

ENVIRONMENTAL  
PROTECTION

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June 18, 1996

**QUARTERLY GROUNDWATER  
MONITORING REPORT**

*Second Quarter, 1996*

625 Hegenberger Road  
Oakland, California

6/18/96

Project No. 1286

Prepared For

Diversified Investment and Management Corp.  
400 Oyster Point Blvd., Suite 415  
South San Francisco, CA 94080

Prepared By

All Environmental, Inc.  
3364 Mt. Diablo Boulevard  
Lafayette, CA 94549  
(800) 801-3224

**AEI**

# ALL ENVIRONMENTAL, INC.

*Environmental Engineering & Construction*

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June 18, 1996  
Project No. 1286

Mr. Barney Chan, Hazardous Materials Specialist  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway, Rm 250  
Alameda, CA 94502-6577

**RE:** Quarterly Groundwater Monitoring Report  
Second Quarter of 1996  
625 Hegenberger Road  
Oakland, California

Dear Mr. Chan:

This report is submitted by All Environmental, Inc. (AEI) on the behalf of Diversified Investment and Management Corp., for the former fuel service station location at 625 Hegenberger Road, Oakland, California.

## **Summary of Activities**

AEI measured the depth to ground water and collected water samples from five groundwater monitoring wells on April 25, 1996. The monitoring wells sampled included the five wells installed by Subsurface Consultant in 1989 and 1990. The previous sampling episode of January 8, 1996 included one other well (designated MW-24) installed by Levine-Fricke in January of 1995. The well was in the area of the proposed excavation area outlined in AEI's report "Soil Remediation Workplan," dated March 20, 1996, and well was abandoned on April 4, 1996 as per the approval of the ACHCSA. Between April 8 and April 11, 1996, approximately 1,600 cubic yards of native soil and surface cover were excavated from three areas of the site to a depth of 5 to 7 feet below ground surface. These three areas of excavation are designated the Large Pit, East Pit, and West Pit on Figure 1. Refer to AEI's letter dated April 29, 1996 for further information on the remedial efforts at the site.

Well locations are shown in Figure 1. The sampling procedure for each monitoring well involved measuring water levels, purging the wells, and collecting a water sample. The depth from the top of the well casing and the total well depth were measured prior to sampling with an electric water level indicator. The wells were purged and a groundwater sample was collected from each well using a disposable clean Teflon bailer.

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Corporate Headquarters:

3364 Mt. Diablo Blvd.  
Lafayette, CA 94549  
Phone: (510) 283-6000

Los Angeles Office:

5031 Pacific Coast Hwy., #178  
Torrance, CA 90505  
Phone: (310) 328-8878

Temperature, pH, and turbidity were measured during the purging of the well. AEI removed 3 to 4 well volumes per well, and provided that the temperature, pH, and turbidity stabilized, a water sample was collected.

Water samples were poured slowly into laboratory-provided glass sampling containers, capped, and shipped on ice under proper chain of custody to McCampbell Analytical Inc. The samples were analyzed for Benzene, Toluene, Ethylbenzene, and Total Xylene (BTEX) by EPA Method 602, for Total Petroleum Hydrocarbons as gasoline (TPHg) by EPA Method 5030/8015, and for Total Petroleum Hydrocarbons as diesel. The ACHCSA discontinued the analysis of samples for Total Petroleum Hydrocarbons as oil (TPHd and TPHo) by EPA Methods 3510/8015 following the recommendations of the previous quarterly monitoring report dated March 20, 1996.

### **Field Results**

Groundwater elevation data are summarized in Table 1 and shown in Figure 1. The groundwater elevation contours and the groundwater flow directions are shown in Figure 1. A summary of field parameters measured during sampling is presented in Table 2.

No free product was encountered during monitoring activities. Groundwater levels for April 25, 1996 range from 1.98 to 3.27 feet below mean sea level (msl). These groundwater elevations were an average of 0.03 feet higher than the January, 1996 levels (2.07 to 2.87 feet below msl).

The general direction of the groundwater flow at the time of measurement was west and north. The groundwater hydraulic gradient ranged from 0.40 to 0.06 ft/ft.

### **Groundwater Quality**

In general, analysis of samples retrieved from wells MW-8 through MW-16 did not show a substantial increase or decrease in contamination levels. Contaminant concentrations did not change by an amount greater than one order of magnitude in relation to previous monitoring episodes. A summary of groundwater quality data, including available historic data, is presented in Table 3. Laboratory analysis data are presented in Appendix A.


