

February 25, 1991
SCI 272.016

Mr. Dan Lau
Construction
City of Oakland
7101 Edgewater Drive
Oakland, California 94612

Quarterly Monitoring Report
January 1991
98th and Edes Avenues
Oakland, California

Dear Mr. Lau:

This letter records the results of the January 1991 groundwater monitoring well sampling and analytical testing events at the subject site. A description of the groundwater monitoring well installation, and the results of previous sampling and analytical testing events were presented in correspondence dated April 10, and October 31, 1990. The monitoring well locations are shown on Plate 1, Site Plan.

Groundwater levels in the wells and piezometers at the site were measured prior to purging and sampling. The groundwater measurements, including previous readings, are presented on Table 1. About 2 inches of free product was measured in well MW-1. No free product was encountered in the other wells. The groundwater contours, corresponding to the most recent measurements, are shown on the Site Plan.

Prior to sampling, the wells were purged using a pre-cleaned, disposable Teflon bailer. At least four well volumes of water were purged from each well. Approximately 50 gallons of water, generated during purging, was placed in a 55-gallon DOT drum. The drum was left on-site for later disposal by others.

■ **Subsurface Consultants, Inc.**

171 12th Street • Suite 201 • Oakland, California 94607 • Telephone 415-268-0461 • FAX 415-268-0137

Mr. Dan Lau
City of Oakland
SCI 272.016
February 25, 1991
Page 2

Groundwater samples were obtained from each well after purging. The water samples were poured into pre-cleaned containers, placed in an iced cooler, and kept refrigerated until delivery to the analytical laboratory. The samples were accompanied by Chain-of-Custody records, copies of which are attached.

Analytical testing was performed by Eureka Laboratories, Inc., a State of California Department of Health Services certified analytical laboratory for the tests performed. The analytical tests to date have included:

1. Total volatile hydrocarbons (TVH) - sample preparation and analysis using EPA methods 5030 (purge and trap) and 8015 (gas chromatograph coupled to a flame ionization detector),
2. Total extractable hydrocarbons (TEH) - sample preparation and analysis using EPA methods 3550 (sonification) and 8015 (modified),
3. Benzene, toluene, xylene and ethylbenzene (BTXE)-sample preparation and analysis using EPA methods 5030 and 8020 (gas chromatograph coupled to a photo-ionization detector),
4. Total oil and grease (TOG) - sample preparation and analysis using EPA method 3550 (Freon extraction) and Standard Method 503E (gravimetric determination), and
5. Purgeable halocarbons - sample preparation and analysis using EPA methods 5030 and 8010 (gas chromatograph and mass spectrometer).

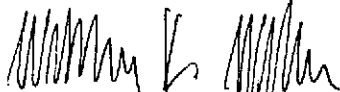
Copies of the analytical test reports are attached. The results of analytical tests for total petroleum hydrocarbons (including TVH, TEH and TOG) and BTXE are presented in Table 2. The results of analytical tests for purgeable halocarbons are presented in Table 3. Only those compounds actually detected are listed. Please refer to the attached analytical test reports for listings of all compounds that were included in the analyses.

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If you have questions regarding the analytical test results to date, please call.

Yours very truly,

Subsurface Consultants, Inc.



William K. Wikander
Geotechnical Engineer 892 (expires 12/31/92)

MK:WKW:RWR:ddh

Attachments: Table 1 - Groundwater Elevations
Table 2 - TVH, TEH, TOG and BTXE Concentrations in Groundwater
Table 3 - Summary of Analytical Tests for Purgeable Halocarbons
Plate 1 - Site Plan
Chain-of-Custody Records
Analytical Test Reports

Copies: Addressee (2)

Ms. Cynthia Chapman (1)
Alameda County Health Care Services Agency
80 Swan Way, Room #200
Oakland, CA 94621

Mr. Lester Feldman (1)
Regional Water Quality Control Board
San Francisco Bay Region
1800 Harrison Street
Oakland, CA 94617

Table 1. Groundwater Elevations

<u>Well</u>	<u>Date</u>	<u>TOC Elev.¹</u> <u>(ft.)</u>	<u>Groundwater</u> <u>Depth²</u> <u>(ft.)</u>	<u>Groundwater</u> <u>Elevation</u> <u>(ft.)</u>
MW-1	03/01/90	99.40	8.95	90.45
	03/06/90		8.55	90.85
	03/23/90		9.17	90.23
	06/30/90		9.56	89.84
	10/04/90		10.23	89.17 ³
	01/23/91		10.17	89.23 ⁴
MW-2	03/01/90	99.72	8.85	90.87
	03/06/90		8.46	91.26
	03/23/90		9.02	90.70
	06/30/90		9.40	90.32
	10/04/90		9.80	89.92
	01/23/91		9.74	89.98
MW-3	03/01/90	99.74	9.17	90.57
	03/06/90		8.78	90.96
	03/23/90		8.35	90.39
	06/30/90		9.74	90.00
	10/04/90		10.17	89.57
	01/23/91		10.11	89.63
MW-4	03/01/90	100.93	9.98	90.95
	03/06/90		9.60	91.33
	03/23/90		10.20	90.73
	06/30/90		10.57	90.36
	10/04/90		10.98	89.95
	01/23/91		10.92	90.01
MW-5	03/01/90	100.57	9.61	90.96
	03/06/90		9.23	91.34
	03/23/90		9.80	90.77
	06/30/90		10.17	90.40
	10/04/90		10.59	89.98
	01.23/91		10.54	90.03
18	03/01/90	99.17	8.53	90.64
	03/06/90		8.11	91.06
	03/23/90		8.73	90.44
	06/30/90		9.11	90.06
	10/04/90		9.50	89.67
	01/23/91		9.51	89.66

¹ Elevation reference: Top of curb at fire hydrant on Edes Avenue (see Site Plan), is assumed to be at Elevation 100.00 ft.

