August 14, 1997

QUARTERLY GROUNDWATER MONITORING REPORT

Second Quarter, 1997

8/14/97

1075 40th Street
Oakland, CA 94608

Aug 14, 97

Project No. 1540

Prepared For

Fidelity Roof Co.
1075 40th Street
Oakland, CA 94608

Prepared By

All Environmental, Inc.
3364 Mt. Diablo Boulevard
Lafayette, CA 94583
(800) 801-3224

AEI

ALL ENVIRONMENTAL, INC.
Environmental Engineering & Construction

August 14, 1997

Mr. Monty Upshaw
Fidelity Roof Co.
1075 40th Street
Oakland, CA 94608

RE: Quarterly Groundwater Monitoring and Sampling Report
Second Quarter, 1997
1075 40th Street
Oakland, CA 94608
Project No. 1540

Dear Mr. Upshaw:

All Environmental, Inc. (AEI) has prepared this report on behalf of Mr. Monty Upshaw, in response to his request for a groundwater investigation at the above referenced site (Figure 1: Site Location Map). The investigation was initiated by the property owner in accordance with the requirements of the Alameda County Health Care Services Agency (ACHCSA). The purpose of this activity is to monitor groundwater quality in the vicinity of previous underground storage tanks. This report presents the findings of the second episode of quarterly groundwater monitoring and sampling conducted on June 20, and June 23, 1997.

Site Description and Background

The site is located in a commercial zone at 1075 40th Street in Oakland, California, and currently supports the operation of Fidelity Roof Company, a roofing company (refer to Figure 1: Site Location Map). The topography of the site slopes gently to the south.

On December 19, 1995, Tank Protect Engineering removed one (1) 1,000 gallon 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. The excavated soil was stockpiled north of the excavation. Three discrete soil samples were collected from beneath the USTs. Analysis of the samples indicated a maximum concentration of 100 mg/kg TPH as gasoline, 2.0 mg/kg benzene, and 96 mg/kg TPH as diesel beneath the 500 gallon UST.

Four discrete soil samples were collected from the excavated soil. The samples were analyzed as one composite sample. TPH as gasoline and TPH as diesel were present within the representative sample at concentrations of 580 mg/kg and 120 mg/kg, respectively. Benzene was detected at a concentration of 2.3 mg/kg.

AEI issued a workplan on August 28, 1996 to the Alameda County Health Care Services Agency (ACHCSA) designed to define the extent and magnitude of petroleum hydrocarbon contamination in the vicinity of the former USTs. On September 11, 1996, Ms. Susan Hugo of the ACHCSA approved the workplan.

On September 12, 1996, AEI advanced four soil borings in the vicinity of the former UST excavation (Ref. - Phase II Soil and Groundwater Investigation, dated October 7, 1996). 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 present in soil to the south and west of the open excavation. The soil contamination was believed to extend beneath the existing pump island. Moderate concentrations of petroleum hydrocarbons remain present in the soil to the east of the excavation, however the removal of additional soil could potentially undermine the existing building. Concentrations present in the soil north of the excavation did not warrant the removal of additional soil.

On October 25, 1996, AEI extended the excavation to the south and west (Ref. - Excavation and Disposal of Contaminated Soil Report, dated January 7, 1997). The contaminated soil was stockpiled on-site and profiled for disposal into a Class III Landfill. The original excavation was extended laterally 7 feet to the south and 12 feet to west. Soil was removed to a depth of 9 feet below ground surface (bgs). The dispenser island and associated piping were 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 TPH as gasoline, 16 mg/kg benzene, and 300 mg/kg TPH as diesel remained within the western sidewall of the excavation.