Mr. Barney Chan, Hazardous Materials Specialist  
Alameda County Health Care Services Agency  
June 18, 1996  
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Please do not hesitate to call either of the undersigned, if you have any questions.

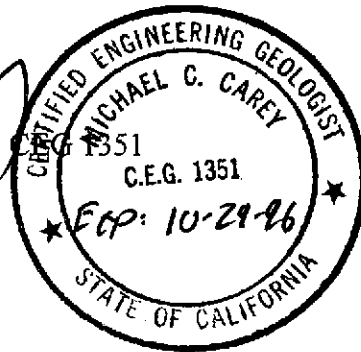
Sincerely,

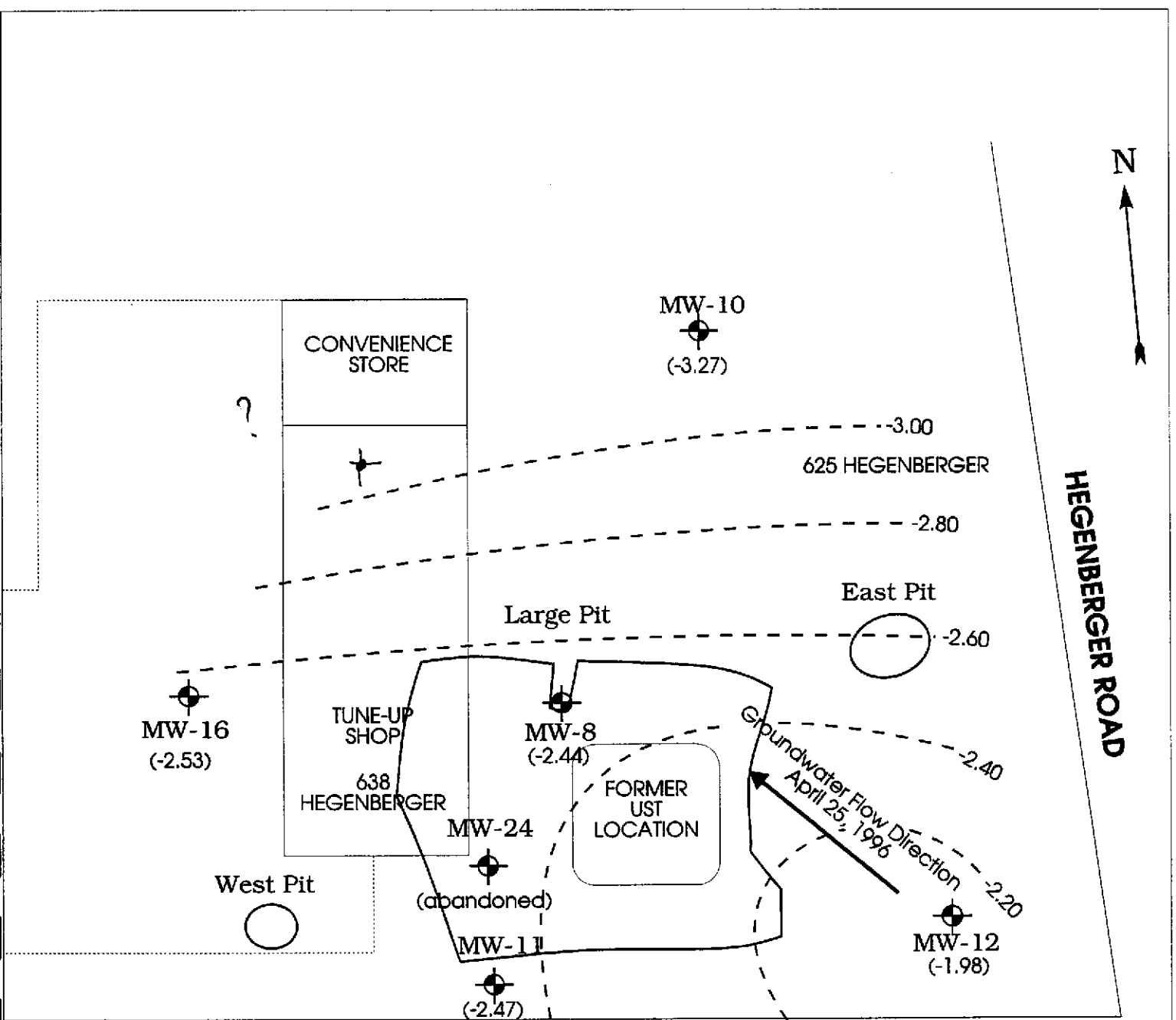


J. P. Deharke  
Project Manager


  
Michael Carey  
Engineering Geologist, C.E.G. 1351

Enclosures





-2.60  
 Line of Equal Groundwater Elevation (feet)

