

March 6, 2003

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

Alameda County
MAR 12 2003
Environmental Health

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

Dear Mr. Hwang:

Enclosed is a copy of the quarterly groundwater report for the eighteenth episode of sampling.

Please call either Peter McIntyre at (925) 283-6000 if you have any questions.

Sincerely,

Brandi K. Reese

Brandi K. Reese
Staff Geologist

Alameda County
MAR 12 2003
Environmental Health

March 6, 2003

**QUARTERLY GROUNDWATER MONITORING
REPORT**

1075 40TH Street
Oakland, California

Project No. 3119

Prepared For

Fidelity Roof Company
1075 40th Street
Oakland, CA 94608

Prepared By

All Environmental, Inc.
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(925) 283-6000

AEI



March 6, 2003

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

RE: Quarterly Groundwater Monitoring and Sampling Report
Eighteenth Episode
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 was 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 eighteenth episode of groundwater monitoring and sampling.

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. Analysis of the soil 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).

On September 12, 1996, AEI advanced four soil borings in the vicinity of the former UST excavation. Analytical results from the subsurface investigation revealed significant levels of gasoline and diesel petroleum hydrocarbons present in soil and groundwater to the south and to the west of the open excavation. 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.

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

Due to low concentration levels from a four-point composite soil sample from the stockpile, 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 the west. Soil was removed to a depth of 9 feet below ground surface (bgs). The dispenser island and associated piping were also removed. 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.

On March 6, 1997, AEI installed three groundwater monitoring wells. At the request of the ACHCSA, six additional soil borings were drilled south and west of the well locations on November 4, 1998. TPH-d was detected at a concentration of 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. No detectable concentrations of petroleum hydrocarbons were found in the soil samples taken during installation.

This report describes the results of the eighteenth groundwater monitoring event that took place on February 12, 2003.

Summary of Activities

AEI measured the depth to groundwater in the four wells on February 12, 2003. 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 plastic bailers. Temperature, turbidity, pH, dissolved oxygen (DO), 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 groundwater parameters stabilized after three consistent readings, and following recovery of water levels to at least 90%, water samples were collected from each well. Well locations are shown in Figure 2.

Water was poured from the bailers into 1-liter amber glass bottles and 40 ml glass VOA vials and capped so neither headspace 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 (Department of Health Services Certification #1644).

Groundwater samples were submitted for chemical analysis for TPH-g (EPA Method 8015C), MTBE (EPA Method 8021B), benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8021B), and (TPH-d) (EPA Method 8015C).

Field Results

A strong hydrocarbon odor and heavy sheen were detected during the sampling of monitoring well MW-1. Groundwater levels for the current monitoring episode ranged from 34.20 to 37.11 feet above mean sea level (msl). These groundwater elevations were an average of 1.4 feet higher than the previous monitoring episode. No recognizable trend has been noted. The most recent calculated groundwater gradient was 0.032 foot per foot (ft/ft), and the direction of flow was towards the northwest. The groundwater gradient is slightly lower than the previous episode, but the flow direction was consistent.

Groundwater elevation data are summarized in Table 1. The groundwater elevation contours and the groundwater flow direction are shown on Figure 3. Refer to Appendix B for Groundwater Monitoring Well Field Sampling Forms.

Groundwater Quality

Significant concentrations of petroleum hydrocarbons remain in the groundwater. The highest concentrations of petroleum hydrocarbons were observed in MW-3 with TPH-g at 61,000 µg/L and TPH-d at 8,400 µg/L. The lowest concentrations were seen in MW-1 with TPH-g at 710 µg/L and TPH-d at 120 µg/L. These concentrations are consistent with the past monitoring events over the last few years.

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. The analytical results indicate that hydrocarbon concentrations have returned to their consistent levels since the last monitoring episode. Groundwater elevations were 1.4 feet higher 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 has been approved. AEI anticipates beginning the approved scope of work once pre-approval for reimbursement has been received from the California State UST Cleanup Fund. Quarterly groundwater monitoring and sampling of the wells will continue at the site and the next monitoring and sampling episode is scheduled for May 2003.