² Depth measured below top of casing

³ 6.25 inches of free product measured in well

⁴ 2.19 inches of free product measured in well

Table 2. TVH, TEH, TOG AND BTXE Concentrations in Groundwater

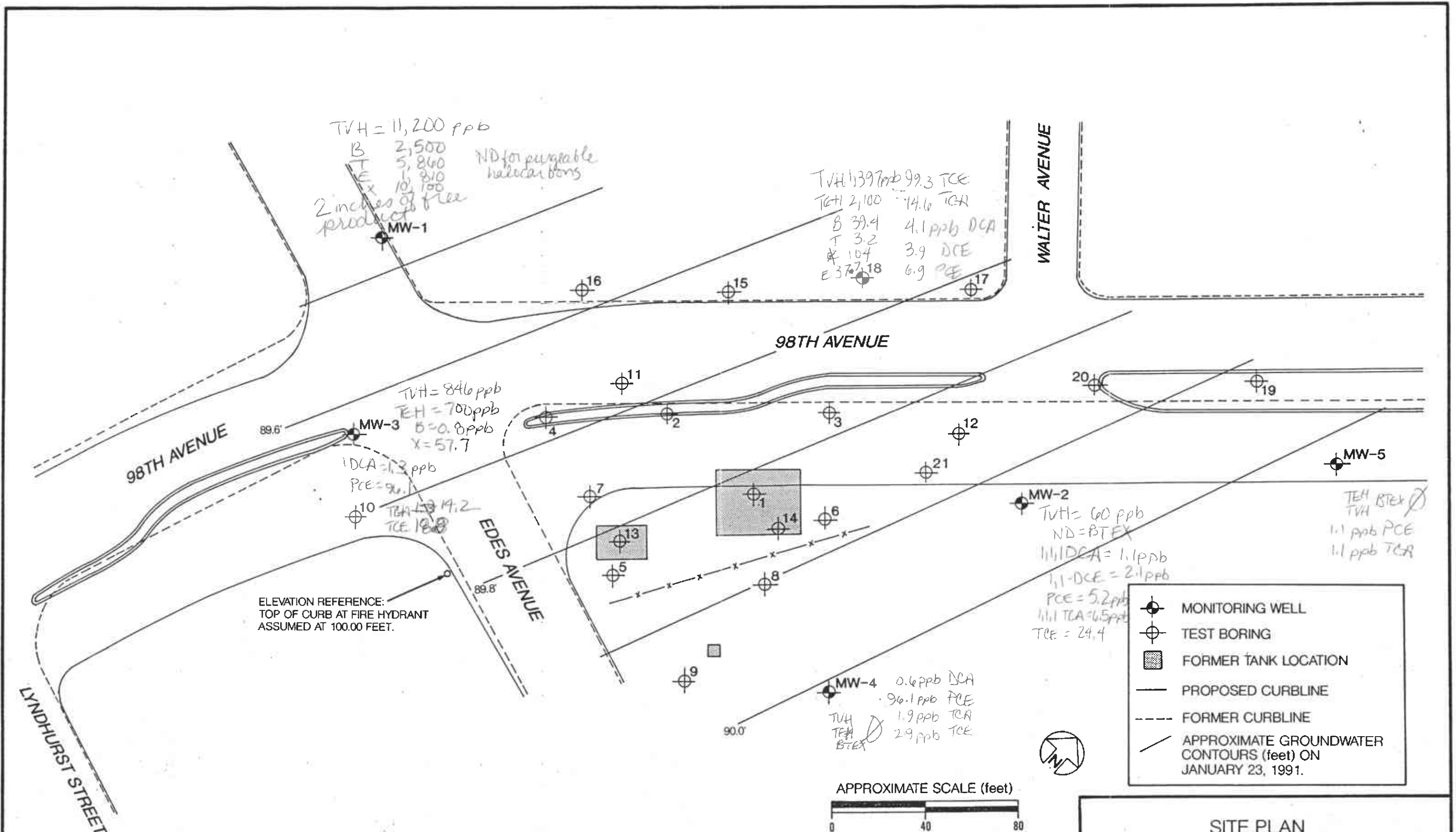
Sample	Sample Date	TVH (ppb) ²	TEH ¹ (ppb)	TOG (ppb)	Benzene (ppb)	Toluene (ppb)	Xylenes (ppb)	Ethyl-benzene (ppb)
MW-1	02/12/90	55.1	100	ND ³	60.8	11.9	19.9	ND
	06/30/90	ND	950	-- ⁴	ND	ND	ND	ND
	10/04/90	2,900,000	270,000	--	7,780	26,700	203,000	20,000
	01/24/91	11,200	59.1	--	2,500	5,860	10,100	1,810
MW-2	02/13/90	35.1	100	ND	ND	ND	4.0	1.3
	06/30/90	ND	ND	--	ND	ND	ND	ND
	10/04/90	52.8	100	--	ND	ND	ND	ND
	01/24/91	60	ND	--	ND	ND	ND	ND
MW-3	02/13/90	ND	100	ND	ND	ND	2.9	ND
	06/30/90	850	2,600	--	ND	ND	ND	44
	10/04/90	42.9	1,200	--	ND	ND	8.5	ND
	01/24/91	846	700	---	0.8	ND	57.7	ND
MW-4	02/13/90	ND	ND	ND	ND	ND	ND	ND
	06/30/90	ND	ND	--	ND	ND	ND	ND
	10/04/90	ND	ND	--	ND	ND	ND	ND
	01/24/91	ND	ND	--	ND	ND	ND	ND
MW-5	02/13/90	ND	ND	ND	ND	ND	ND	ND
	06/30/90	ND	ND	--	ND	ND	ND	ND
	10/04/90	ND	ND	--	ND	ND	ND	ND
	01/24/91	ND	ND	--	ND	ND	ND	ND
18	02/14/90	134,000	17,000	120,000	3,730	8,920	22,500	5,430
	06/30/90	20,000	26,000	--	660	470	180	2,000
	10/04/90	4,900	5,700	--	82	40	635	190
	01/24/91	1,397	2,100	--	39.4	3.2	104	37.7

-
- 1 Gasoline range
2 Parts per billion (ug/L)
3 None detected, see test data sheets for detection limits
4 -- = Test not requested

Table 3. Summary of Analytical Tests For Purgeable Halocarbons

Sample	Sample Date	1,1-DCA ¹ (ppb) ⁶	1,1-DCE ² (ppb)	Dichloro- Methane (ppb)	PCE ³ (ppb)	1,1,1-TCA ⁴ (ppb)	TCE ⁵ (ppb)	Others (ppb)
MW-1	02/12/90	ND ⁷	ND	9.0	2.4	5.1	11.8	ND
	06/30/90	4.1	ND	ND	2.8	8.0	13	ND
	10/04/90	ND	ND	ND	ND	ND	ND	ND
	01/24/91	ND	ND	ND	ND	ND	ND	ND
MW-2	02/13/90	4.9	7.1	7.9	8.5	11.6	25.1	ND
	06/30/90	5.1	3.1	ND	16	15	35	4.8 ⁸
	10/04/90	2.4	ND	ND	6.8	6.3	18.7	ND
	01/24/91	1.1	2.1	ND	5.2	6.5	24.4	ND
MW-3	02/13/90	ND	5.7	69.2	1.6	17.1	21.7	ND
	06/30/90	2.1	1.3	ND	6.2	21	26	3.5 ⁸
	10/04/90	ND	ND	ND	5.1	11.0	ND	ND
	01/24/91	1.3	1.2	ND	3.5	14.2	18.8	ND
MW-4	02/13/90	ND	ND	15.3	67.4	1.8	2.4	ND
	06/30/90	ND	ND	ND	260	2.7	3.0	ND
	10/04/90	ND	ND	ND	95.5	1.1	2.8	0.7 ⁹
	01/24/91	0.6	ND	ND	96.1	1.9	2.9	ND
MW-5	02/13/90	ND	ND	ND	1.4	1.3	1.0	ND
	06/30/90	ND	ND	ND	ND	1.3	2.1	ND
	10/04/90	ND	ND	ND	0.7	0.5	ND	ND
	01/24/91	ND	ND	ND	1.1	1.1	ND	ND
18	02/14/90	ND	ND	ND	ND	ND	ND	ND
	06/30/90	ND	ND	ND	ND	ND	ND	ND
	10/04/90	ND	ND	ND	6	9	91	ND
	01/24/91	4.1	3.9	ND	6.9	14.6	99.3	ND

