James P. Bowers, PE
R. William Rudolph, Jr., PE

March 11, 1993
SCI 430.010

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

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, 58 and 59 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.

■ Subsurface Consultants, Inc.

171 12th Street • Suite 201 • Oakland, California 94607 • Telephone 510-268-0461 • FAX 510-268-0137

Analytical testing was performed by Eureka Laboratories, Inc. a State of California Department of Health Services certified 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 well (EW1) shown on Plate 1.

In general, the analytical test results indicate that dissolved hydrocarbon concentrations in groundwater are continuing to decline. During this event, Monitoring Well 59 was analyzed for TVH and BTXE to evaluate upgradient water quality. TVH and BTXE were not detected at concentrations above the reporting limits in this well.

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	--	--	--
	02/16/93	ND	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	--	--	--
	02/16/93	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)
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	--	--	--
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	--	--	--
	02/16/93	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	--	--	--
	02/16/93	6730	386	51	411	183	--	--	--
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	--	--	--
	02/16/93	123	12.5	4.3	60.9	18.6	--	--	--

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)
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	--	--	--
	02/16/93	ND	ND	ND	ND	ND	--	--	--
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	--	--	--
	02/16/93	ND	ND	ND	ND	ND	--	--	--
59	02/16/93	ND	ND	ND	ND	ND	--	--	--

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[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	--
		01/24/90	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	--
		02/16/93	25.94	73.72	--
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	--
	97.79	05/10/90	31.83	65.96	1.22
		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	--
		02/16/93	24.06	73.73	--

Table 2. Groundwater Elevation Data (continued)

Monitoring Well	TOC Elev[1] (feet)	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)	Free Product Thickness (feet)
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	--
		02/16/93	25.60	72.35	--
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	--
		02/16/93	25.42	73.88	--
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	--
		02/16/93	25.63	73.27	--

Table 2. Groundwater Elevation Data (continued)

Monitoring Well	TOC Elev[1] (feet)	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)	Free Product Thickness (feet)
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	--
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	--
		02/16/93	25.53	73.47	--
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	--
		02/16/93	25.41	73.71	--

Table 2. Groundwater Elevation Data (continued)

Monitoring Well	TOC Elev[1] (feet)	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)	Free Product Thickness (feet)
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	--
		02/16/93	24.35	74.52	--
		02/16/93	24.35	74.52	--
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	--
		02/16/93	27.14	73.76	--
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	--
		02/16/93	26.44	71.67	--

Table 2. Groundwater Elevation Data (continued)

Monitoring Well	TOC Elev[1] (feet)	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)	Free Product Thickness (feet)
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	--
		02/16/93	26.10	72.79	--

[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, AS GASOLINE

BTXE — BENZENE, TOLUENE, XYLENES, ETHYLBENZENE

ND — NONE DETECTED

CONCENTRATIONS IN ug/l

31 TVH ND BTXE ND

29

58 TVH ND BTXE ND

14TH STREET

DIRECTION OF GROUNDWATER FLOW

39 TVH ND BTXE ND

46

TVH 6730
B 386
T 51
X 411
42 E 183

30

28

TVH 123
B 12.5
T 4.3
X 60.9
E 18.6
43

EXISTING BUILDING

PARKING

EXISTING BUILDING

11 TVH ND BTXE ND

MARTIN LUTHER KING JR. WAY

EW-1

GW TREATMENT PLANT

32

PREVIOUS TANK

59 TVH ND BTXE ND

REFERENCE NORTH

N

TRUE NORTH

APPROXIMATE SCALE (feet)

0 20 40

45 TVH ND BTXE ND

SITE PLAN

Subsurface Consultants

1330 MARTIN LUTHER KING JR. WAY – OAK.

JOB NUMBER	DATE	APPROVED
430.010	3/10/93	MK

PLATE 1

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: 02/16/1993
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-01A
SAMPLE ID: 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(dimethylbenzenes)	<0.5	0.5

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: 02/16/1993
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-02A
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(dimethylbenzenes)	<0.5	0.5

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: 02/16/1993
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-03A
SAMPLE ID: 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(dimethylbenzenes)	<0.5	0.5

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: 02/16/1993
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1 & *20

ELI SAMPLE ID: 9302145-04A
SAMPLE ID: 42

COMP. No.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	368 *	10
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	183 *	10
V7	Toluene	51 *	10
V8	Xylenes(dimethylbenzenes)	411 *	10

Note - All positively indentified compounds were second column or second detector confirmed.
* A lower sample volume or higher dilution factor was used for the quantification of this compound due to high analyte concentration.

