

STID

**QUARTERLY GROUND
WATER SAMPLING REPORT
FOR
STID 553 - GRIMIT AUTO AND REPAIR
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA**

HOEXTER CONSULTING, INC.

ALCO
HAZMAT

734 Torreya Court
Palo Alto, California 94308

94 SEP 27 PM 2:12

(415) 494-2505 (phone & fax)

TRANSMITTAL

TO Alameda County - Dept. Env't - Health
1131 Harbor Bay Parkway - 2nd Floor
Alameda CA 94502

DATE 9/26/94
VIA US Mail
FAX NO. _____

ATTENTION Thomas Peacock

PROJECT 1970 Seminary
Oakland CA

JOB NO. E-10-1-019

DESCRIPTION Sept 23, 1994 Quarterly Report

Number of pages, including cover page, if FAX _____

COMMENTS Copy also sent to Reg. Board - Tom Callaghan

ACTION

- As requested
- For your use
- Please return when finished
- Please review and comment
- Other _____

COPY TO _____

BY David F. Hoexter
David F. Hoexter

If enclosures are not as noted, kindly notify us at once

Geology / Engineering Geology / Environmental Studies

HOEXTER CONSULTING, INC.

**734 Torrey Court
Palo Alto, California 94303**

(415) 494-2505 (phone and fax)

September 23, 1994

E-10-1-019

HCQuartEnvrRpts:Seminary1970/4

Mr. Doyle Gritmit
14366 Lark Street
San Leandro, California 94578

**RE: SEPTEMBER, 1994 QUARTERLY
GROUND WATER SAMPLING REPORT
STID 553 - GRIMIT AUTO AND REPAIR
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA**

Dear Mr. Gritmit:

Enclosed is our September, 1994 quarterly ground water sampling report for the property located at 1970 Seminary Avenue, corner of Harmon, in Oakland, California. This sampling round is the fourth quarterly sampling performed by Hoexter Consulting at the site. The results of an initial sampling round by Kaldveer Associates, Inc, following well installation, and the previous Hoexter Consulting quarterly and sub-surface investigation sampling, are included in the analytical results summary table.

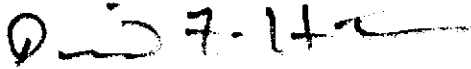
The results of this investigation indicate that the water samples from the three on-site wells contain elevated to very low levels of total petroleum hydrocarbons as gasoline (TPH-G), purgeable aromatic compounds (BTEX), and of oil (total recoverable petroleum hydrocarbons, TRPH). The water sample from well MW-1 indicates a marked increase in all analyzed compounds; the levels in wells MW-2 and MW-3 are much lower, but also indicate an increase.

We recommend that copies of this report be submitted to the California Regional Water Quality Control Board and the Alameda County Department of Environmental Health. The next round of sampling is scheduled for the early part of December, 1994, ~~in the vicinity of the following wells:~~

We appreciate the opportunity to provide services to you on this project and trust this report meets your needs at this time. If you have any questions, or require additional information, please do not hesitate to call.

Very truly yours,

HOEXTER CONSULTING, INC.



David F. Hoexter, RG/CEG/REA
Principal

Copies: Addressee (2)
California Regional Water Quality Control Board (1)
Attention: Mr. Tom Callaghan
Alameda County, Department of Environmental Health (1)
Attention: Mr. Tom Peacock

SEPTEMBER, 1994 QUARTERLY
GROUND WATER SAMPLING REPORT

For

STID 553 - Gritmit Auto and Repair
1970 Seminary Avenue
Oakland, California

To

Mr. Doyle Gritmit
14366 Lark Street
San Leandro, California 94578

September, 1994



David F. Hoexter

David F. Hoexter, R.G./C.E.G./R.E.A.
Principal

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SEPTEMBER, 1994 QUARTERLY GROUND WATER
SAMPLING REPORT
FOR
STID 553 - GRIMIT AUTO AND REPAIR
1970 SEMINARY
OAKLAND, CALIFORNIA

I. INTRODUCTION

This report presents the results of the September, 1994 quarterly ground water sampling at 1970 Seminary, Oakland, California. The project location is shown on the Site Location Map, Figure 1. The scope of services provided during this investigation consisted of collecting and analyzing ground water samples from three on-site monitoring wells. Ground water samples were analyzed for total petroleum hydrocarbons as gasoline, for purgeable aromatic compounds, and for oil and grease. Well locations are shown on the Well Location Map, Figure 2.