-
- 1 1,1-Dichloroethane
 - 2 1,1-Dichloroethylene
 - 3 Tetrachloroethylene
 - 4 1,1,1-Trichloroethane
 - 5 Trichloroethylene
 - 6 Parts per billion (ug/L)
 - 7 None detected, see test data sheets for detection limits
 - 8 1,2-Dichloroethene (total)
 - 9 Chloroform



ELEVATION REFERENCE:
 TOP OF CURB AT FIRE HYDRANT
 ASSUMED AT 100.00 FEET.

	MONITORING WELL
	TEST BORING
	FORMER TANK LOCATION
	PROPOSED CURBLINE
	FORMER CURBLINE
	APPROXIMATE GROUNDWATER CONTOURS (feet) ON JANUARY 23, 1991.



SITE PLAN

98TH & EDES - PHASE 2 - OAKLAND, CA			PLATE 1
Subsurface Consultants	JOB NUMBER 272.016	DATE 2/14/90	APPROVED

91-01-231 C-34

Subsurface Consultants

CHAIN OF CUSTODY RECORD & ANALYTICAL TEST REQUEST

Project Name: 98th & EDES

SCI Job Number: 272.016

Project Contact at SCI: BILL WIKANDER

Sampled By: JOSE BERMUDEZ

Analytical Laboratory: EUREKA LABORATORIES, INC.

Analytical Turnaround: STANDARD

Sample ID	Sample Type ¹	Container Type ²	Sampling Date	Hold	Analysis	Analytical Method
MW-1	WATER	2 VOA's + 1L GLASS JAR	1/24/91	*	TUH/BTEXE TPH PURGABLE HALOCARBONS	GC-FID
MW-2	↓	↓	↓	*		DHS-WFT
MW-3	↓	↓	↓	*		EPA 8010
MW-4	↓	↓	↓	*		
MW-5	↓	↓	↓	*		
MW-6	↓	↓	↓	*		

Bill agree
to check
to 5730L
2 602
1/30/91
9:00 AM
SK

*NOTE: TEST EACH SAMPLE FOR TUH/BTEXE, TPH AND PURGABLE HALOCARBONS

Released by: D. Alexand Received by: _____ Date: 1/28/91

Released by: _____ Received by: _____ Date: _____

Received by Laboratory: Wade Graham Date: 1/28/91

Released by Laboratory: _____ Date: _____

Released by: _____ Date: _____

¹ Sample Type: W = Water, S = Soil, O = Other (specify)
² Container Type: V = VOA, P = Plastic, G = Glass, T = Brass Tube,
 O = Other (specify)

NOTES TO LABORATORY:
 - Notify SCI if there are any anomalous peaks on GC or other scans
 - Questions/clarifications - Contact SCI at (415) 268-0461



EUREKA LABORATORIES, INC.

Air Pollution
Chemical Analysis,
Research & Testing
Environmental Studies
Robotics
Toxicology

Corporate Office:
6790 FLORIN PERKINS ROAD
SACRAMENTO, CA 95828
TEL: (916) 381-7953
FAX: (916) 381-4013

Branch Office:
12121 NORTHUP WAY, SUITE 212
BELLEVUE, WA 98005
TEL: (206) 885-0284
FAX: (206) 885-6162

February 12, 1991

Mr. Bill Wikander
SUBSURFACE CONSULTANTS
171 12th Street
Oakland, CA 94607

RECEIVED

Reference: ELI Order No: 91-01-231
Project: 98th & Edes
SCI Job #: 272.016

FEB 13 1991
AM 7,8,9,10,11,12,13,14,15,16 PM

Dear Mr. Wikander:

Eureka Laboratories, Inc. is pleased to submit a laboratory report for the subject project. This report presents analytical results for six (6) water samples for the following analyses:

<u>ANALYSIS</u>	<u>METHOD</u>	<u>SAMPLE ID.</u>
Halogenated Volatile Organics	EPA 601	MW-1 thru MW-5, MW-18
Aromatic Volatile Organics	EPA 602	same as above
Total Petroleum Hydrocarbons (Gasoline Only)	EPA 5030 By Purge & Trap	same as above
Total Petroleum Hydrocarbons	EPA 8015 (Modified)	same as above

Sincerely yours,
EUREKA LABORATORIES, INC.

By: Shao-Pin Yo
Shao-Pin Yo, Ph.D.
Laboratory Director

SPY/jj

Attachment

ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

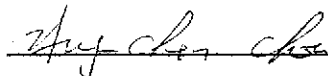
EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: BLANK

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: N/A
DATE ANALYZED: 01/31/1991

COMP. No.	COMPOUND	ug/L	DETECTION LIMIT ug/L (ppb)
V1	Bromodichloromethane	<0.5	0.5
V2	Bromoform	<0.5	0.5
V3	Bromomethane	<0.5	0.5
V4	Carbon tetrachloride	<0.5	0.5
V5	Chlorobenzene	<0.5	0.5
V6	Chloroethane	<0.5	0.5
V7	Chloroform	<0.5	0.5
V8	Chloromethane	<0.5	0.5
V9	Dibromochloromethane	<0.5	0.5
V10	Dibromomethane	<0.5	0.5
V11	1,2-Dichlorobenzene	<0.5	0.5
V12	1,3-Dichlorobenzene	<0.5	0.5
V13	1,4-Dichlorobenzene	<0.5	0.5
V14	1,1-Dichloroethane	<0.5	0.5
V15	1,2-Dichloroethane	<0.5	0.5
V16	1,1-Dichloroethylene (Vinylidene chloride)	<0.5	0.5
V17	trans-1,2-Dichloroethylene	<0.5	0.5
V18	Dichloromethane	<0.5	0.5
V19	1,2-Dichloropropane	<0.5	0.5
V20	cis-1,3-Dichloropropylene	<0.5	0.5
V21	trans-1,3-Dichloropropylene	<0.5	0.5
V22	1,1,2,2-Tetrachloroethane	<0.5	0.5
V23	1,1,1,2-Tetrachloroethane	<0.5	0.5
V24	Tetrachloroethylene	<0.5	0.5
V25	1,1,1-Trichloroethane	<0.5	0.5
V26	1,1,2-Trichloroethane	<0.5	0.5
V27	Trichloroethylene	<0.5	0.5
V28	Vinyl chloride	<0.5	0.5
V29	Dichlorodifluoromethane	<0.5	0.5
V30	Trichlorofluoromethane	<0.5	0.5