MW-8  
  
 (-2.44) Groundwater Elevation (feet)

0 20 40 FEET  
 SCALE: 1" = 40'

<b>ALL ENVIRONMENTAL, INC.</b>	
3364 MT. DIABLO BOULEVARD, LAFAYETTE, CA	
DRAWN BY: B. CAMPBELL	REVISED BY:
DATE: JUNE, 1996	APPROVED BY:
<b>POTENTIOMETRIC MAP</b>	
625 Hegenberger Road, Oakland	FIGURE 1

**Table 1**  
**Groundwater Elevations**  
**625 Hegenberger Road, Oakland, California**

Well ID	Date	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
MW-8	12/22/93	4.88	6.72	-1.84
MW-10	12/22/93	4.21	6.00	-1.79
MW-11	12/22/93	5.04	6.84	-1.80
MW-12	12/22/93	4.58	6.07	-1.49
MW-16	12/22/93	NA	7.48	NA
MW-8	6/30/94	4.88	6.55	-1.67
MW-10	6/30/94	4.21	5.79	-1.58
MW-11	6/30/94	5.04	6.73	-1.69
MW-12	6/30/94	4.58	6.06	-1.48
MW-16	6/30/94	NA	7.28	NA
MW-8	9/27/94	4.88	7.20	-2.32
MW-10	9/27/94	4.21	6.39	-2.18
MW-11	9/27/94	5.04	7.41	-2.37
MW-12	9/27/94	4.58	6.57	-1.99
MW-16	9/27/94	5.53	7.93	-2.40
MW-8	1/4/95	4.88	6.21	-1.67
MW-10	1/4/95	4.21	5.42	-1.58
MW-11	1/4/95	5.04	6.45	-1.69
MW-12	1/4/95	4.58	5.50	-1.48
MW-16	1/4/95	5.53	7.03	-1.50
MW-8	1/10/95	4.88	5.09	-2.32
MW-10	1/10/95	4.21	4.67	-2.18
MW-11	1/10/95	5.04	5.72	-2.37
MW-12	1/10/95	4.58	4.46	-1.99
MW-16	1/10/95	5.53	6.21	-2.40
MW-24	1/10/95	5.49	5.97	-0.48
MW-8	10/2/95	4.88	7.66	-2.78
MW-10	10/2/95	4.21	6.87	-2.66
MW-11	10/2/95	5.04	7.85	-2.81
MW-12	10/2/95	4.58	6.99	-2.41
MW-16	10/2/95	5.53	8.40	-2.87
MW-24	10/2/95	5.49	8.31	-2.82
MW-8	1/8/96	4.88	7.45	-2.57
MW-10	1/8/96	4.21	6.82	-2.61
MW-11	1/8/96	5.04	7.91	-2.87
MW-12	1/8/96	4.58	6.65	-2.07
MW-16	1/8/96	5.53	8.23	-2.70
MW-24	1/8/96	5.49	8.08	-2.59
MW-8	4/25/96	4.88	7.32	-2.44
MW-10	4/25/96	4.21	7.48	-3.27
MW-11	4/25/96	5.04	7.51	-2.47
MW-12	4/25/96	4.58	6.56	-1.98
MW-16	4/25/96	5.53	8.06	-2.53

Notes: All well elevations are measured from the top of casing.  
ft msl = feet above mean sea level  
NA = not available  
All well elevation data was extracted from past Levine-Fricke reports.