II. FIELD INVESTIGATION

The ground water monitoring wells were sampled by a representative of Hoexter Consulting, Inc. on September 9, 1994. Following an initial ground water level measurement (Table 1), each well was checked for free-product with the bailer, and then four well-casing volumes of water were purged from the well. A dedicated teflon bailer was employed for each well. The initial depth to ground water was ~~measured~~ ~~at~~ ~~the~~ ~~well~~ ~~and~~ ~~found~~ ~~to~~ ~~be~~ ~~10.5~~ ~~feet~~ ~~below~~ ~~the~~ ~~ground~~ ~~surface~~, indicating a decline in ground water table elevation from the most recent (February, 1994) measurements.

Following purging, samples were collected using the teflon bailer, placed in appropriate sample containers supplied by the analytical laboratory, labeled, and placed in refrigerated storage for transport to the laboratory under chain-of-custody control. All sampling equipment was thoroughly cleaned with trisodium phosphate detergent and rinsed with distilled water prior to sampling the well. Monitoring well sampling logs and the chain of custody are attached to this report as a part of Appendix I. The laboratory is California Department of Health Services approved for the requested analyses.

Although three wells are present on the site, one of the wells (MW-3) is completed at a shallower depth than the other two wells. Thus, although ground water elevation data was obtained for this investigation and is presented in Table 1, the data is not plotted, as a true ground water flow direction cannot be determined from wells not similarly completed.

III. ANALYTICAL RESULTS

A. Laboratory Procedures

The ground water samples were analyzed by Sequoia Analytical of Redwood City, California. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) using EPA Method 5030/8015; for purgeable aromatic compounds (BTEX) using EPA Method 8020; and for oil and grease (total recoverable petroleum, TRPH) using EPA Method 418.1 (equivalent to SM 5520C/F).

B. Analytical Results

The results of the chemical analyses are presented on Table 2 and are attached to this report as a part of Appendix I. Analytical results of all previous testing, including the August, 1990 sampling by Kaldveer Associates, Inc, following installation of well MW-1, are also included. The current analytical results indicate that TRPH, TPH-G, and BTEX compounds are present at elevated and increased levels in monitoring well MW-1. Very low levels of TPH-G and BTEX were detected in wells MW-2 and MW-3; TRPH was not detected in MW-2 and MW-3.

The test results indicate an increase in levels of all detected compounds. In particular, the levels of TPH-G, BTEX and TRPH increased by an order-of-magnitude in well MW-1 from the February, 1994 sampling event.

Free product was not observed in the initial sounding of the wells, although a sheen (floating film) of oil was observed in well MW-1 and a slight sheen in well MW-3. This film was present in the bailer after purging four well volumes in well MW-1. The purge water from well MW-1 has consistently contained globules of "oil", and it is likely that one or more globules was included in the ground water sample, resulting in an unusually elevated constituent level.

IV. RECOMMENDATIONS

Notwithstanding the preceding discussion, we ~~recomm~~ ~~ended~~ ~~in~~ ~~our~~ ~~March~~ ~~23,~~ ~~1994~~ ~~report~~ and stated in our August 3, 1994 status letter.

V. LIMITATIONS

This report has been prepared according to generally accepted geologic and environmental practices. No other warranty, either expressed or implied as to the methods, results, conclusions or professional advice provided is made. The analysis, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our investigation; review of previous reports relevant to the site conditions; and laboratory results from an outside analytical laboratory.

Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes do occur, we should be advised so that we can review our report in light of those changes.

TABLE 1

GROUND WATER ELEVATION DATA
(All Measurements in Feet)

<u>Well Number</u>	<u>Well Top Elevation</u> (2)	<u>Depth to Water</u>	<u>Relative Ground</u> <u>Water Elevation (2)</u>
MW-1			
8/6/90	37.0	21.5	15.5
1/28/92		21.0	16.0
4/27/92		20.95	16.05
8/10/92		22.20	14.8
2/11/94		15.93 (3)	21.07
2/28/94		13.85 (4)	23.15
9/9/94		20.19	16.81
MW-2			
2/11/94	36.40	14.16 (3)	22.24
2/28/94		16.01 (4)	20.39
9/9/94		18.96	17.44
MW-3			
2/11/94	36.94	6.97 (3)	29.97
2/28/94		7.74 (4)	29.20
9/9/94		9.68	27.26

