25.64	72.89	--
		04/30/90	25.82	72.71	--
		06/01/90	26.30	72.23	--
		10/23/90	26.70	71.83	--
		01/21/91	26.06	72.47	--
		04/24/91	26.40	72.13	--
		10/24/91	27.05	71.48	--

Table 2. Groundwater Elevation Data (continued)



<u>Monitoring Well</u>	<u>TOC Elev¹ (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Free Product Thickness (feet)</u>
39	99.00	04/03/89	25.87	73.13	--
		07/05/89	26.38	72.62	--
		11/09/89	26.70	72.30	--
		01/24/90	26.86	72.14	--
		04/30/90	26.97	72.03	--
		07/03/90	28.17	70.83	--
		10/23/90	28.17	70.83	--
		01/21/91	27.15	71.85	--
		03/28/91	27.76	71.24	--
		04/24/91	27.33	71.67	--
		07/24/91	27.91	71.09	--
		10/24/91	28.26	70.74	--
		01/23/92	29.00	70.00	--
		05/01/92	26.82	72.18	--
		08/07/92	27.18	71.82	--
11/16/92	27.19	71.81	--		
42	99.12	04/03/89	25.77	73.35	--
		07/05/89	26.30	72.89	--
		11/09/89	26.66	72.46	--
		01/24/90	26.82	72.30	--
		04/18/90	26.94	72.18	--
		07/03/90	28.58	70.54	--
		10/23/90	28.58	70.54	0.08
		07/24/91	28.10	71.02	0.00
		10/24/91	28.24	70.88	--
		01/23/92	29.33	69.79	--
		05/01/92	26.88	72.44	--
		08/07/92	27.10	72.02	--
		11/16/92	26.68	72.44	--
43	98.87	04/03/89	25.32	73.55	0.08
		07/05/89	26.80	72.07	1.34
		11/09/89	28.44	70.43	2.89
		04/30/90	27.05	71.82	0.79
		07/03/90	28.36	70.51	0.70
		10/23/90	28.19	70.68	0.83
		10/24/91	26.30	72.57	0.00
		01/24/92	28.25	70.62	0.02
		05/01/92	25.44	73.43	0.00
		08/07/92	25.11	73.76	--
		11/16/92	26.42	72.45	--