Huey-Chen Chow
Chemist

February 12, 1991
Date

ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

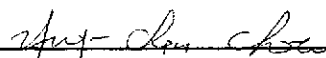
EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-1	DATE SAMPLED: 01/24/1991

COMP. No.	COMPOUND	ug/L	DETECTION LIMIT ug/L (ppb)
V1	Bromodichloromethane	<100	100
V2	Bromoform	<100	100
V3	Bromomethane	<100	100
V4	Carbon tetrachloride	<100	100
V5	Chlorobenzene	<100	100
V6	Chloroethane	<100	100
V7	Chloroform	<100	100
V8	Chloromethane	<100	100
V9	Dibromochloromethane	<100	100
V10	Dibromomethane	<100	100
V11	1,2-Dichlorobenzene	<100	100
V12	1,3-Dichlorobenzene	<100	100
V13	1,4-Dichlorobenzene	<100	100
V14	1,1-Dichloroethane	<100	100
V15	1,2-Dichloroethane	<100	100
V16	1,1-Dichloroethylene (Vinylidene chloride)	<100	100
V17	trans-1,2-Dichloroethylene	<100	100
V18	Dichloromethane	<100	100
V19	1,2-Dichloropropane	<100	100
V20	cis-1,3-Dichloropropylene	<100	100
V21	trans-1,3-Dichloropropylene	<100	100
V22	1,1,2,2-Tetrachloroethane	<100	100
V23	1,1,1,2-Tetrachloroethane	<100	100
V24	Tetrachloroethylene	<100	100
V25	1,1,1-Trichloroethane	<100	100
V26	1,1,2-Trichloroethane	<100	100
V27	Trichloroethylene	<100	100
V28	Vinyl chloride	<100	100
V29	Dichlorodifluoromethane	<100	100
V30	Trichlorofluoromethane	<100	100

Higher detection limit is due to matrix interference.



Huey-Chen Chow
Chemist

February 12, 1991

Date

ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

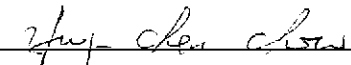
EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-2	DATE SAMPLED: 01/24/1991

COMP. No.	COMPOUND	ug/L	DETECTION LIMIT ug/L (ppb)
V1	Bromodichloromethane	<0.5	0.5
V2	Bromoform	<0.5	0.5
V3	Bromomethane	<0.5	0.5
V4	Carbon tetrachloride	<0.5	0.5
V5	Chlorobenzene	<0.5	0.5
V6	Chloroethane	<0.5	0.5
V7	Chloroform	<0.5	0.5
V8	Chloromethane	<0.5	0.5
V9	Dibromochloromethane	<0.5	0.5
V10	Dibromomethane	<0.5	0.5
V11	1,2-Dichlorobenzene	<0.5	0.5
V12	1,3-Dichlorobenzene	<0.5	0.5
V13	1,4-Dichlorobenzene	<0.5	0.5
V14	1,1-Dichloroethane	1.1	0.5
V15	1,2-Dichloroethane	<0.5	0.5
V16	1,1-Dichloroethylene (Vinylidene chloride)	2.1	0.5
V17	trans-1,2-Dichloroethylene	<0.5	0.5
V18	Dichloromethane	<0.5	0.5
V19	1,2-Dichloropropane	<0.5	0.5
V20	cis-1,3-Dichloropropylene	<0.5	0.5
V21	trans-1,3-Dichloropropylene	<0.5	0.5
V22	1,1,2,2-Tetrachloroethane	<0.5	0.5
V23	1,1,1,2-Tetrachloroethane	<0.5	0.5
V24	Tetrachloroethylene	5.2	0.5
V25	1,1,1-Trichloroethane	6.5	0.5
V26	1,1,2-Trichloroethane	<0.5	0.5
V27	Trichloroethylene	24.4	0.5
V28	Vinyl chloride	<0.5	0.5
V29	Dichlorodifluoromethane	<0.5	0.5
V30	Trichlorofluoromethane	<0.5	0.5

Note: All positively identified compounds were second column confirmed.


Huey-Chen Chow
Chemist

February 12, 1991
Date

ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

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

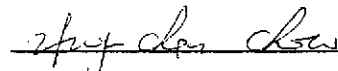
Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: MW-3

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: N/A
DATE ANALYZED: 01/31/1991
DATE SAMPLED: 01/24/1991

COMP. No.	COMPOUND	ug/L	DETECTION LIMIT ug/L (ppb)
V1	Bromodichloromethane	<0.5	0.5
V2	Bromoform	<0.5	0.5
V3	Bromomethane	<0.5	0.5
V4	Carbon tetrachloride	<0.5	0.5
V5	Chlorobenzene	<0.5	0.5
V6	Chloroethane	<0.5	0.5
V7	Chloroform	<0.5	0.5
V8	Chloromethane	<0.5	0.5
V9	Dibromochloromethane	<0.5	0.5
V10	Dibromomethane	<0.5	0.5
V11	1,2-Dichlorobenzene	<0.5	0.5
V12	1,3-Dichlorobenzene	<0.5	0.5
V13	1,4-Dichlorobenzene	<0.5	0.5
V14	1,1-Dichloroethane	1.3	0.5
V15	1,2-Dichloroethane	<0.5	0.5
V16	1,1-Dichloroethylene (Vinylidene chloride)	1.2	0.5
V17	trans-1,2-Dichloroethylene	<0.5	0.5
V18	Dichloromethane	<0.5	0.5
V19	1,2-Dichloropropane	<0.5	0.5
V20	cis-1,3-Dichloropropylene	<0.5	0.5
V21	trans-1,3-Dichloropropylene	<0.5	0.5
V22	1,1,2,2-Tetrachloroethane	<0.5	0.5
V23	1,1,1,2-Tetrachloroethane	<0.5	0.5
V24	Tetrachloroethylene	3.5	0.5
V25	1,1,1-Trichloroethane	14.2	0.5
V26	1,1,2-Trichloroethane	<0.5	0.5
V27	Trichloroethylene	18.8	0.5
V28	Vinyl chloride	<0.5	0.5
V29	Dichlorodifluoromethane	<0.5	0.5
V30	Trichlorofluoromethane	<0.5	0.5

Note: All positively identified compounds were second column confirmed.