Notes:

- (1) N/A = Not applicable
- (2) City of Oakland datum
- (3) Well under pressure when locking cap removed; water level may not have been stabilized
- (4) Depth to water was measured over a 120 minute period; indicated depths are final, stabilized readings

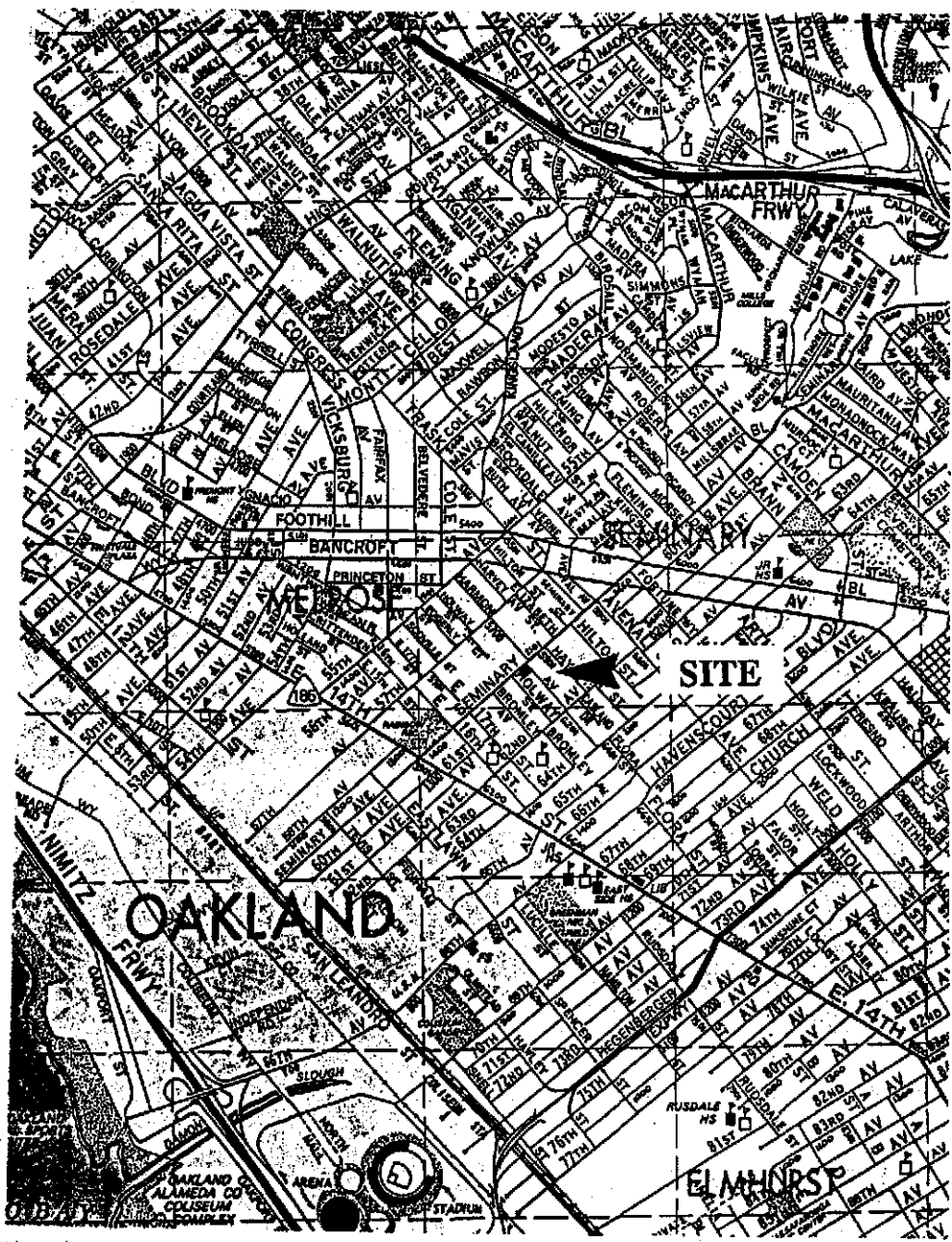
TABLE 2

SUMMARY OF ANALYTICAL TEST RESULTS - GROUND WATER
 (Results reported in parts per million, mg/l) (1)

