DECEMBER, 1998
GROUND WATER SAMPLING REPORT
FOR
STID 553 - GRIMIT AUTO AND REPAIR
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

January 16, 1999

Prepared by

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99 JAN 20 PM 4:07

TRANSMITTAL

TO Alameda County Health – Haz. Mat. Division, 1131 Harbor Bay Parkway #250, Alameda CA 94502-6577 **DATE** 1/18/99

ATTENTION Eva Chu **VIA** US Mail

FAX NO.

PROJECT 1970 Jennings, Oakland **JOB NO.** E-10-1C-261C

DESCRIPTION Jan. 16, 1999 report – ground water sampling

Number of pages, including cover page, if FAX

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BY David F. Hoexter

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Geology / Engineering Geology / Environmental Studies

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January 16, 1999

E-10-1C-261C
HCQuartEnvtRpts:Sem.1970/10(12/98)

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

RE: **DECEMBER, 1998**
GROUND WATER SAMPLING REPORT
STID 553 - GRIMIT AUTO AND REPAIR
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

Dear Mr. Grimit:

Enclosed is our December, 1998 ground water sampling report for the property located at 1970 Seminary Avenue, corner of Harmon, in Oakland, California. This sampling round is the sixteenth performed by Hoexter Consulting and others at the site, dating from August, 1990. This sampling event is the first to be conducted following ASTM RBCA Tier Two evaluation of the site. The results of previous sampling events are included in the analytical results summary tables.

The results of this investigation indicate that the water samples from the nine on-site wells continue to range from relatively low to elevated levels of total petroleum hydrocarbons as gasoline (TPH-G); purgeable aromatic compounds (BTEX) and MTBE; oil (total recoverable petroleum hydrocarbons, TRPH); and halogenated volatile compounds (HVOC). The analyses indicate that all analyzed compounds remain at levels of the same order-of-magnitude as previous results.

Ground water levels rose appreciably from the previous October, 1997 sampling event. Ground water gradient directions, which differ between the "shallow" and "deep" wells, were similar to previous sampling events.

We recommend that copies of the enclosed report be submitted to the Alameda County Health Care Services Agency. The next round of sampling is currently scheduled to be conducted during March, 1999. Please note that in the body of this report, we recommend that consideration be made for conditional site closure, requiring biannual ground water sampling to verify that conditions improve or remain essentially unchanged.

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 Geologist

Copies: Addressee (2)
Alameda County Health Care Services Agency (1)
Attention: Eva Chu, Hazardous Materials Specialist

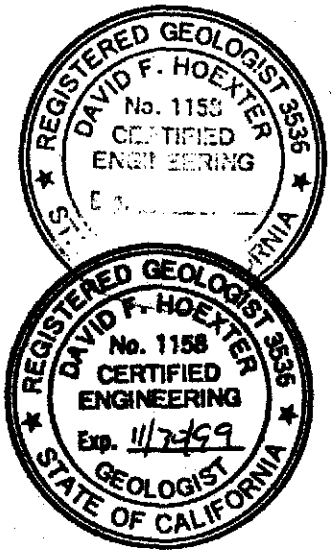
DECEMBER, 1998
GROUND WATER SAMPLING REPORT

For

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

To

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



January 16, 1999

David F. Hoexter, RG/CEG/REA
Principal Geologist

TABLE OF CONTENTS

DECEMBER, 1998
GROUND WATER SAMPLING REPORT
FOR
STID 553 - GRIMIT AUTO AND REPAIR
1970 SEMINARY
OAKLAND, CALIFORNIA

1.0 INTRODUCTION

This report presents the results of the December, 1998 ground water sampling at 1970 Seminary, Oakland, California. The project location is shown on the Location Map, Figure 1. The scope of services provided during this investigation consisted primarily of collecting and analyzing ground water samples from nine on-site monitoring wells. Ground water samples were analyzed for petroleum hydrocarbons and halogenated volatile organic compounds. Well locations are shown on Figure 2, Site Plan.

2.0 FIELD INVESTIGATION

The ground water monitoring wells were sampled December 12, 1998 by representatives of Hoexter Consulting, Inc. Due to past, very slow equilibration of ground water levels, the well caps were loosened on December 10, 1998, two days prior to the planned purging and sampling. The wells were then secured with the caps sufficiently loose to allow venting, and left to equilibrate over the following approximately 48 hours. Following water level measurements on December 12, 1998, the wells were purged and then sampled the same day.

As noted, the well caps were loosened two days prior to the water level measurement, to allow the water level in the wells to equilibrate. Following ground water level measurement (Table 1) at the time of purging, 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 polyethylene bailer was employed for each well. Ground water parameters, including temperature, pH and specific conductivity, were measured prior to and following each purge volume removal.

The samples were collected using the 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 "Alconox" 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 A.

Prior to purging, and following a period of two days for the wells to stabilize, ground water levels were measured in each well using the top of 2-inch PVC casing (north side) as reference point. The ground water elevation increased notably from the prior (October, 1997) sampling event: the four "shallow" wells rose an average of 2.65 feet, and the five "deeper" wells averaged an elevation increase of 5.09 feet.

Well-top elevations, depth to water, and calculated water-surface elevations are presented in Table 1. These data have been used to generate the Ground Water Contour and Gradient Direction Maps, Figures 3A ("shallow wells") and 3B("deep wells").

The ground water gradient direction and inclination are essentially consistent with the previous data. The data for the four "shallow" wells appear to indicate a gradient direction towards Seminary Avenue. The apparent gradient varies across the site, but averages 0.32 foot per foot in the source area. The approximate gradient direction is North 33° West. The data for the five "deeper" wells indicate a gradient direction away from Seminary towards the southeast. The apparent gradient varies across the site, but averages 0.05 foot per foot. The approximate gradient direction is South 47° East.

The data appear to indicate a downward gradient from a relatively shallow (perched ?) zone represented by the four "shallow" wells, to the deeper zone represented by the five "deeper" wells, particularly in the source area. Based on the slow equilibration and recovery time following purging, we infer a relatively slow ground water flow rate, despite the unusually steep gradient.

3.0 ANALYTICAL RESULTS

3.1 Laboratory Procedures

The ground water samples were analyzed by McCampbell Analytical, Inc. of Pacheco, California. McCampbell Analytical is certified by the State of California EPA/DTSC for the conducted analyses. The samples were analyzed as follows:

- Total petroleum hydrocarbons as gasoline (TPH-G) using EPA Method 5030/8015.
- Purgeable aromatic compounds (BTEX) and MTBE using EPA Method 8020.
- Oil and grease (total recoverable petroleum, TRPH) using SM 5520B/F, gravimetric with cleanup.
- Halogenated volatile organic compounds (HVOC) by EPA Method 8010.

3.2 Observations and Analytical Results

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 shortly after purging began, in well MW-4. The purge water from well MW-1 contained globules of "oil", which were observed in earlier sampling rounds.

The results of the chemical analyses are presented on Tables 2, 3 and 4, and are attached to this report as a part of Appendix A. Analytical results of all previous testing are also included. The current analytical results indicate that TRPH, TPH-G, and BTEX compounds, as well as HVOCs, are present at elevated levels which are generally on the same order of magnitude as the most recent, previous analyses.

TPH-G was present in MW-1 at 39,000 ug/l (equivalent to parts per billion, ppb). This represents a decrease from previous sampling events, although a similar order of magnitude. MTBE was not detected at an elevated detection limit of 1500 ppb; the BTEX compounds in MW-1 were of similar order of magnitude, excepting toluene. Toluene decreased from 3,600 to 100 ppb; the reason for this decline is not clear. TRPH also declined notably.

TPH-G, MTBE and BTEX levels variably rose and declined in the other eight wells. Detected levels in wells MW-2 through 9, as during previous sampling events, are generally one to two orders of magnitude less than in MW-1. TRPH was detected only in

well MW-1. Various HVOCs were detected in each well. See Table 3 for the presence and concentrations of particular HVOCs.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Tier Two evaluation of the site, as discussed in the Hoexter Consulting September 3, 1998 addendum letter, resulted in the conclusion that contaminant levels at the site are less than the respective Tier Two SSTLs. Contaminant levels and ground water gradient conditions, although variable, are essentially the same as previous sampling events. We therefore recommend that regulatory agencies consider granting conditional site closure, requiring biannual ground water sampling to verify that conditions improve or remain essentially unchanged.

5.0 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. It should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during an investigation of this type. If you wish to reduce the level of uncertainty associated with this study, we should be contacted for additional consultation.