Huey-Chen Chow
Chemist

February 12, 1991

Date

ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-4	DATE SAMPLED: 01/24/1991

COMP. No.	COMPOUND	ug/L	DETECTION LIMIT ug/L (ppb)
V1	Bromodichloromethane	<0.5	0.5
V2	Bromoform	<0.5	0.5
V3	Bromomethane	<0.5	0.5
V4	Carbon tetrachloride	<0.5	0.5
V5	Chlorobenzene	<0.5	0.5
V6	Chloroethane	<0.5	0.5
V7	Chloroform	<0.5	0.5
V8	Chloromethane	<0.5	0.5
V9	Dibromochloromethane	<0.5	0.5
V10	Dibromomethane	<0.5	0.5
V11	1,2-Dichlorobenzene	<0.5	0.5
V12	1,3-Dichlorobenzene	<0.5	0.5
V13	1,4-Dichlorobenzene	<0.5	0.5
V14	1,1-Dichloroethane	0.6	0.5
V15	1,2-Dichloroethane	<0.5	0.5
V16	1,1-Dichloroethylene (Vinylidene chloride)	<0.5	0.5
V17	trans-1,2-Dichloroethylene	<0.5	0.5
V18	Dichloromethane	<0.5	0.5
V19	1,2-Dichloropropane	<0.5	0.5
V20	cis-1,3-Dichloropropylene	<0.5	0.5
V21	trans-1,3-Dichloropropylene	<0.5	0.5
V22	1,1,2,2-Tetrachloroethane	<0.5	0.5
V23	1,1,1,2-Tetrachloroethane	<0.5	0.5
V24	Tetrachloroethylene	96.1	0.5
V25	1,1,1-Trichloroethane	1.9	0.5
V26	1,1,2-Trichloroethane	<0.5	0.5
V27	Trichloroethylene	2.9	0.5
V28	Vinyl chloride	<0.5	0.5
V29	Dichlorodifluoromethane	<0.5	0.5
V30	Trichlorofluoromethane	<0.5	0.5

Note: All positively identified compounds were second column confirmed.

Huey-Chen Chow
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Chemist

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ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-5	DATE SAMPLED: 01/24/1991

COMP. No.	COMPOUND	ug/L	DETECTION
			LIMIT ug/L (ppb)
V1	Bromodichloromethane	<0.5	0.5
V2	Bromoform	<0.5	0.5
V3	Bromomethane	<0.5	0.5
V4	Carbon tetrachloride	<0.5	0.5
V5	Chlorobenzene	<0.5	0.5
V6	Chloroethane	<0.5	0.5
V7	Chloroform	<0.5	0.5
V8	Chloromethane	<0.5	0.5
V9	Dibromochloromethane	<0.5	0.5
V10	Dibromomethane	<0.5	0.5
V11	1,2-Dichlorobenzene	<0.5	0.5
V12	1,3-Dichlorobenzene	<0.5	0.5
V13	1,4-Dichlorobenzene	<0.5	0.5
V14	1,1-Dichloroethane	<0.5	0.5
V15	1,2-Dichloroethane	<0.5	0.5
V16	1,1-Dichloroethylene (Vinylidene chloride)	<0.5	0.5
V17	trans-1,2-Dichloroethylene	<0.5	0.5
V18	Dichloromethane	<0.5	0.5
V19	1,2-Dichloropropane	<0.5	0.5
V20	cis-1,3-Dichloropropylene	<0.5	0.5
V21	trans-1,3-Dichloropropylene	<0.5	0.5
V22	1,1,2,2-Tetrachloroethane	<0.5	0.5
V23	1,1,1,2-Tetrachloroethane	<0.5	0.5
V24	Tetrachloroethylene	1.1	0.5
V25	1,1,1-Trichloroethane	1.1	0.5
V26	1,1,2-Trichloroethane	<0.5	0.5
V27	Trichloroethylene	<0.5	0.5
V28	Vinyl chloride	<0.5	0.5
V29	Dichlorodifluoromethane	<0.5	0.5
V30	Trichlorofluoromethane	<0.5	0.5

Note: All positively identified compounds were second column confirmed.

Huey-Chen Chow

Huey-Chen Chow
Chemist

February 12, 1991

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ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

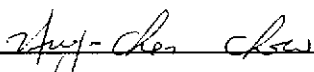
EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-18	DATE SAMPLED: 01/24/1991

COMP. No.	COMPOUND	ug/L	DETECTION LIMIT ug/L (ppb)
V1	Bromodichloromethane	<2.5	2.5
V2	Bromoform	<2.5	2.5
V3	Bromomethane	<2.5	2.5
V4	Carbon tetrachloride	<2.5	2.5
V5	Chlorobenzene	<2.5	2.5
V6	Chloroethane	<2.5	2.5
V7	Chloroform	<2.5	2.5
V8	Chloromethane	<2.5	2.5
V9	Dibromochloromethane	<2.5	2.5
V10	Dibromomethane	<2.5	2.5
V11	1,2-Dichlorobenzene	<2.5	2.5
V12	1,3-Dichlorobenzene	<2.5	2.5
V13	1,4-Dichlorobenzene	<2.5	2.5
V14	1,1-Dichloroethane	4.1	2.5
V15	1,2-Dichloroethane	<2.5	2.5
V16	1,1-Dichloroethylene (Vinylidene chloride)	3.9	2.5
V17	trans-1,2-Dichloroethylene	<2.5	2.5
V18	Dichloromethane	<2.5	2.5
V19	1,2-Dichloropropane	<2.5	2.5
V20	cis-1,3-Dichloropropylene	<2.5	2.5
V21	trans-1,3-Dichloropropylene	<2.5	2.5
V22	1,1,2,2-Tetrachloroethane	<2.5	2.5
V23	1,1,1,2-Tetrachloroethane	<2.5	2.5
V24	Tetrachloroethylene	6.9	2.5
V25	1,1,1-Trichloroethane	14.6	2.5
V26	1,1,2-Trichloroethane	<2.5	2.5
V27	Trichloroethylene	99.3	2.5
V28	Vinyl chloride	<2.5	2.5
V29	Dichlorodifluoromethane	<2.5	2.5
V30	Trichlorofluoromethane	<2.5	2.5

Note: All positively identified compounds were second column confirmed.
Higher detection limit is due to matrix interference.