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 (QGMSR), March 21, 2000, prepared by AEI.
7. QGMSR, July 28, 2000, prepared by AEI.
8. QGMSR, November 6, 2000, prepared by AEI.
9. QGMSR, January 29, 2001, prepared by AEI.
10. QGMSR, May 8, 2001, prepared by AEI.
11. QGMSR, August 14, 2001, prepared by AEI.
12. QGMSR, December 11, 2001, prepared by AEI.
13. Corrective Action Plan, July 31, 2001, prepared by AEI.
14. QGMSR, May 31, 2002, prepared by AEI.
15. QGMSR, June 4, 2002, prepared by AEI.
16. QGWMSR, September 9, 2002, prepared by AEI.
17. QGWMSR, January 16, 2003, 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.

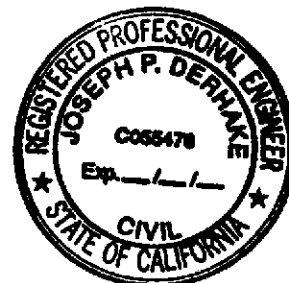
These services were performed in accordance with generally accepted practices in the environmental engineering and construction field that existed at the time and location of the work.

Sincerely,
AEI Consultants

Brandi Kiel Reese
Staff Geologist



J. P. Derhake, PE
Senior Author, Principal



Figures

- | | |
|----------|---|
| Figure 1 | Site Location Map |
| Figure 2 | Site Plan with Hydrocarbon Concentrations |
| Figure 3 | Groundwater Gradient Map |

