

December 12, 2001

Mr. Don Hwang
ACHCSA
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

DEC 18 2001

Subject: Quarterly Groundwater Monitoring Report
1075 40th Street
Oakland, CA
AEI Project No. 3119

Dear Mr. Hwang:

Enclosed is the quarterly groundwater monitoring report documenting the findings for the Third Quarter 2001.

Please call me at (925) 283-6000 if you have any questions.

Sincerely,



Orion Alcalay, M.S.
Environmental Scientist

DEC 18 2001

December 11, 2001

**QUARTERLY GROUNDWATER MONITORING
REPORT**
Third Quarter 2001

1075 40th Street
Oakland, CA

Project No. 3119

Prepared For

Fidelity Roofing Company
1075 40th Street
Oakland, CA 94608

Prepared By

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

AEI



December 11, 2001

Mr. Monte Upshaw
Fidelity Roof Company
1075 40th Street
Oakland, CA 94608

RE: Quarterly Groundwater Monitoring and Sampling Report
Third Quarter 2001
1075 40th Street
Oakland, California
Project No. 3119

Dear Mr. Upshaw:

On your behalf, AEI Consultants (AEI) has prepared this report to document the groundwater investigation at the above referenced site (Figure 1: Site Location Map). The purpose of this activity is to monitor groundwater quality in the vicinity of previous underground storage tanks (USTs). The work was performed in compliance with requirements of the Alameda County Health Care Services Agency (ACHCSA). This report presents the findings of the third episode of groundwater monitoring and sampling for the year 2001.

Site Description and Background

The site currently supports the operation of Fidelity Roof Company and is located in a mixed residential and commercial area of Oakland at 1075 40th Street.

On December 19, 1995, Tank Protect Engineering, Inc. removed one (1) 1,000 gallon diesel underground storage tank (UST) and one (1) 500 gallon gasoline UST from the southeast corner of the property. The removal of the tanks produced a single excavation. Excavated soil was stockpiled north of the excavation. Three discrete soil samples were collected from beneath the USTs. Analysis of the samples indicated that soil beneath the 1,000 gallon UST had been impacted by minor concentrations of Total Petroleum Hydrocarbons as gasoline (TPH-g), TPH as diesel (TPH-d), benzene, toluene, ethylbenzene and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE). A single soil sample collected from beneath the 500 gallon UST indicated that 100 mg/kg of TPH-g and 96 mg/kg of TPH-d were present.

On September 12, 1996, AEI advanced four soil borings in the vicinity of the former UST excavation (Ref. 1). Soil samples were collected from all of the borings and groundwater samples were collected from two of the borings. Analytical results from the subsurface investigation revealed significant levels of gasoline and diesel petroleum hydrocarbons present in soil to the south and to the west of the open excavation. The contamination was thought to

Corporate Headquarters

Los Angeles
(310) 798-4255

Phoenix
(602) 240-5990

San Francisco
(800) 801-3224

Seattle
(425) 401-8500

New York
(212) 279-7770

extend beneath the existing pump island. Groundwater analysis indicated maximum concentrations of 5,500 µg/L of TPH-g, 340 µg/L of benzene, and 2,100 µg/L of TPH-d. Due to the high concentrations of petroleum hydrocarbons within the groundwater, the ACHCSA required further investigation of the extent and magnitude of the groundwater contaminant plume.

During the Phase II Subsurface Investigation, AEI collected four soil samples from the stockpile. The samples were combined into one composite sample for analysis in the laboratory. Analysis of the samples indicated concentrations of 3.8 mg/kg of TPH-g, 28 mg/kg of TPH-d, and minor concentrations of BTEX. Approval was granted by Ms. Hugo of the ACHCSA to reuse the stockpiled soil as backfill material.

On October 25, 1996, AEI extended the excavation laterally 7 feet to the south and 12 feet to west (Ref. 2). Soil was removed to a depth of 9 feet below ground surface (bgs). The contaminated soil was stockpiled on-site and profiled for disposal into a Class III Landfill. The dispenser island and associated piping were also removed. Groundwater was not encountered during the excavation activities. Four confirmation soil samples were collected from the excavation sidewalls. Analyses of the soil samples collected from the excavation sidewalls indicated that up to 150 mg/kg of TPH-g, 16 mg/kg of benzene, and 300 mg/kg of TPH-d remained within the western sidewall of the excavation.