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)

Well Number and Date of Measurement	Reference Elevation (2)	Depth to Water	Relative Ground Water Elevation (2)
MW-1 ("deep")			
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 (3)
2/28/94		13.85 (4)	23.15 (4)
9/9/94		20.19	16.81
12/28/94		14.91	22.09
4/13/95		14.18	22.82
11/1/95		20.90	16.10
3/8/96		11.82	25.18
3/25-26/96	36.97	13.54	23.43
10/7/96		21.41	15.59
1/15/97		13.34	23.63
6/23/97	36.99	19.91	17.08
10/6/97		21.55	15.44
12/12/98		16.24	20.75
MW-2 ("deep")			
2/11/94	36.40	14.16 (3)	22.24 (3)
2/28/94		16.01 (4)	20.39 (4)
9/9/94		18.96	17.44
12/28/94		21.42	14.98
4/13/95		19.69	16.71
11/1/95		21.91	14.49
3/8/96		14.56 (6)	21.84 (6)
3/25-26/96	36.39	10.84	25.55
10/7/96		18.41	17.98
1/15/97		10.07	26.32
6/23/97	36.40	13.73	22.67
10/6/97		17.03	19.37
12/12/98		11.39	25.01
MW-3 ("shallow")			
2/11/94	36.94	6.97 (3)	29.97 (3)
2/28/94		7.74 (4)	29.20 (4)
9/9/94		9.68	27.26
12/28/94		8.15	28.79
4/13/95		8.05	28.89
11/1/95		7.82	29.12
3/8/96		5.69	31.25
3/25-26/96	36.94	6.91	30.03

Table 1 continued

Well Number and Date of Measurement	Reference Elevation (2)	Depth to Water	Relative Ground Water Elevation (2)
MW-3 (cont')			
6/23/97	36.94	9.65	27.29
10/6/97		10.53	26.41
12/12/98		7.12	29.82
MW-4 ("deep")			
3/25-26/96	36.46	14.14	22.32
10/7/96		22.31	14.15
1/15/97		13.78	22.68
6/23/97	36.47	20.90	15.57
10/6/97		22.77	13.60
12/12/98		17.16	19.31
MW-5 ("deep")			
3/25-26/96	36.77	15.63	21.14
10/7/96		22.86	13.91
1/15/97		17.33	19.44
6/23/97	36.77	21.91	14.86
10/6/97		24.26	12.51
12/12/98		20.66	16.11
MW-6 ("shallow")			
3/25-26/96	36.42	8.52	27.90
10/7/96		12.82	23.60
1/15/97		7.72	28.70
6/23/97	36.42	11.42	25.00
10/6/97		12.67	23.75
12/12/98		9.15	27.27
MW-7 ("deep")			
6/23/97	36.83	19.93	16.90
10/6/97		21.43	15.40
12/12/98		16.56	20.27
MW-8 ("shallow")			
6/23/97	36.55	5.74	30.81
10/6/97		5.69	30.86
12/12/98		4.01	32.54
MW-9 ("shallow")			
6/23/97	36.70	17.04	19.66
10/6/97		19.17	20.53
12/12/98		14.18	22.52

Notes on following page

Notes to Table 1

(1) N/A = not applicable.
(2) Elevations from a survey conducted by Andreas Deak, California Licensed Land Surveyor, March 21, 1996, 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 appear to be stabilized readings.
(5) Surveyed elevations of wells MW 1 and MW-2 varied to 0.02 foot on March 21, 1996 survey as compared to February 11, 1994 survey; previously calculated measurements of elevation have **not** been modified to reflect the new survey data. Similar slight survey differences on June 20, 1997 have not been corrected.
(6) Well not stabilized (water level rising).

TABLE 2

GROUND WATER

SUMMARY OF ANALYTICAL TEST RESULTS - PETROLEUM HYDROCARBONS

(Results reported in parts per ***billion***, ppb/ug/l) (1)

Well and Date	TPH Gasoline	MTBE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Oil & Grease HVOC (7)
MW-1 ("deep")							
8/6/90 (2)	54,000	NA	3,500	3,200	1,900	9,400	7,600
1/28/92	2,000,000	NA	7,400	17,000	28,000	120,000	7,500 (5)
4/27/92 (3)	500,000	NA	3,400	6,400	10,000	45,000	440,000 (6)
4/27/92 (4)	175,000	NA	4,200	4,400	3,200	14,600	N/A
8/10/92	170,000	NA	4,200	4,200	3,300	15,900	120,000 (6)
2/11/94	1,800,000	NA	ND	5,100	5,200	23,900	16,000 (6)
9/9/94	23,000,000	NA	56,000	61,000	9,100	137,000	880,000 (6)
12/28/94	55,000	NA	3,700	5,300	1,400	5,800	83,000 (6)
4/13/95	45,000	NA	2,800	3,400	1,200	5,100	50,000 (5)
11/1/95	44,000	NA	2,600	3,400	1,400	5,900	52,000 (5)
3/25/96	45,000	NA	3,000	4,100	1,600	6,800	46,000 (5) (7)
10/8/96	55,000	490	3,300	4,500	1,700	7,100	11,000 (5) (7)
1/16/97	48,000	310	2,600	3,200	1,300	5,300	110,000 (5) (7)
6/23/97	40,000	ND<100	2,300	3,500	1,500	6,300	190,000 (5) (7)
10/7/97	45,000	ND<680	2,500	3,600	1,700	6,800	150,000 (5) (7)
12/12/98	39,000	ND<1500	3,000	100	1,400	5,800	67,000 (5) (7)
MW-2 ("deep")							
2/11/94	130	NA	22	1.1	5.2	7.3	ND (6)
9/9/94	1,000	NA	89	ND	ND	6.9	ND (6)
12/28/94	330	NA	100	3.8	5.4	4.7	5100 (6)
4/13/95	1,300	NA	280	6.9	33	23	ND (5)
11/1/95	100	NA	9.9	ND	ND	ND	ND (5)
3/25/96	4,500	NA	470	57	220	280	ND (5) (7)
10/8/96	710	41	1.9	0.54	1.0	1.0	ND (5) (7)
1/16/97	330	12	41	2.4	1.3	9.9	ND (5) (7)
6/23/97	280	10	12	0.69	ND	13	NA (7)
10/7/97	320	ND<35	4.5	ND	ND	ND	NA (7)
12/12/98	290	ND<11	21	0.76	10	19	ND (5) (7)
MW-3 ("shallow")							
2/11/94	ND	NA	ND	ND	ND	ND	ND (6)
9/9/94	710	NA	10	ND	ND	3.5	ND (6)
12/28/94	2,300	NA	7.8	ND	130	73	ND (6)
4/13/95	1,700	NA	2.9	ND	61	24	ND (5)
11/1/95	1,100	NA	4.4	ND	27	22	ND (5)
3/25/96	2,300	NA	4.0	0.96	120	65	ND (5) (7)
10/8/96	160	ND	ND	0.5	1.2	0.77	ND (5) (7)
1/16/97	1,800	7.1	2.8	0.68	48	66	ND (5) (7)

Table continued following page

Table 2 continued

Well and Date	TPH Gasoline	MTBE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Oil & Grease HVOC (7)
MW-3 ("shallow") **(continued)**							
6/23/97	ND	ND	ND	ND	ND	ND	NA (7)
10/7/97	ND	ND	ND	ND	ND	ND	NA (7)
12/12/98	1,900	ND	1.8	0.78	78	42	ND (5) (7)
MW-4 ("deep")							
3/26/96	9,900	NA	4,000	40	71	100	ND (5) (7)
10/8/96	7,800	140	3,900	33	31	40	ND (5) (7)
1/16/97	4,800	84	1,900	21	2.5	27	5,200 (5) (7)
6/23/97	6,200	160	2,800	20	20	23	ND (5) (7)
10/7/97	4,400	85	1,800	14	18	14	ND (5) (7)
12/12/98	3,500	110	1,500	13	39	14	ND (5) (7)
MW-5 ("deep")							
3/26/96	1,200	NA	43	8.2	83	95	ND (5) (7)
10/8/96	6,700	190	260	92	410	370	ND (5) (7)
1/16/97	3,000	90	150	68	190	180	ND (5) (7)
6/23/97	12,000	150	410	170	920	800	NA (7)
10/7/97	10,000	ND<480	310	62	530	500	NA (7)
12/12/98	11,000	ND<660	400	120	740	480	ND (5) (7)
MW-6 ("shallow")							
3/26/96	9,900	NA	1,000	150	470	720	ND (5) (7)
10/8/96	1,300	57	120	2.3	1.4	4.0	ND (5) (7)
1/15/97	6,500	220	570	65	170	630	ND (5) (7)
6/23/97	3,100	100	410	16	110	140	NA (7)
10/7/97	960	ND<74	78	3.4	1.8	5.8	NA (7)
12/12/98	2,500	ND<160	230	10	92	110	ND (5) (7)
MW-7 (deep")							
6/23/97	8,700	ND<20	950	260	520	380	ND (5) (7)
10/7/97	7,500	ND<310	1100	86	280	150	ND (5) (7)
12/12/98	5,000	ND<190	640	43	200	55	ND (5) (7)
MW-8 ("shallow")							
6/23/97	610	5.9	25	1.4	4.3	2.4	ND (5) (7)
10/7/97	120	ND	6.9	ND	ND	ND	ND (5) (7)
12/12/98	ND	ND	ND	ND	ND	ND	ND (5) (7)