Results of the Phase II Subsurface Investigation indicated groundwater impacted with maximum concentrations of 5,500 µg/l TPH as gasoline, 340 µg/l benzene, and 2,100 µg/l TPH as diesel. Upon review of the Phase II Subsurface Investigation report and the Excavation and Disposal of Contaminated Soil Report, the ACHCSA issued a letter, dated February 18, 1997 which called for further investigation into the extent and magnitude of the groundwater contaminant plume. AEI issued a workplan, dated February 24, 1997, which called for the installation of three groundwater monitoring wells on-site. In a letter, dated February 28, 1997, the ACHCSA approved the workplan.

On March 6, 1997, AEI drilled three soil borings and converted them to groundwater monitoring wells. The wells were developed on March 10, 1997 and first sampled on March 19, 1997.

Summary of Activities

AEI measured the depth to groundwater in the wells June 20, 1997 and collected water samples from the wells on June 23, 1997. The well locations are shown in Figure 2. The depth from the top of the well casings were measured prior to sampling with an electric water level indicator. The wells were purged using a battery powered submersible pump and a groundwater sample was collected using a clean disposable Teflon bailer.

Temperature, pH, and turbidity were measured during the purging of the wells. AEI removed at least 3 well volumes. Once the temperature, pH, and turbidity stabilized, a water sample was collected.

Water was poured from the bailers into 1 liter amber bottles and 40 ml VOA vials and capped so that there was no head space or visible air bubbles 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 analyses for Total Petroleum Hydrocarbons (TPH) as gasoline (EPA Method 5030/8015), methyl tertiary butyl ether (MTBE) (EPA Method 8020/602), benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8020/602), TPH as diesel (EPA Method 3510/8015).

Field Results

No free product was encountered during monitoring activities. Groundwater levels for the current monitoring episode ranged from 35.96 to 36.31 feet above Mean Sea Level (MSL). These groundwater elevations were an average of 0.61 feet lower than the previous monitoring episode. The direction of the groundwater flow at the time of measurement was towards the west. The latest estimated groundwater gradient is approximately 0.007 feet per foot.

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

Groundwater Quality

Analysis of groundwater samples from well MW-3 continues to indicate high levels of hydrocarbon contamination. Contamination in the form of 1,300 µg/l TPH as gasoline, 150 µg/l benzene, and 420 µg/l TPH as diesel was detected for the first time in well MW-1. Concentrations of 70 µg/l MTBE and 3.4 µg/l benzene were found in samples from well MW-2.

A summary of groundwater quality data, including historic data, is presented in Table 3. Laboratory results and chain of custody documents are included in Appendix B. Previous laboratory results and chain of custody documents are included in Appendix C.

Recommendations

All Environmental, Inc. recommends the continued quarterly groundwater monitoring and sampling of the wells. The next monitoring and sampling episode is scheduled for September, 1997, as per the requirements of the ACHCSA.

Report Limitations and Signatures

This report presents a summary of work completed by All Environmental, Inc., 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,
All Environmental, Inc.

Bryan Campbell
Project Geologist

J. P. Derhake, PE, CAC
Senior Author

Figures

Figure 1	Site Location Map
Figure 2	Groundwater Gradient Map

Appendices

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

cc: Ms. Amy Leech, Alameda County Health Care Services Agency,
1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577

Table 1
Groundwater Levels

Well ID	Date	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
MW-1	3/19/97	45.41	8.25	37.16
MW-2	3/19/97	44.94	8.40	36.54
MW-3	3/19/97	44.32	7.59	36.73
MW-1	6/20/97	45.41	9.10	36.31
MW-2	6/20/97	44.94	8.85	36.09
MW-3	6/20/97	44.32	8.36	35.96

