



June 11, 2003

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

Subject: Quarterly Groundwater Monitoring Report
Nineteenth Episode, 2003
1075 40th Street
Oakland, California
AEI Project No. 3119

Alameda County
JUN 16 2003
Environmental Health

Dear Mr. Hwang:

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

Please call Peter McIntyre at (925) 283-6000 x104, if you have any questions.

Sincerely,

Brandi K. Reese

Brandi K. Reese
Staff Geologist



00 FEB -4 AM 8:59

January 31, 2000

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

Subject: Quarterly Groundwater Monitoring Report
Fourth Quarter 1999
1075 40th Street
Oakland, CA 94608
AEI Project No. 3119
STID 3341

Dear Mr. Seery:

Enclosed is a copy of the Fourth Quarter, 1999 Groundwater Monitoring Report for the property referenced above. Please call me at (925) 283-6000 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Carrie E. Locke', written in a cursive style.

Carrie E. Locke
Project Engineer

January 31, 2000

**GROUNDWATER MONITORING WELL
INSTALLATION AND SAMPLING
REPORT**

1075 40TH Street
Oakland, California

Project No. 3119

Prepared For

Fidelity Roof Company
1075 40th Street
Oakland, CA 94608

Prepared By

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

AEI

January 31, 2000

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

RE: Quarterly Groundwater Monitoring and Sampling Report
Fourth Quarter 1999
1075 40th Street
Oakland, California
Project No. 3119

Dear Mr. Upshaw:

AEI Consultants (AEI) has prepared this report on your behalf, in response to your 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 fourth episode of groundwater monitoring and sampling conducted on November 18, 1999.

Site Description and Background

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

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 that soil beneath the 1,000 gallon UST was impacted with minor concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline, TPH as diesel, 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 100 mg/kg of TPH as gasoline and 96 mg/kg of TPH as diesel 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

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(212) 279-7770

investigation revealed significant levels of gasoline and diesel present in soil to the south and to the west of the open excavation, believed to extend beneath the existing pump island. Groundwater analysis indicated maximum concentrations of 5,500 µg/l of TPH as gasoline, 340 µg/l of benzene, and 2,100 µg/l of TPH as diesel. Due to the high concentrations of petroleum hydrocarbons within the groundwater, the ACHCSA required further investigation into 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 by the laboratory into one composite sample for analysis. Analysis of the samples indicated concentrations of 3.8 mg/kg of TPH as gasoline, 28 mg/kg of TPH as diesel, 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 as gasoline, 16 mg/kg of benzene, and 300 mg/kg of TPH as diesel remains 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, under non-hazardous waste manifest, for disposal.

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 29,000 µg/l of TPH as gasoline, 5,600 µg/l of benzene and 7,300 µg/l of TPH as diesel 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 as diesel was detected in the groundwater to the south of the former excavation at 2,400 µg/L. 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

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. All four of the monitoring wells were sampled on August 5, 1999. Significant concentrations of petroleum hydrocarbons were detected in monitoring well MW-3. Methyl tertiary butyl ether (MTBE) was the only analyte detected in the new monitoring well, MW-4, at concentrations of 37 µg/L. Refer to Table 2 for the remaining analytical data collected during the groundwater sampling episode on August 5, 1999.

This report describes the results of the subsequent groundwater monitoring event which took place on November 18, 1999.

Summary of Activities

AEI measured the depth to groundwater in the four wells on November 18, 1999. The depth from the top of the well casings was measured prior to sampling with an electric water level indicator. The wells were purged and sampled using disposable Teflon bailers. 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. The 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 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), MTBE (EPA Method 8020/602), benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8020/602), and TPH as diesel (EPA Method 3510/8015).

Field Results

A strong hydrocarbon odor was detected during the sampling of monitoring well MW-3, and a hydrocarbon sheen was observed. No sheen or free product was encountered during monitoring activities of the remaining wells. Groundwater levels for the current monitoring episode ranged from 33.45 to 36.97 feet above Mean Sea Level (MSL). These groundwater

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 Forms.

Groundwater Quality

Analysis of groundwater samples from well MW-3 continues to indicate high levels of hydrocarbon contamination: 74,000 µg/L of TPH as gasoline, 490,000 µg/L of TPH as diesel, and 8,100 µg/L of benzene. Concentrations of MTBE were detected in wells MW-2 and MW-4 at 370 µg/L and 20 µg/L, respectively. Only low concentrations of TPH as gasoline were detected in groundwater samples collected from 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. Previous laboratory results and chain of custody documents are included in Appendix C.

