AEI CONSULTANTS
Environmental & Civil Engineering Services

3210 Old Tunnel Road Road, Suite B, Lafayette, CA 94549-415
Phone: (925) 283-6000 Fax: (925) 283-6121

ENVIRONMENTAL PROTECTION

00 MAR 22 PM 4:41

March 21, 2000

Barney Chan
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: **Groundwater Monitoring Report**
625 Hegenberger Road
Oakland, California
AEI Project No. 20826

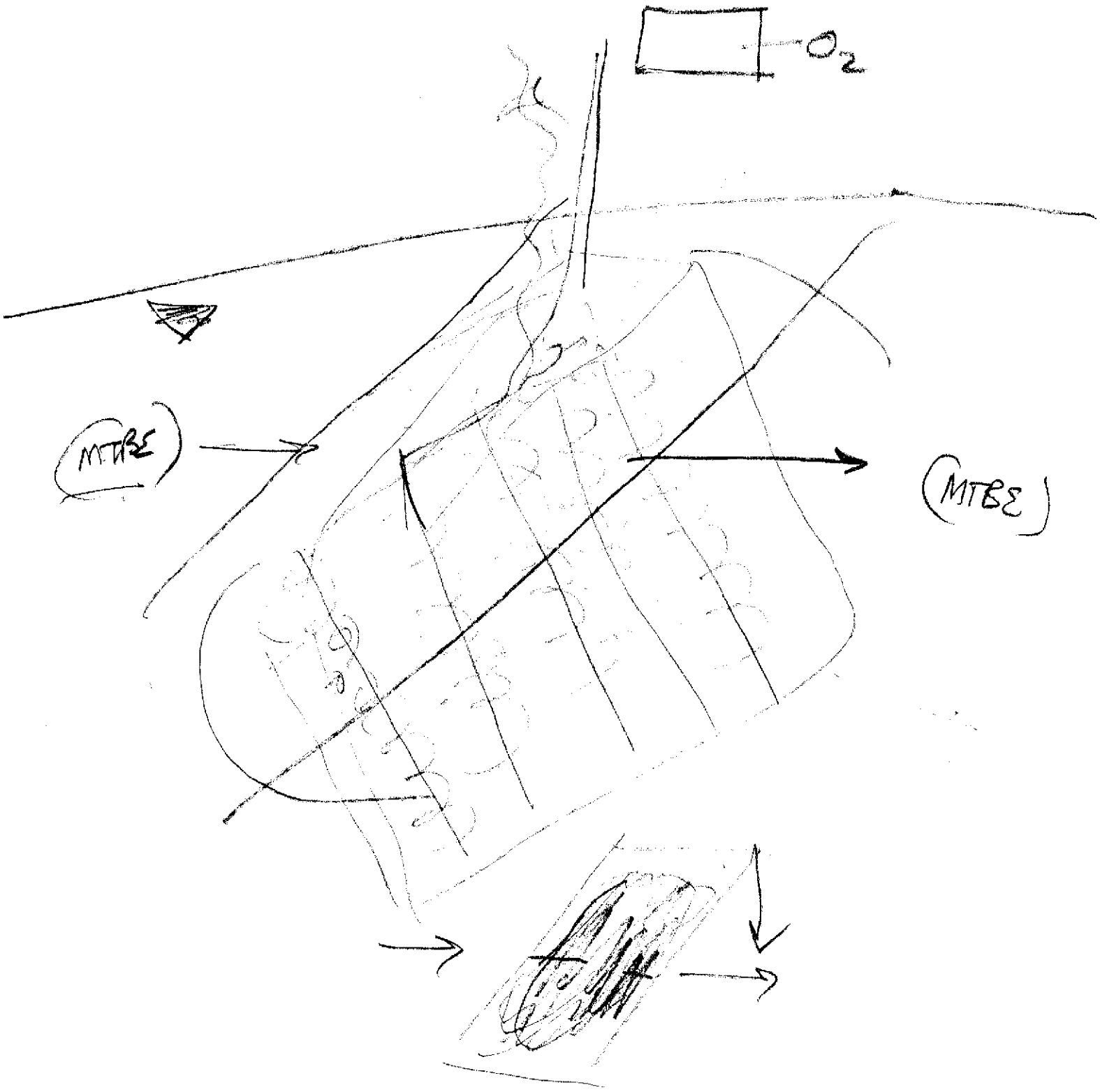
#568

Dear Mr Chan:

Enclosed is a copy of the Quarterly Groundwater Monitoring Report for the above referenced site. Please call me at (925) 283-6000 or Joseph Derhake at (310) 798-4255 if you have any questions regarding this site.

Sincerely,

Peter McIntyre
Project Geologist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MTBE
(MTBE)

March 21, 2000

QUARTERLY GROUNDWATER MONITORING REPORT

First Quarter 2000

625 Hegenberger Road
Oakland, California

Project No. 20826

Prepared For

Mr. Dinesh Maniar
400 Oyster Point Boulevard, Suite 415
South San Francisco, CA 94080

Prepared By

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(800) 801-3224

AEI

AEI CONSULTANTS
3210 Old Tunnel Road, Suite B, Lafayette, CA 94549-4157
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March 21, 2000

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

RE: Quarterly Groundwater Monitoring Report
First Quarter 2000
625 Hegenberger Road
Oakland, California
AEI Project No. 20826

Dear Mr. Chan:

This Quarterly Groundwater Monitoring Report is submitted by AEI Consultants (AEI) on the behalf of Diversified Investment and Management Corp. for the former fuel service station location at 625 Hegenberger Road, Oakland, California. AEI measured the depth to groundwater and collected water samples from six groundwater monitoring wells on February 9, 2000. This groundwater monitoring episode is being conducted to monitor groundwater contamination caused by the release of hydrocarbon fuels at the site and to measure various chemical parameters to judge the suitability of the site for groundwater bioremediation.

Background

In October 1993, three underground storage tanks and related structures were removed from the site under the observation of Levine Fricke. Approximately 300 cubic yards (cy) of soil was excavated during the tank removal. Levine Fricke and Subsurface Consultants performed several shallow soil borings and installed six groundwater monitoring wells at the site. Results of the comprehensive soil investigation indicated that hydrocarbon contamination was present in elevated levels at the site.

The quarterly monitoring of the six monitoring wells was performed by Levine Fricke through January 1995. AEI began monitoring the wells in October 1995. In March 1996, AEI destroyed one of the wells (designated MW-24) in anticipation of excavation activities.

AEI excavated and aerated 1,600 cubic yards of contaminated soil in the spring and summer of 1996 as detailed in AEI's report, "Phase II Environmental Site Assessment" dated March 3, 1997. The excavation extended to the vadose zone, approximately 5 to 7 feet below ground surface (bgs). Figure 1 shows the areas excavated. AEI believes that all significant sources of groundwater contamination have been abated and that only minor contaminant concentrations remain within the soil at the site. However, TPH as gasoline, benzene, and MTBE remain in the groundwater in significant concentration. Please refer to Table 3 for historical groundwater quality data.

On October 1, 1999, AEI installed one (1) 4" diameter well (EW-01) just west of the former tank hold (Figure 2). The well was screened from 5 feet below ground surface (bgs) to 22.5 feet bgs. The well was installed in the determined center of the hydrocarbon plume, to be used as an extraction well for ex-situ groundwater bio-remediation.

Summary of Activities

Well locations are also shown in Figure 2. 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 battery powered submersible pump. Temperature, pH, conductivity, and dissolved oxygen (DO) were measured during the purging of the wells. AEI removed approximately 3 to 4 well volumes per well prior to collection of a groundwater sample.