The excavated soil was profiled and accepted for disposal at the BFI Vasco Road Sanitary Landfill, in Livermore, California. In November 1996, approximately 235 tons of contaminated soil was loaded and transported to the landfill for disposal, under non-hazardous waste manifest.

On March 6, 1997, AEI installed three groundwater monitoring wells (Ref. 3). The wells were subsequently sampled in March 1997, June 1997, October 1997 and January 1998. The analytical data from January 1998 indicated that 29,000 µg/L of TPH-g, 5,600 µg/L of benzene and 7,300 µg/L of TPH-d were present in the groundwater.

At the request of the ACHCSA, six additional soil borings were drilled south and west of the well locations on November 4, 1998 (Ref. 4). The locations of these borings were chosen to assess the lateral extent of impacted groundwater at the site. TPH-d was detected at 2,400 µg/L in groundwater to the south of the former excavation. No significant concentrations of petroleum hydrocarbons were detected from the other borings.

Based on the results of these six soil borings, the ACHCSA requested the installation of a fourth groundwater monitoring well at the site, located south of the former tank locations along Yerba Buena Avenue. Monitoring well MW-4 was installed on July 15, 1999, and two soil samples at 10 and 14 feet bgs were analyzed from the boring (Ref. 5). No detectable concentrations of petroleum hydrocarbons were found in the soil samples.

The analytical results of prior groundwater sampling episodes are included in Table 2. This report describes the results of the subsequent groundwater monitoring event which took place on November 6, 2001.

Summary of Activities

AEI measured the depth to groundwater in the four wells on November 6, 2001. Prior to sampling, the depth to water from the top of the well casings was measured with an electric water level indicator. The wells were purged and sampled using disposable Teflon bailers. Temperature, pH, and specific conductivity were measured during the purging of the wells. AEI removed at least 3 well volumes from each well while purging. Once the temperature, pH, and specific conductivity stabilized, a water sample was collected. Well locations are shown in Figure 2.

Water was poured from the bailers into 1-liter amber bottles and 40 ml VOA vials and capped so neither head space nor air bubbles were visible within the sample containers. Samples were shipped on ice under proper chain of custody protocol to McCampbell Analytical, Inc. of Pacheco, California (State Certification #1644).

Groundwater samples were submitted for chemical analysis for TPH-g (EPA Method 5030/8015), MTBE (EPA Method 8020/602), benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8020/602), and (TPH-d) (EPA Method 3510/8015).

Field Results

A strong hydrocarbon odor and surface sheen were detected during the sampling of monitoring well MW-3. Groundwater levels for the current monitoring episode ranged from 32.64 to 35.21 feet above mean sea level (MSL). These groundwater elevations were an average of 0.22 feet lower than the previous monitoring episode. The most recent calculated groundwater gradient is 0.05 foot per foot (ft/ft), and the direction of flow was towards the northwest.

Groundwater elevation data are summarized in Table 1. The groundwater elevation contours and the groundwater flow direction are shown on Figure 2. Refer to Appendix B for Groundwater Monitoring Well Field Sampling Forms.

Groundwater Quality

Significant concentrations of petroleum hydrocarbons still remain in the groundwater. A slight decrease in concentrations of TPH-g, TPH-d and MTBE were observed in wells MW-1, MW-2 and MW-4. Concentrations of these constituents as well as benzene and total xylenes remained highest in well MW-3. All constituents were below laboratory detection limits in well MW-1.

A summary of groundwater quality data is presented in Table 2. Laboratory results and chain of custody documents are included in Appendix B.

Conclusions

Groundwater analytical results from the current sampling episode indicated that elevated levels of petroleum hydrocarbons remained in the groundwater. Groundwater elevations were slightly lower than the previous sampling episode and groundwater flow direction was to the northwest. A corrective action plan (CAP) discussing available remedial technologies available to this site was submitted to the ACHCSA for their review and approval is pending. Quarterly groundwater monitoring and sampling of the wells will continue at the site and the next monitoring and sampling episode is scheduled for February 2002, as per requirements of the ACHCSA.