Recommendations

It is apparent from this monitoring episode, as well as those conducted previously, that significant amounts of petroleum hydrocarbons remain in the groundwater. AEI Consultants recommends the continued quarterly groundwater monitoring and sampling of the wells. The next monitoring and sampling episode is scheduled for February, 2000, as per the 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 Installation and Sampling report, September 3, 1999, prepared by AEI.

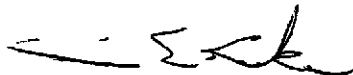
Report Limitations and Signatures

This report presents a summary of work completed by All Environmental, Inc., including observations and descriptions of site conditions. Where appropriate, it includes analytical

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



Carrie E. Locke
Project Engineer



J. P. Derhake, PE, CAC
Senior Author



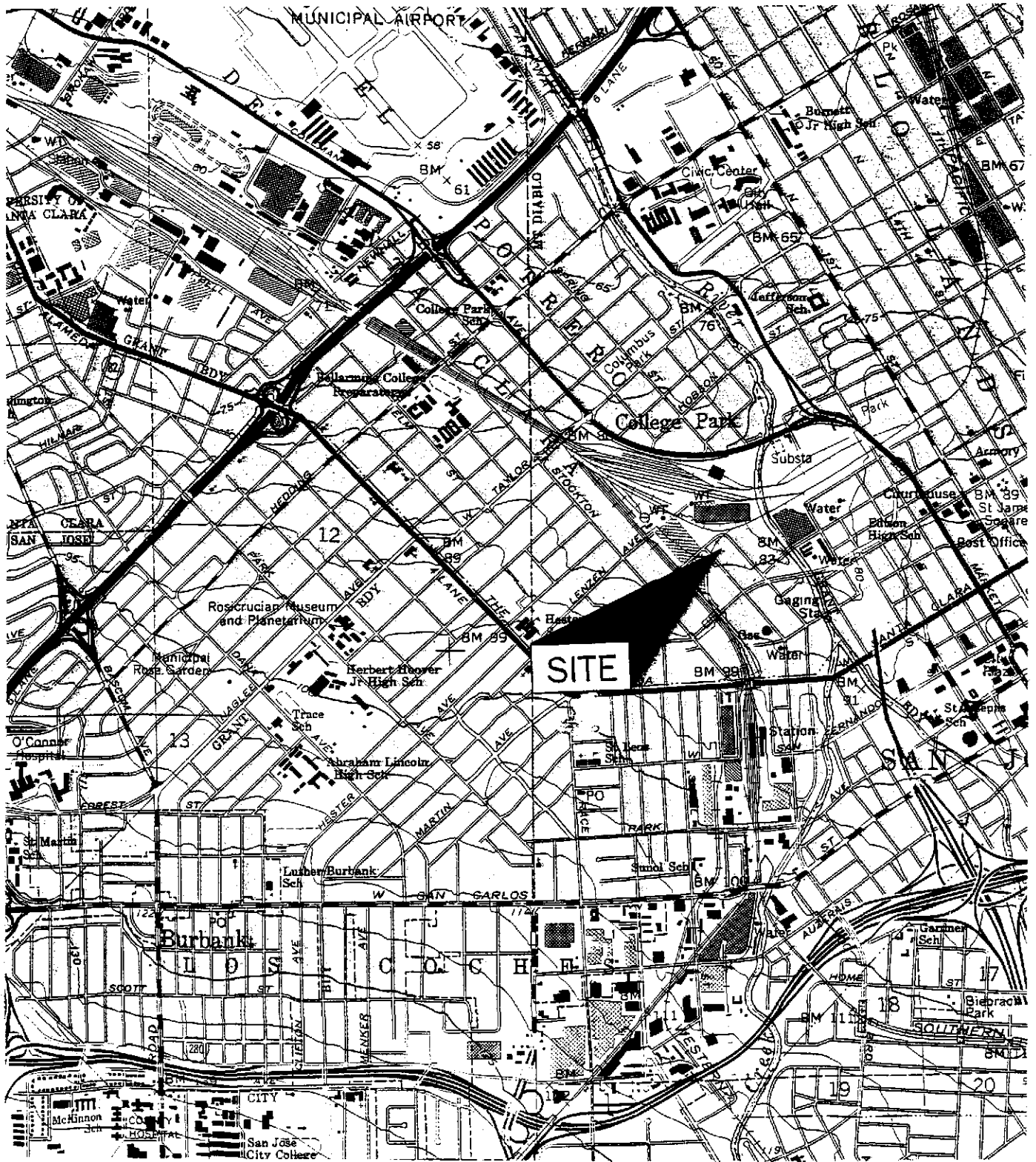
Figures

- Figure 1 Site Location Map
- Figure 2 Site Plan

Appendices

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

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



SOURCE:
 SAN JOSE WEST, CA QUAD USGS TOPO
 MAP
 1961; PHOTOREVISED 1980
 SCALE 1:24,000

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

SITE LOCATION MAP

370 NORTH MONTGOMERY STREET
 SAN JOSE, CALIFORNIA

FIGURE 1
 PROJECT No. 3237

PARKING
AND SUPPLY
YARD AREA

40TH ST.