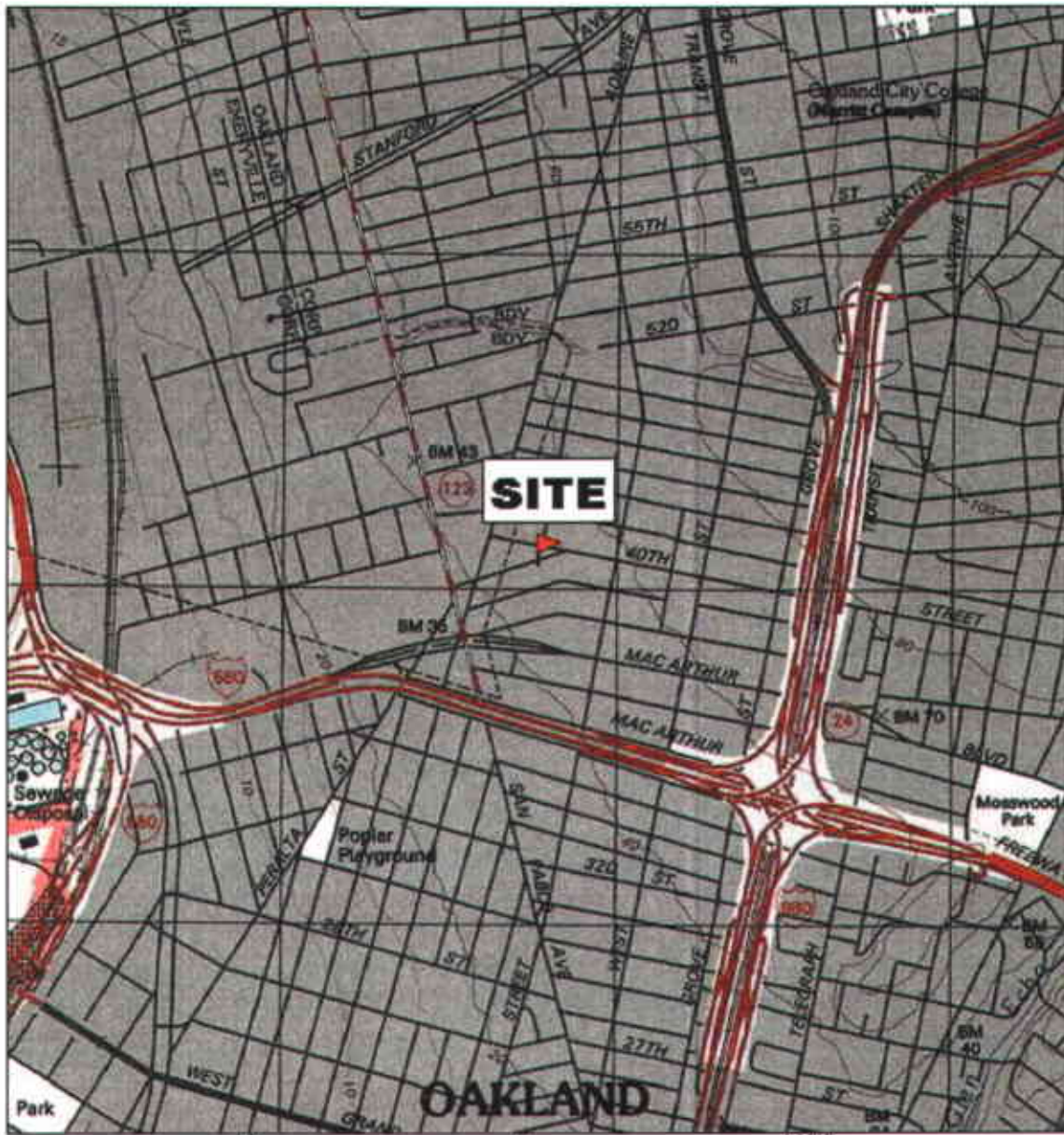
Tables

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

Appendices

- | | |
|------------|---|
| Appendix A | Groundwater Monitoring Well Field Sampling Forms |
| Appendix B | 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 1000 FEET 0 500 1000 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 44 TH STREET OAKLAND, CALIFORNIA	FIGURE 1 PROJECT NO. 3119

PARKING
AND SUPPLY
YARD AREA

GROUNDWATER
FLOW DIRECTION WITH A
GRADIENT OF 1.1 FT/FT
FEBRUARY 12, 2003

40TH ST.

OFFICES

MW-2
(35.91)

MW-3
(34.20)

SHOP

CONCRETE
PAD

MW-1
(37.13)

DRIVEWAY

WALL


SIDEWALK

PARKING LANE

YERBA BUENA AVENUE

MW-4
(37.11)