References

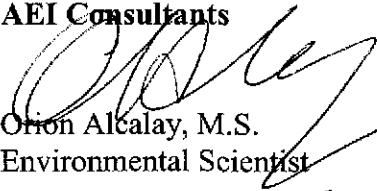
1. Phase II Soil and Groundwater Investigation Report, October 7, 1996, prepared by AEI.
2. Excavation and Disposal of Contaminated Soil Report, January 7, 1997, prepared by AEI.
3. Groundwater Monitoring Well Installation Report, dated May 30, 1997, prepared by AEI.
4. Phase II Subsurface Investigation Report, December 9, 1998, prepared by AEI.
5. Groundwater Monitoring Well and Sampling report, September 3, 1999, prepared by AEI.
6. Quarterly Groundwater Monitoring and Sampling Report, March 21, 2000, prepared by AEI.
7. Quarterly Groundwater Monitoring and Sampling Report, July 28, 2000, prepared by AEI.
8. Quarterly Groundwater Monitoring and Sampling Report, November 6, 2000, prepared by AEI.
9. Quarterly Groundwater Monitoring and Sampling Report, January 29, 2001, prepared by AEI.
10. Quarterly Groundwater Monitoring and Sampling Report, May 8, 2001, prepared by AEI.
11. Quarterly Groundwater Monitoring and Sampling Report, August 14, 2001, prepared by AEI.

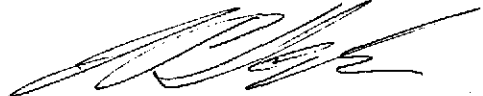
Report Limitations and Signatures

This report presents a summary of work completed by AEI Consultants including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, but it cannot be assumed that they are entirely representative of all areas not sampled. All conclusions and recommendations are based on these analyses, observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

These services were performed in accordance with generally accepted practices in the environmental engineering and construction field which existed at the time and location of the work.

Sincerely,
AEI Consultants


Orion Alcalay, M.S.
Environmental Scientist


J. P. Derhake, PE, CAC
Senior Author



Figures

- Figure 1 Site Location Map
- Figure 2 Well Location Map
- Figure 3 Groundwater Gradient Map