Table continued following page

Table 2 continued

Well and Date	TPH Gasoline	MTBE	Benzene	Toluene	Ethyl-Benzene	Xylenes	Oil & Grease HVOC (7)
MW-9 ("shallow")							
6/23/97	32,000	250	340	280	1,500	4,300	ND (5) (7)
10/7/97	33,000	ND<690	880	350	1900	4,700	ND (5) (7)
12/12/98	3,400	ND<78	160	14	220	210	ND (5) (7)
EB-4 ("grab" gw sample)							
3/8/96	15,000	NA	780	840	1,300	590	7,500 (5) (7)
MCL	NA	NA	1	150	700	1,750	NA

Notes to Table 2

(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
(7) **HVOC detected**: see Table 3

TABLE 3

GROUND WATER

SUMMARY OF ANALYTICAL TEST RESULTS - HALOGENATED VOLATILE ORGANIC COMPOUNDS (HVOC)

(Results reported in parts per **billion**, ppb/ug/l) (1) (2)

Well and Date	CA	1,2 DCB	1,2 DCA	cis 1,2 DCE	trns 1,2 DCE	1,2 DCP	PCE	TCE	VCL
MW-1 ("deep")									
3/25/96	ND<5	7.2	5.3	82	ND<5	ND<5	ND<5	7.8	25
10/8/96	ND<20	ND<20	ND<20	45	ND<20	ND<20	ND<20	ND<20	26
1/16/97	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/97	ND<2	10	4.1	130	3.7	ND<2	5.0	23	54
10/7/97	3.5	7.4	2.2	82	3.8	ND<2	ND<3	9.5	68
12/12/98	ND<2.5	7.4	ND<2.5	26	ND<2.5	ND<2.5	ND<2.7	ND<2.5	7.3
MW-2 ("deep")									
3/25/96	ND<0.5	ND<0.5	8.7	11	ND<0.5	1.0	ND<0.5	3.2	0.92
10/8/96	ND<0.5	ND<0.5	15	9.6	ND<0.5	1.1	ND<0.5	6.6	ND<0.5
1/16/97	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/97	ND<0.5	ND<0.5	9.7	8.0	ND<0.5	0.86	ND<0.5	9.6	ND<0.5
10/7/97	ND<0.5	ND<0.5	18	11	ND<0.5	1.2	ND<0.5	15	ND<0.5
12/12/98	ND<0.5	ND<0.5	16	9.4	ND<0.5	1.1	ND<1	7.5	ND<0.5
MW-3 ("shallow")									
3/25/96	ND<0.5	ND<0.5	0.56	1.2	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
10/8/96	ND<0.5	ND<0.5	1.1	0.87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1/16/97	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/97	ND<0.5	ND<0.5	0.54	0.76	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
10/7/97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
12/12/98	ND<0.5	ND<0.5	0.51	0.82	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5
MW-4 ("deep")									
3/26/96	ND<8	22	ND<8	300	9.2	ND<8	38	150	44
10/8/96	ND<15	22	4.9	320	ND<15	ND<15	52	130	60
1/16/97	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/97 (5)	3.6	21	5.3	340	10	ND<3	11	110	83
10/7/97	ND<8	20	ND<8	380	9.9	ND<8	ND<12	56	56
12/12/98 (7)	ND<3.5	18	ND<3.5	150	12	ND<8	ND<4.5	12	57
MW-5 ("deep")									
3/26/96	1.4	ND<0.5	2.1	6.2	ND<0.5	ND<0.5	ND<0.5	ND<0.5	10
10/8/96	ND<2.5	ND<2.5	4.9	4.4	ND<2.5	ND<2.5	ND<2.5	ND<2.5	9.4
1/16/97	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/97 (5)	2.0	2.1	2.0	7.2	0.71	ND<0.5	ND<0.5	ND<0.5	13
10/7/97	1.9	1.4	2.8	3.4	ND<0.5	ND<0.5	ND<0.5	ND<0.5	10

Continued following page

Table 3 continued

Well and Date	CA	1,2 DCB	1,2 DCA	cis 1,2 DCE	trns 1,2 DCE	1,2 DCP	PCE	TCE	VCL
MW-5 ("deep") **continued**									
12/12/98	1.4	2.0	1.1	3.7	ND<1.0	ND<1.0	ND<1.5	ND<1.0	5.8
MW-6 ("shallow")									
3/26/96	ND<0.5	ND<0.5	3.9	15	ND<0.5	1.9	0.77	2	ND<0.5
10/8/96	ND<0.5	ND<0.5	2.3	9.9	ND<0.5	ND<0.5	ND<0.5	0.57	ND<0.5
1/16/97	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/23/97	ND<0.5	ND<0.5	1.6	10	ND<0.5	ND<0.5	ND<0.5	0.63	0.50
10/7/97	ND<0.5	ND<0.5	3.4	7.9	ND<0.5	ND<0.5	ND<0.5	0.82	ND<0.5
12/12/98 (7)	ND<0.5	ND<0.5	1.5	8.4	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5
MW-7 ("deep")									
6/23/97	0.93	1.6	ND<0.5	2.4	1.2	ND<0.5	9.8	17	1.5
10/7/97	ND<2	ND<2	ND<2	8.5	2.4	ND<2	38	110	ND<2
12/12/98	ND<2	2.2	ND<2	97	ND<2.0	ND<2	ND<3.5	ND<2	ND<2
MW-8 ("shallow")									
6/23/97	ND<1	5.4	ND<1	64	ND<1	ND<1	97	100	ND<1
10/7/97	ND<0.5	1.1	ND<0.5	16	ND<0.5	ND<0.5	30	27	ND<0.5
12/12/98	ND<0.5	ND<0.5	ND<0.5	3.4	ND<0.5	ND<0.5	4.8	4.7	ND<0.5
MW-9 (shallow")									
6/23/97 (5)	ND<1	2.1	ND<1	7.4	ND<1	ND<1	3.5	1.4	ND<1
10/7/97 (6)	ND<0.5	1.6	2.1	21	ND<0.5	0.7	ND<2	0.53	2.7
12/12/98	ND<0.5	0.7	0.53	1.9	ND<0.5	ND<0.5	ND<1.0	ND<0.5	ND<0.5
EB-4 (grab)									
3/8/96	ND	ND	ND	42	ND	ND	130	340	ND
MCL	NA	600	0.5	6	10	5	7	5	0.5

Notes on following page

Notes to Table 3

(1) ND = non-detect; reporting limit 0.5 ug/l (ppb) unless otherwise stated
(2) NA = not applicable
(3) Composite
(4) Abbreviations as follows:

CA	Chloroethane	1,2 DCP	1,2 Dichloropropane
1,2 DCB	1,2 Dichlorobenzene	PCE	Tetrachloroethene (perchloroeth
1,2 DCA	1,2 Dichloroethane	TCE	trichloroethene
cis 1,2 DCE	cis 1,2 Dichloroethene	VCL	vinyl chloride
trans 1,2 DCE	trans 1,2 Dichloroethene		

(5) 6/23/97 additional detections:
MW-4, 4.8 ppb 1,4-Dichlorobenzene
MW-5, 0.53 ppb 1,4-Dichlorobenzene
MW-9 2.1 ppb chloroform (tetrachloromethane)
(6)10/7/97 additional detections:
MW-9, 0.65 chloroform (tetrachloromethane)
(7) 12/12/98 additional detections:
MW-4, 6.2 ppb 1,3-Dichlorobenzene
MW-4, 4.8 ppb 1,4-Dichlorobenzene
MW-6, 8.9 ppb 1,1,1-Trichloroethane

TABLE 4

GROUND WATER

SUMMARY OF ANALYTICAL TEST RESULTS - POLYNUCLEAR AROMATIC HYDROCARBONS (PNA, PAH)

(Results reported in parts per billion, ppb/ug/l) (1) (2) (3)

Well and Date	Phenanthrene	Naphthalene
MW-1 ("deep")		
6/23/97	12	2200
10/7/97	ND<100	810
12/12/98	NA	NA
MCL	NA	NA

Notes to Table 4

(1) ND = non-detect
(2) NA = not applicable
(3) Detected compounds only

TABLE 5

GROUND WATER

SUMMARY OF ANALYTICAL TEST RESULTS - ADDITIONAL CHEMICAL PARAMETERS

(Results reported in parts per ***million***, mg/l) (1)