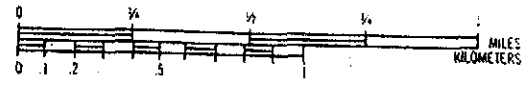
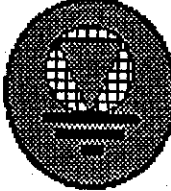
<u>Well and Date</u>	<u>TPH Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethyl-benzene</u>	<u>Oil & Grease</u>
<u>MW-1</u>						
8/6/90 (2)	54	3.5	3.2	9.4	1.9	7.6
1/28/92 (3)	2,000	7.4	17.0	120.0	28.0	75 (5)
4/27/92 (3)	500	3.4	6.4	45.0	10.0	440 (6)
4/27/92 (4)	175	4.2	4.4	14.6	3.2	N/A
8/10/92 (3)	170	4.2	4.2	15.0	3.3	120 (6)
2/11/94 (3)	1,800	ND	5.1	23.0	5.2	16 (6)
9/9/94 (3)	[REDACTED]	[REDACTED]	61	137	9.1	880 (6)
<u>MW-2</u>						
2/11/94 (3)	0.130	0.022	0.0011	0.0073	0.0052	ND (6)
9/9/94 (3)	[REDACTED]	[REDACTED]	ND	0.00069	ND	ND (6)
<u>MW-3</u>						
2/11/94 (3)	ND	ND	ND	ND	ND	ND (6)
9/9/94 (3)	[REDACTED]	0.010	ND	0.0035	ND	ND (6)

Notes:

- (1) ND - non-detect; N/A - not applicable
- (2) Kaldveer Associates report, September, 1990
- (3) Sequoia Analytical Laboratory
- (4) Applied Remediation Laboratory
- (5) Gravimetric Method
- (6) Infrared Method