Former
500 gallon gasoline UST
and 1,000 gallon UST
Excavation
(Removed 10/19/95)

GROUNDWATER
FLOW DIRECTION WITH A
GRADIENT OF 0.068 FT/FT
NOVEMBER 18, 1999

MW-2

OFFICES

SHOP

MW-3

CONCRETE
PAD

34.0

34.5

35.0

35.5

36.0

36.5

Extent of
Excavation
(10/25/96)

MW-1

Former
Pump
Island

WALL

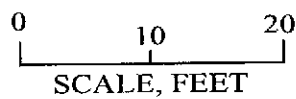
DRIVEWAY

SIDEWALK

PARKING LANE

MW-4

YERBA BUENA AVENUE



MONITORING WELL
GROUNDWATER CONTOUR
IN FEET ABOVE MSL

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

GROUNDWATER GRADIENT MAP

1075 40TH STREET
OAKLAND, CALIFORNIA

FIGURE 2

**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
	6/20/97	45.41	9.10	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
MW-2	3/19/97	44.94	8.40	36.54
	6/20/97	44.94	8.85	36.09
	10/8/97	44.94	9.80	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	10.20	34.78
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
MW-4	8/5/99	43.48	8.79	34.69
	11/18/99	43.48	8.11	35.37

Notes:

All wells re-surveyed after the installation of MW-4

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 (µg/l)	MTBE (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- Benzene (µg/l)	Xylenes (µg/l)	TPHd (µg/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
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
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
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

Notes: µg/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 All Environmental, Inc.
 MAI McCampbell Analytical Inc., Pacheco, California

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM					
Monitoring Well Number: MW-1					
Project Name: Fidelity Roof, Co			Date of Sampling: 11/18/99		
Job Number: 3119			Name of Sampler: CH		
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			8.52		
Water Elevation			36.97		
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)			5.99		
4" casing: (TD - DTW)(0.65)(3)					
6" casing: (TD - DTW)(1.44)(3)					
Actual Volume Purged (gallons)			6		
Appearance of Purge Water			Lightly merky		
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
	2	69.1	6.91	1006	
	4	66.0	6.90	962	
	6	63.8	6.92	931	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)					
No hydrocarbon sheen or odor					

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: 11/18/99
Job Number: 3119	Name of Sampler: CH
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	10.20
Water Elevation	34.78
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5.18
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-liter amber bottle
----------------------------------	--------------------------------------

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
	2	67.1	6.80	1205	
	4	68.8	6.88	1186	
	6	68.6	6.95	1173	

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

No hydrocarbon sheen or odor

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: 11/18/99
Job Number: 3119	Name of Sampler: CH
Project Address: 1075 40th 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	10.92
Water Elevation	33.45
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	4.84
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-liter amber bottle			
Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
	2	64.4	6.47	1892	
	4	64.2	6.50	1966	
	6	63.5	6.55	1985	

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

Strong hydrocarbon odor and sheen observed

TD - Total Depth of Well
DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: MW-4

Project Name: Fidelity Roof, Co	Date of Sampling: 11/18/99
Job Number: 3119	Name of Sampler: CH
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	8.11
Water Elevation	35.37
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	Merky

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
	2	65.6	6.85	1292	
	4	67.4	6.91	1298	
	6	67.3	6.79	1294	

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

No hydrocarbon odor or sheen

TD - Total Depth of Well
DTW - Depth To Water



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. 901 Moraga Road, Suite C Lafayette, CA 94549	Client Project ID: #3119; Fidelity	Date Sampled: 11/18/99
		Date Received: 11/18/99
	Client Contact: Peter McIntyre	Date Extracted: 11/18-11/19/99
	Client P.O:	Date Analyzed: 11/18-11/19/99

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	Ethylbenzene	Xylenes	% Recovery Surrogate
25872	MW-1	W	79j	ND	ND	ND	ND	ND	101
25873	MW-2	W	ND	370	ND	ND	ND	ND	99
25874	MW-3	W	74,000,a,h	ND<1000	8100	5000	2100	8100	102
25875	MW-4	W	ND	20	ND	ND	ND	ND	99
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.



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. 901 Moraga Road, Suite C Lafayette, CA 94549	Client Project ID: #3119; Fidelity	Date Sampled: 11/18/99
		Date Received: 11/18/99
	Client Contact: Peter McIntyre	Date Extracted: 11/18/99
	Client P.O.:	Date Analyzed: 11/19-11/21/99

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
25872	MW-1	W	ND	104
25873	MW-2	W	ND	103
25874	MW-3	W	490,000,g,b,h	103
25875	MW-4	W	ND	104
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.