Well and Date	Dissolved Oxygen	Ferrous Iron	Nitrate	Sulfate
MW-1 ("deep")				
10/8/96	1.5	ND	ND	ND
1/16/97	1.4	3.6	ND	ND
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA
MW-2 ("deep")				
10/8/96	3.7	ND	3	25
1/16/97	5.4	0.28	3	25
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA
MW-3 ("shallow")				
10/8/96	3.8	ND	ND	5
1/16/97	5.2	ND	ND	5
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA
MW-4 ("deep")				
10/8/96	3.0	ND	ND	ND
1/16/97	4.7	0.75	ND	5
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA
MW-5 ("deep")				
10/8/96	2.8	ND	ND	8
1/16/97	3.4	0.38	ND	9
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA
MW-6 ("shallow")				
10/8/96	2.7	ND	ND	6
1/16/97	2.7	0.28	ND	8
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA

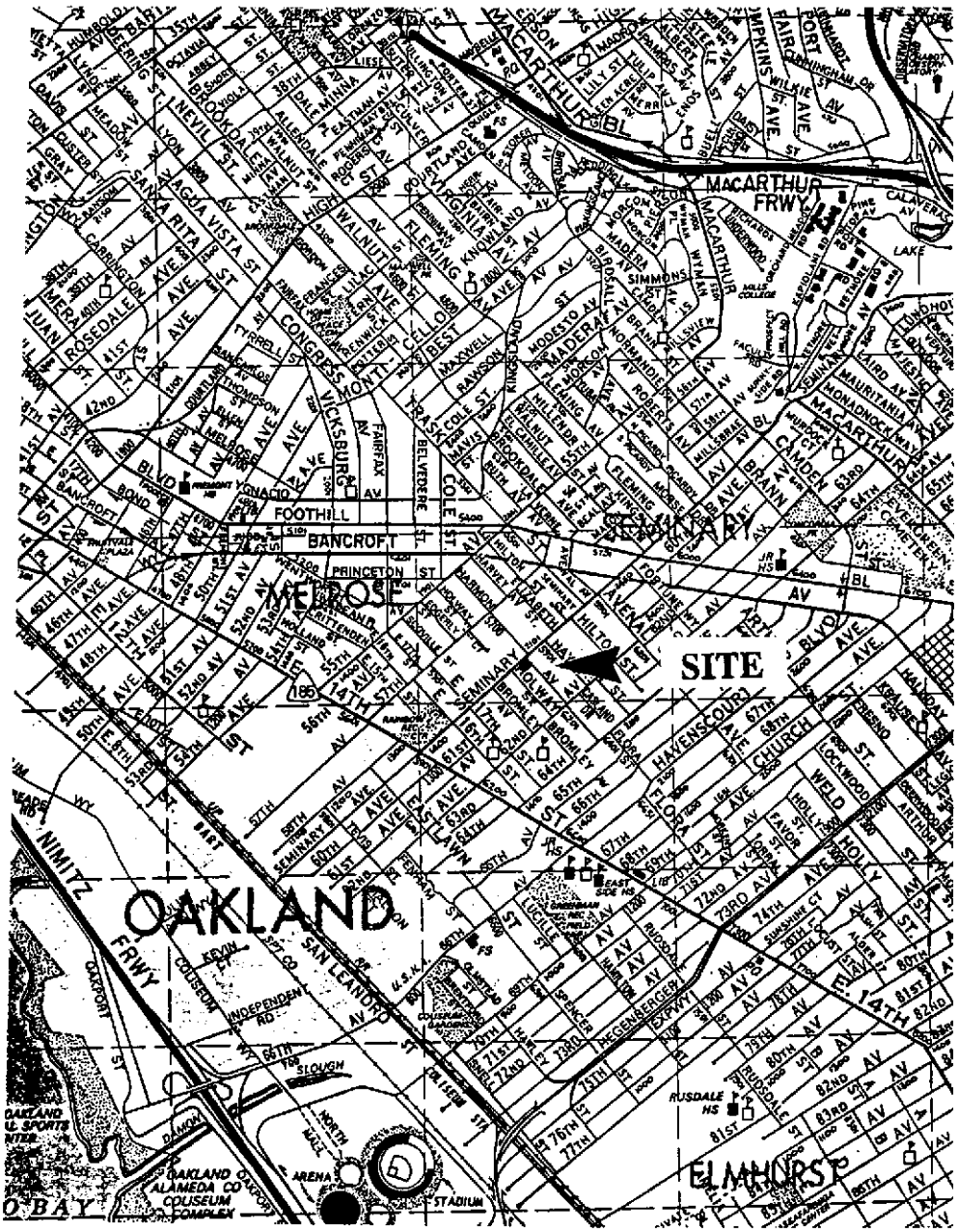
Continued following page

Table 5 continued

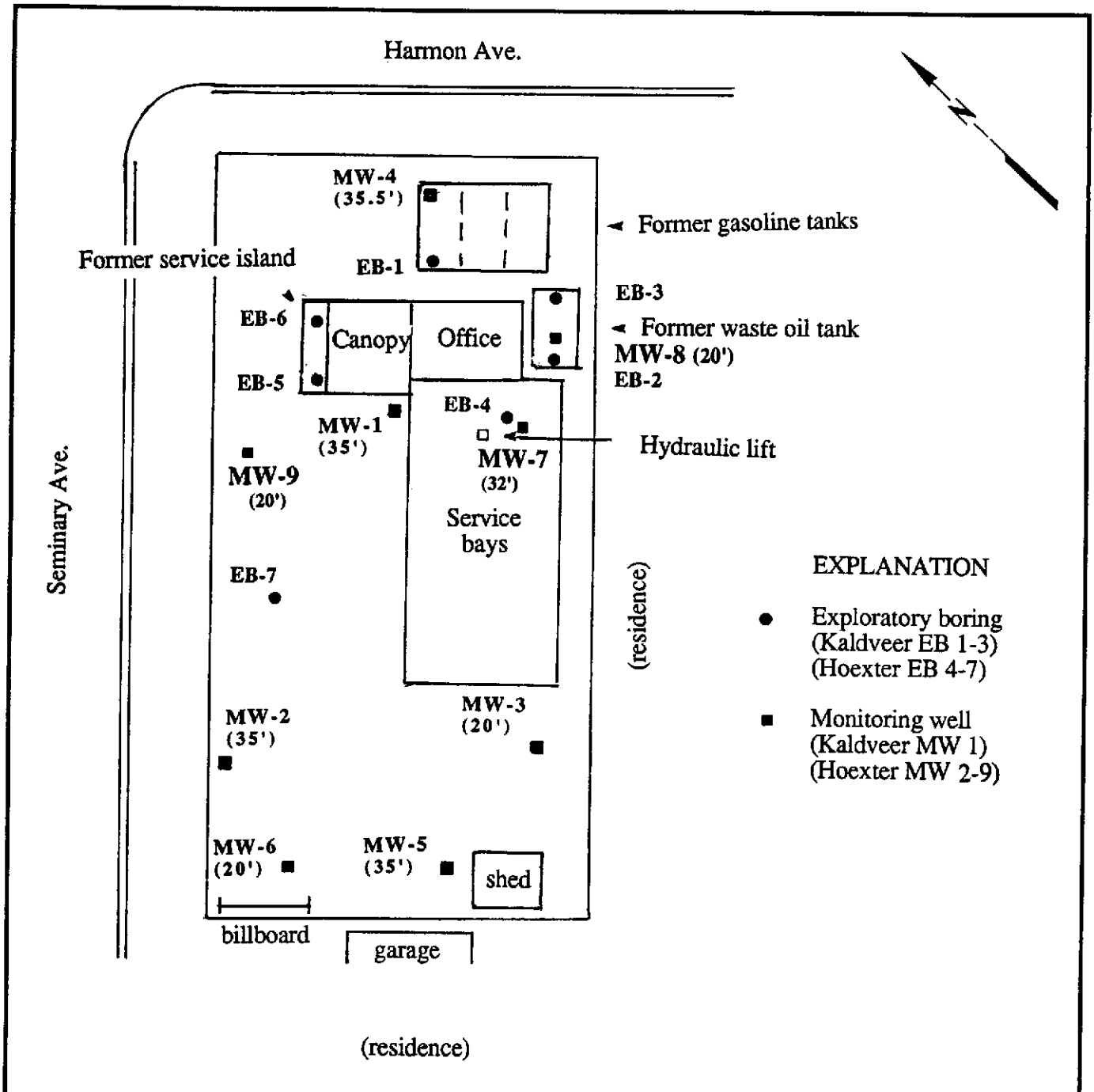
Well and Date	Dissolved Oxygen	Ferrous Iron	Nitrate	Sulfate
MW-7 ("deep")				
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA
MW-8 ("shallow")				
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA
MW-9 ("shallow")				
6/23/97	NA	NA	NA	NA
10/7/97	NA	NA	NA	NA
12/12/98	NA	NA	NA	NA