Huey-Chen Chow
Chemist

February 12, 1991

Date

ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

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

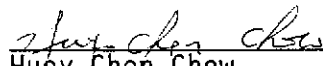
Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: REAGENT SPIKE RECOVERY *

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: N/A
DATE ANALYZED: 01/31/1991

<u>COMP. NO.</u>	<u>COMPOUND</u>		<u>SPIKE</u>	<u>RECOVERY</u>	
COMP. No.	COMPOUND		COMP No.	COMPOUND	
V1	Bromodichloromethane	-	V16	1,1-Dichloroethylene	89%
V2	Bromoform	-		(Vinylidene chloride)	
V3	Bromomethane	-	V17	trans-1,2-Dichloroethylene	114%
V4	Carbon tetrachloride	106%	V18	Dichloromethane	-
V5	Chlorobenzene	-	V19	1,2-Dichloropropane	-
V6	Chloroethane	-	V20	cis-1,3-Dichloropropylene	-
V7	Chloroform	103%	V21	trans-1,3-Dichloropropylene	-
V8	Chloromethane	-	V22	1,1,2,2-Tetrachloroethane	-
V9	Dibromochloromethane	-	V23	1,1,1,2-Tetrachloroethane	-
V10	Dibromomethane	-	V24	Tetrachloroethylene	100%
V11	1,2-Dichlorobenzene	114%	V25	1,1,1-Trichloroethane	123%
V12	1,3-Dichlorobenzene	113%	V26	1,1,2-Trichloroethane	-
V13	1,4-Dichlorobenzene	113%	V27	Trichloroethylene	115%
V14	1,1-Dichloroethane	120%	V28	Vinyl chloride	-
V15	1,2-Dichloroethane	-	V29	Dichlorodifluoromethane	-
			V30	Trichlorofluoromethane	-

* Reagent spike set is used due to insufficient sample provided.


Huey-Chen Chow
Chemist

February 12, 1991
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ORGANIC ANALYSIS REPORT

Halogenated Volatile Organics, EPA 601

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: REAGENT SPIKE RECOVERY DUP. *	

<u>COMP. NO.</u>	<u>COMPOUND</u>		<u>SPIKE</u>	<u>RECOVERY</u>	
COMP. No.	COMPOUND		COMP No.	COMPOUND	
V1	Bromodichloromethane	-	V16	1,1-Dichloroethylene	86%
V2	Bromoform	-		(Vinylidene chloride)	
V3	Bromomethane	-	V17	trans-1,2-Dichloroethylene	111%
V4	Carbon tetrachloride	103%	V18	Dichloromethane	-
V5	Chlorobenzene	-	V19	1,2-Dichloropropane	-
V6	Chloroethane	-	V20	cis-1,3-Dichloropropylene	-
V7	Chloroform	90%	V21	trans-1,3-Dichloropropylene	-
V8	Chloromethane	-	V22	1,1,2,2-Tetrachloroethane	-
V9	Dibromochloromethane	-	V23	1,1,1,2-Tetrachloroethane	-
V10	Dibromomethane	-	V24	Tetrachloroethylene	100%
V11	1,2-Dichlorobenzene	107%	V25	1,1,1-Trichloroethane	111%
V12	1,3-Dichlorobenzene	107%	V26	1,1,2-Trichloroethane	-
V13	1,4-Dichlorobenzene	107%	V27	Trichloroethylene	112%
V14	1,1-Dichloroethane	113%	V28	Vinyl chloride	-
V15	1,2-Dichloroethane	-	V29	Dichlorodifluoromethane	-
			V30	Trichlorofluoromethane	-

* Reagent spike set is used due to insufficient sample provided.

Huey Chen Chow
Huey Chen Chow
Chemist

February 12, 1991
Date

ORGANIC ANALYSIS REPORT
Aromatic Volatile Organics, EPA Method 602

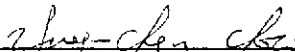
EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: BLANK

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: N/A
DATE ANALYZED: 01/31/1991

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

February 12, 1991
Date

ORGANIC ANALYSIS REPORT
Aromatic Volatile Organics, EPA Method 602

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

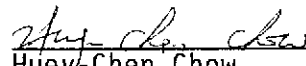
CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: MW-1

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: N/A
DATE ANALYZED: 01/31/1991
DATE SAMPLED: 01/24/1991

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	2500	100
V2	Chlorobenzene	<100	100
V3	1,2-Dichlorobenzene	<100	100
V4	1,3-Dichlorobenzene	<100	100
V5	1,4-Dichlorobenzene	<100	100
V6	Ethyl benzene	1810	100
V7	Toluene	5860	100
V8	Xylenes (Dimethyl benzenes)	10100	100

Note:

All positively identified compounds were second column confirmed.
Higher detection limit is due to matrix interference.


Huey-Chen Chow
Chemist

February 12, 1991
Date

ORGANIC ANALYSIS REPORT
Aromatic Volatile Organics, EPA Method 602

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-2	DATE SAMPLED: 01/24/1991

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 February 12, 1991
Chemist Date

ORGANIC ANALYSIS REPORT
Aromatic Volatile Organics, EPA Method 602

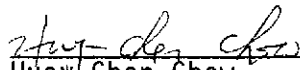
EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-3	DATE SAMPLED: 01/24/1991

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	0.8	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)	57.7	0.5

Note: All positively identified compounds were second column confirmed.


Huey-Chen Chow February 12, 1991
Chemist Date

ORGANIC ANALYSIS REPORT
Aromatic Volatile Organics, EPA Method 602

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: MW-4

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: N/A
DATE ANALYZED: 01/31/1991
DATE SAMPLED: 01/24/1991

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
Huey Chen Chow
Chemist

February 12, 1991
Date

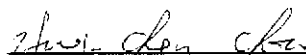
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Sacramento, CA 95828
(916) 381-7953

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-5	DATE SAMPLED: 01/24/1991

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 February 12, 1991
Chemist Date

ORGANIC ANALYSIS REPORT
Aromatic Volatile Organics, EPA Method 602

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Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-18	DATE SAMPLED: 01/24/1991

COMP. NO.	COMPOUND	ug/L (ppb)	DETECTION LIMIT ug/L (ppb)
V1	Benzene	39.4	2.5
V2	Chlorobenzene	<2.5	2.5
V3	1,2-Dichlorobenzene	<2.5	2.5
V4	1,3-Dichlorobenzene	<2.5	2.5
V5	1,4-Dichlorobenzene	<2.5	2.5
V6	Ethyl benzene	37.7	2.5
V7	Toluene	3.2	2.5
V8	Xylenes (Dimethyl benzenes)	104	2.5

Note:

All positively identified compounds were second column confirmed.
Higher detection limit is due to matrix interference.