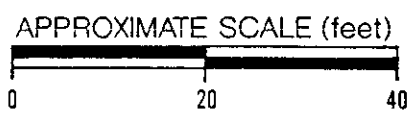
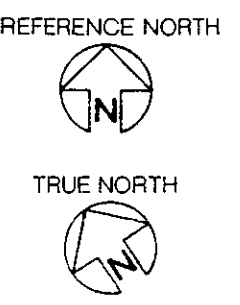
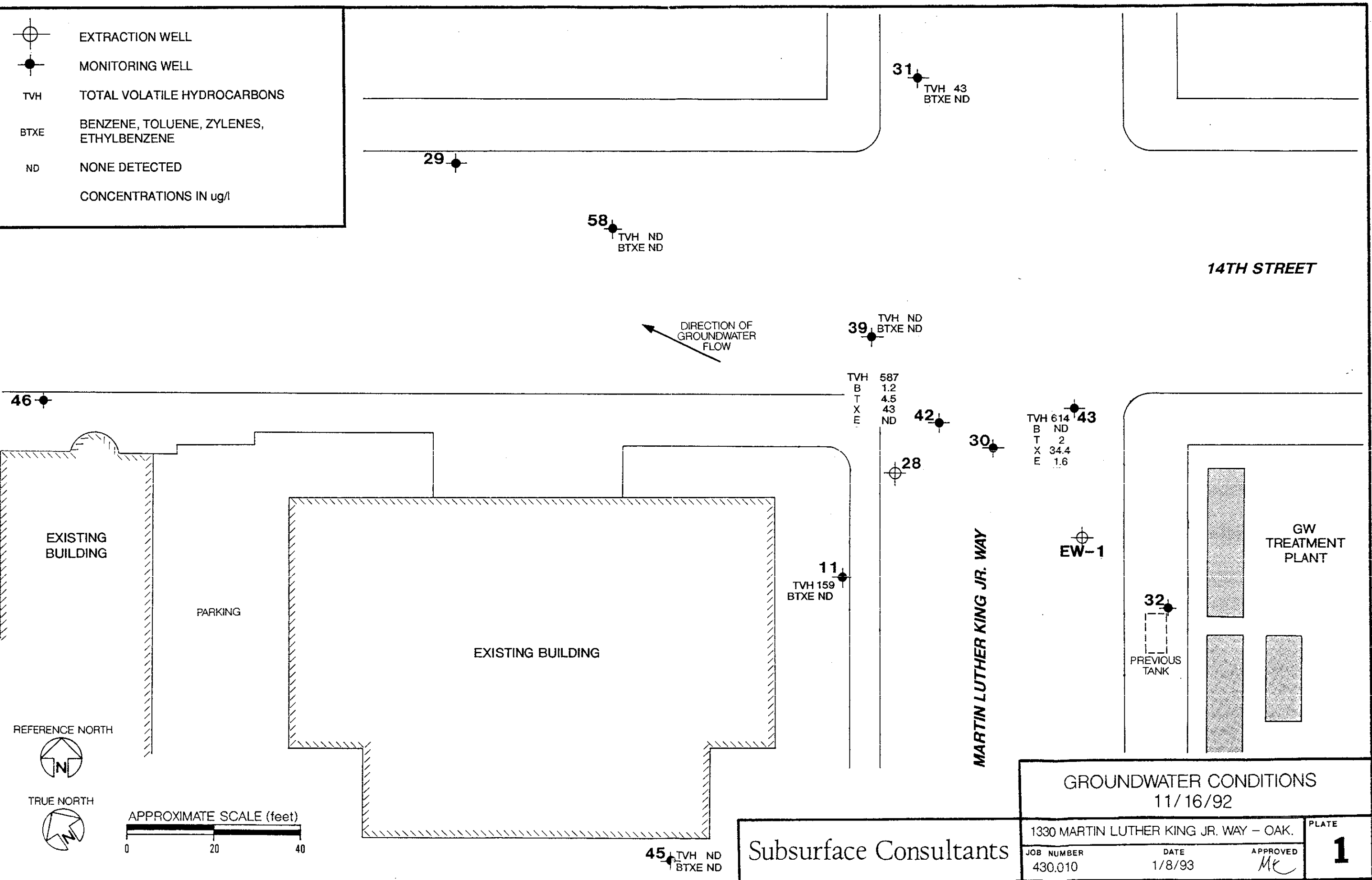
Table 2. Groundwater Elevation Data (continued)

<u>Monitoring Well</u>	<u>TOC Elev¹ (feet)</u>	<u>Date</u>	<u>Groundwater Depth (feet)</u>	<u>Groundwater Elevation (feet)</u>	<u>Free Product Thickness (feet)</u>
45	100.90	12/05/89	28.71	72.19	--
		04/30/90	28.85	72.05	--
		07/03/90	29.45	71.45	--
		10/23/90	29.50	71.40	--
		01/21/91	29.03	71.87	--
		04/24/91	28.87	72.03	--
		07/25/91	29.63	71.27	--
		10/24/91	29.62	71.28	--
		01/23/92	30.45	70.45	--
		05/01/92	28.42	72.48	--
		08/07/92	28.70	72.20	--
11/16/92	28.84	72.06	--		
46	98.11	12/19/89	27.40	70.71	--
		04/30/90	27.46	70.63	--
		07/03/90	27.75	70.36	--
		10/23/90	27.86	70.25	--
		01/21/91	27.60	70.51	--
		04/24/91	27.40	70.71	--
		07/24/91	28.73	69.38	--
		10/24/91	27.88	70.23	--
		01/23/92	28.31	69.80	--
		08/07/92	27.28	70.83	--
		11/16/92	27.42	70.69	--
58	98.89	01/30/91	28.25	70.64	--
		03/28/91	27.81	71.08	--
		04/24/91	27.55	71.34	--
		07/24/91	33.42	65.47	--
		10/24/91	28.29	70.60	--
		01/23/92	28.75	70.14	--
		05/01/92	27.10	71.79	--
		08/07/92	27.40	71.49	--
		11/16/92	27.44	71.45	--

¹ Elevation reference: PG&E manhole approximately 30 feet south of 14th Street on Martin Luther King Jr. Way, assumed to be 100.00 feet,
 TOC = Top of casing