**Table 2**  
**Water Quality Parameters**  
**625 Hegenberger Road, Oakland, California**

Well ID	Date	Well Volume (gallons)	Volume Withdrawn (gallons)	Stabilized Temperature (deg. C)	Qualitative Turbidity
MW-8	12/22/93	1.5	4.50	19.40	turbid*
MW-10	12/22/93	1.6	7.00	20.80	moderately turbid
MW-11	12/22/93	1.5	4.50	20.20	turbid
MW-12	12/22/93	1.6	5.30	20.30	moderately turbid
MW-16	12/22/93	1.1	4.50	20.50	turbid
MW-8	6/30/94	1.5	8.00	21.00	turbid*
MW-10	6/30/94	1.6	6.00	21.00	turbid
MW-11	6/30/94	1.4	6.00	20.20	turbid
MW-12	6/30/94	1.6	6.00	20.60	moderately turbid
MW-16	6/30/94	1.1	4.50	21.80	turbid
MW-8	9/27/94	1.4	4.50	21.60	turbid*
MW-10	9/27/94	1.5	6.00	22.60	turbid
MW-11	9/27/94	1.3	3.00	21.00	turbid
MW-12	9/27/94	1.5	6.00	22.50	turbid
MW-16	9/27/94	1.0	3.00	22.60	turbid
MW-8	1/10/95	1.7	5.30	17.20	turbid*
MW-10	1/10/95	1.8	6.00	19.50	turbid
MW-11	1/10/95	1.6	5.30	18.60	turbid
MW-12	1/10/95	1.8	6.00	19.30	turbid
MW-16	1/10/95	1.2	6.00	19.30	turbid
MW-24	1/10/95	4.9	41.00	18.90	turbid
MW-8	10/2/95	1.1	11.00	22.80	moderately turbid
MW-10	10/2/95	1.5	11.00	22.60	turbid
MW-11	10/2/95	1.0	12.00	22.00	moderately turbid
MW-12	10/2/95	1.3	11.00	22.90	turbid
MW-16	10/2/95	1.1	11.00	22.60	turbid
MW-24	10/2/95	3.4	20.00	22.80	turbid
MW-8	1/8/96	1.1	12.00	17.30	slightly turbid
MW-10	1/8/96	1.5	10.00	17.90	slightly turbid
MW-11	1/8/96	1.0	5.50	17.60	slightly turbid
MW-12	1/8/96	1.2	10.00	18.00	slightly turbid
MW-16	1/8/96	0.9	5.00	19.00	slightly turbid
MW-24	1/8/96	3.4	35.00	17.60	slightly turbid
MW-8	4/25/96	1.1	5.00	21.44†	clear
MW-10	4/25/96	1.4	5.00	22.89†	slightly turbid
MW-11	4/25/96	1.1	5.50	21.72†	clear
MW-12	4/25/96	1.2	5.00	23.56†	clear
MW-16	4/25/96	1.2	5.00	24.94†	slightly turbid

Notes:      \*    A slight hydrocarbon sheen was reported.  
             \*\*    At time of monitoring  
             †    Average

**Table 3**  
**Historic Water Quality**  
**625 Hegenberger Road, Oakland, California**  
**(concentrations reported in milligrams per liter)**