Water samples were collected using disposable bailers and 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 Total Petroleum Hydrocarbons (TPH) as gasoline by EPA Method 5030/8015, benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether MTBE by EPA Method 5030/8020. The six samples were also analyzed for total nitrogen (EPA method 351.3/300), total phosphorous (EPA method 365.2), and potassium (EPA method 200.7).

Field Results

No free product was encountered during monitoring activities. A slight to strong hydrocarbon odor was observed during the purging and sampling of wells MW-8, MW-11, and EW-01. Groundwater levels for February 9, 2000 ranged from 0.24 to 1.28 feet below mean sea level (msl). These groundwater elevations are an average of 0.662 feet lower that those measured in January 1998. Groundwater flow direction appears to be to the west. The groundwater gradient was calculated to average 0.014 ft/ft. Historic groundwater elevation data are summarized in Table 1. The groundwater elevation

contours and the groundwater flow direction are shown in Figure 2. A summary of field parameters measured during sampling is presented in Table 2, Water Quality Parameters.

Well Survey

A survey of deep wells within ½ radius of the site was performed at the Department of Water Resources (DWR) in Sacramento. The survey revealed a number of deep wells within the search radius at three locations. Please refer to the following table for information on the wells identified.

Location	Distance (feet)	Direction	Depth (feet)	Use
Oakland Coliseum Complex (11 wells)	1,000 – 2,500	Northwest	70 - 112	Observation
7825 San Leandro Street (1 well)	1,250	Northeast	510	Industrial
550 85th Avenue (2 wells)	1,850	Southeast	448	Industrial

Groundwater Quality

Concentrations of TPH as gasoline, MTBE and benzene remain dissolved in the groundwater up to 39 mg/l, 0.46 mg/l, and 6.4 mg/l, respectively. The concentrations of benzene and MTBE have remained fairly stable in wells MW-8 and MW-11. MTBE continues to be detected down gradient of the former tank locations in MW-16.

Historical dissolved oxygen (DO) data indicate DO below the general oxygen requirement of 0.2 mg/l for aerobic bio-degradation. However, DO concentrations recorded during the most recent sampling episode were on average at lease one order of magnitude higher than those historically seen at the site.

A summary of groundwater quality data, including available historic data, is presented in Table 3. Historical DO data is shown on Table 2. Laboratory analysis data are presented in Appendix B, Laboratory Data. Please refer to Figures 3 & 4 for a graphical representation of the dissolved TPH as gasoline and MTBE plumes.

Conclusions and Recommendations

Although the plume of dissolved TPH as gasoline and BTEX compounds appear to be localized around the former excavation, significant concentrations of MTBE have migrated west of the release area.

Groundwater flow has ranged from north/northwest to southwest over the seven years of groundwater monitoring. During the majority of sampling episodes, groundwater has been calculated to flow the west.

Please refer to Figure 2 for a Rose Diagram depicting groundwater flow direction average. The lengths of the arrows on the Rose Diagram are proportional to the number of monitoring episodes with that flow direction calculated. The shortest arrows represent one episode while the longer arrows represent three episodes.

The increase in DO concentrations is likely a result of rapid infiltration of surface water through the former tank hold and excavation backfill.

The concentrations of MTBE detected in MW-16 have historically been an order of magnitude higher than that detected in January 2000. The dissolved MTBE plume may have passed MW-16. The two additional down-gradient wells proposed by AEI will assist in defining the extent of the dissolved MTBE plume. Additionally, AEI proposes the collection of multiple water samples from a deep boring in the original source area to vertically define the dissolved hydrocarbon plume.

Please do not hesitate to call either of the undersigned, if you have any questions.

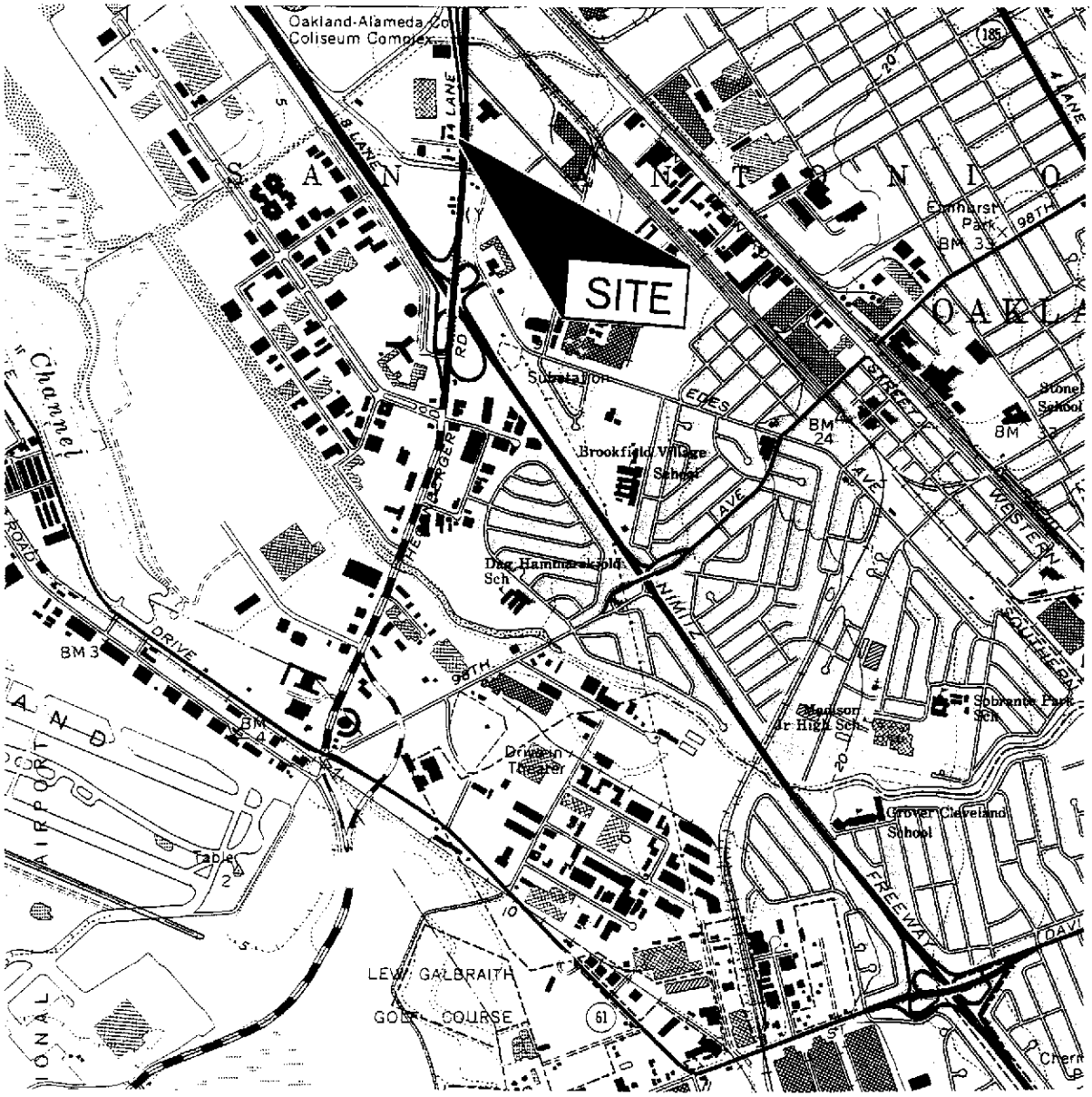
Sincerely,
AEI Consultants

Peter McIntyre
Project Geologist

Joseph P. Derhake, PE
Principal

Attachments

cc: Dinesh Manner, Diversified Investment and Management Corp.
400 Oyster Point Boulevard, Suite 400, South San Francisco, CA 94080