LEGEND

 Monitoring Well

Contours drawn in Surfer v. 7.0
Contour interval is 0.2 feet



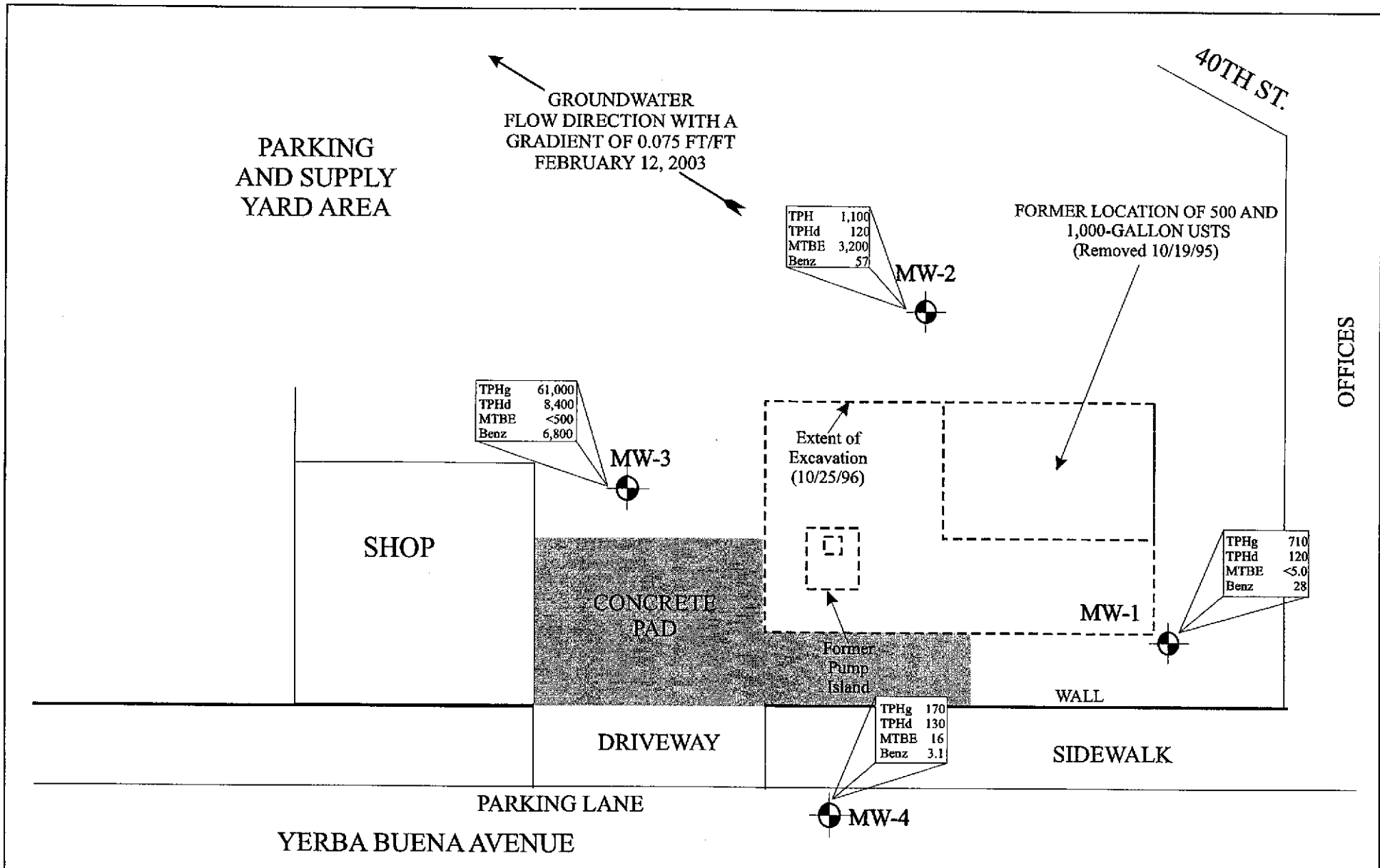
AEI CONSULTANTS

3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

GROUNDWATER GRADIENT MAP

1075 40TH STREET
OAKLAND, CALIFORNIA

FIGURE 2
Project 3119



<p>LEGEND</p> <p> Monitoring Well</p> <p>Groundwater results are expressed in $\mu\text{g/L}$.</p> <p>TPHg = Total petroleum hydrocarbons as gasoline</p> <p>TPHd = Total petroleum hydrocarbons as diesel</p> <p>MTBE = Methyl tertiary butyl ether</p> <p>Benz = Benzene</p>	<p></p> <p>0 10 20</p>	<p>AEI CONSULTANTS</p> <p>3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA</p>	
		<p>SITE MAP WITH HYDROCARBON CONCENTRATIONS</p>	
		<p>1075 40TH STREET</p> <p>OAKLAND, CALIFORNIA</p>	<p>FIGURE 3</p> <p>Project: 3119</p>