Well ID	Date	Consultant/ Lab		TPHg	Benzene	Toluene	Ethyl- Benzene	Xylenes	TPHd	TPHc	Total Lead
MW-8	(1)	SUB	(2)	NA	3.7	BDL	0.29	0.69	NA	NA	BDL
	5/28/93	HC/SUP		19	6.4	0.028	0.16	0.036	1	NA	(3)
	12/22/93	LF/AEN	(4)	56	16	5.9993	(5) 0.65	2.7	0.3	<0.2	<0.04
	6/30/94	LF/AEN	(4)	41	11	4.8	2.2	8.2	<0.5	0.5	<0.04
	9/27/94	LF/AEN		28	8.5	0.26	1.6	5.3	0.62	<0.2	<0.04
	1/10/95	LF/AEN		58	10	11	2.4	12	0.07	<0.2	NA
	10/2/95	AEI/PEL		28	0.051	0.016	0.054	0.08	<0.05	<0.5	NA
	1/8/96	AEI/MAI		72	8.6	13	2.2	12	3.7	<0.25	NA
duplicate	1/8/96	AEI/MAI		62	7.2	9.5	1.6	8	NA	NA	NA
	4/25/96	AEI/MAI		33	7.6	2.3	1.5	4.8	3.1	NA	NA
MW-10	(1)	SUB		NA	0.0017	BDL	BDL	BDL	NA	NA	BDL
	5/28/93	HC/SUP		<0.05	<0.0003	<0.0003	<0.0003	<0.0009	0.054	NA	(3)
	12/22/93	LF/AEN		<0.05	<0.0005	<0.0007	(5) <0.0005	<0.0002	0.58	<0.2	<0.04
	6/30/94	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	<0.05	0.6	<0.04
	9/27/94	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	0.61	<0.2	<0.04
	1/10/95	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	0.6	<0.2	NA
	10/2/95	AEI/PEL		0.35	0.0044	0.0026	0.0023	0.0064	<0.05	<0.5	NA
	1/8/96	AEI/MAI		0.05	0.0058	0.0071	0.0012	0.0064	<0.05	<0.25	NA
	4/25/96	AEI/MAI		<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
MW-11	(1)	SUB	(6)	NA	0.053	BDL	BDL	BDL	NA	NA	0.21
	5/28/93	HC/SUP		1.2	0.45	0.017	0.0015	0.0021	<0.05	NA	(3)
	12/22/93	LF/AEN		9.2	4.5	0.0383	(5) 0.012	0.043	0.53	<0.2	<0.04
	6/30/94	LF/AEN		8.8	1.5	0.013	0.69	1.2	<0.05	1.1	<0.04
duplicate	6/30/94	LF/AEN		9.7	1.7	0.014	0.73	1.3	NA	NA	NA
	9/27/94	LF/AEN		15	6.5	0.026	0.87	0.59	0.91	<0.2	<0.04
	1/10/95	LF/AEN		14	0.89	0.22	0.84	2.4	1.1	0.2	NA
	10/2/95	AEI/PEL		7.1	0.047	0.0057	0.011	0.036	<0.05	<0.5	NA
	1/8/96	AEI/MAI		12	1.2	0.099	0.79	1.4	2	<0.25	NA
	4/25/96	AEI/MAI		5.8	0.23	0.059	0.2	0.77	1.4	NA	NA
MW-12	(1)	SUB		NA	0.0017	BDL	BDL	BDL	NA	NA	BDL
	5/28/93	HC/SUP		<0.05	<0.0003	<0.0003	<0.0003	<0.0009	<0.05	NA	(3)
	12/22/93	LF/AEN		0.05	<0.0005	<0.0007	(5) <0.0005	<0.0002	0.3	<0.2	<0.04
	6/30/94	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	<0.05	0.4	<0.04
	9/27/94	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	0.4	<0.2	<0.04
duplicate	9/27/94	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	NA
	1/10/95	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	0.3	<0.2	NA
	10/2/95	AEI/PEL		<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	<0.5	NA
	1/8/96	AEI/MAI		<0.05	0.0024	0.0027	0.00054	0.0028	<0.05	<0.25	NA
	4/25/96	AEI/MAI		<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	NA	NA
MW-16	(1)	SUB	(7)	NA	BDL	BDL	BDL	BDL	NA	NA	BDL
	5/28/93	HC/SUP		<0.05	0.0028	<0.0003	<0.0007	<0.0009	<0.05	NA	(3)
	12/22/93	LF/AEN		2.2	<0.0005	<0.0007	(5) <0.0005	<0.0002	0.52	<0.2	<0.04
	6/30/94	LF/AEN		<0.05	0.008	<0.0005	<0.0005	<0.0002	<0.05	0.9	<0.04
	9/27/94	LF/AEN		0.07	0.017	<0.0005	<0.0005	<0.0002	0.59	<0.2	<0.04
	1/10/95	LF/AEN		0.3	0.19	<0.0005	<0.0005	<0.0002	0.7	<0.2	NA
	10/2/95	AEI/PEL		0.55	0.0077	0.0007	0.0035	0.013	<0.05	<0.5	NA
	1/8/96	AEI/MAI		0.36	<0.0005	<0.0005	0.004	0.0097	0.14	<0.25	NA
	4/25/96	AEI/MAI		1.1	0.39	0.0037	0.0032	0.014	0.33	NA	NA
MW-24	1/10/95	LF/AEN		31	12	1.9	1.1	1.3	0.9	0.2	NA
duplicate	1/10/95	LF/AEN		31	12	2	1.1	1.3	0.8	0.2	NA
	10/2/95	AEI/PEL		8.6	0.044	0.011	0.012	0.04	<0.05	<0.5	NA
	1/8/96	AEI/MAI		22	8.8	0.14	0.5	0.28	1.5	<0.25	NA
	4/25/96	AEI/MAI	(8)	NS	NS	NS	NS	NS	NS	NA	NA
<b>Blanks</b>											
Trip Blank	5/28/93	HC/SUP		<0.05	<0.0003	<0.0003	<0.0003	<0.0009	NA	NA	BDL
MW-12-BB	12/22/93	LF/AEN		<0.05	<0.0005	0.0007	<0.0005	<0.0002	NA	NA	(3)
MW-16-BB	12/22/93	LF/AEN		NA	NA	NA	NA	NA	NA	NA	<0.04
MW-12-BB	6/30/94	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	<0.04
MW-12-BB	9/27/94	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	NA
Trip Blank	9/27/94	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	NA
MW-11-BB	1/10/95	LF/AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	NA