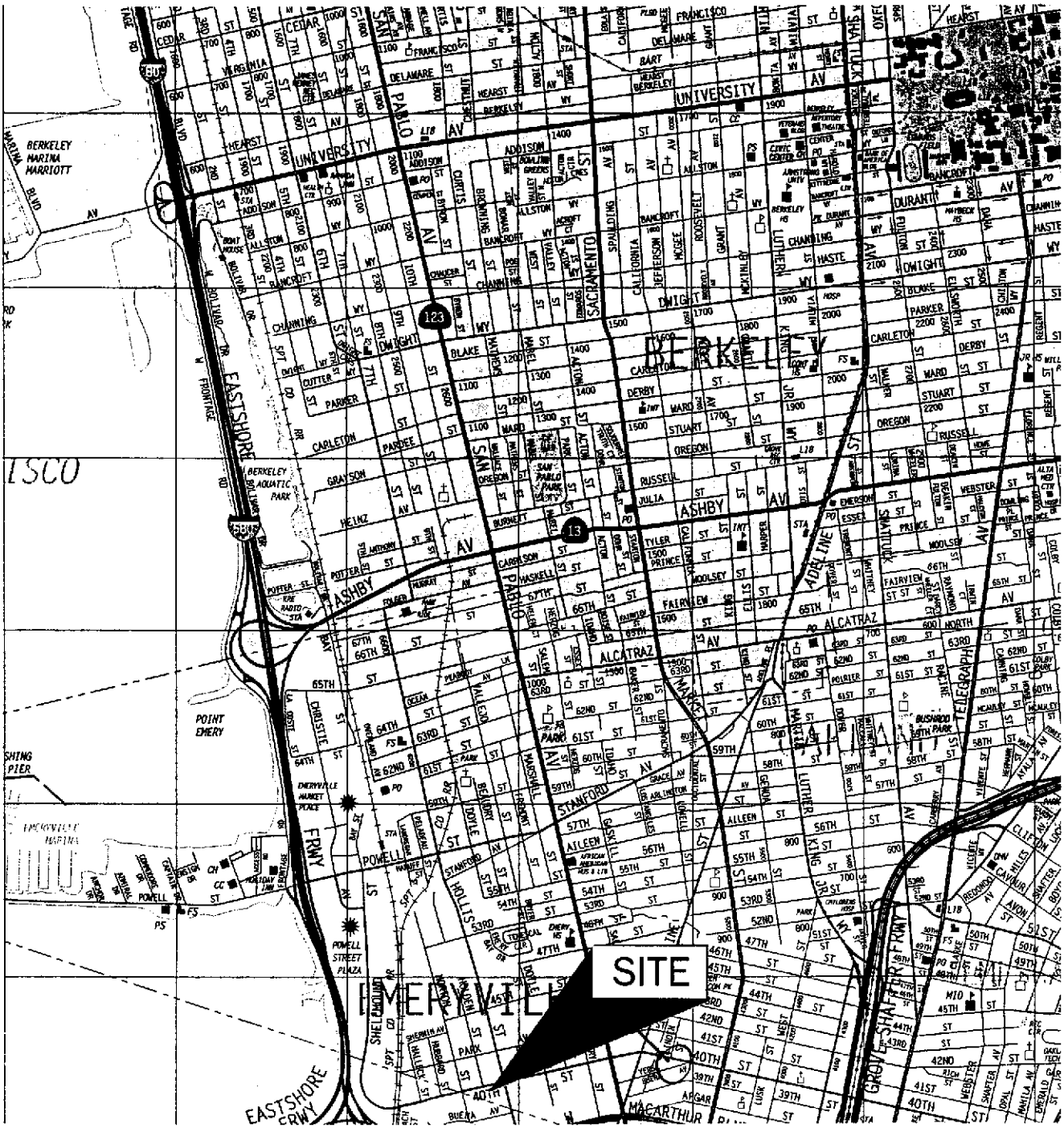
Notes: All well elevations are measured from the top of casing not from the ground surface.
ft msl = feet above mean sea level

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
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
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

Notes:

MTBE	Methyl Tertiary Butyl Ether
TPHg	Total Petroleum Hydrocarbons as gasoline
TPHd	Total Petroleum Hydrocarbons as diesel
AEI	All Environmental, Inc.
MAI	McCampbell Analytical Inc., Pacheco, California
ug/l	Micrograms per liter



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FROM:
ALAMEDA/CONTRA
COSTA COUNTIES
THOMAS BROS. MAPS
1997 EDITION

ALL ENVIRONMENTAL, INC.