² -- = No free product present

 EXTRACTION WELL
 MONITORING WELL
 TVH TOTAL VOLATILE HYDROCARBONS
 BTXE BENZENE, TOLUENE, ZYLENES, ETHYLBENZENE
 ND NONE DETECTED
 CONCENTRATIONS IN ug/l



Subsurface Consultants			GROUNDWATER CONDITIONS		PLATE 1
			11/16/92		
1330 MARTIN LUTHER KING JR. WAY - OAK.			JOB NUMBER	DATE	APPROVED
			430.010	1/8/93	<i>Mr</i>

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-01A
SAMPLE ID: MW-11

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	<0.5	0.5
V8	Xylenes (Dimethyl benzenes)	<0.5	0.5

Huey-Chen Chow

Chemist

December 3, 1992
Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-02A
SAMPLE ID: MW-31

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	<0.5	0.5
V8	Xylenes (Dimethyl benzenes)	<0.5	0.5

Huey-Chen Chow

Chemist

December 3, 1992
Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 8020

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Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-03A
SAMPLE ID: MW-39

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	<0.5	0.5
V8	Xylenes (Dimethyl benzenes)	<0.5	0.5

Huey-Chen Chow

Chemist

December 3, 1992

Date

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PURGEABLE AROMATICS, EPA Method 8020

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Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-04A
SAMPLE ID: MW-42

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	1.2	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	4.5	0.5
V8	Xylenes (Dimethyl benzenes)	43.0	0.5

Note: All positively identified compounds were second column or second detector confirmed.

Huey-Chen Chow

Chemist

December 3, 1992

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PURGEABLE AROMATICS, EPA Method 8020

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Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-05A
SAMPLE ID: MW-43

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	1.6	0.5
V7	Toluene	2.0	0.5
V8	Xylenes (Dimethyl benzenes)	34.4	0.5

Note: All positively identified compounds were second column or second detector confirmed.

Huey-Chen Chow

Chemist

December 3, 1992

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(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-06A
SAMPLE ID: MW-45

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	<0.5	0.5
V8	Xylenes (Dimethyl benzenes)	<0.5	0.5

Huey-Chen Chow

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Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-07A
SAMPLE ID: MW-58

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	<0.5	0.5
V8	Xylenes (Dimethyl benzenes)	<0.5	0.5

Huey-Chen Chow

Chemist

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Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: NA
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-08A
SAMPLE ID: METHOD BLANK

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	<0.5	0.5
V8	Xylenes (Dimethyl benzenes)	<0.5	0.5

Huey-Chen Chow

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Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: NA
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-10A
SAMPLE ID: MW-45 MATRIX SPIKE RECOVERY

<u>COMP.</u> <u>NO.</u>	<u>COMPOUND</u>	<u>SPIKE RECOVERY</u>
----------------------------	-----------------	-----------------------

V1	Benzene	71%
V2	Chlorobenzene	75%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	-
V5	1,4-Dichlorobenzene	-
V6	Ethyl benzene	87%
V7	Toluene	71%
V8	Xylenes (Dimethyl benzenes)	79%

Huey-Chen Chow

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(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: NA
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: NA
DATE ANALYZED: 11/23/1992
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-11A
SAMPLE ID: MW-45 MATRIX SPIKE RECOVERY
DUPLICATE

<u>COMP.</u> <u>NO.</u>	<u>COMPOUND</u>	<u>SPIKE RECOVERY</u>
----------------------------	-----------------	-----------------------

V1	Benzene	91%
V2	Chlorobenzene	82%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	-
V5	1,4-Dichlorobenzene	-
V6	Ethyl benzene	79%
V7	Toluene	80%
V8	Xylenes (Dimethyl benzenes)	85%

Huey-Chen Chow

Chemist

December 3, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-01A
SAMPLE ID: MW-11

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	159	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C13	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C7	-

Samir Samaan

Chemist

December 3, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-02A
SAMPLE ID: MW-31

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	43	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C13	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C7	-

Samir Samaan

Chemist

December 3, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-03A
SAMPLE ID: MW-39

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	<20	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	-	-
<u>PEAK CARBON NO</u>		
Gasoline Range	-	-

Samir Samaan

Chemist

December 3, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-04A
SAMPLE ID: MW-42

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	587	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C13	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C7	-

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Chemist

December 3, 1992

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EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-05A
SAMPLE ID: MW-43

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	614 *	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C14	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C8	-

* Hydrocarbons in the gasoline range have been detected. However, their patterns are different from our standard.