Huey-Chen Chow
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February 12, 1991
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ORGANIC ANALYSIS REPORT
Aromatic Volatile Organics, EPA Method 602

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6790 Florin-Perkins Road
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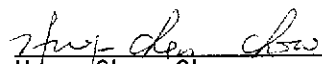
Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: REAGENT SPIKE RECOVERY *	

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

V1	Benzene	93%
V2	Chlorobenzene	83%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	79%
V5	1,4-Dichlorobenzene	84%
V6	Ethyl benzene	85%
V7	Toluene	86%
V8	Xylenes (Dimethyl benzenes)	92%

* Reagent spike set is used due to insufficient sample provided.

 Huey Chen Chow Chemist	February 12, 1991 Date
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ORGANIC ANALYSIS REPORT
Aromatic Volatile Organics, EPA Method 602

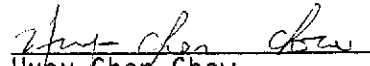
EUREKA LABORATORIES, INC.
6790 Florin-Perkins Road
Sacramento, CA 95828
(916) 381-7953

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: N/A
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: REAGENT SPIKE RECOVERY DUP. *	

<u>COMP.</u> <u>NO.</u>	<u>COMPOUND</u>	<u>SPIKE RECOVERY</u>
V1	Benzene	95%
V2	Chlorobenzene	84%
V3	1,2-Dichlorobenzene	-
V4	1,3-Dichlorobenzene	77%
V5	1,4-Dichlorobenzene	91%
V6	Ethyl benzene	85%
V7	Toluene	84%
V8	Xylenes (Dimethyl benzenes)	101%

* Reagent spike set is used due to insufficient sample provided.



Huey-Chen Chow February 12, 1991
Chemist Date

TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: BLANK

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: 01/31/1991
DATE ANALYZED: 01/31/1991

<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
Total Gasoline	-	
<u>CARBON NO. RANGE</u>		
Gasoline Range	-	-
<u>PEAK CARBON NO</u>		
Gasoline Range	-	-



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date


TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: 01/31/1991
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-1	DATE SAMPLED: 01/24/1991

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	11200	20
Total Gasoline	11200	
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C13	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C8	-



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date


TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: 01/31/1991
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-2	DATE SAMPLED: 01/24/1991

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	60	20
Total Gasoline	60	
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C13	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C13	-



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date

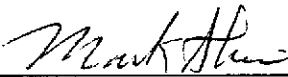
TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: 01/31/1991
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-3	DATE SAMPLED: 01/24/1991

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	846	20
Total Gasoline	846	
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C13	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C13	-



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date

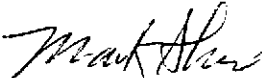
TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: 01/31/1991
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-4	DATE SAMPLED: 01/24/1991

<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
Total Gasoline	-	
<u>CARBON NO. RANGE</u>		
Gasoline Range	-	-
<u>PEAK CARBON NO</u>		
Gasoline Range	-	-



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date


TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: 01/31/1991
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-5	DATE SAMPLED: 01/24/1991

<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
Total Gasoline	-	
<u>CARBON NO. RANGE</u>		
Gasoline Range	-	-
<u>PEAK CARBON NO</u>		
Gasoline Range	-	-



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date


TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE	DATE RECEIVED: 01/28/1991
PROJECT: 98TH & EDES	DATE EXTRACTED: 01/31/1991
SCI JOB #: 272.016	DATE ANALYZED: 01/31/1991
SAMPLE ID: MW-18	DATE SAMPLED: 01/24/1991

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> <u>[ug/L (ppb)]</u>	<u>DETECTION LIMIT</u> <u>[ug/L (ppb)]</u>
Gasoline Range	1397	20
Total Gasoline	1397	
<u>CARBON NO. RANGE</u>		
Gasoline Range	C6-C13	-
<u>PEAK CARBON NO</u>		
Gasoline Range	C13	-



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date

TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: MATRIX SPIKE RECOVERY *

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: 01/31/1991
DATE ANALYZED: 01/31/1991

PETROLEUM HYDROCARBONS

SPIKE RECOVERY

Gasoline Range

108%

CARBON NO. RANGE

Gasoline Range

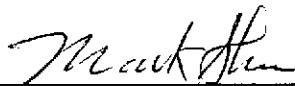
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PEAK CARBON NO

Gasoline Range

-

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



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date

TOTAL PETROLEUM HYDROCARBONS,
(GASOLINE ONLY)
EPA METHOD 5030 BY PURGE & TRAP

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

Order No: 91-01-231
Hazardous Waste Testing
Certification: E765

CLIENT: SUBSURFACE
PROJECT: 98TH & EDES
SCI JOB #: 272.016
SAMPLE ID: MATRIX SPIKE RECOVERY DUP. *

DATE RECEIVED: 01/28/1991
DATE EXTRACTED: 01/31/1991
DATE ANALYZED: 01/31/1991

PETROLEUM HYDROCARBONS

SPIKE RECOVERY

Gasoline Range

112%

CARBON NO. RANGE

Gasoline Range

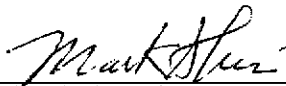
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PEAK CARBON NO

Gasoline Range

-

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



Mark Shih, Ph.D.
Chemist

February 12, 1991
Date

TOTAL PETROLEUM HYDROCARBONS
MODIFIED EPA METHOD 8015 (GC-FID) FOR WATER

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

Order No.: 91-01-231
Hazardous Waste Testing
Certification No.: E765

CLIENT: SUBSURFACE CONSULTANTS
REPORT UNIT: ppm (mg/L)
SAMPLE LOCATION:
SAMPLE ID: MW-1

DATE SAMPLED: 01/24/91
DATE RECEIVED: 01/28/91
DATE EXTRACTED: 01/31/91
DATE COMPLETED: 02/01/91
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	RESULT	DETECTION LIMIT
Gasoline Range	59.1	.1
Diesel Range	<.2	.2
Motor Oil Range	<.5	.5
Total Petroleum Hydrocarbons	59.1	
CARBON NO. RANGE		
Gasoline Range	C9-C12	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	C10	
Diesel Range	-	
Motor Oil Range	-	

Chemist

Mark Shih
Mark Shih, Ph.D.