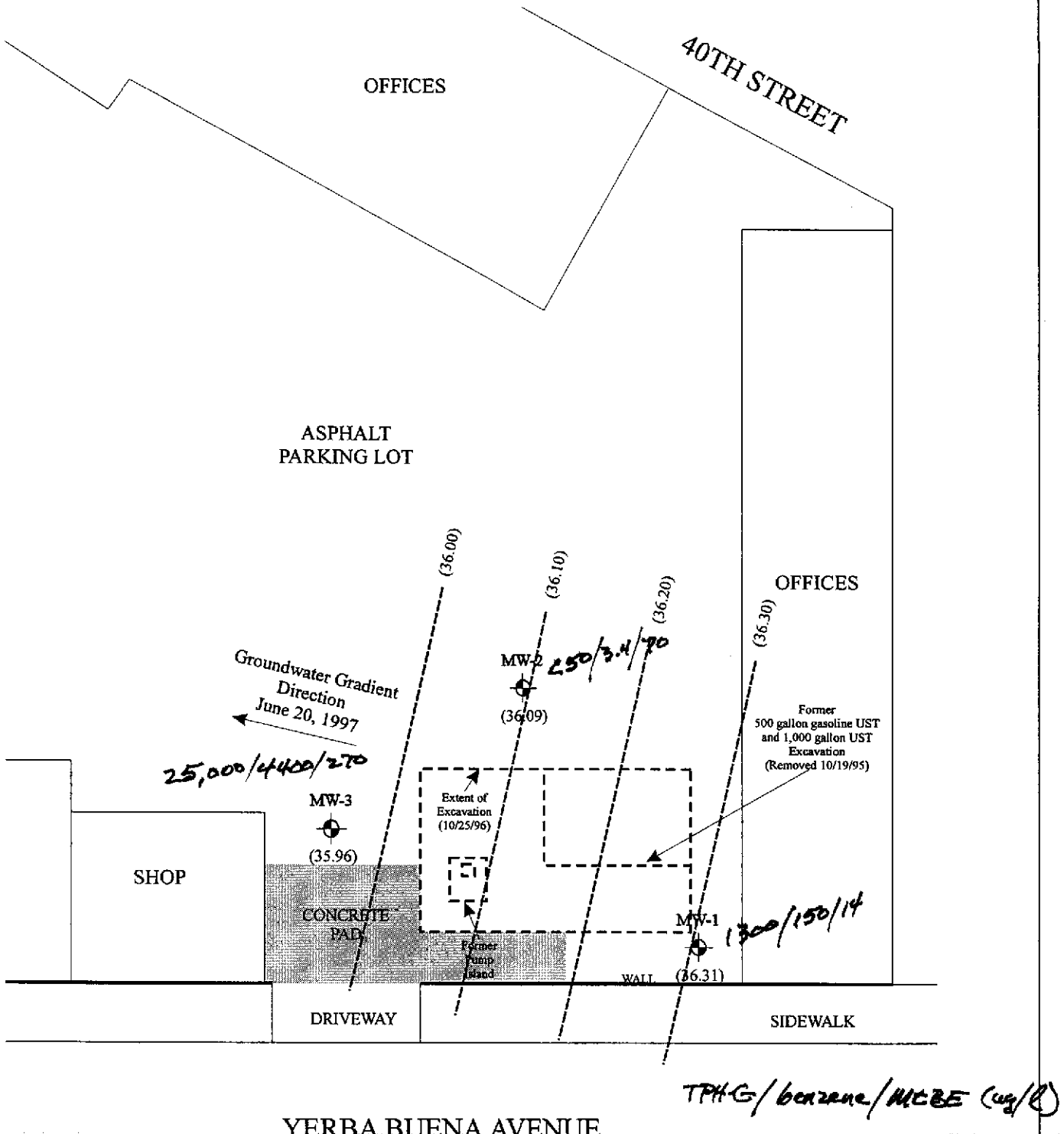
3364 MT. DIABLO BOULEVARD, LAFAYETTE, CA

SCALE: 1":2400' | DATE:

SITE LOCATION MAP

1075 40TH STREET
OAKLAND, CALIFORNIA

DRAWING NUMBER:
FIGURE 1



ALL ENVIRONMENTAL, INC.