Samir Samaan
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December 3, 1992
Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
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Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-06A
SAMPLE ID: MW-45

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	<20	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	-	-
<u>PEAK CARBON NO</u>		
Gasoline Range	-	-

Samir Samaan

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December 3, 1992

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TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
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Order No: 92-11-137
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Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: 11/16/1992
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-07A
SAMPLE ID: MW-58

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	<20	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	-	-
<u>PEAK CARBON NO</u>		
Gasoline Range	-	-

Samir Samaan

Chemist

December 3, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: NA
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-08A
SAMPLE ID: METHOD BLANK

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	<20	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	-	-
<u>PEAK CARBON NO</u>		
Gasoline Range	-	-

Samir Samaan

Chemist

December 3, 1992

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TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

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6790 Florin-Perkins Road
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(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: NA
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-10A
SAMPLE ID: MW-45 MATRIX SPIKE RECOVERY

PETROLEUM HYDROCARBONS

SPIKE RECOVERY

Gasoline Range

100%

CARBON NO. RANGE

Gasoline Range

-

PEAK CARBON NO

Gasoline Range

-

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Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

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6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

ELI SAMPLE ID: 9211137-11A
SAMPLE ID: MW-45 MATRIX SPIKE RECOVERY
DUPLICATE

DATE SAMPLED: NA
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

PETROLEUM HYDROCARBONS

SPIKE RECOVERY

Gasoline Range

110%

CARBON NO. RANGE

Gasoline Range

-

PEAK CARBON NO

Gasoline Range

-

Samir Samaan

Chemist

December 3, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

ELI SAMPLE ID: 9211137-12A
SAMPLE ID: REAGENT SPIKE RECOVERY

DATE SAMPLED: NA
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

PETROLEUM HYDROCARBONS

SPIKE RECOVERY

Gasoline Range

71%

CARBON NO. RANGE

Gasoline Range

-

PEAK CARBON NO

Gasoline Range

-

Samir Samaan

Chemist

December 3, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-11-137
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GW
JOB #: 430-010

DATE SAMPLED: NA
DATE RECEIVED: 11/17/1992
DATE EXTRACTED: 11/24/1992
DATE ANALYZED: 11/24/1992
INSTRUMENT ID: SVG7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

ELI SAMPLE ID: 9211137-13A
SAMPLE ID: REAGENT SPIKE RECOVERY DUP.

PETROLEUM HYDROCARBONS

SPIKE RECOVERY

Gasoline Range

73%

CARBON NO. RANGE

Gasoline Range

-

PEAK CARBON NO

Gasoline Range

-

Samir Samaan

Chemist

December 3, 1992

Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 602

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-12-171
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GROUNDWATER MONITORING WELLS
JOB #: 430.010

DATE SAMPLED: NA
DATE RECEIVED: 12/18/1992
DATE EXTRACTED: NA
DATE ANALYZED: 12/21/1992
INSTRUMENT ID: VG-4
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

ELI SAMPLE ID: 9212171-02A
SAMPLE ID: METHOD BLANK

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	<0.5	0.5
V8	Xylenes (Dimethyl benzenes)	<0.5	0.5

Huey-Chen Chow

Chemist

December 28, 1992

Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 602

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-12-171
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GROUNDWATER MONITORING WELLS
JOB #: 430.010

DATE SAMPLED: 12/17/1992
DATE RECEIVED: 12/18/1992
DATE EXTRACTED: NA
DATE ANALYZED: 12/21/1992
INSTRUMENT ID: VG-4
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9212171-01A
SAMPLE ID: 31

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	<0.5	0.5
V2	Chlorobenzene	<0.5	0.5
V3	1,2-Dichlorobenzene	<0.5	0.5
V4	1,3-Dichlorobenzene	<0.5	0.5
V5	1,4-Dichlorobenzene	<0.5	0.5
V6	Ethyl benzene	<0.5	0.5
V7	Toluene	<0.5	0.5
V8	Xylenes (Dimethyl benzenes)	<0.5	0.5

Huey-Chen Chow

Chemist

December 28, 1992
Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 602

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-12-171
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GROUNDWATER MONITORING WELLS
JOB #: 430.010