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: 02/16/1993
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-05A
SAMPLE ID: 43

COMP. No.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	12.5	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	18.6	0.5
V7	Toluene	4.3	0.5
V8	Xylenes(dimethylbenzenes)	60.9	0.5

Note - All positively indentified compounds were second column or second detector confirmed.

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: 02/16/1993
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-06A
SAMPLE ID: 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(dimethylbenzenes)	<0.5	0.5

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: 02/16/1993
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-07A
SAMPLE ID: 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(dimethylbenzenes)	<0.5	0.5

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: 02/16/1993
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-08A
SAMPLE ID: 59

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(dimethylbenzenes)	<0.5	0.5

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT

Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: NA
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: NA
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-09A
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(dimethylbenzenes)	<0.5	0.5

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED:	NA
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/19/1993
INSTRUMENT ID:	VG-1
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

ELI SAMPLE ID: 9302145-11A
SAMPLE ID: MATRIX SPIKE RECOVERY *

COMP. No.	COMPOUND	% SPIKE RECOVERY
V1	Benzene	73%
V2	Chlorobenzene	86%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	-
V5	1,4-Dichlorobenzene	-
V6	Ethyl benzene	76%
V7	Toluene	75%
V8	Xylenes(dimethylbezenes)	86%

* This set of matrix spike is from another sample of the same matrix and of the same analytical batch.

Huey-Chen Chow
Chemist

March 5, 1993
Date

ORGANIC ANALYSIS REPORT
Purgeable Aromatics, EPA Method 8020

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

Order No.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED: NA
DATE RECEIVED: 02/17/1993
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/1993
INSTRUMENT ID: VG-1
MATRIX: AQUEOUS
% MOISTURE: NA
REPORT WT.: NA
SAMPLE VOL./WT.: 5ml
DILUTION FACTOR: 1

ELI SAMPLE ID: 9302145-12A
SAMPLE ID: MATRIX SPIKE RECOVERY DUPLICATE *

COMP. No.	COMPOUND	% SPIKE RECOVERY
V1	Benzene	77%
V2	Chlorobenzene	82%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	-
V5	1,4-Dichlorobenzene	-
V6	Ethyl benzene	68%
V7	Toluene	72%
V8	Xylenes(dimethylbezenes)	72%

* This set of matrix spike is from another sample of the same matrix and of the same analytical batch.

Huey-Chen Chow
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED:	02/16/1993
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

ELI SAMPLE ID: 9302145-01A
SAMPLE ID: 11

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

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED:	02/16/1993
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

ELI SAMPLE ID: 9302145-02A
SAMPLE ID: 31

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

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED:	02/16/1993
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

ELI SAMPLE ID: 9302145-03A
SAMPLE ID: 39

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

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED:	02/16/1993
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

ELI SAMPLE ID: 9302145-04A
SAMPLE ID: 42

PETROLEUM HYDROCARBONS	CONCENTRATION [ug/L (ppb)]	DETECTION LIMIT [ug/L (ppb)]
Gasoline Range	6730	20
CARBON NO. RANGE		
Gasoline Range	C6-C13	
PEAK CARBON NO.		
Gasoline Range	C7	

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

ELI SAMPLE ID: 9302145-05A
SAMPLE ID: 43

DATE SAMPLED:	02/16/1993
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

PETROLEUM HYDROCARBONS	CONCENTRATION [ug/L (ppb)]	DETECTION LIMIT [ug/L (ppb)]
Gasoline Range	123	20
CARBON NO. RANGE		
Gasoline Range	C6-C13	
PEAK CARBON NO.		
Gasoline Range	C7	