3364 MT. DIABLO BOULEVARD, LAFAYETTE, CA

SCALE: 1"=20' | DATE:

GROUNDWATER GRADIENT MAP

1075 40TH STREET
OAKLAND, CALIFORNIA

DRAWING NUMBER:
FIGURE 2

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name: Fidelity Roof Co.	Date of Sampling: 6/20/97
Job Number: 1540	Name of Sampler: Dusty Roy
Project Address: 1075 40th Street, Oakland, CA 94608	

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	45.41
Depth of Well	21.00
Depth to Water	9.10
Water Elevation	36.31
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5.71
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	6
Appearance of Purge Water	Clear

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 - 40 ml VOAs, 1 - 1 liter bottle

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
	2	19.5	6.61	1299	
	4	19.1	6.63	1258	
	5	19.2	6.73	1289	Pumped Dry

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

TD - Total Depth of Well
DTW - Depth To Water

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name: Fidelity Roof Co.	Date of Sampling: 6/20/97
Job Number: 1540	Name of Sampler: Dusty Roy
Project Address: 1075 40th Street, Oakland, CA 94608	

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	44.94
Depth of Well	21.00
Depth to Water	8.85
Water Elevation	36.09
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5.83
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	9
Appearance of Purge Water	Clear

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 - 40 ml VOAs, 1 - 1 liter bottle

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
	1	20.3	6.87	1249	
	2	21.2	6.86	1487	
	4	20.7	6.88	1592	
	5	20.3	6.90	1541	
	7	20.0	6.92	1445	
	9	19.9	6.91	1476	Pumped Dry

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

TD - Total Depth of Well
DTW - Depth To Water

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name: Fidelity Roof Co.	Date of Sampling: 6/20/97
Job Number: 1540	Name of Sampler: Dusty Roy
Project Address: 1075 40th Street, Oakland, CA 94608	

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	44.32
Depth of Well	21.00
Depth to Water	8.36
Water Elevation	35.96
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	6.07
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	7
Appearance of Purge Water	Clear

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 - 40 ml VOAs, 1 - 1 liter bottle

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
	1	20.3	6.49	2455	
	2	21.2	6.51	2287	
	4	20.2	6.49	2342	
	5	19.8	6.50	2363	
	7	19.8	6.57	2368	Pumped Dry

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

TD - Total Depth of Well
DTW - Depth To Water

McCAMPBELL ANALYTICAL INC.
110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #1540; Fidelity Roof	Date Sampled: 06/23/97
3364 Mt. Diablo Blvd.		Date Received: 06/23/97
Lafayette, CA 94549	Client Contact: Bryan Campbell	Date Extracted: 06/28/97
	Client P.O:	Date Analyzed: 06/28/97

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
77872	MW-1	W	1300,a	14	150	2.1	12	19	94
77873	MW-2	W	ND	70	3.4	ND	ND	ND	105
77874	MW-3	W	25,000,a	270	4400	120	540	1500	103
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

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

cluttered chromatogram; sample peak coelutes with surrogate peak

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

DHS Certification No. 1644

Edward Hamilton, Lab Director

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110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #1540; Fidelity Roof	Date Sampled: 06/23/97
3364 Mt. Diablo Blvd.		Date Received: 06/23/97
Lafayette, CA 94549	Client Contact: Bryan Campbell	Date Extracted: 06/25/97
	Client P.O:	Date Analyzed: 06/25/97