SOURCE:
USGS SAN LEANDRO QUAD
SCALE: 1: 24,000

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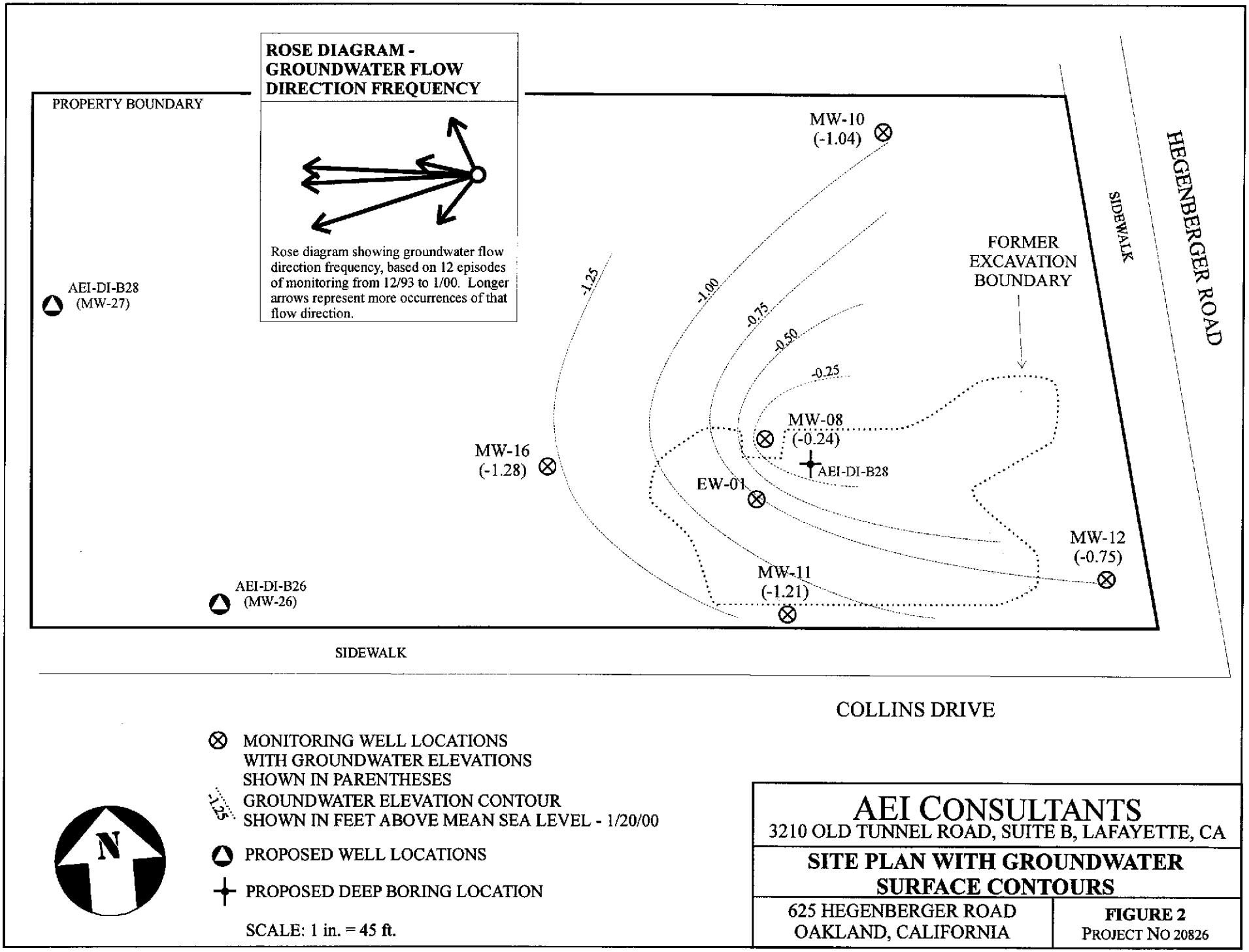
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SITE LOCATION MAP

625 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 20826



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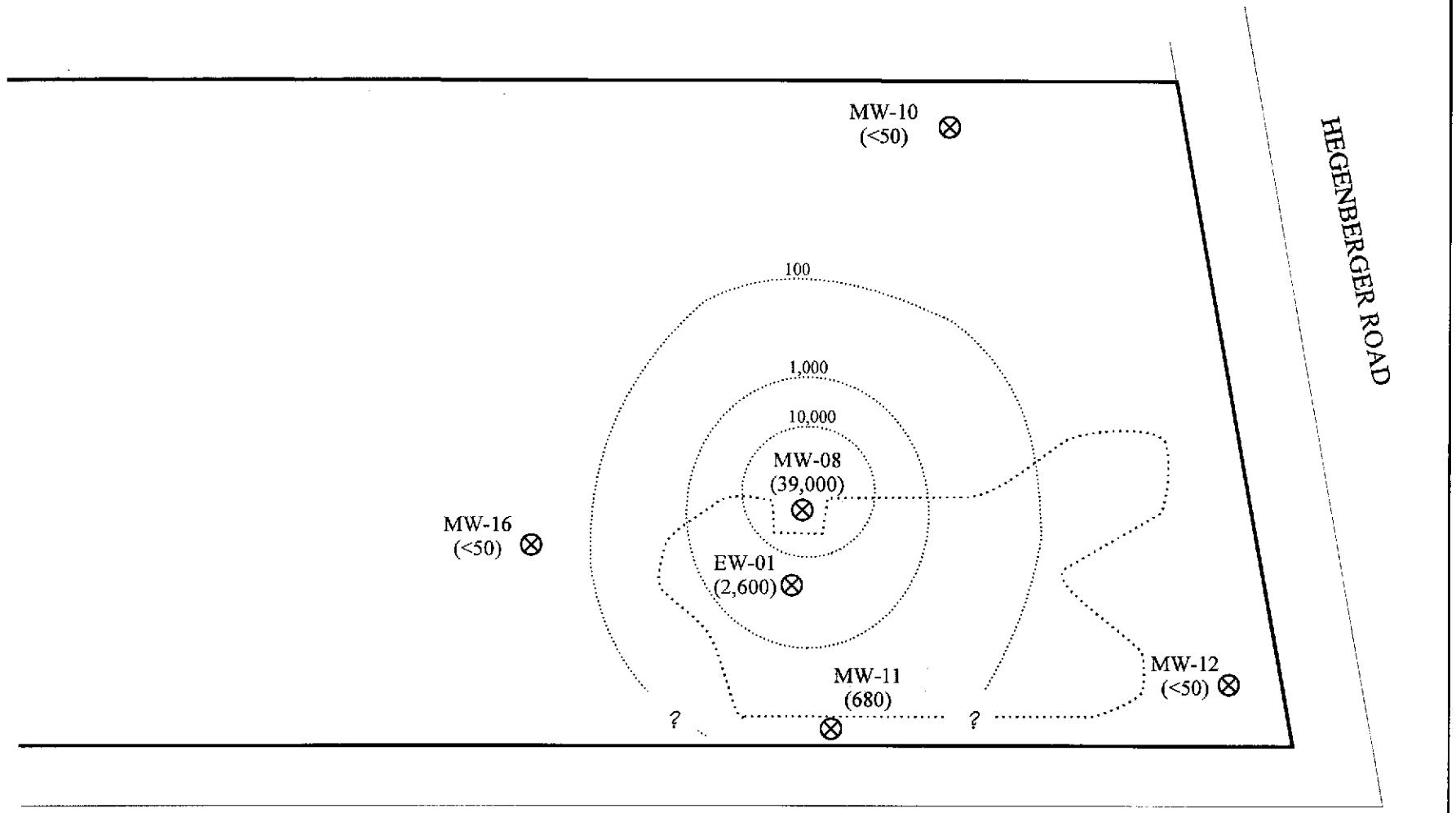
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SITE PLAN WITH GROUNDWATER SURFACE CONTOURS

625 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

FIGURE 2
PROJECT NO 20826



⊗ MONITORING WELL LOCATIONS WITH MTBE CONCENTRATIONS IN ug/l

100 BENZENE CONCENTRATION CONTOURS EXPRESSED IN ug/l

SCALE: 1 in. = 45 ft.