DATE SAMPLED: NA
DATE RECEIVED: 12/18/1992
DATE EXTRACTED: NA
DATE ANALYZED: 12/21/1992
INSTRUMENT ID: VG-4
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9212171-04A
SAMPLE ID: 31 MATRIX SPIKE RECOVERY

<u>COMP.</u> <u>NO.</u>	<u>COMPOUND</u>	<u>SPIKE RECOVERY</u>
----------------------------	-----------------	-----------------------

V1	Benzene	70%
V2	Chlorobenzene	85%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	-
V5	1,4-Dichlorobenzene	-
V6	Ethyl benzene	82%
V7	Toluene	98%
V8	Xylenes (Dimethyl benzenes)	78%

Huey-Chen Chow

Chemist

December 28, 1992

Date

ORGANIC ANALYSIS REPORT
PURGEABLE AROMATICS, EPA Method 602

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-12-171
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GROUNDWATER MONITORING WELLS
JOB #: 430.010

DATE SAMPLED: NA
DATE RECEIVED: 12/18/1992
DATE EXTRACTED: NA
DATE ANALYZED: 12/21/1992
INSTRUMENT ID: VG-4
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9212171-05A
SAMPLE ID: 31 MATRIX SPIKE RECOVERY
DUPLICATE

<u>COMP.</u> <u>NO.</u>	<u>COMPOUND</u>	<u>SPIKE RECOVERY</u>
----------------------------	-----------------	-----------------------

V1	Benzene	84%
V2	Chlorobenzene	86%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	-
V5	1,4-Dichlorobenzene	-
V6	Ethyl benzene	88%
V7	Toluene	101%
V8	Xylenes (Dimethyl benzenes)	88%

Huey-Chen Chow

Chemist

December 28, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-12-171
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GROUNDWATER MONITORING WELLS
JOB #: 430.010

DATE SAMPLED: NA
DATE RECEIVED: 12/18/1992
DATE EXTRACTED: NA
DATE ANALYZED: 12/21/1992
INSTRUMENT ID: SVG-7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

ELI SAMPLE ID: 9212171-02A
SAMPLE ID: METHOD BLANK

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	<20	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	-	-
<u>PEAK CARBON NO</u>		
Gasoline Range	-	-

Samir Samaan

Chemist

December 28, 1992
Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-12-171
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GROUNDWATER MONITORING WELLS
JOB #: 430.010

DATE SAMPLED: 12/17/1992
DATE RECEIVED: 12/18/1992
DATE EXTRACTED: NA
DATE ANALYZED: 12/21/1992
INSTRUMENT ID: SVG-7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9212171-01A
SAMPLE ID: 31

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	35.3	20
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C13	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C7	-

Samir Samaan

Chemist

December 28, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-12-171
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GROUNDWATER MONITORING WELLS
JOB #: 430.010

DATE SAMPLED: NA
DATE RECEIVED: 12/18/1992
DATE EXTRACTED: NA
DATE ANALYZED: 12/21/1992
INSTRUMENT ID: SVG-7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

ELI SAMPLE ID: 9212171-06A
SAMPLE ID: REAGENT SPIKE RECOVERY *

PETROLEUM HYDROCARBONS

SPIKE RECOVERY

Gasoline Range

104%

CARBON NO. RANGE

Gasoline Range

-

PEAK CARBON NO

Gasoline Range

-

* Reagent spike set is used due to matrix interference.

Samir Samaan

Chemist

December 28, 1992

Date

TOTAL PETROLEUM HYDROCARBONS (GASOLINE)
EPA METHOD 5030/8015 (Modified)

EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 92-12-171
Hazardous Waste Testing
Certification: 1165

CLIENT: SUBSURFACE CONSULTANTS
PROJECT: MLK GROUNDWATER MONITORING WELLS
JOB #: 430.010

DATE SAMPLED: NA
DATE RECEIVED: 12/18/1992
DATE EXTRACTED: NA
DATE ANALYZED: 12/21/1992
INSTRUMENT ID: SVG-7
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

ELI SAMPLE ID: 9212171-07A
SAMPLE ID: REAGENT SPIKE RECOVERY *
DUPLICATE

PETROLEUM HYDROCARBONS

SPIKE RECOVERY

Gasoline Range

100%

CARBON NO. RANGE

Gasoline Range

-

PEAK CARBON NO

Gasoline Range

-

* Reagent spike set is used due to matrix interference.