**Table 3**  
**Historic Water Quality**  
**625 Hegenberger Road, Oakland, California**  
**(concentrations reported in milligrams per liter)**

**Notes**

BDL	below detection limit
NA	not analyzed
NS	not sampled
TPHd	total petroleum hydrocarbons as diesel
TPHg	total petroleum hydrocarbons as gasoline
TPHo	total petroleum hydrocarbons as oil
AEN	American Environmental Networks, Pleasant Hill, California
HC	HartCrowser, San Francisco, California
LF	Levine Fricke, Emeryville, California
SUB	Subsurface Consultants, Oakland, California
SUP	Superior Analytical Laboratories, Martinez, California
AEI	All Environmental, Inc., San Ramon, California
PEL	Priority Analytical Laboratories, Milpitas, California
MAI	McCampbell Analytical Inc., Pacheco, California

- (1) Date of groundwater sampling unavailable.
- (2) 18 mg/ total volatile hydrocarbons also detected
- (3) All May 1993 samples also analyzed for total organic lead (DHS Method). The compound was not detected above the detection limit of 4 mg/l.
- (4) A slight hydrocarbon sheen was observed on the surface of the well water.
- (5) Toluene detection for 22-Dec-93 were qualified using 0.0007 mg/l as a baseline. The bailer blank (MW-12-BB) contained toluene at 0.0007 mg/l.
- (6) 0.24 mg/l total volatile hydrocarbons also detected
- (7) 0.38 mg/l total volatile hydrocarbons also detected
- (8) Well Mw-8 was abandoned on April 5, 1996.

All Environmental, Inc. 3364 Mt. Diablo Blvd. Lafayette, CA 94549	Client Project ID: # 1286; Hegenberger	Date Sampled: 04/25/96
		Date Received: 04/25/96
	Client Contact: Brian Campbell	Date Extracted: 04/26/96
	Client P.O:	Date Analyzed: 04/26/96

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*, with 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) <sup>+</sup>	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
63472	MW-8	W	33,000,a	7600	2300	1500	4800	100
63473	MW-10	W	ND	ND	ND	ND	ND	101
63474	MW-11	W	5800,a	230	59	200	770	104
63475	MW-12	W	ND	ND	ND	ND	ND	103
63476	MW-16	W	1100,a	390	3.7	3.2	14	106
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	0.5	0.5	0.5	0.5		
	S	1.0 mg/kg	0.005	0.005	0.005	0.005		

\* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/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.

All Environmental, Inc. 3364 Mt. Diablo Blvd. Lafayette, CA 94549	Client Project ID: # 1286; Hegenberger	Date Sampled: 04/25/96
		Date Received: 04/25/96
	Client Contact: Brian Campbell	Date Extracted: 05/01/96
	Client P.O:	Date Analyzed: 05/01-05/02/96

**Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel \***

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) <sup>+</sup>	% Recovery Surrogate
63472	MW-8	W	3100,d	103
63473	MW-10	W	ND	103
63474	MW-11	W	1400,d	104
63475	MW-12	W	ND	103
63476	MW-16	W	330,g	107
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	
	S		1.0 mg/kg	

\* water samples are reported in ug/L, soil samples in mg/kg, and all TCLP and STLC extracts in mg/L

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ 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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/26/96-04/27/96