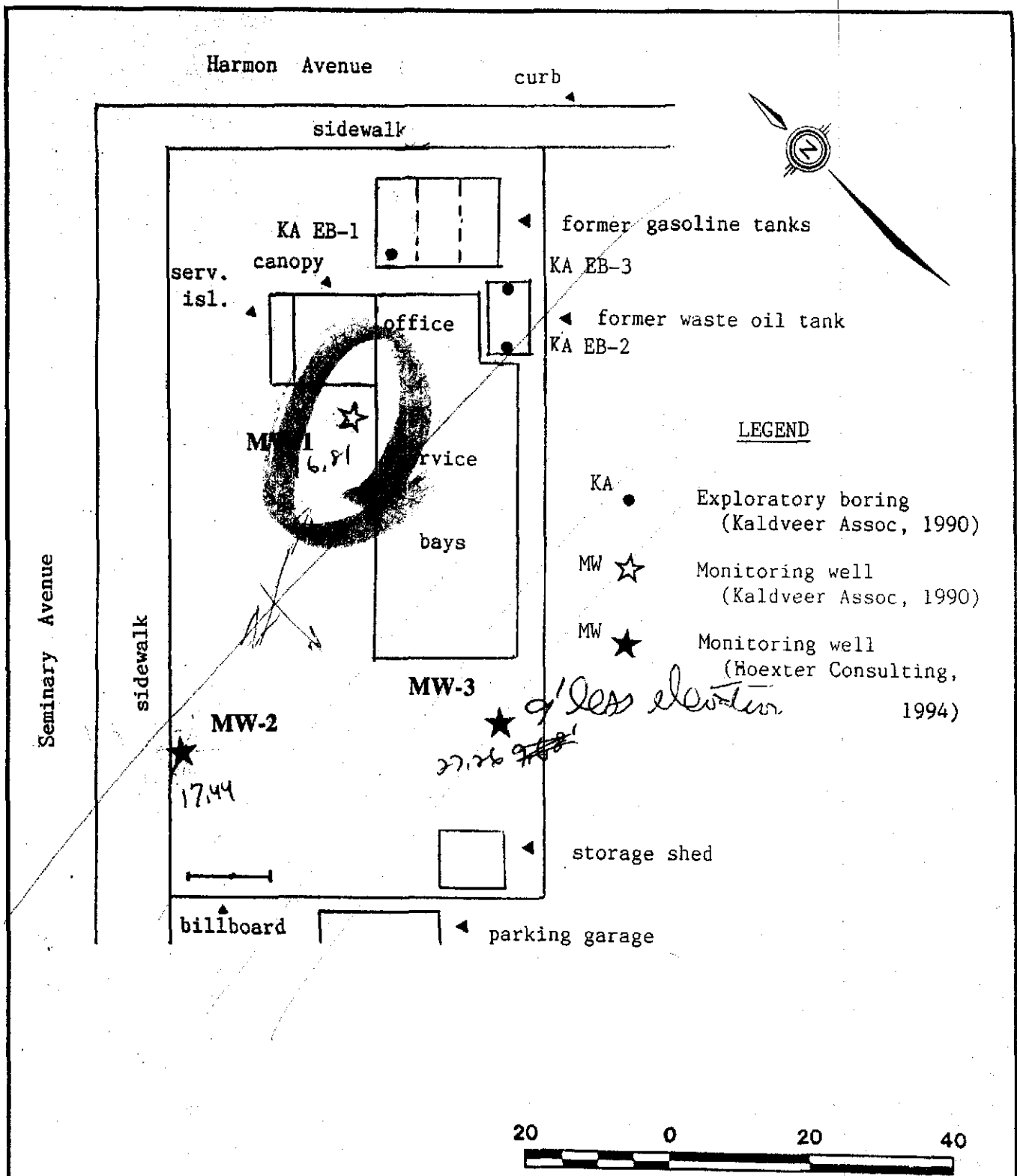


ALAMEDA COUNTY
 1991 *Thomas Guide*.

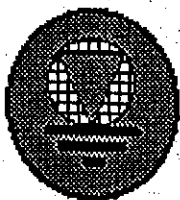



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LOCATION MAP		
1970 Seminary Avenue Oakland, California		
Project No.	Date	Figure 1
E-10-1-019	September, 1994	



Base: Field sketch, 10/25/93



HOEXTER CONSULTING
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Environmental Studies

SITE PLAN

1970 Seminary Avenue
Oakland, California

Project No.

Date

Figure 2

E-10-1-019

September, 1994

APPENDIX I
WATER SAMPLE LOG
CHAIN OF CUSTODY
ANALYTICAL TEST RESULTS

HOEXTER CONSULTING

Groundwater Sampling Field Log

Project Name/No: Seminary / E-10-1-019
 Client: D. Gruit
 Project Manager: D.F. Hoexter
 Sampler: J. Forsythe
 Casing Diameter: 2 inch 3 inch _____ 4 inch _____ 6 inch _____ Other: _____

Lab I.D.: 9409566-01
 Date: 9/9/94
 Sample Location/I.D.: MW-1
 Start Time: _____

Depth of Well (feet): 35
 Depth to Water (feet): 20.19
 Sample Depth (feet): _____

Calculated Purged Volume: 9.7 gal
 Actual Purged Volume: 10 gal

2.42 gal/well vol.

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm) x 100	Temperature Degrees C°	Color (visual)	Other
13:19		2.5	6.42	8.39	67.6	med. brown	stagn/odor
13:28	5.0	2.5	6.49	7.62	68.1		
13:39	7.5	2.5	6.45	7.51	67.8		
13:50	10.0	2.5	6.46	7.87	68.0		

Purge Method

_____ 2" Bladder Pump Bailer - dedicated disp teflon Well Wizard _____ Dedicated
 _____ Submersible Pump _____ Centrifugal Pump _____ Dipper _____ Other
 _____ Pneumatic Displacement Pump _____

Sample Method

_____ 2" Bladder Pump Bailer (Teflon) dedicated, disposable Well Wizard _____ Dedicated
 _____ Surface Sampler _____ Dipper _____ Fultz Pump _____ Other

Well Integrity: OK

Remarks: Shen and moderately strong product odor in initial bailer extract

Signature: (original signed by J-Forsythe)

Volumes Per Unit Length Selected Well Casing Diameters

Well Casing I.D. (inches)	Volume Per Unit Length			
	Gal/ft	Cubic Ft/ft	L/M	L/Ft
1.5	0.0918	0.0123	1.140	0.3475
2.0	0.1632	0.0218	2.027	0.6178
3.0	0.3672	0.0491	4.560	1.3900
4.0	0.6528	0.0873	8.107	2.4710
6.0	1.4690	0.1963	18.240	5.5600

Conversion Factors

To Convert	Into	Multiply
Ft. of Water	Lbs/sq.in.	0.4335
Lbs/Sq. inch	Ft. of Water	2.3070
Cubic feet	Gallons	7.4800
Gallons	Liters	3.7850
Feet	Meters	0.30048
Inches	Centimeters	2.5400

HOEXTER CONSULTING

Groundwater Sampling Field Log

Project Name/No: Seminary / E-10-1-019
 Client: D. G. Gruit
 Project Manager: D. F. Hoexter
 Sampler: J. Forsythe
 Casing Diameter: 2 inch 3 inch _____ 4 inch _____ 6 inch _____ Other: _____

Lab I.D.: 9409566-02
 Date: 9/9/94
 Sample Location/I.D.: MW-2
 Start Time: _____

Depth of Well (feet): 35
 Depth to Water (feet): 18.96
 Sample Depth (feet): _____

Calculated Purged Volume: 10.5 gal
 Actual Purged Volume: 12.5 gal

2.62 gal / well vol.