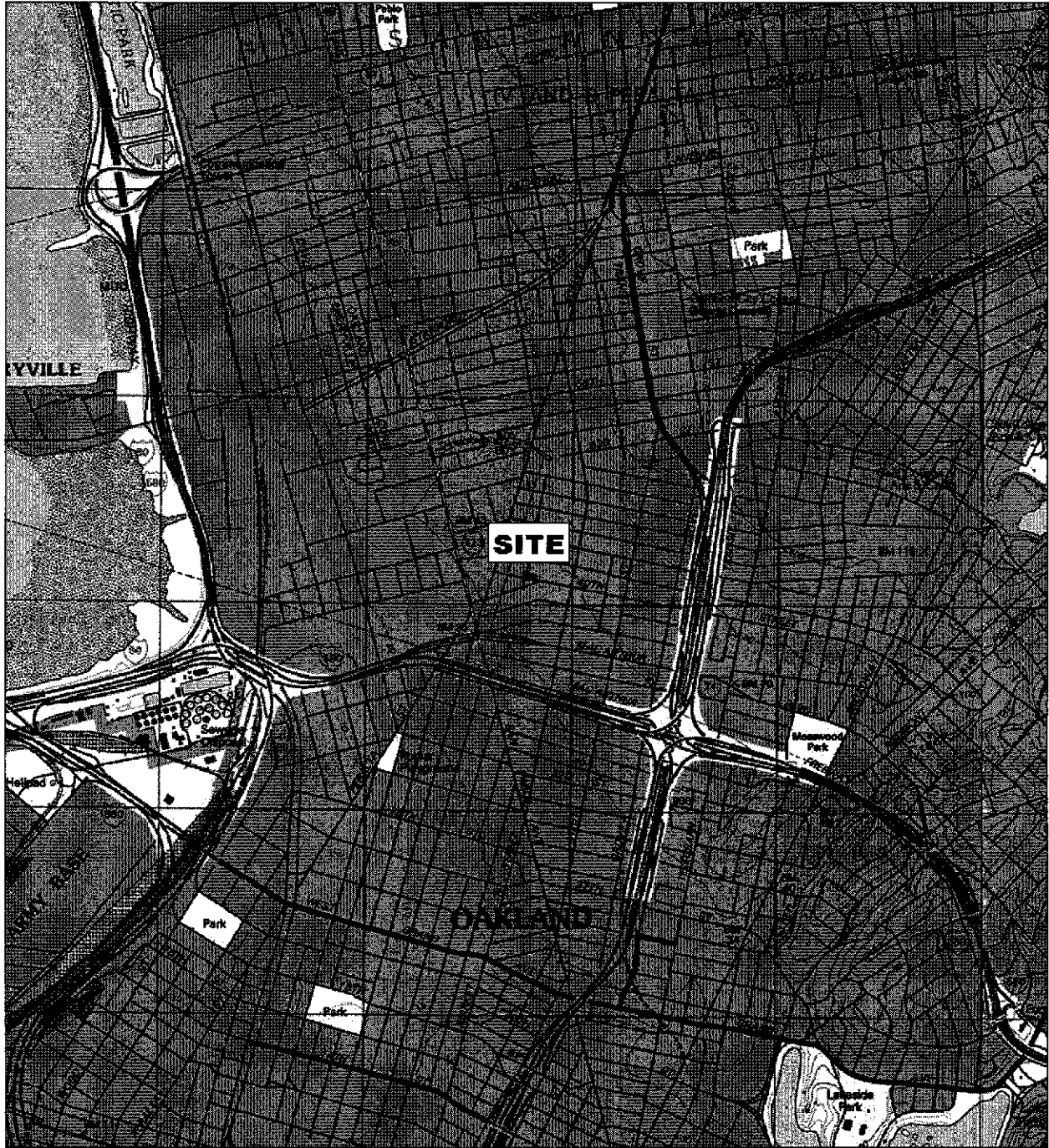
Tables

- Table 1 Groundwater Elevation Data
- Table 2 Groundwater Sample Analytical Data

Appendices

- Appendix A Groundwater Monitoring Well Field Sampling Forms
- Appendix B Current Laboratory Analyses With Chain of Custody Documentation

cc: Mr. Don Hwang, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577



TN* /MN
15%

0 1060 FEET 500 1060 METERS

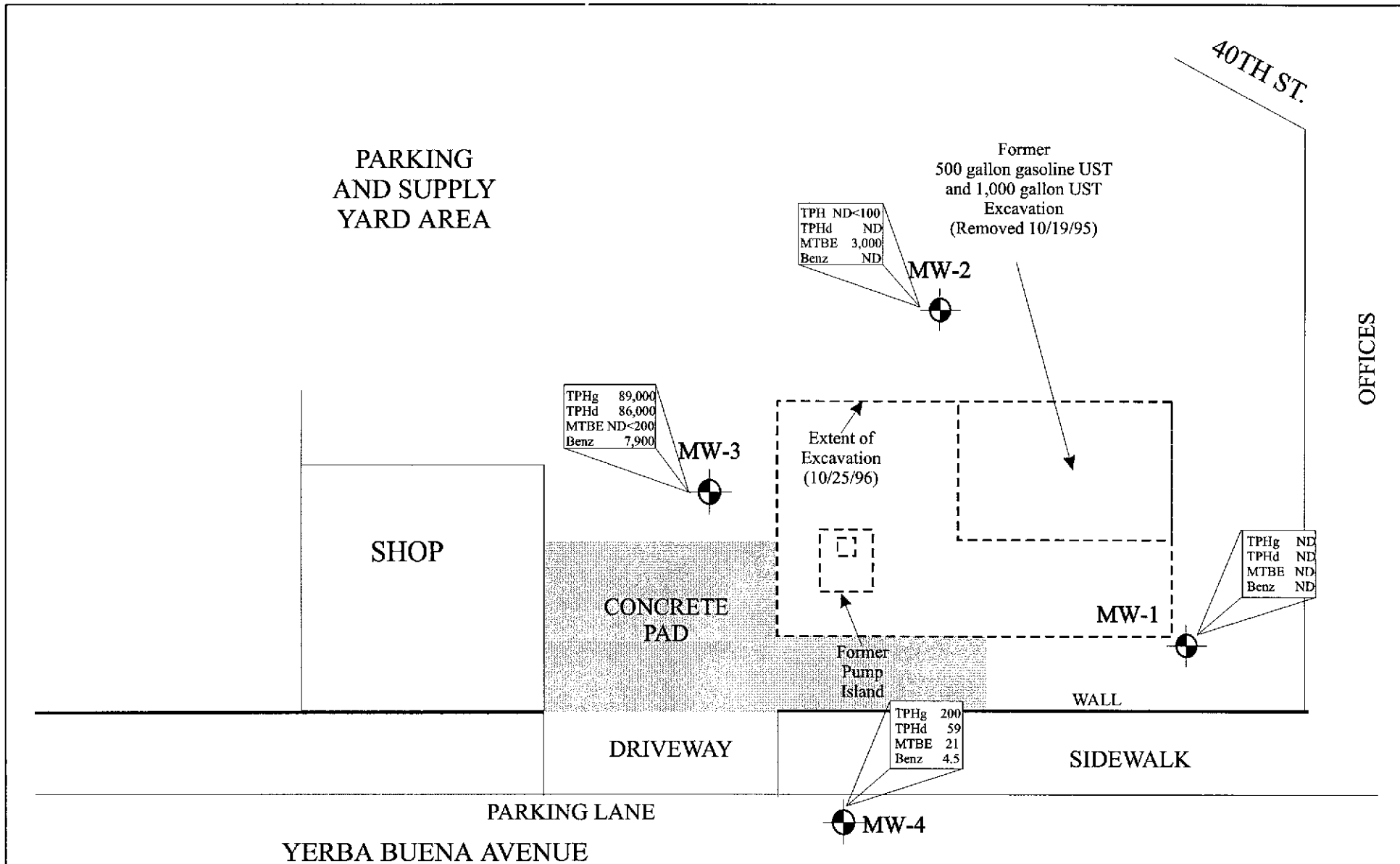
Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