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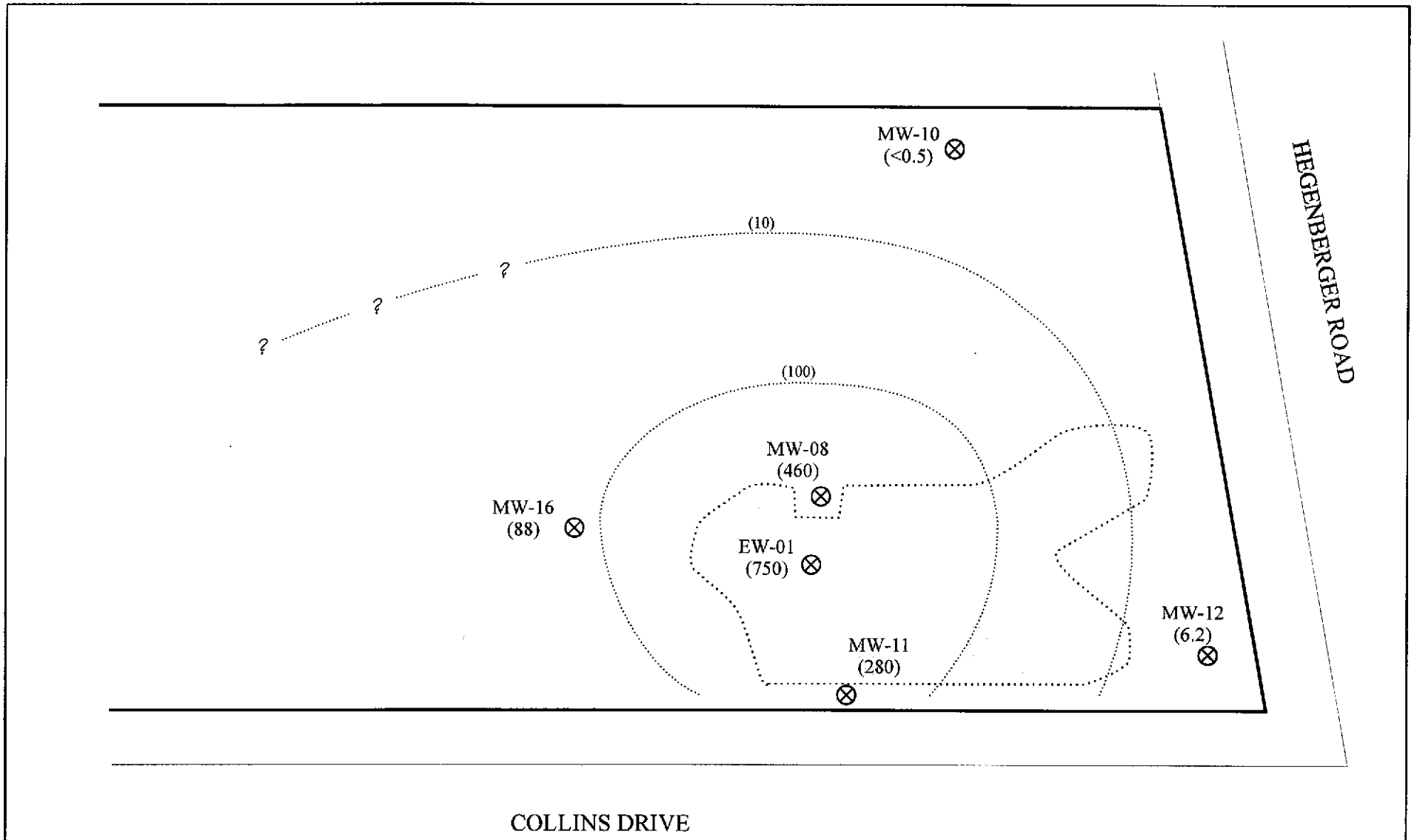
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

TPH AS GASOLINE CONTOURS

625 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

FIGURE 3
PROJECT NO 20826



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3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

MTBE CONCENTRATION CONTOURS

625 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

FIGURE 4
PROJECT NO 20826

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	5.53	7.48	-1.95
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	5.53	7.28	-1.75
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
MW-8	3/25/97	4.88	6.75	-1.87
MW-10	3/25/97	4.21	5.83	-1.62
MW-11	3/25/97	5.04	6.83	-1.79
MW-12	3/25/97	4.58	6.03	-1.45
MW-16	3/25/97	5.53	7.35	-1.82
MW-8	7/3/97	4.88	8.70	-3.82
MW-10	7/3/97	4.21	5.87	-1.66
MW-11	7/3/97	5.04	6.83	-1.79
MW-12	7/3/97	4.58	6.03	-1.45
MW-16	7/3/97	5.53	7.35	-1.82
MW-8	10/2/97	4.88	6.70	-1.82
MW-10	10/2/97	4.21	5.90	-1.69
MW-11	10/2/97	5.04	6.85	-1.81
MW-12	10/2/97	4.58	6.08	-1.50
MW-16	10/2/97	5.53	7.36	-1.83
MW-8	1/28/98	4.88	5.20	-0.32
MW-10	1/28/98	4.21	4.40	-0.19
MW-11	1/28/98	5.04	5.33	-0.29
MW-12	1/28/98	4.58	4.54	-0.04
MW-16	1/28/98	5.53	5.90	-0.37
MW-8	2/9/00	4.88	5.12	-0.24
MW-10	2/9/00	4.21	5.25	-1.04
MW-11	2/9/00	5.04	6.25	-1.21
MW-12	2/9/00	4.58	5.33	-0.75
MW-16	2/9/00	5.53	6.81	-1.28