Notes to Table 5

(1) ND = non-detect
(2) NA = not applicable



HOEXTER CONSULTING Geology Engineering Geology Environmental Studies	LOCATION MAP	
	1970 Seminary Ave. Oakland, California	
	Project No.	**Date**
	E-10-1C-261C	January, 1999
		Figure 1



Base: A. Deak, Licensed Land Surveyor, 3/21/96 (wells, streets & property line); Hoexter field sketch, 10/25/93 (explor. borings, other features)

20 0 20 40

Approximate Scale in Feet

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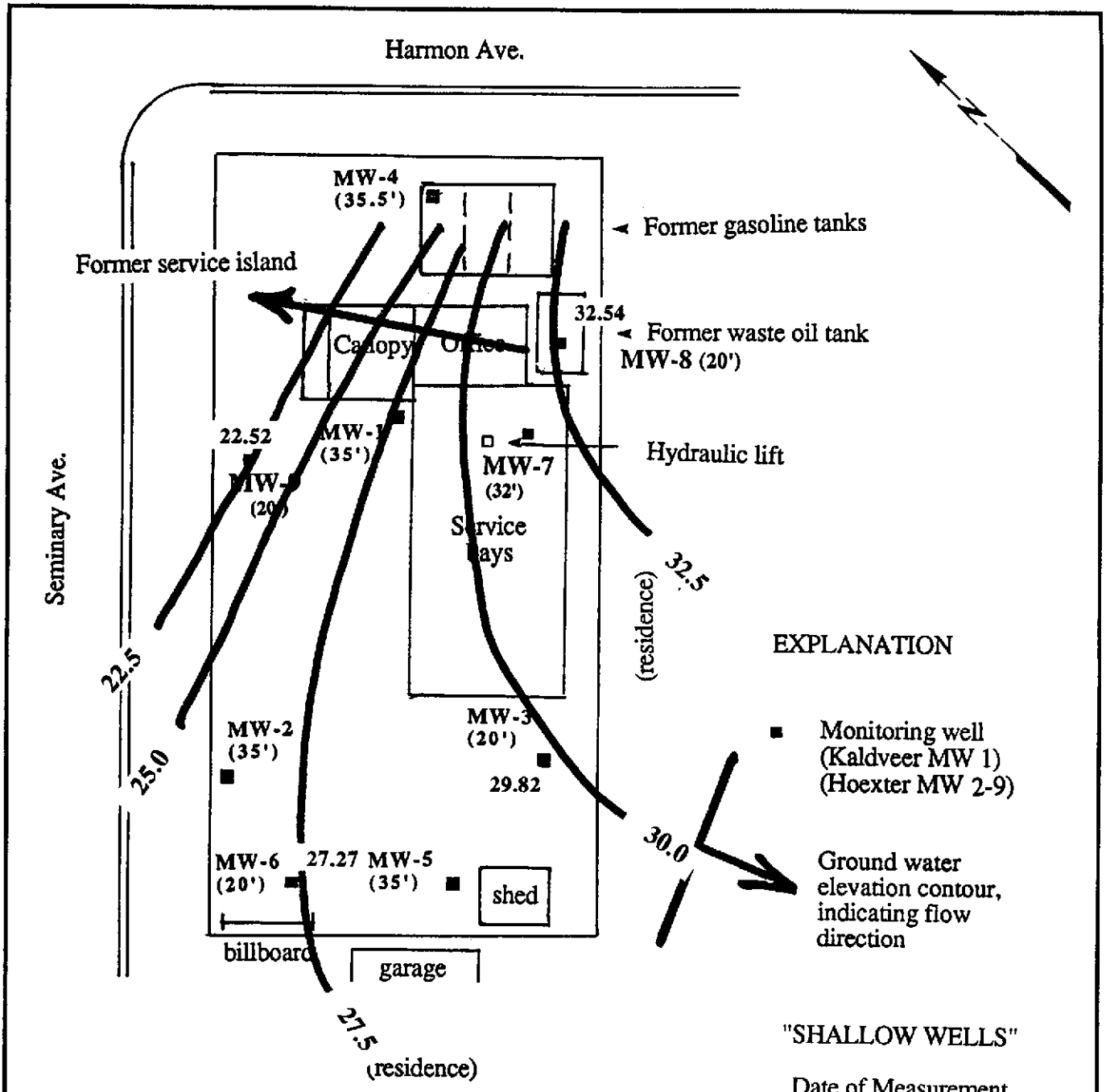
SITE PLAN

1970 Seminary Ave.
Oakland, California

Project No.	Date	Figure 2
E-10-1C-261C	January, 1999	



Base: A. Deak, Licensed Land Surveyor, 3/21/96 (wells, streets & property line); Hoexter field sketch, 10/25/93 (explor. borings, other features)

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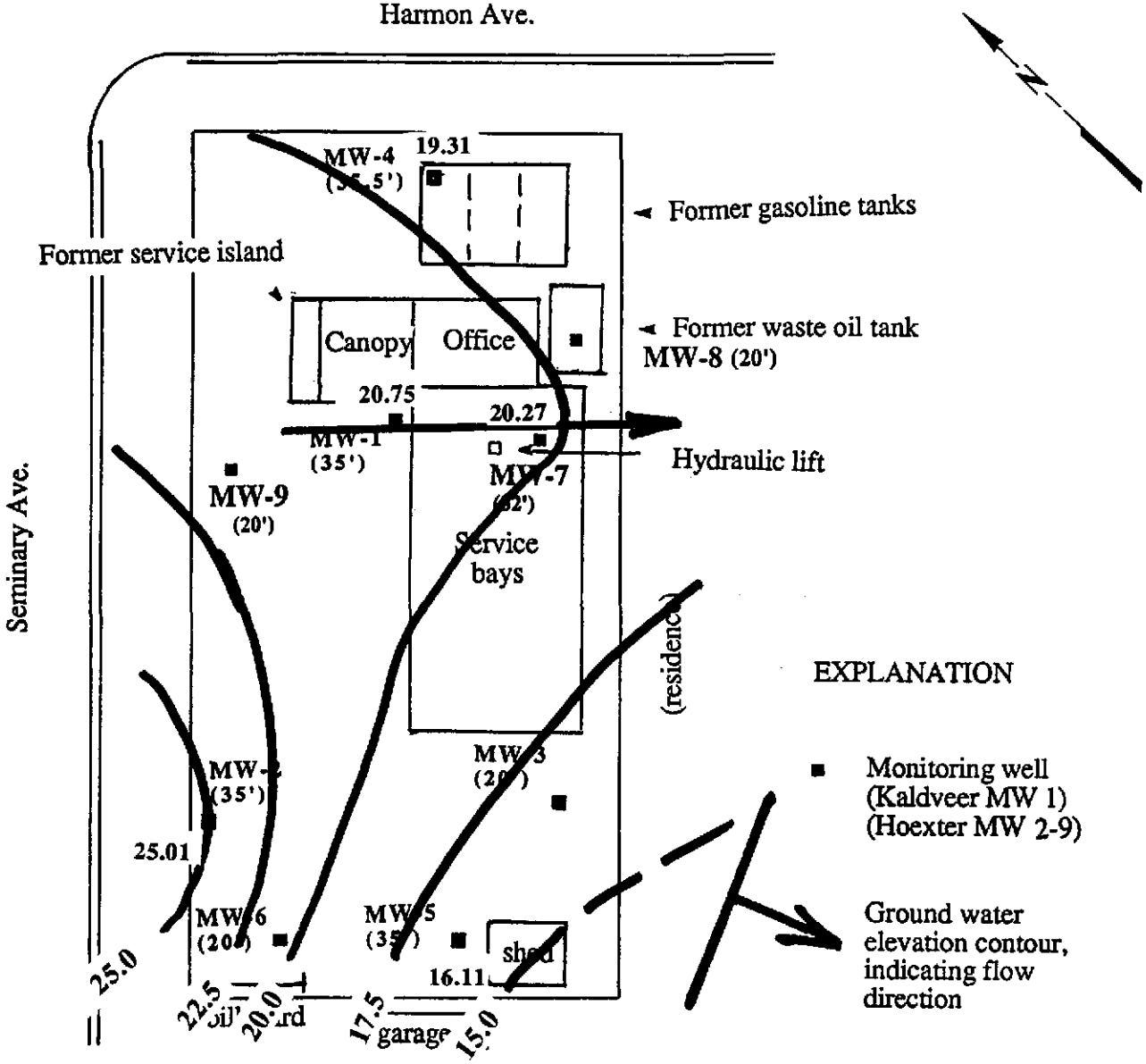
GROUND WATER CONTOUR AND GRADIENT DIRECTION MAP