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm) x 100	Temperature Degrees $^{\circ}$ F	Color (visual)	Other
12:08		3.0	6.45	6.84	71.0	Light Brown	
12:21	6.0	3.0	6.46	6.39	67.6	↓	
12:31	9.0	3.0	6.55	6.60	67.9		
12:42	12.0	3.0	6.46	6.48	69.3		

Purge Method

_____ 2" Bladder Pump Bailer dedicated, disp. teflon Well Wizard _____ Dedicated
 _____ Submersible Pump _____ Centrifugal Pump _____ Dipper _____ Other
 _____ Pneumatic Displacement Pump _____

Sample Method

_____ 2" Bladder Pump Bailer (Teflon) dedicated, disposable Well Wizard _____ Dedicated
 _____ Surface Sampler _____ Dipper _____ Fultz Pump _____ Other

Well Integrity: OK

Remarks: Slight product odor (no shown) in initial bailer extracts
Depth to water at sample collection time = 30.30'

Signature: (original signed by J. Forsythe)

Volumes Per Unit Length Selected Well Casing Diameters

Well Casing I.D. (inches)	Volume Per Unit Length			
	Gal/ft	Cubic Ft/ft	L/M	L/Ft
1.5	0.0918	0.0123	1.140	0.3475
2.0	0.1632	0.0218	2.027	0.6178
3.0	0.3672	0.0491	4.560	1.3900
4.0	0.6528	0.0873	8.107	2.4710
6.0	1.4690	0.1963	18.240	5.5600

Conversion Factors

To Convert	Into	Multiply
Ft. of Water	Lbs/sq.in.	0.4335
Lbs/Sq. inch	Ft. of Water	2.3070
Cubic feet	Gallons	7.4800
Gallons	Liters	3.7850
Feet	Meters	0.30048
Inches	Centimeters	2.5400

HOEXTER CONSULTING

Groundwater Sampling Field Log

Project Name/ No: Seminary/E-10-1-09
 Client: D. Gruit
 Project Manager: D.F. Herbert
 Sampler: J. Forsythe
 Casing Diameter: 2 inch 3 inch _____ 4 inch _____ 6 inch _____ Other: _____

Lab I.D.: 9409566-03
 Date: 9/9/94
 Sample Location/I.D.: 476-3
 Start Time: _____

Depth of Well (feet): 20
 Depth to Water (feet): 9.68
 Sample Depth (feet): _____

Calculated Purged Volume: 6.7 gal
 Actual Purged Volume: 8.5 gal

1.68 gal/well vol.

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm) <small>x 100</small>	Temperature Degrees $^{\circ}$ F	Color (visual)	Other
<u>11:08</u>		<u>2.0</u>	<u>7.19</u>	<u>5.49</u>	<u>68.2</u>	<u>clear</u>	
<u>11:16</u>	<u>4.0</u>	<u>2.0</u>	<u>6.82</u>	<u>5.85</u>	<u>67.0</u>	<u>cloudy</u>	
<u>11:24</u>	<u>6.0</u>	<u>2.0</u>	<u>6.95</u>	<u>5.95</u>	<u>66.3</u>	<u>↓</u>	
<u>11:31</u>	<u>8.0</u>	<u>2.0</u>	<u>7.08</u>	<u>6.03</u>	<u>67.4</u>	<u>↓</u>	

Purge Method

_____ 2" Bladder Pump Bailer ded. disp. teflon _____ Well Wizard _____ Dedicated
 _____ Submersible Pump _____ Centrifugal Pump _____ Dipper _____ Other
 _____ Pneumatic Displacement Pump _____

Sample Method

_____ 2" Bladder Pump Bailer (Teflon) ded, disp. _____ Well Wizard _____ Dedicated
 _____ Surface Sampler _____ Dipper _____ Fultz Pump _____ Other