Notes:
All 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)	Well Volumes Withdrawn	Stabilized Temperature (deg. C)	Qualitative Turbidity	Stabilized pH	Stabilized Disolved Oxygen (mg/L)	Stabilized Redox Potential (mV)	N (mg/L)	P (mg/L)	K (mg/L)
MW-8	12/22/93	1.5	4.50	3.00	19.40	turbid*						
MW-10	12/22/93	1.6	7.00	4.38	20.80	moderately turbid						
MW-11	12/22/93	1.5	4.50	3.00	20.20	turbid						
MW-12	12/22/93	1.6	5.30	3.31	20.30	moderately turbid						
MW-16	12/22/93	1.1	4.50	4.09	20.50	turbid						
MW-8	6/30/94	1.5	8.00	5.33	21.00	turbid*						
MW-10	6/30/94	1.6	6.00	3.75	21.00	turbid						
MW-11	6/30/94	1.4	6.00	4.29	20.20	turbid						
MW-12	6/30/94	1.6	6.00	3.75	20.60	moderately turbid						
MW-16	6/30/94	1.1	4.50	4.09	21.80	turbid						
MW-8	9/27/94	1.4	4.50	3.21	21.60	turbid*						
MW-10	9/27/94	1.5	6.00	4.00	22.60	turbid						
MW-11	9/27/94	1.3	3.00	2.31	21.00	turbid						
MW-12	9/27/94	1.5	6.00	4.00	22.50	turbid						
MW-16	9/27/94	1.0	3.00	3.00	22.60	turbid						
MW-8	1/10/95	1.7	5.30	3.12	17.20	turbid*						
MW-10	1/10/95	1.8	6.00	3.33	19.50	turbid						
MW-11	1/10/95	1.6	5.30	3.31	18.60	turbid						
MW-12	1/10/95	1.8	6.00	3.33	19.30	turbid						
MW-16	1/10/95	1.2	6.00	5.00	19.30	turbid						
MW-24	1/10/95	4.9	41.00	8.37	18.90	turbid						
MW-8	10/2/95	1.1	11.00	10.00	22.80	moderately turbid	6.49					
MW-10	10/2/95	1.5	11.00	7.33	22.60	turbid	7.20					
MW-11	10/2/95	1.0	12.00	12.00	22.00	moderately turbid	6.85					
MW-12	10/2/95	1.3	11.00	8.46	22.90	turbid	7.20					
MW-16	10/2/95	1.1	11.00	10.00	22.60	turbid	7.20					
MW-24	10/2/95	3.4	20.00	5.88	22.80	turbid	7.10					
MW-8	1/8/96	1.1	12.00	10.91	17.30**	slightly turbid	6.74**					
MW-10	1/8/96	1.5	10.00	6.67	17.90**	slightly turbid	6.62**					
MW-11	1/8/96	1.0	5.50	5.50	17.60**	slightly turbid	6.65**					
MW-12	1/8/96	1.2	10.00	8.33	18.00**	slightly turbid	6.49**					
MW-16	1/8/96	0.9	5.00	5.56	19.00**	slightly turbid	7.50**					
MW-24	1/8/96	3.4	35.00	10.29	17.60**	slightly turbid	6.67**					
MW-8	4/25/96	1.1	5.00	4.55	21.11	clear	6.53					
MW-10	4/25/96	1.4	5.00	3.57	22.83	slightly turbid	6.70					
MW-11	4/25/96	1.1	5.50	5.00	21.39	clear	6.58					
MW-12	4/25/96	1.2	5.00	4.17	22.39	clear	6.50					
MW-16	4/25/96	1.2	5.00	4.17	25.33	slightly turbid	7.12					
MW-8	3/25/97	2.2	10.00	4.55	18.17	clear	6.67	0.23	-140.00			
MW-10	3/25/97	3.4	12.00	3.57	19.72	slightly turbid	6.79	0.35	-131.00			
MW-11	3/25/97	2.0	10.00	5.00	18.56	clear	6.64	0.19	-120.00			
MW-12	3/25/97	2.4	10.00	4.17	18.44	clear	6.67	0.19	-79.00			
MW-16	3/25/97	2.4	10.00	4.17	17.94	slightly turbid	7.02	0.10	-135.00			
MW-8	7/3/97	1.1	12.00	10.91	19.58	clear	6.43	0.04	-99.00	<0.5	1.8	
MW-10	7/3/97	1.5	12.00	8.00	21.51	slightly turbid	6.67	0.17	-104.00			
MW-11	7/3/97	1.4	12.00	8.57	19.38	clear	6.36	0.05	-84.00	<0.5	1.8	
MW-12	7/3/97	1.5	12.00	8.00	20.62	clear	6.50	0.10	-76.00			
MW-16	7/3/97	1.0	12.00	12.00	19.66	clear	6.76	0.06	-103.00			
MW-8	10/2/97	1.1	4.50	4.09	21.23	clear	6.93	NA	NA			
MW-10	10/2/97	1.4	5.00	3.57	23.04	slightly turbid	7.26	NA	NA			
MW-11	10/2/97	1.1	7.00	6.36	22.94	clear	6.73	NA	NA			
MW-12	10/2/97	1.2	4.50	3.75	20.94	clear	7.15	NA	NA			
MW-16	10/2/97	1.2	7.00	5.83	19.11	slightly turbid	7.22	NA	NA			
MW-8	1/28/98	2.5	15.00	6.00	18.53	slightly greenish	6.86	0.10	-132.00			
MW-10	1/28/98	2.7	15.00	5.56	20.89	moderately turbid	7.05	0.09	-133.00			
MW-11	1/28/98	2.5	15.00	6.00	20.12	slightly greenish	6.74	0.11	-72.00			
MW-12	1/28/98	2.6	14.00	5.38	19.83	moderately turbid	6.90	0.11	-105.00			
MW-16	1/28/98	2.4	16.00	6.67	19.08	slightly turbid	7.20	0.18	-51.00			
MW-8	2/9/00	1.5	5.00	3.30	63.00***	slightly greenish	8.35	1.24	NA	19	3.4	35
MW-10	2/9/00	1.7	5.00	3.00	67.70	slightly turbid	8.56	0.70	NA	15	6.4	66
MW-11	2/9/00	1.6	5.00	3.20	63.50	slightly turbid	8.35	0.62	NA	<0.2	2.1	49
MW-12	2/9/00	1.6	5.00	3.10	62.80	clear	8.41	1.28	NA	10	3.1	33
MW-16	2/9/00	0.9	5.00	5.50	63.20	slightly turbid	8.63	3.13	NA	<0.2	1.8	12
EW-01	2/9/00	10.4	32.00	3.07	60.00	slightly turbid	8.48	0.51	NA	21	1.7	51

Notes:
* A slight hydrocarbon sheen was reported.
** Only one measurement collected.
*** Temperature expressed in degrees Farenheight
N = Nitrogen (total)
P = Phosphorous (total)
K = Potassium

Table 3
Historic Groundwater Monitoring Data
625 Hegenberger Road, Oakland, California
(concentrations in mg/L)