1970 Seminary Ave.
Oakland, California

Project No.	Date	
E-10-1C-261C	January, 1999	Figure 3A



Base: A. Deak, Licensed Land Surveyor, 3/21/96 (wells, streets & property line); Hoexter field sketch, 10/25/93 (explor. borings, other features)

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GROUND WATER CONTOUR AND GRADIENT DIRECTION MAP

1970 Seminary Ave.
Oakland, California

Project No.	Date	Figure
E-10-1C-261C	January, 1999	3B

APPENDIX A

WATER SAMPLE LOG
CHAIN OF CUSTODY
ANALYTICAL TEST RESULTS

HOEXTER CONSULTING

E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No.: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsythe
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00093
Date: 12/12/98
Sample Location/I.D.: MW-1
Start Time: ____

Depth of Well (feet): 35
Depth to Water (feet): 16.24
Sample Depth (feet): ____

Calculated Purged Volume: 12.24 gal.
Actual Purged Volume 12.5

3.06 gal / vol

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
1244	3	3	6.44	1036	60.6	cloudy	
1253	6	3	6.47	1061	61.3		
1308	9	3	6.49	1055	61.6		
1324	12	3.5	6.55	1013	62.0		

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK
Remarks: Moderate sheen + odor initial bailer extraction. Floating oil "globules" from second purge volume. Sampled 13:50

Signature: Dennis F. Hoexter

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	Mulitply
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

MW-1

HOEXTER CONSULTING

E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No.: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsythe
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00094
Date: 12/12/98
Sample Location/I.D.: MW-2
Start Time: ____

Depth of Well (feet): 35
Depth to Water (feet): 11.39
Sample Depth (feet): ____

Calculated Purged Volume: 15.6 gal
Actual Purged Volume 16
3.9 gal / vol

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
1111	4	4	6.38	1049	63.0	clear	
1125	8	4	6.42	960	63.6		
1137	12	4	6.40	940	61.0		
1148	16	4	6.41	971	61.8		

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK
Remarks: No odor product or sheen on initial bailer extraction. Sampled 1410

Signature: Dennis F. Hoexter

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	Mulitply
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

MW-2

HOEXTER CONSULTING

E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsythe
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00095
Date: 12/12/98
Sample Location/I.D.: MW-3
Start Time: ____

Depth of Well (feet): 20
Depth to Water (feet): 7.12
Sample Depth (feet): ____

Calculated Purged Volume: 8.4 gal.
Actual Purged Volume 8.5
2.1 gal / vol.

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
1015	2.5	2.5	6.26	688	59.0	clear	
1020	4.5	2	6.33	690	61.7		
1027	6.5	2	6.32	694	61.2	V. light brown -	
1033	8.5	2	6.36	691	61.0		

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK -
Remarks: NO product, sheen or odor initial bailer extraction. Sampled 1420

Signature: Dennis F. Hoexter

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	Mulitply
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

MW-3

HOEXTER CONSULTING

E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No.: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsyth
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00096
Date: 12/12/98
Sample Location/I.D.: MW-4
Start Time: ____

Depth of Well (feet): 35.5
Depth to Water (feet): 17.16
Sample Depth (feet): ____

Calculated Purged Volume: 12 gal -
Actual Purged Volume 12
3.0 gal /vol.

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
1142	3	3	6.44	1096	61.9		
1153	6	3	6.42	1093	60.6	Lt-gray	
1204	9	3	6.40	1113	61.9		
1246	12	3	6.40	1122	62.2		

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK -
Remarks: No product, sheen or odor initial bailer extraction. Sheen on purge water after 2nd vol - Sampled 1435

Signature: D. F. Hoexter

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	Mulitply
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

MW-4

HOEXTER CONSULTING

E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No.: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsythe
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00097
Date: 12/12/98
Sample Location/I.D.: MW-5
Start Time: ____

Depth of Well (feet): 35
Depth to Water (feet): 20.66
Sample Depth (feet): ____

Calculated Purged Volume: 9.36 gal
Actual Purged Volume 10
2.34 gal/vol.

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
1021	2.5	2.5	6.38	921	60.0	Tan	
1030	5	2.5	6.41	995	60.6	Greenish	
1039	7.5	2.5	6.46	1044	60.7	grey	
1047	10	2.5	6.45	1050	60.8	↓	

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK
Remarks: No product, sheen or odor initial bailer extraction, slight subsequent sheen and moderate odor, Sampled 1445

Signature: [signature]

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	Mulitply
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

MW-5

HOEXTER CONSULTING

E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No.: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsyth
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00098
Date: 12/12/98
Sample Location/I.D.: MW-6
Start Time: ____

Depth of Well (feet): 20
Depth to Water (feet): 9.15
Sample Depth (feet): ____

Calculated Purged Volume: 7.085 gal
Actual Purged Volume 8
1.77 gal/vol.

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
1105	2	2	6.36	999	59.5	clear	
1112	4	2	6.39	1036	61.9	↓	
1119	6	2	6.36	1024	61.0	↓	
1127	8	2	6.36	1014	60.7	↓	

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK
Remarks: No product, sheen on initial bailer extraction, slight H2S (?) odor. Sampled 1500.

Signature: [signature]

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	Mulitply
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

MW-6

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E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No.: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsythe
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00099
Date: 12/12/98
Sample Location/I.D.: MW-7
Start Time: ____

Depth of Well (feet): 32
Depth to Water (feet): 16.56
Sample Depth (feet): ____

Calculated Purged Volume: 10.08
Actual Purged Volume 10.5
2.52 gal / vol

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
1310	2.5	2.5	6.41	957	61.9		
1318	5	2.5	6.43	937	62.2	sl. turbid, brown	
1325	7.5	2.5	6.50	917	62.8		
1330	10.5	3.0	6.50	901	62.9		

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK
Remarks: No odor, sheen or product initial bailer extraction. Slight sheen after 1 purge. Sampled 1516

Signature: [signature]

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	Mulitply
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

MW-7

HOEXTER CONSULTING

E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No.: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsythe
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00100
Date: 12/12/98
Sample Location/I.D.: MW-8
Start Time: ____

Depth of Well (feet): 20
Depth to Water (feet): 4.01
Sample Depth (feet): ____

Calculated Purged Volume: 10.44 gal
Actual Purged Volume 10.5
2.61 gal / vol

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
1201	3	3	6.55	541	59.4	Brown/turbid	
1214	6.5	3.5	6.54	566	60.5		
1219	8.5	2.0	6.58	403	59.9		
1228	10.5	2.0	6.56	490	60.4		

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK (PVC pipe + cap); Traffic box and concrete have
Remarks: settled; horizontal work on 2" PVC indicates that well pipe probably has not settled, No product, sheen or odor on initial bailer extraction. Sampled 1530.
Signature: [signature]

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	Mulitply
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

MW-8

HOEXTER CONSULTING

E-10-1C-261C

Groundwater Sampling Field Log

Project Name/ No.: 1970 Seminary, Oakland CA
Client: D. Grimit
Project Manager: D-F. Hoexter
Sampler: Hoexter / Forsyth
Casing Diameter: 2 inch X 3 inch ____ 4 inch ____ 6 inch ____ Other: ____

Lab I.D.: 00101
Date: 12/12/98
Sample Location/I.D.: MW-9
Start Time: ____

Depth of Well (feet): 20
Depth to Water (feet): 14.18
Sample Depth (feet): ____

Calculated Purged Volume: 3.8 gal
Actual Purged Volume 3.0
0.95 gal/vol

Field Measurements

Time	Cum	Volume (gal.)	pH (units)	E.C. (umhos/cm)	Temperature Degrees F	Color (visual)	Other
944	1	1	6.43	1238	63.4		
947	2	1	6.50	1250	63.9	Lgt. brwn	
950	3	1	6.70	1257	64.0		

Purge Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Submersible Pump ____ Cenetrifugal Pump ____ Dipper ____ Other
____ Pneumatic Displacement Pump

Sample Method

____ 2" Bladder Pump ✓ Bailer ____ Well Wizard ✓ Dedicated
____ Surface Sampler ____ Dipper ____ Fultz Pump ____ Other

Well Integrity: OK -
Remarks: No product, sheen or odor initial bailer extraction. Possible slight H_2S (?) odor. Sampled 1540 (did not purge fourth well volume: excessive drawdown)
Signature: D. F. Hoexter

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	Mulitply
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

MW-9

McCAMPBELL ANALYTICAL INC.