AEI CONSULTANTS
3210 OLD TUNNEL RD, STE B, LAFAYETTE, CA

SITE LOCATION MAP

1075 40TH STREET
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 3119

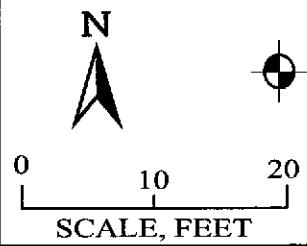


TPHg 89,000
 TPHd 86,000
 MTBE ND<200
 Benz 7,900

TPH ND<100
 TPHd ND
 MTBE 3,000
 Benz ND

TPHg ND
 TPHd ND
 MTBE ND
 Benz ND

TPHg 200
 TPHd 59
 MTBE 21
 Benz 4.5



MONITORING WELL LOCATIONS AND IDENTIFICATION

Groundwater results are expressed in $\mu\text{g/L}$.
 TPHg = Total petroleum hydrocarbons as gasoline
 TPHd = Total petroleum hydrocarbons as diesel
 MTBE = Methyl tertiary butyl ether
 Benz = Benzene

AEI CONSULTANTS	
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA	
WELL LOCATION MAP	
1075 40TH STREET OAKLAND, CALIFORNIA	FIGURE 2 Project: 3119

PARKING
AND SUPPLY
YARD AREA

40TH ST.