Table 1
Groundwater Elevation Data

Well ID	Date	Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
MW-1	03/19/97	45.41	8.25	37.16
	06/20/97	45.41	9.1	36.31
	10/08/97	45.41	9.95	35.46
	01/16/98	45.41	7.57	37.84
	08/05/99	45.49	10.16	35.33
	11/18/99	45.49	8.52	36.97
	02/24/00	45.49	7.65	37.84
	05/24/00	45.49	8.47	37.02
	08/29/00	45.49	10.28	35.21
	01/12/01	45.49	8.5	36.99
	04/18/01	45.49	8.77	36.72
	07/27/01	45.49	10.5	34.99
	11/06/01	45.49	10.28	35.21
	02/13/02	45.49	8.47	37.02
	05/14/02	45.49	9.50	35.99
	08/15/02	45.49	10.39	35.10
11/14/02	45.49	9.08	36.41	
02/12/03	45.49	8.36	37.13	
MW-2	03/19/97	44.94	8.4	36.54
	06/20/97	44.94	8.85	36.09
	10/08/97	44.94	9.8	35.14
	01/16/98	44.94	5.28	39.66
	08/05/99	44.98	9.32	35.66
	11/18/99	44.98	10.2	34.78
	02/24/00	44.98	7.03	37.95
	05/24/00	44.98	8.01	36.97
	08/29/00	44.98	11.07	33.91
	01/12/01	44.98	8.6	36.38
	04/18/01	44.98	8.8	36.18
	07/27/01	44.98	11.1	33.88
	11/06/01	44.98	12.21	32.77
	02/13/02	44.98	7.98	37.00
	05/14/02	44.98	10.48	34.50
	08/15/02	44.98	10.64	34.34
11/14/02	44.98	11.69	33.29	
02/12/03	44.98	9.07	35.91	
MW-3	03/19/97	44.32	7.59	36.73
	10/08/97	44.32	9.98	34.34
	06/20/97	44.32	8.36	35.96
	01/16/98	44.32	9.18	35.14
	08/05/99	44.37	10.56	33.81
	11/18/99	44.37	10.92	33.45
	02/24/00	44.37	8.49	35.88
	05/24/00	44.37	8.42	35.95
	08/29/00	44.37	12	32.37
	01/12/01	44.37	10.5	33.87
	04/18/01	44.37	9.5	35.22
	07/27/01	44.37	11.61	32.76
	11/06/01	44.37	11.73	32.64
	02/13/02	44.37	9.36	35.01
	05/14/02	44.37	9.00	35.37
	08/15/02	44.37	11.72	32.65
11/14/02	44.37	11.28	33.09	
02/12/03	44.37	10.17	34.2	
MW-4	08/05/99	43.48	8.79	34.69
	11/18/99	43.48	8.11	35.37
	02/24/00	43.48	5.19	38.29
	05/24/00	43.48	7.23	36.25
	08/29/00	43.48	9.04	34.44
	01/12/01	43.48	6.4	37.08
	04/18/01	43.48	7.3	36.18
	07/27/01	43.48	9.16	34.32
	11/06/01	43.48	9.03	34.45
	02/13/02	43.48	6.60	36.88
	05/14/02	43.48	7.19	36.29
	08/15/02	43.48	8.97	34.51
	11/14/02	43.48	7.52	35.96
02/12/03	43.48	6.37	37.11	