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Hoexter Consulting Engineering Geology 734 Torreya Court Palo Alto, CA 94303	Client Project ID: #E-10-1C-261C; 1970 Seminary, Oakland, CA	Date Sampled: 12/12/98
		Date Received: 12/14/98
	Client Contact: David Hoexter	Date Extracted: 12/14/98
	Client P.O:	Date Analyzed: 12/14/98

12/22/98

Dear David:

Enclosed are:

1). the results of **9** samples from your ***#E-10-1C-261C; 1970 Seminary, Oakland, CA*** project,

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

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Hoexter Consulting	Client Project ID: #E-10-1C-261C; 1970 Seminary, Oakland, CA	Date Sampled: 12/12/98
Engineering Geology		Date Received: 12/14/98
734 Torreya Court	Client Contact: David Hoexter	Date Extracted: 12/15-12/16/98
Palo Alto, CA 94303	Client P.O:	Date Analyzed: 12/15-12/16/98

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Recovery Surrogate
00093	MW-1	W	39,000,a,h	ND<1500	3000	100	1400	5700	95
00094	MW-2	W	290,a	ND<11	21	0.76	10	19	100
00095	MW-3	W	1900,b,j	ND	1.8	0.78	78	42	99
00096	MW-4	W	3500,a	110	1500	13	39	14	102
00097	MW-5	W	11,000,a	ND<660	400	120	740	480	96
00098	MW-6	W	2500,a	ND<160	230	10	92	110	97
00099	MW-7	W	5000,a	ND<190	640	43	200	55	101
00100	MW-8	W	ND	ND	ND	ND	ND	ND	103
00101	MW-9	W	3400,a	ND<78	160	14	220	210	95
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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	Client Contact: David Hoexter	Date Extracted: 12/14-12/17/98
	Client P.O:	Date Analyzed: 12/15-12/17/98

Petroleum Oil & Grease (with Silica Gel Clean-up) *

EPA methods 413.1, 9070 or 9071; Standard Methods 5520 D/E&F or 503 D&E for solids and 5520 B&F or 503 A&E for liquids

Lab ID	Client ID	Matrix	Oil & Grease*
00093	MW-1	W	67,h
00094	MW-2	W	ND
00095	MW-3	W	ND
00096	MW-4	W	ND
00097	MW-5	W	ND
00098	MW-6	W	ND
00099	MW-7	W	ND
00100	MW-8	W	ND
00101	MW-9	W	ND
Reporting Limit unless otherwise stated; *ND* means not detected above the reporting limit		W	5 mg/L
		S	50 mg/kg

* water samples are reported in mg/L, wipe samples in mg/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in mg/L

h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5vol. % sediment.

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Engineering Geology		Date Received: 12/14/98
734 Torreya Court	Client Contact: David Hoexter	Date Extracted: 12/15-12/16/98
Palo Alto, CA 94303	Client P.O:	Date Analyzed: 12/15-12/16/98

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	00093	00094	00095	00096
Client ID	MW-1	MW-2	MW-3	MW-4
Matrix	W	W	W	W
Compound	Concentration*			
Bromodichloromethane	ND<2.5	ND	ND	ND<3.5
Bromoform[b]	ND<2.5	ND	ND	ND<3.5
Bromomethane	ND<2.5	ND	ND	ND<3.5
Carbon Tetrachloride[c]	ND<2.5	ND	ND	ND<3.5
Chlorobenzene	ND<2.5	ND	ND	ND<3.5
Chloroethane	ND<2.5	ND	ND	ND<3.5
2-Chloroethyl Vinyl Ether[d]	ND<2.5	ND	ND	ND<3.5
Chloroform[e]	ND<2.5	ND	ND	ND<3.5
Chloromethane	ND<2.5	ND	ND	ND<3.5
Dibromochloromethane	ND<2.5	ND	ND	ND<3.5
1,2-Dichlorobenzene	7.4	ND	ND	18
1,3-Dichlorobenzene	ND<2.5	ND	ND	6.2
1,4-Dichlorobenzene	ND<2.5	ND	ND	4.8
Dichlorodifluoromethane	ND<2.5	ND	ND	ND<3.5
1,1-Dichloroethane	ND<2.5	ND	ND	ND<3.5
1,2-Dichloroethane	ND<2.5	16	0.51	ND<3.5
1,1-Dichloroethene	ND<2.5	ND	ND	ND<3.5
cis 1,2-Dichloroethene	26	9.4	0.82	150
trans 1,2-Dichloroethene	ND<2.5	ND	ND	12
1,2-Dichloropropane	ND<2.5	1.1	ND	ND<3.5
cis 1,3-Dichloropropene	ND<2.5	ND	ND	ND<3.5
trans 1,3-Dichloropropene	ND<2.5	ND	ND	ND<3.5
Methylene Chloride[f]	ND<2.5	ND	ND	ND<4.5
1,1,2,2-Tetrachloroethane	ND<2.5	ND	ND	ND<3.5
Tetrachloroethene	ND<2.7	ND<1.0	ND<1.0	ND<4.5
1,1,1-Trichloroethane	ND<2.5	ND	ND	ND<3.5
1,1,2-Trichloroethane	ND<2.5	ND	ND	ND<3.5
Trichloroethene	ND<2.5	7.5	ND	12
Trichlorofluoromethane	ND<2.5	ND	ND	ND<3.5
Vinyl Chloride[g]	7.3	ND	ND	57
% Recovery Surrogate	110	99	102	103
Comments	j,h			

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe

Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

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Engineering Geology		Date Received: 12/14/98
734 Torreya Court	Client Contact: David Hoexter	Date Extracted: 12/15-12/16/98
Palo Alto, CA 94303	Client P.O:	Date Analyzed: 12/15-12/16/98

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	00097	00098	00099	00100
Client ID	MW-5	MW-6	MW-7	MW-8
Matrix	W	W	W	W
Compound	Concentration*			
Bromodichloromethane	ND<1.0	ND	ND<2.0	ND
Bromoform[b]	ND<1.0	ND	ND<2.0	ND
Bromomethane	ND<1.0	ND	ND<2.0	ND
Carbon Tetrachloride[c]	ND<1.0	ND	ND<2.0	ND
Chlorobenzene	ND<1.0	ND	ND<2.0	ND
Chloroethane	1.4	ND	ND<2.0	ND
2-Chloroethyl Vinyl Ether[d]	ND<1.0	ND	ND<2.0	ND
Chloroform [e]	ND<1.0	ND	ND<2.0	ND
Chloromethane	ND<1.0	ND	ND<2.0	ND
Dibromochloromethane	ND<1.0	ND	ND<2.0	ND
1,2-Dichlorobenzene	2.0	ND	2.2	ND
1,3-Dichlorobenzene	ND<1.0	ND	ND<2.0	ND
1,4-Dichlorobenzene	ND<1.0	ND	ND<2.0	ND
Dichlorodifluoromethane	ND<1.0	ND	ND<2.0	ND
1,1-Dichloroethane	ND<1.0	ND	ND<2.0	ND
1,2-Dichloroethane	1.1	1.5	ND<2.0	ND
1,1-Dichloroethene	ND<1.0	ND	ND<2.0	ND
cis 1,2-Dichloroethene	3.7	8.4	97	3.4
trans 1,2-Dichloroethene	ND<1.0	ND	ND<2.0	ND
1,2-Dichloropropane	ND<1.0	ND	ND<2.0	ND
cis 1,3-Dichloropropene	ND<1.0	ND	ND<2.0	ND
trans 1,3-Dichloropropene	ND<1.0	ND	ND<2.0	ND
Methylene Chloride[f]	ND<1.0	ND	ND<2.5	ND
1,1,2,2-Tetrachloroethane	ND<1.0	ND	ND<2.0	ND
Tetrachloroethene	ND<1.5	ND<1.0	ND<3.5	4.8
1,1,1-Trichloroethane	ND<1.0	8.9	ND<2.0	ND
1,1,2-Trichloroethane	ND<1.0	ND	ND<2.0	ND
Trichloroethene	ND<1.0	ND	ND<2.0	4.7
Trichlorofluoromethane	ND<1.0	ND	ND<2.0	ND
Vinyl Chloride[g]	5.8	ND	ND<2.0	ND
% Recovery Surrogate	106	104	102	98
Comments	j			

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe

Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

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	Client P.O:	Date Analyzed: 12/15-12/16/98

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	00101			
Client ID	MW-9			
Matrix	W			
Compound	Concentration*			
Bromodichloromethane	ND			
Bromoform[b]	ND			
Bromomethane	ND			
Carbon Tetrachloride[c]	ND			
Chlorobenzene	ND			
Chloroethane	ND			
2-Chloroethyl Vinyl Ether[d]	ND			
Chloroform [e]	ND			
Chloromethane	ND			
Dibromochloromethane	ND			
1,2-Dichlorobenzene	0.70			
1,3-Dichlorobenzene	ND			
1,4-Dichlorobenzene	ND			
Dichlorodifluoromethane	ND			
1,1-Dichloroethane	ND			
1,2-Dichloroethane	0.53			
1,1-Dichloroethene	ND			
cis 1,2-Dichloroethene	1.9			
trans 1,2-Dichloroethene	ND			
1,2-Dichloropropane	ND			
cis 1,3-Dichloropropene	ND			
trans 1,3-Dichloropropene	ND			
Methylene Chloride[f]	ND			
1,1,2,2-Tetrachloroethane	ND			
Tetrachloroethene	ND<1.0			
1,1,1-Trichloroethane	ND			
1,1,2-Trichloroethane	ND			
Trichloroethene	ND			
Trichlorofluoromethane	ND			
Vinyl Chloride[g]	ND			
% Recovery Surrogate	103			
Comments				