02/04/91

Date

TOTAL PETROLEUM HYDROCARBONS
MODIFIED EPA METHOD 8015 (GC-FID) FOR WATER

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

Order No.: 91-01-231
Hazardous Waste Testing
Certification No.: E765

CLIENT: SUBSURFACE CONSULTANTS
REPORT UNIT: ppm (mg/L)
SAMPLE LOCATION:
SAMPLE ID: MW-2

DATE SAMPLED: 01/24/91
DATE RECEIVED: 01/28/91
DATE EXTRACTED: 01/31/91
DATE COMPLETED: 02/01/91
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	RESULT	DETECTION LIMIT
Gasoline Range	<.1	.1
Diesel Range	<.2	.2
Motor Oil Range	<.5	.5
Total Petroleum Hydrocarbons		
CARBON NO. RANGE		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	

Chemist

Mark Shih
Mark Shih, Ph.D.

02/04/91

Date

TOTAL PETROLEUM HYDROCARBONS
MODIFIED EPA METHOD 8015 (GC-FID) FOR WATER

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

Order No.: 91-01-231
Hazardous Waste Testing
Certification No.: E765

CLIENT: SUBSURFACE CONSULTANTS
REPORT UNIT: ppm (mg/L)
SAMPLE LOCATION:
SAMPLE ID: MW-3

DATE SAMPLED: 01/24/91
DATE RECEIVED: 01/28/91
DATE EXTRACTED: 01/31/91
DATE COMPLETED: 02/01/91
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	RESULT	DETECTION LIMIT
Gasoline Range	.7	.1
Diesel Range	<.2	.2
Motor Oil Range	<.5	.5
Total Petroleum Hydrocarbons	.7	
CARBON NO. RANGE		
Gasoline Range	C9-C12	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	C10	
Diesel Range	-	
Motor Oil Range	-	

Chemist

Mark Shih
Mark Shih, Ph.D.

02/04/91

Date

TOTAL PETROLEUM HYDROCARBONS
MODIFIED EPA METHOD 8015 (GC-FID) FOR WATER

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

Order No.: 91-01-231
Hazardous Waste Testing
Certification No.: E765

CLIENT: SUBSURFACE CONSULTANTS
REPORT UNIT: ppm (mg/L)
SAMPLE LOCATION:
SAMPLE ID: MW-5

DATE SAMPLED: 01/24/91
DATE RECEIVED: 01/28/91
DATE EXTRACTED: 01/31/91
DATE COMPLETED: 02/01/91
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	RESULT	DETECTION LIMIT
Gasoline Range	<.1	.1
Diesel Range	<.2	.2
Motor Oil Range	<.5	.5
Total Petroleum Hydrocarbons		
CARBON NO. RANGE		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	

Chemist

Mark Shih
Mark Shih, Ph.D.

02/04/91

Date

TOTAL PETROLEUM HYDROCARBONS
MODIFIED EPA METHOD 8015 (GC-FID) FOR WATER

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

Order No.: 91-01-231
Hazardous Waste Testing
Certification No.: E765

CLIENT: SUBSURFACE CONSULTANTS
REPORT UNIT: ppm (mg/L)
SAMPLE LOCATION:
SAMPLE ID: MW-18

DATE SAMPLED: 01/24/91
DATE RECEIVED: 01/28/91
DATE EXTRACTED: 01/31/91
DATE COMPLETED: 02/01/91
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	RESULT	DETECTION LIMIT
Gasoline Range	2.1	.1
Diesel Range	<.2	.2
Motor Oil Range	<.5	.5
Total Petroleum Hydrocarbons	2.1	
CARBON NO. RANGE		
Gasoline Range	C9-C12	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	C10	
Diesel Range	-	
Motor Oil Range	-	

Chemist

Mark Shih

Mark Shih, Ph.D.

02/04/91

Date

TOTAL PETROLEUM HYDROCARBONS
MODIFIED EPA METHOD 8015 (GC-FID) FOR WATER

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

Order No.: 91-01-231
Hazardous Waste Testing
Certification No.: E765

CLIENT: SUBSURFACE CONSULTANTS
REPORT UNIT: ppm (mg/L)
SAMPLE LOCATION:
SAMPLE ID: METHOD BLANK

DATE SAMPLED:
DATE RECEIVED: 01/28/91
DATE EXTRACTED: 01/31/91
DATE COMPLETED: 02/01/91
DILUTION FACTOR: 1.00

PETROLEUM HYDROCARBONS	RESULT	DETECTION LIMIT
Gasoline Range	<.1	.1
Diesel Range	<.2	.2
Motor Oil Range	<.5	.5
Total Petroleum Hydrocarbons		
CARBON NO. RANGE		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	
PEAK CARBON NO.		
Gasoline Range	-	
Diesel Range	-	
Motor Oil Range	-	

Chemist

Mark Shih
Mark Shih, Ph.D.

02/04/91

Date

TOTAL PETROLEUM HYDROCARBONS
MODIFIED EPA METHOD 8015 (GC-FID) FOR WATER

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

Order No.: 91-01-231
Hazardous Waste Testing
Certification No.: E765

CLIENT: SUBSURFACE CONSULTANTS
REPORT UNIT: %
SAMPLE LOCATION:
SAMPLE ID: SPIKE RECOVERY
REAGENT

DATE SAMPLED:
DATE RECEIVED: 01/28/91
DATE EXTRACTED: 01/31/91
DATE COMPLETED: 02/01/91

PETROLEUM HYDROCARBONS	RESULT
Gasoline Range	NA
Diesel Range	88%
Motor Oil Range	NA
Total Petroleum Hydrocarbons	
CARBON NO. RANGE	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-
PEAK CARBON NO.	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-

Reagent spike set is used due to insufficient sample provided.

Chemist

Mark Shih
Mark Shih, Ph.D.

02/04/91

Date

TOTAL PETROLEUM HYDROCARBONS
MODIFIED EPA METHOD 8015 (GC-FID) FOR WATER

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

Order No.: 91-01-231
Hazardous Waste Testing
Certification No.: E765

CLIENT: SUBSURFACE CONSULTANTS
REPORT UNIT: %
SAMPLE LOCATION:
SAMPLE ID: SPIKE RECOVERY DUPLICATE
REAGENT

DATE SAMPLED:
DATE RECEIVED: 01/28/91
DATE EXTRACTED: 01/31/91
DATE COMPLETED: 02/01/91

PETROLEUM HYDROCARBONS	RESULT
Gasoline Range	NA
Diesel Range	80%
Motor Oil Range	NA
Total Petroleum Hydrocarbons	
CARBON NO. RANGE	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-
PEAK CARBON NO.	
Gasoline Range	-
Diesel Range	-
Motor Oil Range	-

Reagent spike set is used due to insufficient sample provided.

Chemist



Mark Shih, Ph.D.

02/04/91

Date