Matrix: Water

Analyte	Concentration (ug/L) Sample (#63458)			Amount Spiked	% Recovery		
	MS	MSD			MS	MSD	RPD
TPH (gas)	0.0	103.9	112.5	100.0	103.9	112.5	8.0
Benzene	0.0	9.8	9.5	10.0	98.0	95.0	3.1
Toluene	0.0	9.7	10.0	10.0	97.0	100.0	3.0
Ethyl Benzene	0.0	10.9	10.2	10.0	109.0	102.0	6.6
Xylenes	0.0	29.9	30.0	30.0	99.7	100.0	0.3
TPH (diesel)	0	171	170	150	114	113	0.4
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 05/01/96-05/02/96

Matrix: Water

Analyte	Concentration (ug/L) Sample (#64598)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	0.0	103.1	107.3	100.0	103.1	107.3	4.0
Benzene	0.0	10.1	10.2	10.0	101.0	102.0	1.0
Toluene	0.0	10.1	10.1	10.0	101.0	101.0	0.0
Ethyl Benzene	0.0	10.0	9.9	10.0	100.0	99.0	1.0
Xylenes	0.0	29.6	29.6	30.0	98.7	98.7	0.0
TPH (diesel)	0	154	154	150	102	103	0.3
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

**McCAMPBELL ANALYTICAL**

110 2nd AVENUE, # D7  
PACHECO, CA 94553

(510) 798-1820

FAX (510) 798-1822

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME:  RUSH  24 HOUR  48 HOUR  5 DAY

REPORT TO: Brian Campbell BILL TO:

COMPANY: ALL ENVIRONMENTAL INC

2641 CROW CANYON Rd. Ste 5

San Ramon CA 94583

TELE: 510-820-3224

FAX #: 510-838-2697

PROJECT NUMBER: 1286

PROJECT NAME: HEGENBERGER

PROJECT LOCATION: OAKLAND

SAMPLER SIGNATURE: [Signature]

**ANALYSIS REQUEST**

**OTHER**

BTEX & TPH as Gasoline (602/8020 & 8015)	
THP as Diesel (8015)	
Total Petroleum DI & Grease (5520 ERF/5520 BM)	
Total Petroleum Hydrocarbons (418.1)	
EPA 601/8010	
EPA 602/8020	
EPA 608/8080	
EPA 608/8080 - PCBs Only	
EPA 624/8240/8260	
EPA 625/8270	
CAM - 17 Metals	
EPA - Priority Pollutant Metals	
LEAD (7240/7421/239.2/6010)	
ORGANIC LEAD	
PCI	

COMMENTS

SAMPLE ID	LOCATION	SAMPLING		# CONTAINERS	TYPE CONTAINERS	MATRIX					METHOD PRESERVED			
		DATE	TIME			WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO <sub>3</sub>	OTHER	
MW-8		4/25/96		4		X						X	X	
MW-10		"		4		X						X	X	
MW-11		"		4		X						X	X	
MW-12		"		4		X						X	X	
MW-16		"		4		X						X	X	
CHECKED FOR PRESERVATION		PRESERVATIVE APPROPRIATE		CONTAINERS										

63472  
63473  
63474  
63475  
63476

RELINQUISHED BY: <u>[Signature]</u>	DATE: <u>4/25/96</u>	TIME: <u>5:40pm</u>	RECEIVED BY: <u>[Signature]</u>
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:

REMARKS:  
Hold for diesel Imo.  
Diesel off Hold 4/30 per B.C. 5day

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY LABORATORY:
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ALL ENVIRONMENTAL INC. -- GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
<b>Monitoring Well Number: MW-8</b>	
Project Name	Hegenberger
Job Number	1286
Project Address	625 Hegenberger Road Oakland, California
Date of Sampling	4/25/96
Name of Sampler	Dusty Roy
<b>MONITORING WELL DATA</b>	
Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock -- OK/Replace	
Elevation of Top of Casing	4.88
Depth of Well	
Depth to Water	7.32
Water Elevation	-2.44
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5
Appearance of Purge Water	Clear
<b>GROUNDWATER SAMPLES</b>	
Number of Samples/Container Size	2 x 40 ml VOA's; 2 x 1 liter
Groundwater Temp/pH/Conductivity #1:	71.1/6.78/903
Groundwater Temp/pH/Conductivity #2:	70.6/6.55/830
Groundwater Temp/pH/Conductivity #3:	70.0/6.53/813
Appearance of Groundwater Samples	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)	