Well ID	Date	Consultant/ Lab		TPHg	MTBE	Benzene	Toluene		Ethyl-Benzene	Xylenes	TPHo	TPHd	Total Lead
MW-8	(1)	SUB	(2)	NA	NA	3.7	BDL		0.29	0.69	NA	NA	BDL
	5/28/93	HC/SUP		19	NA	6.4	0.028		0.16	0.036	NA	1	(3)
	12/22/93	LF/AEN	(4)	56	NA	16	5.9993	(5)	0.65	2.7	<0.2	0.3	<0.04
	6/30/94	LF/AEN	(4)	41	NA	11	4.8		2.2	8.2	0.5	<0.5	<0.04
	9/27/94	LF/AEN		28	NA	8.5	0.26		1.6	5.3	<0.2	0.62	<0.04
	1/10/95	LF/AEN		58	NA	10	11		2.4	12	<0.2	0.07	NA
	10/2/95	AEI/PEL		28	NA	0.051	0.016		0.054	0.08	<0.5	<0.05	NA
	1/8/96	AEI/MAI		72	NA	8.6	13		2.2	12	<0.25	3.7	NA
duplicate	1/8/96	AEI/MAI		62	NA	7.2	9.5		1.6	8	NA	NA	NA
	4/25/96	AEI/MAI		33	NA	7.6	2.3		1.5	4.8	NA	3.1	NA
	3/25/97	AEI/MAI		23	1.5	8.3	0.08		0.35	0.38	NA	1.9	NA
	7/3/97	AEI/MAI		14	1.3	6.6	0.032		0.19	0.1	NA	1.4	NA
duplicate	7/3/97	AEI/MAI		15	1.7	7.3	0.034		0.16	0.11	NA	1.4	NA
	10/2/97	AEI/MAI		7.6	0.89	3.5	0.014		0.037	0.021	NA	0.81	NA
	1/28/98	AEI/MAI		21	0.9	5.5	0.27		0.73	0.78	NA	2.7	NA
	9/9/99	AEI/MAI		2.5	0.38	0.79	0.0028		0.0047	0.008	NA	NA	NA
	2/9/00	**AEI/MAI**		**39**	**0.46**	**6.4**	**4.3**		**0.95**	**0.39**	**NA**	**NA**	**NA**
MW-10	(1)	SUB		NA	NA	0.0017	BDL		BDL	BDL	NA	NA	BDL
	5/28/93	HC/SUP		<0.05	NA	<0.0003	<0.0003		<0.0003	<0.0009	NA	0.054	(3)
	12/22/93	LF/AEN		<0.05	NA	<0.0005	<0.0007	(5)	<0.0005	<0.0002	<0.2	0.58	<0.04
	6/30/94	LF/AEN		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	0.6	<0.05	<0.04
	9/27/94	LF/AEN		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	<0.2	0.61	<0.04
	1/10/95	LF/AEN		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	<0.2	0.6	NA
	10/2/95	AEI/PEL		0.35	NA	0.0044	0.0026		0.0023	0.0064	<0.5	<0.05	NA
	1/8/96	AEI/MAI		0.05	NA	0.0058	0.0071		0.0012	0.0064	<0.25	<0.05	NA
	4/25/96	AEI/MAI		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	3/25/97	AEI/MAI		<0.05	<0.005	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	7/3/97	AEI/MAI		<0.05	<0.005	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	10/2/97	AEI/MAI		<0.05	<0.005	<0.0005	<0.0005		<0.0005	<0.0005	NA	0.11	NA
	1/28/98	AEI/MAI		<0.05	<0.005	0.0057	<0.0005		<0.0005	<0.0005	NA	ND	NA
	8/19/99	AEI/MAI		<0.05	<0.005	0.0057	<0.0005		<0.0005	<0.0005	NA	NA	NA
	2/9/00	**AEI/MAI**		**<0.05**	**<0.005**	**0.0057**	**<0.0005**		**<0.0005**	**<0.0005**	**NA**	**NA**	**NA**
MW-11	(1)	SUB	(6)	NA	NA	0.053	BDL		BDL	BDL	NA	NA	0.21
	5/28/93	HC/SUP		1.2	NA	0.45	0.017		0.0015	0.0021	NA	<0.05	(3)
	12/22/93	LF/AEN		9.2	NA	4.5	0.0383	(5)	0.012	0.043	<0.2	0.53	<0.04
	6/30/94	LF/AEN		8.8	NA	1.5	0.013		0.69	1.2	1.1	<0.05	<0.04
duplicate	6/30/94	LF/AEN		9.7	NA	1.7	0.014		0.73	1.3	NA	NA	NA
	9/27/94	LF/AEN		15	NA	6.5	0.026		0.87	0.59	<0.2	0.91	<0.04
	1/10/95	LF/AEN		14	NA	0.89	0.22		0.84	2.4	0.2	1.1	NA
	10/2/95	AEI/PEL		7.1	NA	0.047	0.0057		0.011	0.036	<0.5	<0.05	NA
	1/8/96	AEI/MAI		12	NA	1.2	0.099		0.79	1.4	<0.25	2	NA
	4/25/96	AEI/MAI		5.8	NA	0.23	0.059		0.2	0.77	NA	1.4	NA
	3/25/97	AEI/MAI		0.76	0.13	0.13	0.049		0.0029	0.001	NA	0.49	NA
	7/3/97	AEI/MAI		0.29	0.38	<0.0005	<0.0005		0.6	<0.0005	NA	<0.05	NA
	10/2/97	AEI/MAI		0.22	0.72	0.0088	0.00073		<0.0005	0.00067	NA	0.22	NA
	1/28/98	AEI/MAI		0.54	0.36	0.14	0.00081		<0.0005	<0.0005	NA	0.16	NA
	8/19/99	AEI/MAI		0.59	0.72	0.18	0.0032		<0.0005	<0.0005	NA	NA	NA
	2/9/00	**AEI/MAI**		**0.68**	**0.28**	**0.1**	**0.0031**		**<0.0005**	**0.0029**	**NA**	**NA**	**NA**
MW-12	(1)	SUB		NA	NA	0.0017	BDL		BDL	BDL	NA	NA	BDL
	5/28/93	HC/SUP		<0.05	NA	<0.0003	<0.0003		<0.0003	<0.0009	NA	<0.05	(3)
	12/22/93	LF/AEN		0.05	NA	<0.0005	<0.0007	(5)	<0.0005	<0.0002	<0.2	0.3	<0.04
	6/30/94	LF/AEN		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	0.4	<0.05	<0.04
	9/27/94	LF/AEN		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	<0.2	0.4	<0.04
duplicate	9/27/94	LF/AEN		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	NA	NA	NA
	1/10/95	LF/AEN		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	<0.2	0.3	NA
	10/2/95	AEI/PEL		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0005	<0.5	<0.05	NA
	1/8/96	AEI/MAI		<0.05	NA	0.0024	0.0027		0.00054	0.0028	<0.25	<0.05	NA
	4/25/96	AEI/MAI		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	3/25/97	AEI/MAI		<0.05	0.016	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	7/3/97	AEI/MAI		<0.05	0.016	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	10/2/97	AEI/MAI		<0.05	0.017	<0.0005	<0.0005		<0.0005	<0.0005	NA	0.12	NA
	1/28/98	AEI/MAI		<0.05	0.013	0.0013	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	8/19/99	AEI/MAI		<0.05	0.0091	<0.0005	<0.0005		<0.0005	<0.0005	NA	NA	NA
	2/9/00	**AEI/MAI**		**<0.05**	**0.0062**	**<0.0005**	**<0.0005**		**<0.0005**	**<0.0005**	**NA**	**NA**	**NA**

Table 3
Historic Groundwater Monitoring Data
625 Hegenberger Road, Oakland, California
(concentrations in mg/L)

Well ID	Date	Consultant/ Lab		TPHg	MTBE	Benzene	Toluene		Ethyl-Benzene	Xylenes	TPHo	TPHd	Total Lead
MW-16	(1)	SUB	(7)	NA	NA	BDL	BDL		BDL	BDL	NA	NA	BDL
	5/28/93	HC/SUP		<0.05	NA	0.0028	<0.0003		<0.0007	<0.0009	NA	<0.05	(3)
	12/22/93	LF/AEN		2.2	NA	<0.0005	<0.0007	(5)	<0.0005	<0.0002	<0.2	0.52	<0.04
	6/30/94	LF/AEN		<0.05	NA	0.008	<0.0005		<0.0005	<0.0002	0.9	<0.05	<0.04
	9/27/94	LF/AEN		0.07	NA	0.017	<0.0005		<0.0005	<0.0002	<0.2	0.59	<0.04
	1/10/95	LF/AEN		0.3	NA	0.19	<0.0005		<0.0005	<0.0002	<0.2	0.7	NA
	10/2/95	AEI/PEL		0.55	NA	0.0077	0.0007		0.0035	0.013	<0.5	<0.05	NA
	1/8/96	AEI/MAI		0.36	NA	<0.0005	<0.0005		0.004	0.0097	<0.25	0.14	NA
	4/25/96	AEI/MAI		1.1	NA	0.39	0.0037		0.0032	0.014	NA	0.33	NA
	3/25/97	AEI/MAI		0.31	2.1	<0.0005	<0.0005		<0.0005	0.0014	NA	0.12	NA
	7/3/97	AEI/MAI		0.25	1.9	<0.0005	<0.0005		<0.0005	<0.0005	NA	0.13	NA
	10/2/97	AEI/MAI		0.29	2	<0.0005	<0.0005		<0.0005	<0.0005	NA	0.18	NA
	1/28/98	AEI/MAI		0.15	1.9	<0.0005	<0.0005		<0.0005	<0.0005	NA	0.13	NA
	9/9/99	AEI/MAI		<0.05	0.88	<0.0005	<0.0005		<0.0005	<0.0005	NA	NA	NA
	2/9/00	**AEI/MAI**		**<0.05**	**0.088**	**<0.0005**	**0.0006**		**<0.0005**	**0.00087**	**NA**	**NA**	**NA**
MW-24	1/10/95	LF/AEN		31	NA	12	1.9		1.1	1.3	0.2	0.9	NA
duplicate	1/10/95	LF/AEN		31	NA	12	2		1.1	1.3	0.2	0.8	NA
	10/2/95	AEI/PEL		8.6	NA	0.044	0.011		0.012	0.04	<0.5	<0.05	NA
	1/8/96	AEI/MAI	(8)	22	NA	8.8	0.14		0.5	0.28	<0.25	1.5	NA
EW-01	**2/9/00**	**AEI/MAI**		**2.6**	**0.75**	**0.8**	**0.048**		**0.021**	**0.091**	**NA**	**NA**	**NA**
Blanks													
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