Notes:
All well elevations are measured from the top of the casing and not from the ground
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	03/19/97	AEI/MAI	<50	23	<0.5	<0.5	<0.5	<0.5	<50	
	06/23/97	AEI/MAI	1,300	14	150	2.1	12	19	420	
	10/08/97	AEI/MAI	56	5.8	2.8	<0.5	<0.5	<0.5	66	
	01/16/98	AEI/MAI	1,500	<33	95	0.72	69	8.4	910	
	08/05/99	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	
	02/24/00	AEI/MAI	300	<5.0	14	0.82	3.5	1.6	160	
	05/24/00	AEI/MAI	1,300	<10	93	<0.5	17	1.6	480	
	08/29/00	AEI/MAI	120	<5.0	0.93	<0.5	<0.5	<0.5	<0.5	
	01/12/01	AEI/MAI	360	<5.0	16	<0.5	9.3	0.69	170	
	04/18/01	AEI/MAI	1,100	2,800	63	<0.5	34	0.73	410	
	07/27/01	AEI/MAI	130	<5.0	1.6	<0.5	<0.5	<0.5	66	
	11/06/01	AEI/MAI	<50	<5.0	<0.5	<0.5	<0.5	<0.5	<50	
	02/13/02	AEI/MAI	430	<5.0	17	0.51	11	0.64	270	
	05/14/02	AEI/MAI	340	<5.0	21	<0.5	5.3	0.67	170	
	08/15/02	AEI/MAI	96	<5.0	0.66	<0.5	<0.5	<0.5	53	
	11/14/02	AEI/MAI	66,000	<1,200	8,300	860	3,000	11,000	23,000	
	02/12/03	AEI/MAI	710	<5.0	28	4.3	32	130	120	
	MW - 2	03/19/97	AEI/MAI	<50	65	<0.5	<0.5	<0.5	<0.5	<50
		06/23/97	AEI/MAI	<50	70	3.4	<0.5	<0.5	<0.5	<50
10/08/97		AEI/MAI	<50	90	<0.5	<0.5	<0.5	<0.5	<50	
01/16/98		AEI/MAI	<50	65	<0.5	<0.5	<0.5	<0.5	<50	
08/05/99		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	
02/24/00		AEI/MAI	<50	880	<0.5	<0.5	<0.5	<0.5	<50	
05/24/00		AEI/MAI	<250	2,200	<0.5	<0.5	<0.5	<0.5	62	
08/29/00		AEI/MAI	<200	1,900	<0.5	<0.5	<0.5	<0.5	<50	
01/12/01		AEI/MAI	470	2,000	8.7	3.1	16	73	70	
04/18/01		AEI/MAI	<50	2,800	<0.5	<0.5	<0.5	<0.5	<50	
07/27/01		AEI/MAI	<100	3,300	<0.5	<0.5	<0.5	<0.5	<50	
11/06/01		AEI/MAI	<100	3,000	<0.5	<0.5	<0.5	<0.5	<50	
02/13/02		AEI/MAI	54	3,200	<0.5	<0.5	<0.5	<0.5	<50	
05/14/02		AEI/MAI	<150	3,800	4.8	<1.0	<1.0	<1.0	<50	
08/15/02		AEI/MAI	<50	2,900	<0.5	<0.5	<0.5	<0.5	<50	
11/14/02		AEI/MAI	<120	3,800	<1.0	<1.0	<1.0	<1.0	<50	
02/12/03		AEI/MAI	1,100	3,200	57	7	55	210	120	
MW - 3		03/19/97	AEI/MAI	26,000	230	3,000	530	340	2,300	5,000
		06/23/97	AEI/MAI	25,000	270	4,400	120	540	1,500	7,000
	10/08/97	AEI/MAI	17,000	<280	4,400	47	280	410	5,100	
	01/16/98	AEI/MAI	29,000	<360	5,600	740	950	3,500	7,300	
	08/05/99	AEI/MAI	31,000	<200	5,400	150	1100	2,300	5,100	
	11/18/99	AEI/MAI	74,000	<1,000	8,100	5,000	2,100	8,100	490,000	
	02/24/00	AEI/MAI	110,000	<200	12,000	1,400	2,900	14,000	6,300	
	05/24/00	AEI/MAI	87,000	<200	13,000	1,900	2,900	14,000	26,000	
	08/29/00	AEI/MAI	49,000	<200	7,400	800	1,800	7,400	9,400	
	01/12/01	AEI/MAI	69,000	<300	8,600	980	2,600	11,000	21,000	
	04/18/01	AEI/MAI	75,000	<500	9,200	1,200	2,500	12,000	13,000	
	07/27/01	AEI/MAI	75,000	<650	8,700	1,100	2,600	12,000	85,000	
	11/06/01	AEI/MAI	89,000	<200	7,900	910	2,800	12,000	86,000	
	02/13/02	AEI/MAI	85,000	<2000	8,500	830	2,600	11,000	13,000	
	05/14/02	AEI/MAI	94,000	<1000	9,700	1,100	3,400	15,000	35,000	
	08/15/02	AEI/MAI	37,000	<1200	5,200	430	1,800	5,900	9,700	
	11/14/02	AEI/MAI	<50	<5.0	<0.5	<0.5	<0.5	<0.5	<50	
	02/12/03	AEI/MAI	61,000	<500	6,800	500	2,400	9,800	8,400	
	MW - 4	08/05/99	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
02/24/00		AEI/MAI	<50	20	<0.5	<0.5	<0.5	<0.5	<50	
05/24/00		AEI/MAI	120	31	1.3	<0.5	<0.5	<0.5	140	
08/29/00		AEI/MAI	<50	22	<0.5	<0.5	<0.5	<0.5	<0.5	
01/12/01		AEI/MAI	<50	25	<0.5	<0.5	<0.5	<0.5	81	
04/18/01		AEI/MAI	30	35	2.4	1.1	0.66	4.2	170	
07/27/01		AEI/MAI	87	26	1.8	<0.5	2	10	110	
11/06/01		AEI/MAI	200	21	4.5	1	5.2	24	59	
02/13/02		AEI/MAI	<50	15	<0.5	<0.5	<0.5	<0.5	91	
05/14/02		AEI/MAI	260	26	12	2.7	11	49	140	
08/15/02		AEI/MAI	<50	12	<0.5	<0.5	<0.5	<0.5	<50	
11/14/02		AEI/MAI	<50	11	<0.5	<0.5	<0.5	<0.5	<50	
02/12/03	AEI/MAI	170	16	3.1	0.66	6.4	27	130		