MW-2



OFFICES

SHOP

MW-3



GROUNDWATER
FLOW DIRECTION WITH A
GRADIENT OF 0.05 FT/FT
NOVEMBER 6, 2001

CONCRETE
PAD

MW-1



WALL

DRIVEWAY

SIDEWALK

PARKING LANE

33.95

34.20

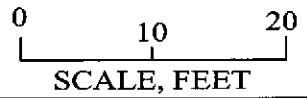
MW-4



MONITORING WELL

34.0

GROUNDWATER CONTOUR
IN FEET ABOVE MSL



YERBA BUENA AVENUE

AEI CONSULTANTS
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

GROUNDWATER GRADIENT MAP

1075 40TH STREET
OAKLAND, CALIFORNIA

FIGURE 3
Project 3119

Table 1
Groundwater Elevation Data

Well ID	Date	Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
MW-1	3/19/97	45.41	8.25	37.16
	6/20/97	45.41	9.1	36.31
	10/8/97	45.41	9.95	35.46
	1/16/98	45.41	7.57	37.84
	8/5/99	45.49	10.16	35.33
	11/18/99	45.49	8.52	36.97
	2/24/00	45.49	7.65	37.84
	5/24/00	45.49	8.47	37.02
	8/29/00	45.49	10.28	35.21
	1/12/01	45.49	8.5	36.99
	4/18/01	45.49	8.77	36.72
	7/27/01	45.49	10.5	34.99
	11/6/01	45.49	10.28	35.21
MW-2	3/19/97	44.94	8.4	36.54
	6/20/97	44.94	8.85	36.09
	10/8/97	44.94	9.8	35.14
	1/16/98	44.94	5.28	39.66
	8/5/99	44.98	9.32	35.66
	11/18/99	44.98	10.2	34.78
	2/24/00	44.98	7.03	37.95
	5/24/00	44.98	8.01	36.97
	8/29/00	44.98	11.07	33.91
	1/12/01	44.98	8.6	36.38
	4/18/01	44.98	8.8	36.18
	7/27/01	44.98	11.1	33.88
	11/6/01	44.98	12.21	32.77
MW-3	3/19/97	44.32	7.59	36.73
	10/8/97	44.32	9.98	34.34
	6/20/97	44.32	8.36	35.96
	1/16/98	44.32	9.18	35.14
	8/5/99	44.37	10.56	33.81
	11/18/99	44.37	10.92	33.45
	2/24/00	44.37	8.49	35.88
	5/24/00	44.37	8.42	35.95
	8/29/00	44.37	12	32.37
	1/12/01	44.37	10.5	33.87
	4/18/01	44.37	9.5	35.22
	7/27/01	44.37	11.61	32.76
	11/6/01	44.37	11.73	32.64
MW-4	8/5/99	43.48	8.79	34.69
	11/18/99	43.48	8.11	35.37
	2/24/00	43.48	5.19	38.29
	5/24/00	43.48	7.23	36.25
	8/29/00	43.48	9.04	34.44
	1/12/01	43.48	6.4	37.08
	4/18/01	43.48	7.3	36.18
	7/27/01	43.48	9.16	34.32
	11/6/01	43.48	9.03	34.45

Notes:

All well elevations are measured from the top of the casing and not from the ground surface
ft msl = feet above mean sea level