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
MTBE	methyl tertiary butyl ether
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., Lafayette, 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-24 was abandoned on April 5, 1996.

APPENDIX A

WELL FIELD SAMPLING FORMS

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-8

Project Name: Hegenberger	Date of Sampling: 2/9/2000
Job Number: 20826	Name of Sampler: Peter McIntyre
Project Address: 625 Hegenberger Road	Oakland, CA

MONITORING WELL DATA

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	14.40
Depth to Water	5.12
Water Elevation	-0.24
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	4.6
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5
Appearance of Purge Water	

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 X 40 ml VOAs; 2 X 1 liter

Time	Vol Remvd (gal)	Temp F	PH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
1345	2.0	63.2	8.33	1431	1.13	
1400	4.0	63.9	8.35	2300	1.24	
1420	5.0	64.0	8.36	3120	1.29	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

Strong hydrocarbon odor.

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-10

Project Name: Hegenberger	Date of Sampling: 2/9/2000
Job Number: 20826	Name of Sampler: Peter McIntyre
Project Address: 625 Hegenberger Road	Oakland, CA

MONITORING WELL DATA

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	15.7
Depth to Water	5.25
Water Elevation	-1.04
Three Well Volumes (gallons)*	
2" casing: (TD – DTW)(0.16)(3)	5.0
4" casing: (TD – DTW)(0.65)(3)	
6" casing: (TD – DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5
Appearance of Purge Water	Moderately Turbid

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 X 40 ml VOAs

Time	Vol Remvd (gal)	Temp C	Ph	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	1	62.3	8.56	5600	0.93	
	3	67.7	8.57	5630	1.20	
	5	63.5	8.55	5610	0.70	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-11	
Project Name: Hegenberger	Date of Sampling: 2/9/2000
Job Number: 20826	Name of Sampler: Peter McIntyre
Project Address: 625 Hegenberger Road	Oakland, CA
MONITORING WELL DATA	
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	15
Depth to Water	6.25
Water Elevation	-1.21
Three Well Volumes (gallons)*	
2" casing: (TD – DTW)(0.16)(3)	4.3
4" casing: (TD – DTW)(0.65)(3)	
6" casing: (TD – DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5
Appearance of Purge Water	Slightly Greenish
GROUNDWATER SAMPLES	
Number of Samples/Container Size	2 X 40 ml VOAs; 2 X 1 liter

Time	Vol Remvd (gal)	Temp C	PH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	2	63.5	8.32	3120	0.73	
	5	63.5	8.38	2980	0.60	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)						

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-12	
Project Name: Hegenberger	Date of Sampling: 2/9/2000
Job Number: 20826	Name of Sampler: Peter McIntyre
Project Address: 625 Hegenberger Road	Oakland, CA
MONITORING WELL DATA	
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	15.5
Depth to Water	5.33
Water Elevation	-0.75
Three Well Volumes (gallons)*	
2" casing: (TD – DTW)(0.16)(3)	4.8
4" casing: (TD – DTW)(0.65)(3)	
6" casing: (TD – DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5
Appearance of Purge Water	Moderately Turbid
GROUNDWATER SAMPLES	
Number of Samples/Container Size	2 X 40 ml VOAs

Time	Vol Remvd (gal)	Temp C	PH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	2	63.0	8.41	2140	1.44	
	3.5	62.5	8.40	2080	1.37	
	5	63.0	8.42	2150	1.19	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)
Slight hydrocarbon odor

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-16	
Project Name: Hegenberger	Date of Sampling: 2/9/2000
Job Number: 20826	Name of Sampler: Peter McIntyre
Project Address: 625 Hegenberger Road	Oakland, CA
MONITORING WELL DATA	
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	12.5
Depth to Water	6.81
Water Elevation	-1.28
Three Well Volumes (gallons)*	
2" casing: (TD – DTW)(0.16)(3)	2.8
4" casing: (TD – DTW)(0.65)(3)	
6" casing: (TD – DTW)(1.44)(3)	
Actual Volume Purged (gallons)	4
Appearance of Purge Water	Slight odor
GROUNDWATER SAMPLES	
Number of Samples/Container Size	2 X 40 ml VOAs

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	1	63.0	8.55	950	4.55	
	2	63.0	8.64	1469	3.70	
	3	62.8	8.65	1640	3.13	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: EW-01	
Project Name: Hegenberger	Date of Sampling: 2/9/2000
Job Number: 20826	Name of Sampler: Peter McIntyre
Project Address: 625 Hegenberger Road	Oakland, CA
MONITORING WELL DATA	
Well Casing Diameter (2"/4"/6")	4"
Seal at Grade – Type and Condition	
Well Cap & Lock – OK/Replace	
Elevation of Top of Casing	NA
Depth of Well	22.5
Depth to Water	6.45
Water Elevation	NA
Three Well Volumes (gallons)*	
2" casing: (TD – DTW)(0.16)(3)	
4" casing: (TD – DTW)(0.65)(3)	31.3
6" casing: (TD – DTW)(1.44)(3)	
Actual Volume Purged (gallons)	31
Appearance of Purge Water	Moderately Turbid
GROUNDWATER SAMPLES	
Number of Samples/Container Size	2 X 40 ml VOAs

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	10	63.6	8.41	3550	0.43	
	20	60.7	8.52	3230	0.43	
	28	60.0	8.47	3190	0.51	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)
Strong hydrocarbon odor

TD - Total Depth of Well
DTW - Depth To Water

APPENDIX B

LABORATORY ANALYTICAL AND CHAIN OF CUSTODY DOCUMENTATION

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc. 3210 Old Tunnel Road, Suite B Lafayette, CA 94549-4157	Client Project ID: #20826; Hegenberger	Date Sampled: 02/09/2000
		Date Received: 02/09/2000
	Client Contact: Peter McIntyre	Date Extracted: 02/09/2000
	Client P.O:	Date Analyzed: 02/09/2000

02/16/2000

Dear Peter:

Enclosed are:

1). the results of **6** samples from your **#20826; Hegenberger** 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

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #20826; Hegenberger	Date Sampled: 02/09/2000
3210 Old Tunnel Road, Suite B		Date Received: 02/09/2000
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 02/13-02/15/2000
	Client P.O:	Date Analyzed: 02/13-02/15/2000