Well Integrity: OK

Remarks: Slight product odor and sheen detected in initial bailer extracts. Depth to water at sample collection time (11:25) = 17.75'

Signature: (original signed by J. Forsythe)

Volumes Per Unit Length Selected Well Casing Diameters

Well Casing I.D. (inches)	Volume Per Unit Length			
	Gal/ft	Cubic Ft/ft	L/M	L/ft
1.5	0.0918	0.0123	1.140	0.3475
2.0	0.1632	0.0218	2.027	0.6178
3.0	0.3672	0.0491	4.560	1.3900
4.0	0.6528	0.0873	8.107	2.4710
6.0	1.4690	0.1963	18.240	5.5600

Conversion Factors

To Convert	Into	Multiply
Ft. of Water	Lbs/sq.in.	0.4335
Lbs/Sq. inch	Ft. of Water	2.3070
Cubic feet	Gallons	7.4800
Gallons	Liters	3.7850
Feet	Meters	0.30048
Inches	Centimeters	2.5400

CHAIN-OF-CUSTODY RECORD

Project Number E-10-1-019		Project Name Seminary					Number / Type of Containers	Analytical Tests TPH-G / BTEX * SM5520 C/P *						Remarks
Sampler's Name (printed) J. Forsythe														
Boring Number	Date	Time	Soil	Water	Sample Location or Depth	Sample Number								
MW-1	9/9/94	15:12					3-40ml	X						
							1-100ml		X					
MW-2		14:52					3-40ml	X						
							1-100ml		X					
MW-3		14:25					3-40ml	X						
							1-100ml		X					

Relinquished by: (Signature) <i>J. Forsythe</i>	Date/Time 9/9/94 17:02	Received by: (Signature) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time	Received by: (Signature) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time	Received for Laboratory by: (Signature) 9/9/94 <i>[Signature]</i> 17:02

Ship To: Sequoia Analytical
680 Chosapeake Dr.
Redwood City CA 94063

Attention: Receiving
 Phone No: 415-364-9600

Requested Turnaround Time: Normal Contact: David F. Hoexter Phone: 415-494-2805

Remarks: * Analyze per RWQCB LUFT guidelines

Hoexter Consulting
 Engineering Geology
 734 Torreya Court
 Palo Alto, CA 94303

CHAIN-OF-CUSTODY RECORD

Project Number E-10-1-019		Project Name Sewerage		Number/Type of Containers	Analytical Tests TPH-G / BTEX * SMSS20 C/P *	Remarks 9409566		
Sampler's Name (printed) J. Forsythe								
Boring Number	Date	Time	Soil				Water	Sample Location or Depth
MW-1	9/9/94	15:12				3-40ml- 1-100ml	X X	
MW-2		14:52				3-40ml 1-100ml	X X	
MW-3		14:25				3-40ml 1-100ml	X X	

Relinquished by: (Signature) <i>Jack Forsythe</i>	Date/Time 9/9/94 17:02	Received by: (Signature) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time	Received by: (Signature) <i>[Signature]</i>
Relinquished by: (Signature) <i>[Signature]</i>	Date/Time	Received for Laboratory by: (Signature) 9/9/94 <i>David Hoexter</i> 17:02

Ship To: Sequoia Analytical
680 Chesapeake Dr.
Redwood City, CA 94063

Attention: Receiving
 Phone No: 415-364-9600

Requested Turnaround Time: Normal Contact: David F. Hoexter Phone: 415-494-2505
 Remarks: * Analyze per RWQCB LUFT guidelines ph / fax

Hoexter Consulting
 Engineering Geology
 734 Torrey Court
 Palo Alto, CA 94303



Hoexter Consulting Eng'g Geo
734 Torreya Court
Palo Alto, CA 94303

Client Proj. ID: E-10-1-019, Seminary

Lab Proj. ID: 9409566

Sampled: 09/09/94

Received: 09/09/94

Analyzed: see below

Attention: David F. Hoexter

Reported: 09/16/94

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9409566-01 Sample Desc: LIQUID,MW-1				
TRPH (EPA 418.1)	mg/L	09/16/94	500	880
Lab No: 9409566-02 Sample Desc: LIQUID,MW-2				
TRPH (EPA 418.1)	mg/L	09/16/94	5.0	N.D.
Lab No: 9409566-03 Sample Desc: LIQUID,MW-3				
TRPH (EPA 418.1)	mg/L	09/16/94	5.0	N.D.