Table 2
Groundwater Sample Analytical Data

Well ID	Date	Consultant/Lab	TPHg (ug/L)	MTBE (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Xylenes (ug/L)	TPHd (ug/L)
MW - 1	3/19/97	AEI/MAI	<50	23	<0.5	<0.5	<0.5	<0.5	<50
	6/23/97	AEI/MAI	1,300	14	150	2.1	12	19	420
	10/8/97	AEI/MAI	56	5.8	2.8	<0.5	<0.5	<0.5	66
	1/16/98	AEI/MAI	1,500	<33	95	0.72	69	8.4	910
	8/5/99	AEI/MAI	160	<15	1.6	<0.5	0.56	1.1	63
	11/18/99	AEI/MAI	79	<5.0	<0.5	<0.5	<0.5	<0.5	<50
	2/24/00	AEI/MAI	300	<5.0	14	0.82	3.5	1.6	160
	5/24/00	AEI/MAI	1,300	ND<10	93	<0.5	17	1.6	480
	8/29/00	AEI/MAI	120	<5.0	0.93	<0.5	<0.5	<0.5	<0.5
	1/12/01	AEI/MAI	360	<5.0	16	<0.5	9.3	0.69	170
	4/18/01	AEI/MAI	1,100	2,800	63	<0.5	34	0.73	410
	7/27/01	AEI/MAI	130	<5.0	1.6	<0.5	<0.5	<0.5	66
	11/6/01	AEI/MAI	<50	<5.0	<0.5	<0.5	<0.5	<0.5	<50
MW - 2	3/19/97	AEI/MAI	<50	65	<0.5	<0.5	<0.5	<0.5	<50
	6/23/97	AEI/MAI	<50	70	3.4	<0.5	<0.5	<0.5	<50
	10/8/97	AEI/MAI	<50	90	<0.5	<0.5	<0.5	<0.5	<50
	1/16/98	AEI/MAI	<50	65	<0.5	<0.5	<0.5	<0.5	<50
	8/5/99	AEI/MAI	<50	600	<0.5	<0.5	<0.5	<0.5	<50
	11/18/99	AEI/MAI	<50	370	<0.5	<0.5	<0.5	<0.5	<50
	2/24/00	AEI/MAI	<50	880	<0.5	<0.5	<0.5	<0.5	<50
	5/24/00	AEI/MAI	ND<250	2,200	<0.5	<0.5	<0.5	<0.5	62
	8/29/00	AEI/MAI	ND<200	1,900	<0.5	<0.5	<0.5	<0.5	<50
	1/12/01	AEI/MAI	470	2,000	8.7	3.1	16	73	70
	4/18/01	AEI/MAI	<50	2,800	<0.5	<0.5	<0.5	<0.5	<50
	7/27/01	AEI/MAI	ND<100	3,300	<0.5	<0.5	<0.5	<0.5	<50
	11/6/01	AEI/MAI	ND<100	3,000	<0.5	<0.5	<0.5	<0.5	<50
MW - 3	3/19/97	AEI/MAI	26,000	230	3,000	530	340	2,300	5,000
	6/23/97	AEI/MAI	25,000	270	4,400	120	540	1,500	7,000
	10/8/97	AEI/MAI	17,000	ND<280	4,400	47	280	410	5,100
	1/16/98	AEI/MAI	29,000	ND<360	5,600	740	950	3,500	7,300
	8/5/99	AEI/MAI	31,000	ND<200	5,400	150	1100	2,300	5,100
	11/18/99	AEI/MAI	74,000	ND<1,000	8,100	5,000	2,100	8,100	490,000
	2/24/00	AEI/MAI	110,000	ND<200	12,000	1,400	2,900	14,000	6,300
	5/24/00	AEI/MAI	87,000	ND<200	13,000	1,900	2,900	14,000	26,000
	8/29/00	AEI/MAI	49,000	ND<200	7,400	800	1,800	7,400	9,400
	1/12/01	AEI/MAI	69,000	ND<300	8,600	980	2,600	11,000	21,000
	4/18/01	AEI/MAI	75,000	ND<500	9,200	1,200	2,500	12,000	13,000
	7/27/01	AEI/MAI	75,000	ND<650	8,700	1,100	2,600	12,000	85,000
	11/6/01	AEI/MAI	89,000	ND<200	7,900	910	2,800	12,000	86,000
MW-4	8/5/99	AEI/MAI	<50	37	<0.5	<0.5	<0.5	<0.5	<50
	11/18/99	AEI/MAI	<50	20	<0.5	<0.5	<0.5	<0.5	<50
	2/24/00	AEI/MAI	<50	20	<0.5	<0.5	<0.5	<0.5	<50
	5/24/00	AEI/MAI	120	31	1.3	<0.5	<0.5	<0.5	140
	8/29/00	AEI/MAI	<50	22	<0.5	<0.5	<0.5	<0.5	<0.5
	1/12/01	AEI/MAI	<50	25	<0.5	<0.5	<0.5	<0.5	81
	4/18/01	AEI/MAI	30	35	2.4	1.1	0.66	4.2	170
	7/27/01	AEI/MAI	87	26	1.8	<0.5	2	10	110
	11/6/01	AEI/MAI	200	21	4.5	1	5.2	24	59

Notes:

ug/L= micrograms per liter

ND= Not detected

MTBE= Methyl Tertiary Butyl Ether

TPHg= Total Petroleum Hydrocarbons as gasoline

TPHd= Total Petroleum Hydrocarbons as diesel

AEI = AEI Consultants

MAI = McCampbell Analytical Inc., Pacheco, California

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM					
Monitoring Well Number: MW-1					
Project Name: Fidelity Roof, Co			Date of Sampling: 11/06/01		
Job Number: 3119			Name of Sampler: OA		
Project Address: 1075 40 th Street, Oakland					
MONITORING WELL DATA					
Well Casing Diameter (2"/4"/6")			2		
Seal at Grade -- Type and Condition			Cement / Good		
Well Cap & Lock -- OK/Replace			OK		
Elevation of Top of Casing			45.49		
Depth of Well			21.0		
Depth to Water			10.28		
Water Elevation			35.21		
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)			5.14		
4" casing: (TD - DTW)(0.65)(3)					
6" casing: (TD - DTW)(1.44)(3)					
Actual Volume Purged (gallons)			6.0		
Appearance of Purge Water			Clear		
GROUNDWATER SAMPLES					
Number of Samples/Container Size			(2) 40 ml VOAS, 1-liter amber bottle		
Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
10:34					
10:36	2	19.6	6.48	841	
10:38	4	19.9	6.25	882	
10:40	6	19.9	6.26	897	
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-2

Project Name: Fidelity Roof, Co	Date of Sampling: 11/06/01
Job Number: 3119	Name of Sampler: OA
Project Address: 1075 40 th Street, Oakland	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	Cement / Good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	44.98
Depth of Well	21.0
Depth to Water	12.21
Water Elevation	32.77
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	4.21
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	5.0
Appearance of Purge Water	Clear, No Odor