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
30870	MW-08	W	39,000,a	460	6400	4300	950	3900	100
30871	MW-10	W	ND	ND	ND	ND	ND	ND	102
30872	MW-11	W	680,c,j	280	100	3.1	ND	2.9	109
30873	MW-12	W	ND	6.2	ND	ND	ND	ND	103
30874	MW-16	W	ND ?	88	ND	0.60	ND	0.87	101
30875	EW-01	W	2600,a	750	800	48	21	91	112
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

McCAMPBELL ANALYTICAL INC.
110 2nd Ave. South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
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QC REPORT

Date: 02/13/00-02/14/00 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 21400				Instrument: GC-3			
Surrogate1	0.000	102.0	101.0	100.00	102	101	1.0
Xylenes	0.000	292.0	293.0	300.00	97	98	0.3
Ethyl Benzene	0.000	97.0	97.0	100.00	97	97	0.0
Toluene	0.000	101.0	100.0	100.00	101	100	1.0
Benzene	0.000	107.0	105.0	100.00	107	105	1.9
MTBE	0.000	88.0	88.0	100.00	88	88	0.0
GAS	0.000	912.0	935.7	1000.00	91	94	2.6
SampleID: 21400				Instrument: MB-1			
Oil & Grease	0.000	23.2	23.7	20.00	116	119	2.2
SampleID: 21600				Instrument: GC-11 A			
Surrogate1	0.000	114.0	112.0	100.00	114	112	1.8
TPH (diesel)	0.000	323.0	300.0	300.00	108	100	7.4

$$\%\ \text{Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # L042-01 **Date:** 2/21/00

McCampbell Analytical
110 2nd Avenue South
Pacheco CA 94553

Project: 18886

PO#

Date Rec'd: 2/11/00
Date Started: 2/11/00
Date Completed: 2/18/00

Date Sampled: 2/09/00
Time:
Sampler:

Sample ID	Lab ID	PQL	MDL	Method	Analyte	Results	Units
MW-08	L31312		0.2	351.3/300	Nitrogen (Total)	19	mg/L
			0.01	365.2	Total Phosphorous	3.4	mg/L
			1.0	200.7	Potassium	35	mg/L
MW-10	L31313		0.2	351.3/300	Nitrogen (Total)	15	mg/L
			0.01	365.2	Total Phosphorous	6.4	mg/L
			1.0	200.7	Potassium	66	mg/L
MW-11	L31314		0.2	351.3/300	Nitrogen (Total)	ND	mg/L
			0.01	365.2	Total Phosphorous	2.1	mg/L
			1.0	200.7	Potassium	49	mg/L
MW-12	L31315		0.2	351.3/300	Nitrogen (Total)	10	mg/L
			0.01	365.2	Total Phosphorous	3.1	mg/L
			1.0	200.7	Potassium	33	mg/L
MW-16	L31316		0.2	351.3/300	Nitrogen (Total)	ND	mg/L
			0.01	365.2	Total Phosphorous	1.8	mg/L
			1.0	200.7	Potassium	12	mg/L
EW-01	L31317		0.2	351.3/300	Nitrogen (Total)	21	mg/L
			0.01	365.2	Total Phosphorous	1.7	mg/L
			1.0	200.7	Potassium	51	mg/L

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

Report# L042-01

QC REPORT

McCampbell Analytical
110 2nd Avenue South
Pacheco CA 94553

Dates Analyzed 2/11/00-2/18/00

Analyte	Batch #	Method	MS % Recovery	MSD % Recovery	RPD	Blank
Nitrogen (Total)	I00891	351.3/300	108.0	94.0	13.9	ND
Total Phosphorous	I00865	365.2	99.8	100.2	0.4	ND
Potassium	I00925	200.7	100.4	94.8	5.7	ND

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

L042-71

McCAMPBELL ANALYTICAL INC.

1110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY ☐ ROUTINE

Report To: ED HAMILTON Bill To: MAI

Project #: 18886 Project Name: All

Project Location:

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other H_2SO_4	ANALYSIS REQUEST: EPA 601/8010	EPA 602/8020	EPA 608/808	EPA 608/8080-PCB's only	EPA 624/8240/8260	EPA 625/8270	CAM – 17 Metals	EPA – Priority Pollutant Metals	LUFT Metals	LEAD (7240/7421/239.2/6010)	ORGANIC LEAD	RCI	OTHER: N, P, K						COMMENTS
MW-08		2/9/01		1	P	X								X													X	L31312					30870
MW-10		"		"	"	"								"													"	L31313					30871
MW-11		"		"	"	"								"													"	L31314					30872
MW-12		"		"	"	"								"													"	L31315					30873
MW-16		"		"	"	"								"													"	L31316					30874
EW-01		"		"	"	"								"													"	L31317					30875

Relinquished By:	Date:	Time:	Received By:
Yen Cao	2/10		CA Overnight
California Overnight	2/11/01	8:10 AM	Jennifer Hoffman

Remarks:

AEI ENVIRONMENTAL, INC.

Environmental Engineering & Construction

~~901 Moraga Road, Suite C~~ 3210 Old Tunnel Rd Ste B
Lafayette, CA 94549
(925) 283-6000 Fax: (925) 283-6121

CHAIN OF CUSTODY

18886 Zale 192 Inc

PAGE 1 OF 1

TAT: RUSH / 24 hr / 48 hr / ~~5 day~~ / other

AEI PROJECT MANAGER Peter McIntyre
PROJECT NAME Hagenberger
PROJECT NUMBER 20826
TOTAL # OF CONTAINERS 18
RCVD. GOOD CONDITION/COLD [X] Y [ ] N

SAMPLE ID	DATE	TIME	MATRIX	TPH(g), BTEX, MTBE SOIL: EPA 5030/8015M, 8020 WATER: EPA 5030/8015m, 602	TPH(d) SOIL: EPA 5030/8015M WATER: EPA 8015M	BTEX, MTBE SOIL: EPA 8020 WATER: EPA 602	TOTAL OIL & GREASE SOIL: EPA 418.1 or STD. 5520 I/F/B-F WATER: STD. 5520 I&F	VOLATILE HALOCARBONS SOIL: EPA 8010 WATER: EPA 601	VOC's SOIL: EPA 8260 WATER: EPA 624	SEMI-VOLATILE ORGANICS SOIL: EPA 8270/3550 WATER: EPA 625/3510	TOTAL LEAD (TTLC) SOIL: 6010 (ICP) WATER: 239.2 (AA)	LUFT 5 METALS SOIL: EPA 7130, 7130, 7190, 7420, 7060 WATER:	N, P, K		HOLD	# OF CONTAINERS
MW-08	2/9/00	4:20	H2O	X									X			3
MW-10		4:45		X									X			3
MW-11		4:10		X									X			3
MW-12		4:35		X									X			3
MW-16		4:00		X									X			3
EW-01		4:55		X									X			3

30870
30871
30872
30873
30874
30875

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATION APPROPRIATE ✓
CONTAINERS ✓

VOAS	O&G	METALS	OTHER
✓			

COMMENTS / INSTRUCTIONS pH reserve to pH < 2.0 w/ HNO3
N, P, K - Nitrogen, Phosphorous, Potassium

ANALYTICAL LABORATORY McCampbell Analytical
ADDRESS
PHONE ( ) FAX ( )

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
SIGNATURE	Marcia Venegas	SIGNATURE	SIGNATURE
Pete McIntyre	PRINTED NAME	PRINTED NAME	PRINTED NAME
AEI	MAI	COMPANY	COMPANY
DATE 2/9/00 TIME 6:00 PM	DATE TIME	DATE TIME	DATE TIME