Samir Samaan

Chemist

December 28, 1992

Date

UPS 2^c

CHAIN OF CUSTODY FORM

92-12-171 F57

PAGE 1 OF 1

PROJECT NAME: MILK GROUNDWATER MONITORING WELLS

JOB NUMBER: 430.010 LAB: EUREKA LABORATORIES

PROJECT CONTACT: MARK KAWAKAMI TURNAROUND: 5 DAY

SAMPLED BY: JOSE BERNUDEZ REQUESTED BY: MARK KAWAKAMI

ANALYSIS REQUESTED									

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES		
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H2SO4	HNO3	ICE	NONE	MONTH	DAY	YEAR	TIME			
1A	31	X				X				X			X		12	17	92		X	TVH/BIXE	

EXPEDITE

COMMENTS & NOTES:

PLEASE RETURN COOLER AND BLUE ICE TO SCI.

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature) <u>Mr. Bernudez</u> DATE/TIME <u>12/17/92</u>	RECEIVED BY: (Signature) <u>D. Regan</u> DATE/TIME <u>12/17/92 3:12 PM</u>
RELEASED BY: (Signature) _____ DATE/TIME _____	RECEIVED BY: (Signature) _____ DATE/TIME _____
RELEASED BY: (Signature) _____ DATE/TIME _____	RECEIVED BY: (Signature) <u>K. Francescochi</u> DATE/TIME <u>12/18/92/12:00</u>

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0461 • FAX: 510-268-0137

CHAIN OF CUSTODY FORM

PROJECT NAME: MLK GW DI
 JOB NUMBER: 430.010 ~~CH~~
 PROJECT CONTACT: MARK KAWAKAMI @ 2.11.13
 LAB: EUREKA LAB
 TURNAROUND: NORMAL
 SAMPLER BY: FV REQUESTED BY: MARK KAWAKAMI

PAGE _____ OF Hand
copy

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H2SO4	HNO3	ICE	NONE	MONTH	DAY	YEAR	TIME	
1A	MW-11	X				3				X			X		11	16	92		TUH/BTYE (8015/9010)
2A	MW-31	X				3				X			X						
3A	MW-39	X				3				X			X						
4A	MW-42	X				3				X			X						
5A	MW-43	X				3				X			X						
6A	MW-45	X				3				X			X						
7A	MW-58	X				3				X			X						

COMMENTS & NOTES:

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>11/17/92</u>	RECEIVED BY: (Signature) <u>R. Morgan</u>	DATE/TIME <u>11/17/92 1230</u>
RELEASED BY: (Signature) <u>R. Morgan</u>	DATE/TIME <u>11/17/92 1730</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE/TIME
RELEASED BY: (Signature) <u>[Signature]</u>	DATE/TIME	RECEIVED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>11/17/92 5:30</u>

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0161 • FAX: 510-268-0137

ORRICK, HERRINGTON
& SUTCLIFFE

Direct Dial

(415) 773-5652

February 7, 1992

Thomas Peacock
Alameda Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94621

Re: 1330 Martin Luther King Jr. Way;
STID No. 3618 [SIC] /3623

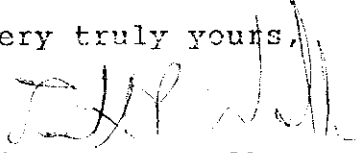
Dear Mr. Peacock:

This will confirm our telephone conversation on February 6, 1992 concerning your January 3, 1992 Notice of Requirement to Reimburse that you sent to the Redevelopment Agency of the City of Oakland c/o Carol Fenelon.

As I explained to you, Carol Fenelon was a former associate at this firm. This office is not presently representing the Redevelopment Agency of the City of Oakland with respect to any present or former underground storage tanks at 1330 Martin Luther King Jr. Way, Oakland, California.

You indicated that you would redirect a notice to the Redevelopment Agency directly.

Very truly yours,


Timothy P. Walker

TPW/vcs.

cc: Redevelopment Agency of the City
of Oakland

5656W

P 367 604 681

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL

(See Reverse)

U.S.G.P.O. 1989-234-555

PS Form 3800, June 1985

Sent to City of Oakland	
Street and No. 1417 Clay St	
P.O. Box and ZIP Code Oakland, CA 94612	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	2.29
Postmark or Date 430-4530 2-13-92	

363