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

SEQUOIA ANALYTICAL - ELAP #1210

Suzanne Chin
Project Manager





Hoexter Consulting Eng'g Geo 734 Torrey Court Palo Alto, CA 94303	Client Proj. ID: E-10-1-019, Seminary Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9409566-01	Sampled: 09/09/94 Received: 09/09/94 Analyzed: 09/15/94 Reported: 09/16/94
---	---	---


Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500000	2300000
Benzene	5000	56000
Toluene	5000	61000
Ethyl Benzene	5000	9100
Xylenes (Total)	5000	137000
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	104

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

SEQUOIA ANALYTICAL - ELAP #2000


 Suzanne Chin
 Project Manager





Hoexter Consulting Eng'g Geo 734 Torreya Court Palo Alto, CA 94303	Client Proj. ID: E-10-1-019, Seminary Sample Descript: MW-2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9409566-02	Sampled: 09/09/94 Received: 09/09/94 Analyzed: 09/15/94 Reported: 09/16/94
Attention: David F. Hoexter		

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	1000
Benzene	0.50	89
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	0.69
Chromatogram Pattern:		Gas
Non Gas Mix		> C9

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	99

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

SEQUOIA ANALYTICAL - ELAP #2000

Suzanne Chin
Project Manager





Hoexter Consulting Eng'g Geo 734 Torreya Court Palo Alto, CA 94303	Client Proj. ID: E-10-1-019, Seminary Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9409566-03	Sampled: 09/09/94 Received: 09/09/94 Analyzed: 09/15/94 Reported: 09/16/94
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Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	710
Benzene	0.50	10
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	3.5
Chromatogram Pattern:		Gas
Non Gas Mix		>C9

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	99

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

SEQUOIA ANALYTICAL - ELAP #2000

Suzanne Chin
Project Manager





Hoexter Consulting Engrg. Geol. 734 Torreya Court Palo Alto, CA 94303 Attention: David F. Hoexter	Client Project ID: E-10-1-019, Seminary Matrix: Liquid QC Sample Group: 9409566 -01-03	Reported: Sep 19, 1994
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QUALITY CONTROL DATA REPORT

ANALYTE	Total Recoverable Petroleum Hydrocarb.
Method:	EPA 418.1
Analyst:	K. Hynes

MS/MSD
Batch#: BLK091694
Date Prepared: 9/16/94
Date Analyzed: 9/16/94
Instrument I.D.#: N/A
Conc. Spiked: 7.0 mg/L

Matrix Spike
% Recovery: 117

Matrix Spike
Duplicate %
Recovery: 110

Relative %
Difference: 6.2

LCS Batch#: -
Date Prepared: -
Date Analyzed: -
Instrument I.D.#: -

LCS %
Recovery: -

% Recovery Control Limits:	60-140
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Please Note:
 The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

 Suzanne Chin
 Project Manager





Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600
 1900 Bates Avenue, Suite L Concord, CA 94520 (510) 686-9600
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600

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

Hoexter Consulting Engrg. Geol. Client Project ID: E-10-1-019, Seminary
 734 Torrey Court Matrix: Liquid
 Palo Alto, CA 94303
 Attention: David F. Hoexter QC Sample Group: 9409566-01-03
 Reported: Sep 19, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	N. Zahedi	N. Zahedi	N. Zahedi	N. Zahedi

MS/MSD Batch#:	4090049	4090049	4090049	4090049
Date Prepared:	9/15/94	9/15/94	9/15/94	9/15/94
Date Analyzed:	9/15/94	9/15/94	9/15/94	9/15/94
Instrument I.D.#:	GCHP-1	GCHP-1	GCHP-1	GCHP-1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Matrix Spike % Recovery:	99	90	95	94
Matrix Spike Duplicate % Recovery:	88	80	84	84
Relative % Difference:	12	12	12	11

LCS Batch#:	LCS091594	LCS091594	LCS091594	LCS091594
Date Prepared:	9/15/94	9/15/94	9/15/94	9/15/94
Date Analyzed:	9/15/94	9/15/94	9/15/94	9/15/94
Instrument I.D.#:	GCHP-1	GCHP-1	GCHP-1	GCHP-1
LCS % Recovery:	96	96	101	99

% Recovery Control Limits:	71-133	72-128	72-130	71-120
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Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL
 ELAP #2000


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 Project Manager