 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

Date: 11/18/99 Matrix: Water

Extraction: N/A

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

SampleID: 111899

Instrument: GC-12

Xylenes	0.0	290.0	298.0	300.00	97	99	2.7
Ethyl Benzene	0.0	95.0	94.0	100.00	95	94	1.1
Toluene	0.0	95.0	97.0	100.00	95	97	2.1
Benzene	0.0	99.0	99.0	100.00	99	99	0.0
MTBE	0.0	85.0	92.0	100.00	85	92	7.9
GAS	0.0	1010.5	1,031.4	1000.00	101	103	2.1

SampleID: 111899

Instrument: GC-6 B

TPH (diesel)	0.0	356.0	343.0	300.00	119	114	3.7
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SampleID: 111899

Instrument: IR-1

TRPH	0.0	25.8	26.9	23700.00	0	0	4.2
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$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

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

RPD means Relative Percent Deviation



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QC REPORT

Date: 11/19/99-11/20/99 Matrix: Water

Extraction: N/A

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

SampleID: 111999

Instrument: GC-12

Xylenes	0.0	291.0	302.0	300.00	97	101	3.7
Ethyl Benzene	0.0	94.0	97.0	100.00	94	97	3.1
Toluene	0.0	97.0	99.0	100.00	97	99	2.0
Benzene	0.0	101.0	103.0	100.00	101	103	2.0
MTBE	0.0	89.0	88.0	100.00	89	88	1.1
GAS	0.0	935.3	922.3	1000.00	94	92	1.4

SampleID: 25698

Instrument: GC-2 A

TPH (diesel)	0.0	303.0	284.0	300.00	101	95	6.5
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SampleID: 25698

Instrument: IR-1

TRPH	0.0	25.8	26.9	23700.00	0	0	4.2
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$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

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

RPD means Relative Percent Deviation



17748 ZAF111

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

AEI PROJECT MANAGER Peter McIntyre
 PROJECT NAME Fidelity
 PROJECT NUMBER 3119
 TOTAL # OF CONTAINERS 12
 RCVD. GOOD CONDITION/COLD Y N

TPH(g) FTX, MTBE
SOIL: EPA 8080/8015M, 8020
WATER: EPA 8080/8015G, 802

TPH(g)
SOIL: EPA 8080/8015M
WATER: EPA 8080/8015M

FTX, MTBE
SOIL: EPA 8020
WATER: EPA 802

TOTAL OIL & GREASE
SOIL: EPA 813.1 or STD 5520 U/CAF
WATER: STD 5520 BAF

VOLATILE HALOCARBONS
SOIL: EPA 8010
WATER: EPA 801

VOC's
SOIL: EPA 8240
WATER: EPA 824

SEMI-VOLATILE ORGANICS
SOIL: EPA 8270/8581
WATER: EPA 8270/8581

TOTAL LEAD (TLC)
SOIL: 9010 (ICV)
WATER: 291.2 (LA)

LUFT 5 METALS
SOIL: EPA 7130, 7150, 7180, 7220, 7250
WATER:

	SAMPLE ID	DATE	TIME	MATRIX
(+)	MW-1	11/18/99		water
+	MW-2	↓		↓
(+)	MW-3	↓		↓
+	MW-4	↓		↓

TPH(g) FTX, MTBE	TPH(g)	FTX, MTBE	TOTAL OIL & GREASE	VOLATILE HALOCARBONS	VOC's	SEMI-VOLATILE ORGANICS	TOTAL LEAD (TLC)	LUFT 5 METALS	HOLD	# OF CONTAINERS
X	X									3
X	X									3
X	X									3
X	X									3

25872
25873
25874
25875

ICE/✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATION APPROPRIATE CONTAINERS ✓

VOAS ✓
O&G ✓
METALS ✓
OTHER ✓

COMMENTS / INSTRUCTIONS
McC Campbell Analytical

ANALYTICAL LABORATORY ADDRESS PHONE () FAX ()

RELINQUISHED BY
Charles McC Campbell
SIGNATURE
CHARLES MCC CAMPBELL
PRINTED NAME
AEI
COMPANY
DATE 11-18 TIME 4:45

RECEIVED BY
H. Ziecca
SIGNATURE
H. Ziecca
PRINTED NAME
MAI
COMPANY
DATE 11/18/99 TIME 1045

RELINQUISHED BY SIGNATURE PRINTED NAME COMPANY DATE TIME

RECEIVED BY SIGNATURE PRINTED NAME COMPANY DATE TIME