Notes:

ug/L= micrograms per liter

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

Please refer to Appendix B: Laboratory Analysis for more detailed information including method detection limits and dilution factors

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Fidelity Roof Company	Date of Sampling:	2/12/2003
Job Number:	3119	Name of Sampler:	S Moore
Project Address:	1075 40th Street, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	45.49		
Depth of Well	21.00		
Depth to Water (from top of casing)	8.36		
Water Elevation (feet above msl)	37.13		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	6.1		
Actual Volume Purged (gallons)	6.5		
Appearance of Purge Water	clear		
Free Product Present?	Yes	Thickness (ft):	<0.1

GROUNDWATER SAMPLES

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
14:00	1	18.83	6.62	1075	0.49	141.4	
	3	19.11	6.67	1090	0.3	90.8	
	5	19.5	6.68	1044	0.26	92.2	
	7	19.58	6.69	1049	0.24	86.9	

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

Free product present as sheen
strong hydrocarbon odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Fidelity Roof Company	Date of Sampling:	2/12/2003
Job Number:	3119	Name of Sampler:	S Moore
Project Address:	1075 40th Street, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		▼
Elevation of Top of Casing (feet above msl)	44.98		
Depth of Well	21.00		
Depth to Water (from top of casing)	9.07		
Water Elevation (feet above msl)	35.91		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	5.7		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	clear		
Free Product Present?	No	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
14:00	2	20.12	6.64	1520	11.36	36	clear, slight smell
	4	20.66	6.67	1573	4.77	164.5	
	6	20.77	6.68	1556	3.71	205.7	