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe

Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 12/15/98 Matrix: WATER

Analyte	Concentration (mg/L) Sample (#00071)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	92.2	92.7	100.0	92.2	92.7	0.5
Benzene	0.0	9.7	9.7	10.0	97.0	97.0	0.0
Toluene	0.0	10.2	10.0	10.0	102.0	100.0	2.0
Ethyl Benzene	0.0	10.0	10.0	10.0	100.0	100.0	0.0
Xylenes	0.0	30.7	31.0	30.0	102.3	103.3	1.0
TPH(diesel)	0.0	164	163	150	109	108	0.7
TRPH (oil & grease)	0	23810	23645	23700	100	100	0.7

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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QC REPORT FOR EPA 8010/8020/EDB

Date: 12/15/98-12/16/98 Matrix: WATER

Analyte	Concentration (ug/L)				% Recovery		
	Sample (#99964)	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0.0	10.3	10.6	10.0	103	106	2.9
Trichloroethene	0.0	9.3	9.5	10.0	93	95	2.1
EDB	0.0	9.1	9.3	10.0	91	93	2.2
Chlorobenzene	0.0	10.1	10.1	10.0	101	101	0.0
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobz (PID)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATION APPROPRIATE CONTAINERS ✓

VOAS	O&G	METALS	OTHER
✓			

13309 x HC68

CHAIN-OF-CUSTODY RECORD

1/2

Project Number	Project Name
E-10-1C-261C	1970 Seminary, Oakland CA

Sampler's Name (printed): D. F. Hoexter, J. Forsythe

	Boring Number	Date	Time	Soil	Water	Sample Location or Depth	Sample Number	Number/Type of Containers	TPH-G/BTEX/MTBE SM5520 B/F	TPH-D 8015	Remarks	
(+)	MW-1	12/12/98	1350					3 VOA	X	X	Pres HCl	00093
								1 L	X			00094
(+)	MW-2		1410					3 VOA	X	X	Pres HCl	00095
								1 L	X			00096
(+)	MW-3		1420					3 VOA	X	X	Pres HCl	00097
								1 L	X			00098
(+)	MW-4		1435					3 VOA	X	X	Pres HCl	00099
								1 L	X			
(+)	MW-5		1445					3 VOA	X	X	Pres HCl	
								1 L	X			
+	MW-6		1500					3 VOA	X	X	Pres HCl	
								1 L	X			
+	MW-7	↓	1576		↓			3 VOA	X	X	Pres HCl	
								1 L	X			
	MW-8,9										(See next page)	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
D. F. Hoexter	12/14/98 1225	Robert Nas #2507
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Nas 507		
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
Nas 507	12/14 2:40	Simon A. Butler

Ship To: Mc Campbell Anal- Pacheco CA

Attention:

Phone No:

Requested Turnaround Time: Normal

Contact: DAVID HOEXTER

Phone 650-494-2505 ph/fax

Remarks: VOAs in small cooler; others in large cooler.

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

13309 x HC 68

CHAIN-OF-CUSTODY RECORD

2/2

Project Number	Project Name
E-10-1C-261C	1970 Seminary, Oakland CA

Sampler's Name (printed): D.F. Hoexter, J. Forsythe

Analytical Tests: TPH-G/BTEX/MTBE; SM 5520 B/F; HVOC 8010

Boring Number	Date	Time	Soil	Water	Sample Location or Depth	Sample Number	Number/Type of Containers	TPH-G/BTEX/MTBE	SM 5520 B/F	HVOC 8010				Remarks
+ MW-8	12/12/98	1530		↓			3 VOA	✓		✓				Pres. HCL 00100
							1L		X					
+ MW-9	↓	1540		↓			3 VOA	✓		✓				Pres. HCL 00101
							1L		X					

ICE/I° ✓   PRESERVATION (VOAS ✓ | O&G | METALS | OTHER)
GOOD CONDITION ✓   APPROPRIATE CONTAINERS ✓
HEAD SPACE ABSENT ✓

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
D. F. Hoexter	12/14/98 12:25	Aaro #2507 Roberts
Aaro 507	12/14 2:40	Gina A. Butler
~~Aaro [illegible]~~		Received for Laboratory by: (Signature)

Ship To: Mc Campbell Anal. Pacheco CA

Attention:

Phone No:

Requested Turnaround Time: Normal

Contact: DAVID HOEXTER   Phone 650-494-2505 ph/fax

Remarks: VOAs in small cooler; others in large cooler.

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

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 925-798-1620 Fax: 925-798-1622

QC REPORT FOR EPA 8010/8020/EDB

Date: 12/15/98-12/16/98 Matrix: WATER

Analyte	Concentration (ug/L) Sample (#99964)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
1,1-DCE	0.0	10.3	10.6	10.0	103	106	2.9
Trichloroethene	0.0	9.3	9.5	10.0	93	95	2.1
EDB	0.0	9.1	9.3	10.0	91	93	2.2
Chlorobenzene	0.0	10.1	10.1	10.0	101	101	0.0
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobz (PID)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATION APPROPRIATE CONTAINERS ✓

VOAs ✓	O&G	METALS	OTHER

13309 x HC68

CHAIN-OF-CUSTODY RECORD

1/2

Project Number	Project Name
E-10-1C-261C	1970 Seminary, Oakland CA

Sampler's Name (printed): D. F. Hoexter, J. Forsythe

	Boring Number	Date	Time	Soil	Water	Sample Location or Depth	Sample Number	Number/Type of Containers	Analytical Tests: TPH-G/BTEX/MTBE	5M5520 B/F	LUFT 8010				Remarks	
(+)	MW-1	12/12/98	1350					3 VOA	X		X				Pres HCl	00093
								1 L		X						00094
(+)	MW-2		1410					3 VOA	X		X				Pres HCl	
								1 L		X						00095
(+)	MW-3		1420					3 VOA	X		X				Pres HCl	
								1 L		X						00096
(+)	MW-4		1435					3 VOA	X		X				Pres HCl	
								1 L		X						00097
(+)	MW-5		1445					3 VOA	X		X				Pres HCl	
								1 L		X						00098
+	MW-6		1500					3 VOA	X		X				Pres HCl	
								1 L		X						00099
+	MW-7	V	1576					3 VOA	X		X				Pres HCl	
								1 L		X						
	MW-8,9														(See next page)	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
D. F. Hoexter	12/14/98 1225	Rebecka Nes #2507
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Rebecka Nes 507		
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
Rebecka Nes 507	12/14 2:40	Shirley A. Butler

Ship To: Mc Campbell Anal- Pacheco CA

Attention:

Phone No:

Requested Turnaround Time: Normal

Contact: DAVID HOEXTER

Phone 650-494-2505 ph/fax

Remarks: VOAs in small cooler; others in large cooler.

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

13309 x HC68

CHAIN-OF-CUSTODY RECORD

2/2

Project Number: E-10-1C-261C

Project Name: 1970 Seminary, Oakland CA

Sampler's Name (printed): D.F. Hoexter, J. Forsythe

Analytical Tests: TPH-G/BTEX/MTBE; SM 5520 B/F; HVOC 8010

	Boring Number	Date	Time	Soil	Water	Sample Location or Depth	Sample Number	Number/Type of Containers	TPH-G/BTEX/MTBE	SM 5520 B/F	HVOC 8010	Remarks	
+	MW-8	12/12/98	1530		↓			3 VOA	✓		✓	Pres. HCL	00100
								1L		X			
+	MW-9	↓	1540		↓			3 VOA	✓		✓	Pres. HCL	00101
								1L		X			

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

	VOAS	O&G	METALS	OTHER
PRESERVATION	✓			

APPROPRIATE CONTAINERS ✓

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
D F Hoexter	12/14/98 12:25	Aaro #2507 Roberts
Aaro 507	12/14 2:40	Gina A. Butler
~~Aaro [illegible]~~		Received for Laboratory by: (Signature)

Ship To: McCampbell Anal. Pacheco CA

Attention:

Phone No:

Requested Turnaround Time: Normal

Contact: DAVID HOEXTER **Phone** 650-494-2505 ph/fax

Remarks: VOAs in small cooler; others in large cooler.

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