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

ELI SAMPLE ID: 9302145-06A
SAMPLE ID: 45

DATE SAMPLED:	02/16/1993
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

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

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED:	02/16/1993
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

ELI SAMPLE ID: 9302145-07A
SAMPLE ID: 58

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

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

ELI SAMPLE ID: 9302145-08A
SAMPLE ID: 59

DATE SAMPLED:	02/16/1993
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

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

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED:	NA
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	NA
DILUTION FACTOR:	1

ELI SAMPLE ID: 9302145-09A
SAMPLE ID: METHOD BLANK

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

Susie Yang
Chemist

March 5, 1993
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.: 93-02-145
Hazardous Waste Testing
Certification: 1165

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

DATE SAMPLED:	NA
DATE RECEIVED:	02/17/1993
DATE EXTRACTED:	NA
DATE ANALYZED:	02/22/1993
INSTRUMENT ID:	SVG-7
MATRIX:	AQUEOUS
% MOISTURE:	NA
REPORT WT.:	NA
SAMPLE VOL./WT.:	5ml
DILUTION FACTOR:	1

ELI SAMPLE ID: 9302145-11A
SAMPLE ID: 45 MATRIX SPIKE RECOVERY

PETROLEUM HYDROCARBONS	% SPIKE RECOVERY
Gasoline Range	102%
CARBON NO. RANGE	
Gasoline Range	-
PEAK CARBON NO.	
Gasoline Range	-

Susie Yang
Chemist

March 5, 1993
Date

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EPA METHOD 5030/8015 (Modified)

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CLIENT: SUBSURFACE CONSULTANTS	DATE SAMPLED: NA
PROJECT: MLK GROUNDWATER	DATE RECEIVED: 02/17/1993
JOB #: 430.010	DATE EXTRACTED: NA
	DATE ANALYZED: 02/22/1993
	INSTRUMENT ID: SVG-7
	MATRIX: AQUEOUS
	% MOISTURE: NA
	REPORT WT.: NA
ELI SAMPLE ID: 9302145-12A	SAMPLE VOL./WT.: 5ml
SAMPLE ID: 45 MATRIX SPIKE RECOVERY DUP.	DILUTION FACTOR: 1

PETROLEUM HYDROCARBONS	% SPIKE RECOVERY
Gasoline Range	98%
CARBON NO. RANGE	
Gasoline Range	-
PEAK CARBON NO.	
Gasoline Range	-

Susie Yang
Chemist

March 5, 1993
Date

Hand Carry

93-02-145 GCV19/GCV8

CHAIN OF CUSTODY FORM

PAGE 1 OF 1

PROJECT NAME: MLK GROUNDWATER

JOB NUMBER: 430.010 LAB: EUREKA LABORATORIES

PROJECT CONTACT: MARK KAWAKAMI TURNAROUND: NORMAL

SAMPLED BY: FERNANDO VELEZ REQUESTED BY: MARK KAWAKAMI

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX						CONTAINERS						METHOD PRESERVED					SAMPLING DATE				NOTES	ANALYSIS REQUESTED
		WATER	SOIL	WASTE	AIR			VOA	LITER	PINT	TUBE			HCL	H_2SO_4	HNO_3	ICE	NONE	MONTH	DAY	YEAR	TIME		GASOLINE/BTEX (EPA 5030/GC/MS)
1A	11	X						X						X			X		02	16	93			X
2A	31	X						X						X			X							X
3A	39	X						X						X			X							X
4A	42	X						X						X			X							X
5A	43	X						X						X			X							X
6A	45	X						X						X			X							X
7A	58	X						X						X			X							X
8A	59	X						X						X			X		02	16	93			X

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE / TIME	RELEASED BY: (Signature)	DATE / TIME
		Joni L. Bonilla	2/17 1215
RELEASED BY: (Signature)	DATE / TIME	RELEASED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RELEASED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RELEASED BY: (Signature)	DATE / TIME

COMMENTS & NOTES:

Rec'd by: K. Francesconi 2/17/93 1215

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 • FAX: 510-268-0137