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

no odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Fidelity Roof Company	Date of Sampling:	2/12/2003
Job Number:	3119	Name of Sampler:	S Moore
Project Address:	1075 40th Street, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		▼
Elevation of Top of Casing (feet above msl)	44.37		
Depth of Well	21.00		
Depth to Water (from top of casing)	10.17		
Water Elevation (feet above msl)	34.20		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	5.2		
Actual Volume Purged (gallons)	5.5		
Appearance of Purge Water	clear		
Free Product Present?	No	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol. Removed (gal)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
3pm	2	19.59	6.50	1687	2.91	-41.8	Sheen/strong smell
	4	20.0	6.51	1784	2.49	-54.1	
	5.5	20.08	6.6	1789	7.87	-62.1	

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

dry @ 3 gallons waited 7 minutes

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Fidelity Roof Company	Date of Sampling:	2/12/2003
Job Number:	3119	Name of Sampler:	S Moore
Project Address:	1075 40th Street, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		▼
Elevation of Top of Casing (feet above msl)	43.48		
Depth of Well	20.00		
Depth to Water (from top of casing)	6.37		
Water Elevation (feet above msl)	33.31		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	6.5		
Actual Volume Purged (gallons)	7.0		
Appearance of Purge Water	clear		
Free Product Present?	No	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
15:00	1	20.26	6.67	1112	9.79	377.7	
	3	19.69	6.61	1100	7.3	401	
	5	20.4	6.64	1164	5.88	462.5	
	7	20.68	6.64	1203	3.61	481.3	

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

slight hydrocarbon odor

AEI

0302213

McCAMPBELL ANALYTICAL INC.

110 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 HR 48 HR 72 HR 5 DAY

EDF Required? Yes No

Report To: BRANDI KIEL REESE Bill To: _____
 Company: AEI CONSULTANTS
3210 OLD TUNNEL RD
 E-Mail: _____
 Tele: (925) 283-6000 Fax: ()
 Project #: 3119 Project Name: FIDELITY
 Project Location: OAKLAND
 Sampler Signature: _____

Analysis Request

Other _____ Comments _____

- BTEX & TPH as Gas (602/8020 + 8015) VMTBE
- TPH as Diesel (8015)
- Total Petroleum Oil & Grease (5520 E&FB&F)
- Total Petroleum Hydrocarbons (418.1)
- EPA 601 / 8010
- BTEX ONLY (EPA 602 / 8020)
- EPA 608 / 8080
- EPA 608 / 8080 PCB'S ONLY
- EPA 624 / 8240 / 8260
- EPA 625 / 8270
- PART'S / PNA'S by EPA 625 / 8270 / 8310
- CAN-17 Metals
- LUFT 5 Metals
- Lead (7240/7421/7539/2/6010)
- RCI

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other			
MW-1		7/14		3	AMBER Vials	X						XX	XX				
MW-2																	
MW-3																	
MW-4																	

Relinquished By: [Signature] Date: 2/14 Time: 4
 Received By: Mark Valo
 Relinquished By: _____ Date: _____ Time: _____
 Received By: _____
 Relinquished By: _____ Date: _____ Time: _____
 Received By: _____

ICE/C⁺
 GOOD CONDITION
 HEAD SPACE ABSENT
 DECHLORINATED IN LAB
 PRESERVATION: VOLS O&G METALS OTHER
 APPROPRIATE CONTAINERS
 PRESERVED IN LAB

McC Campbell Analytical Inc.



110 Second Avenue South, #D7
 Pacheco, CA 94553-5560
 (925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0302213

Client:
 All Environmental, Inc.
 3210 Old Tunnel Rd., Ste. B
 Lafayette, CA 94549-4157

TEL: (925) 283-6000
 FAX: (925) 283-6121
 ProjectNo: #3119; Fidelity
 PO:

Date Received: 2/14/03
 Date Printed: 2/14/03

Requested Tests

Sample ID	ClientSampleID	Matrix	Collection Date	Hold	SW8015C	8021B/8015
0302213-001	MW-1	Water	2/14/03		B	A
0302213-002	MW-2	Water	2/14/03		B	A
0302213-003	MW-3	Water	2/14/03		B	A
0302213-004	MW-4	Water	2/14/03		B	A

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.