TD - Total Depth of Well  
DTW - Depth To Water

ALL ENVIRONMENTAL INC. -- GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
<b>Monitoring Well Number: MW-10</b>	
Project Name	Hegenberger
Job Number	1286
Project Address	625 Hegenberger Road
	Oakland, California
Date of Sampling	4/25/96
Name of Sampler	Dusty Roy
<b>MONITORING WELL DATA</b>	
Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock -- OK/Replace	
Elevation of Top of Casing	4.21
Depth of Well	
Depth to Water	7.48
Water Elevation	-3.27
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5
Appearance of Purge Water	Slightly yellow/green.
<b>GROUNDWATER SAMPLES</b>	
Number of Samples/Container Size	2 x 40 ml VOA's; 2 x 1 liter
Groundwater Temp/pH/Conductivity #1:	73.3/6.72/5700
Groundwater Temp/pH/Conductivity #2:	73.1/6.71/5690
Groundwater Temp/pH/Conductivity #3:	73.1/6.70/5720
Appearance of Groundwater Samples	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)	

TD - Total Depth of Well

DTW - Depth To Water



ALL ENVIRONMENTAL INC. -- GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
<b>Monitoring Well Number: MW-11</b>	
Project Name	Hegenberger
Job Number	1286
Project Address	625 Hegenberger Road
	Oakland, California
Date of Sampling	4/25/96
Name of Sampler	Dusty Roy
<b>MONITORING WELL DATA</b>	
Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock -- OK/Replace	
Elevation of Top of Casing	5.04
Depth of Well	
Depth to Water	7.51
Water Elevation	-2.47
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5.5
Appearance of Purge Water	Clear
<b>GROUNDWATER SAMPLES</b>	
Number of Samples/Container Size	2 x 40 ml VOA's; 2 x 1 liter
Groundwater Temp/pH/Conductivity #1:	71.8/6.75/1698
Groundwater Temp/pH/Conductivity #2:	71.0/6.61/1305
Groundwater Temp/pH/Conductivity #3:	70.5/6.58/1293
Appearance of Groundwater Samples	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)	
Fast recharge. Sulfur odor. Pumped dry at 5.5 gallons.	

TD - Total Depth of Well

DTW - Depth To Water

ALL ENVIRONMENTAL INC. -- GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
<b>Monitoring Well Number: MW-12</b>	
Project Name	Hegenberger
Job Number	1286
Project Address	625 Hegenberger Road
	Oakland, California
Date of Sampling	4/25/96
Name of Sampler	Dusty Roy
<b>MONITORING WELL DATA</b>	
Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock -- OK/Replace	
Elevation of Top of Casing	4.58
Depth of Well	
Depth to Water	6.56
Water Elevation	-1.98
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5
Appearance of Purge Water	Clear
<b>GROUNDWATER SAMPLES</b>	
Number of Samples/Container Size	2 x 40 ml VOA's; 2 x 1 liter
Groundwater Temp/pH/Conductivity #1:	77.2/6.45/4910
Groundwater Temp/pH/Conductivity #2:	73.8/6.50/2270
Groundwater Temp/pH/Conductivity #3:	72.3/6.50/2200
Appearance of Groundwater Samples	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)	

TD - Total Depth of Well

DTW - Depth To Water

ALL ENVIRONMENTAL INC. -- GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
<b>Monitoring Well Number: MW-16</b>	
Project Name	Hegenberger
Job Number	1286
Project Address	625 Hegenberger Road
	Oakland, California
Date of Sampling	4/25/96
Name of Sampler	Dusty Roy
<b>MONITORING WELL DATA</b>	
Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock -- OK/Replace	
Elevation of Top of Casing	5.53
Depth of Well	
Depth to Water	8.06
Water Elevation	-2.53
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5
Appearance of Purge Water	Yellowish Brown
<b>GROUNDWATER SAMPLES</b>	
Number of Samples/Container Size	2 x 40 ml VOA's; 2 x 1 liter
Groundwater Temp/pH/Conductivity #1:	75.9/7.20/2040
Groundwater Temp/pH/Conductivity #2:	77.3/7.10/1873
Groundwater Temp/pH/Conductivity #3:	77.6/7.21/1945
Appearance of Groundwater Samples	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)	

TD - Total Depth of Well  
DTW - Depth To Water