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

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

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
77872	MW-1	W	420,d,b	103
77873	MW-2	W	ND	101
77874	MW-3	W	7000,d,b	102
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

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

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

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) *unmodified or* weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) *medium boiling* point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) *liquid* sample that contains greater than ~5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/28/97 Matrix: Water

Analyte	Concentration (mg/L) Sample #(77919)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	110.4	109.7	100.0	110.4	109.7	0.6
Benzene	0.0	10.0	9.8	10.0	100.0	98.0	2.0
Toluene	0.0	10.3	10.1	10.0	103.0	101.0	2.0
Ethyl Benzene	0.0	9.7	9.8	10.0	97.0	98.0	1.0
Xylenes	0.0	29.2	29.8	30.0	97.3	99.3	2.0
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

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

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
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QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/25/97 Matrix: Water

Analyte	Concentration (mg/L) Sample #(77720)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	90.5	98.7	100.0	90.5	98.7	8.7
Benzene	0.0	9.1	9.7	10.0	91.0	97.0	6.4
Toluene	0.0	9.6	10.2	10.0	96.0	102.0	6.1
Ethyl Benzene	0.0	9.8	10.5	10.0	98.0	105.0	6.9
Xylenes	0.0	29.4	31.6	30.0	98.0	105.3	7.2
TPH (diesel)	0	149	151	150	100	101	1.2
TRPH (oil & grease)	0	28300	28400	28000	101	101	0.4

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

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

Chain of Custody

ALL ENVIRONMENTAL, INC.
3364 Mt. Diablo Boulevard
Lafayette, CA 94549
(510) 283-6000 FAX: (510) 283-6121

8885 xale 165.doc

DATE: 6/23/97 PAGE: 1 OF: 1

AEI PROJECT MANAGER: Brynn Campbell
PROJECT NAME: Fidelity Roof
PROJECT NUMBER: 1540
SIGNATURE: Dusty Roy
TOTAL # OF CONTAINERS: 9
RECD. GOOD COND./COLD: YES

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	MATRIX	TPH-Gasoline (EPA 5030/8015)	TPH-Gasoline (EPA 5030/8015) w/ BTEX and MTBE (EPA 602/8020)	TPH-Diesel (EPA 3510/3550/8015)	PURGEABLE AROMATICS BTEX and MTBE (EPA 602/8020)	TOTAL OIL & GREASE (EPA 5520 E&F)	TOTAL LEAD (AA) (EPA 7420)	VOLATILE ORGANIC COMPOUNDS (EPA 8240)	LUFT Metals (EPA 7130,7190,7420,7520,7950)	STLC CAM 17 (EPA 1310/6010)	RCI REACTIVITY, CORROSIVITY, IGNITABILITY (Title 22, CCR 66261.21-23)				NUMBER OF CONTAINERS
MW-1	6/23/97		W		X	X											3
MW-2	"		W		X	X											3
MW-3	"		W		X	X											3
													77872				
													77873				
													77874				

VOAS | O&G | METALS | OTHER

ICE/T° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATIVE APPROPRIATE ✓
CONTAINERS ✓

ANALYTICAL LAB:
ADDRESS:
PHONE: ( ) FAX: ( )
INSTRUCTIONS/COMMENTS:

RELINQUISHED BY: 1	RECEIVED BY: 1	RELINQUISHED BY: 2	RECEIVED BY: 2
Signature: Dusty Roy	Signature: Heidi Ricca	Signature:	Signature:
Printed Name: Dusty Roy	Printed Name: H. Ricca	Printed Name:	Printed Name:
Company: AEI	Company: MAI	Company:	Company:
Time: 5:00pm Date: 6/23/97	Time: 5:00 Date: 6/23/97	Time: Date:	Time: Date:

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

All Environmental, Inc. 3364 Mt. Diablo Blvd. Lafayette, CA 94549	*Client Project ID*: # 1540; Fidelity Roof	Date Sampled: 03/19/97
		Date Received: 03/21/97
	Client Contact: Bryan Campbell	Date Extracted: 03/24/97
	Client P.O:	Date Analyzed: 03/24/97

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	% Rec. Surrogate
74590	MW-1	W	ND	23	ND	ND	ND	ND	105
74591	MW-2	W	ND	65	ND	ND	ND	ND	105
74592	MW-3	W	26,000,a	230	3000	530	340	2300	100
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, soil and sludge samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

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

DHS Certification No. 1644

Edward Hamilton, Lab Director

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	Client Contact: Bryan Campbell	Date Extracted: 03/21/97
	Client P.O:	Date Analyzed: 03/21/97

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

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

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
74590	MW-1	W	ND	101
74591	MW-2	W	ND	110
74592	MW-3	W	5000,d	100
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

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

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

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/21/97 Matrix: Water

Analyte	Concentration (mg/L) Sample (#74543)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	97.3	99.5	100.0	97.3	99.5	2.2
Benzene	0.0	9.6	9.8	10.0	96.0	98.0	2.1
Toluene	0.0	9.9	10.2	10.0	99.0	102.0	3.0
Ethyl Benzene	0.0	10.2	10.5	10.0	102.0	105.0	2.9
Xylenes	0.0	30.4	31.3	30.0	101.3	104.3	2.9
TPH (diesel)	0	139	143	150	93	95	2.6
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

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

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/24/97 Matrix: Water

Analyte	Concentration (mg/L) Sample (#74563)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	101.4	100.8	100.0	101.4	100.8	0.6
Benzene	0.0	9.9	9.8	10.0	99.0	98.0	1.0
Toluene	0.0	10.3	10.2	10.0	103.0	102.0	1.0
Ethyl Benzene	0.0	10.4	10.4	10.0	104.0	104.0	0.0
Xylenes	0.0	31.1	31.3	30.0	103.7	104.3	0.6
TPH (diesel)	0	139	139	150	93	92	0.2
TRPH (oil & grease)	0	24800	24900	23700	105	105	0.4

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

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

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7
(510) 798-1620 PACHECO, CA 94553 FAX (510) 798-1622

CHAIN OF CUSTODY RECORD

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

REPORT TO: Bryan Campbell BILL TO:

COMPANY: ALL ENVIRONMENTAL INC
3364 MT DIABLO BLVD
LAFAYETTE CA 94553

TELE: 510-283-6000 FAX #: 510283-6121

PROJECT NUMBER: 1540 PROJECT NAME: Fidelity Roof

PROJECT LOCATION: OAKLAND SAMPLER SIGNATURE: Dusty Roy

SAMPLE ID	LOCATION	SAMPLING DATE	SAMPLING TIME	# CONTAINERS	TYPE CONTAINERS	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	METHOD PRESERVED: HCL	HNO_3	OTHER
MW-1		3/19/97		3		X							
MW-2		3/19/97		3		X							
MW-3		3/19/97		3		X							

ANALYSIS REQUEST

BTEX & TPH as Gasoline (602/8020 & 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/5520 B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080 - PCBs Only	EPA 624/8240/8260	EPA 625/8270	CAM - 17 Metals	EPA - Priority Pollutant Metals	LEAD (7240/7421/239.2/6010)	ORGANIC LEAD	RCI	OTHER	OTHER	OTHER	OTHER	COMMENTS
X	X																			74590
X	X																			74591
X	X																			74592

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
Dusty Roy	3/21/97	9:20AM	Wendi Rivera
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
RELINQUISHED BY:	DATE	TIME	RECEIVED BY LABORATORY:

REMARKS:

ICE/T° ✓ VOAS | O&G | METALS | OTHER
GOOD CONDITION ✓ PRESERVATIVE ✓
HEAD SPACE ABSENT ✓ APPROPRIATE
CONTAINERS ✓