GROUNDWATER SAMPLES

Number of Samples/Container Size	(2) 40 ml VOAS, 1-liter amber bottle
----------------------------------	--------------------------------------

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
10:47					
10:49	1	20.3	6.17	1,436	
10:51	3	20.4	6.26	1,508	
10:53	5	20.7	6.21	1,458	

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-3					
Project Name: Fidelity Roof, Co			Date of Sampling: 11/06/01		
Job Number: 3119			Name of Sampler: OA		
Project Address: 1075 40 th Street, Oakland					
MONITORING WELL DATA					
Well Casing Diameter (2"/4"/6")			2"		
Seal at Grade -- Type and Condition			Cement / Good		
Well Cap & Lock -- OK/Replace			OK		
Elevation of Top of Casing			44.37		
Depth of Well			21.0		
Depth to Water			11.73		
Water Elevation			32.64		
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)			4.44		
4" casing: (TD - DTW)(0.65)(3)					
6" casing: (TD - DTW)(1.44)(3)					
Actual Volume Purged (gallons)			5.0		
Appearance of Purge Water			Clear; Strong Hydrocarbon Odor/Sheen		
GROUNDWATER SAMPLES					
Number of Samples/Container Size			(2) 40 ml VOAS, 1-liter amber bottle		
Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
10:59					
11:02	1	19.8	6.07	1,704	
11:05	3	20.0	6.10	1,882	
11:07	5				Well went dry
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-4					
Project Name: Fidelity Roof, Co			Date of Sampling: 11/06/01		
Job Number: 3119			Name of Sampler: OA		
Project Address: 1075 40 th Street, Oakland					
MONITORING WELL DATA					
Well Casing Diameter (2"/4"/6")			2"		
Seal at Grade -- Type and Condition			Cement / Good		
Well Cap & Lock -- OK/Replace			OK		
Elevation of Top of Casing			43.48		
Depth of Well			20.0		
Depth to Water			9.03		
Water Elevation			34.35		
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)			5.26		
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		
GROUNDWATER SAMPLES					
Number of Samples/Container Size			(2) 40 ml VOAS, 1-liter amber bottle		
Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
11:18					
11:20	2	20.0	6.09	1,065	
11:22	4	21.7	6.06	1,069	
11:25	6	21.4	6.17	1,148	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)					

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: #3119; Fidelity	Date Sampled: 11/06/01
		Date Received: 11/06/01
	Client Contact: Orion Alcalay	Date Extracted: 11/09-11/12/01
	Client P.O:	Date Analyzed: 11/09-11/12/01

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	Ethyl-benzene	Xylenes	% Recovery Surrogate
82874	MW-1	W	ND	ND	ND	ND	ND	ND	106
82875	MW-2	W	ND<100	3000	ND	ND	ND	ND	106
82876	MW-3	W	89,000,a,h	ND<200	7900	910	2800	12,000	105
82877	MW-4	W	200,a	21	4.5	1.0	5.2	24	102
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
<http://www.mccampbell.com> E-mail: main@mccampbell.com

QC REPORT

EPA 8015m + 8020

Date: 11/09/01

Extraction: TTLC

Matrix: Water

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 110901

Instrument: GC-7

Surrogate1	ND	103.0	102.0	100.00	103	102	1.0
Xylenes	ND	32.2	31.9	30.00	107	106	0.9
Ethylbenzene	ND	10.7	10.6	10.00	107	106	0.9
Toluene	ND	10.5	10.4	10.00	105	104	1.0
Benzene	ND	9.4	9.5	10.00	94	95	1.1
MTBE	ND	8.8	8.8	10.00	88	88	0.0
TPH (gas)	ND	110.6	107.3	100.00	111	107	3.1

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

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

RPD means Relative Percent Deviation



McCAMPBELL ANALYTICAL INC.

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

QC REPORT

EPA 8015m + 8020

Date: 11/07/01

Extraction: TTLC

Matrix: Water

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 100601

Instrument: GC-11 A

Surrogate1	ND	98.0	99.0	100.00	98	99	1.0
TPH (diesel)	ND	7325.0	7075.0	7500.00	98	94	3.5

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

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

RPD means Relative Percent Deviation

