PHASE II SUBSURFACE INVESTIGATION

1075 40th Street Oakland, California

12/98

Project No. 1893

Prepared For

Monty Upshaw Fidelity Roof Company 1075 40th Street Oakland, CA 94608

Prepared By

All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549 (800) 801-3224





December 9, 1998

Monty Upshaw Fidelity Roof Company 1075 40th Street Oakland, CA 94608

Subject:

Phase II Subsurface Investigation

1075 40th Street Oakland, California Project No. 1893

Dear Mr. Upshaw:

The following letter report describes the activities and results of the subsurface investigation performed by All Environmental, Inc. (AEI) at the above referenced property (Figure 1: Site Location Map). This investigation was performed at the request of Scott Seery of the Alameda County Health Care Services Agency (ACHCSA) to further define the lateral extent of groundwater contamination at the property. Mr. Seery approved the workplan presented by AEI on September 28, 1998. The workplan included the advancement of six soil borings and analysis of groundwater samples.

I 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. 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 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 TPH as gasoline and 96 mg/kg TPH as diesel present. BTEX was present at concentrations of 2.0 mg/kg, 0.26 mg/kg, 1.9 mg/kg and 8.0 mg/kg, respectively. MTBE was not present above the detection limit of 0.30 mg/kg.

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. BTEX concentrations were 2.3 mg/kg, 11 mg/kg, 6.8 mg/kg and 47 mg/kg, respectively. MTBE was not detected within the composite stockpile soil sample above the detection limit.

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 (Phase II Soil and Groundwater Investigation report, 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.

Results of the Phase II Subsurface Investigation indicated groundwater impacted with maximum concentrations of 5,500 μ g/l TPH as gasoline, 340 μ g/l benzene, and 2,100 μ g/l 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.

Based upon information obtained during the Phase II Subsurface Investigation, AEI recommended that additional soil be removed from the south side of the existing excavation. In addition, AEI recommended that soil below and in the vicinity of the pump island be excavated. Moderate concentrations of petroleum hydrocarbons remain in the soil to the east of the excavation, however the removal of additional soil could potentially undermine the existing building. Low concentrations of hydrocarbons are present in the soil north of the excavation, therefore, additional excavation is not warranted.

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 the presence of concentrations of 3.8 mg/kg TPH as gasoline, 28 mg/kg TPH as diesel and minor concentrations of BTEX. Approval was obtained from 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 (Excavation and Disposal of Contaminated Soil report, dated January 7, 1997). 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 TPH as gasoline, 16 mg/kg benzene, and 300 mg/kg 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. On November 27 and November 29, 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 drilled three soil borings and converted them to groundwater monitoring wells (Groundwater Monitoring Well Installation report, dated May 30, 1997). Based on the data collected during the four monitoring episodes, groundwater beneath the site is impacted with petroleum hydrocarbons. The most recent analytical data indicated 29,000 μ g/l TPH as gasoline, 5,600 μ g/l benzene and <360 μ g/l MTBE present in the groundwater.

At the request of the Alameda County Health Care Services Agency (ACHCSA), AEI submitted a workplan on September 18, 1998 to further define the lateral extent of groundwater contamination. Based on the groundwater flow direction to the southwest, the workplan was designed to determine if the plume was moving offsite to the south and west. On October 9, 1998, Mr. Scott Seery of the ACHSCA approved the workplan.

II Investigative Efforts

All Environmental, Inc. (AEI) performed a subsurface investigation at the property on November 3, 1998. A total of 6 soil borings (SB-1 to SB-6) were advanced. Three borings, SB-1, SB-2, and SB-6, were located south of the property along Yerba Buena Avenue. Three borings SB-3, SB-4, and SB-5 were located in the western portion of the property. The locations of the soil borings are shown on Figure 2.

The near surface native soil encountered during the boring advancement consisted of sandy clay with sands and silt increasing with depth. Soils encountered during the monitoring well installation consisted of clay with gravel and sand to 20 feet below ground surface. The porosity and therefore the transmisivity of these soils are expected to be very low. The very slow groundwater generation during sampling is likely due to the tight nature of the soil beneath the property. Refer to Attachment A for detailed logs of the borings. Based on groundwater monitoring conducted on the property, the groundwater flow direction is general to the southwest, with seasonal variations.

Soil Sample Collection

The borings were advanced with a Geoprobe drilling rig to depths between 15 and 20 feet bgs. Soil samples were collected at 4 feet and 8 feet below ground surface.

No odor or soil staining was observed during the advancement of the soil borings and sample collection. The soil screening data is presented on the borings logs (Attachment A). Soil samples were collected in 2"acrylic liners, from which a six inch sample was chosen from the four foot sections. The soil samples were sealed with teflon tape and plastic caps and placed in a cooler with wet ice to await transportation to the laboratory.

Groundwater Sample Collection

Groundwater exists at approximately 12 to 15 feet bgs at the site. Due to the slow generation of groundwater, water samples were collected by inserting slotted PVC pipe into the borings and bailing the water samples using a clean stainless steel bailer. No groundwater was generated in SB-3. Due to the slow generation of groundwater, the water sample from SB-1 was collected the following morning. With the approval of Mr. Scott Seery, slotted PVC pipe was inserted into the boring and covered until water had generated the next morning. All samples were placed in 1-liter amber bottles and 40-mL VOA vials. The groundwater samples were capped so that there was no head space or visible air bubbles within the vials, then placed in a cooler with wet ice to await transportation to the laboratory.

Following sample collection, each boring was backfilled with cement slurry.

Laboratory Analysis

With the exception of the water sample from SB-1, the soil and groundwater samples were transported to SunStar Laboratories, Inc. of Tustin, California (DOHS Certification Number 2250) on November 3, 1998 under chain of custody protocol for analysis. The water sample from SB-1 was bailed on November 4, 1998 and transported to McCampbell Analytical, Inc. of Pacheco, California (State Certification # 1664). Analytical results and chain of custody documents are included as Attachment B.

Groundwater samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline (EPA Method 5030/8015), benzene, toluene, ethylbenzene and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) (EPA Method 8020/602), and TPH as diesel (EPA Method 3510/8015).

All soil samples were placed on hold at the laboratory.

unclear

III Findings

TPH as gasoline was not detected above laboratory detection limits in any of the groundwater samples analyzed. TPH as diesel was detected in the groundwater sample from SB-1 at 2,400 μ g/L. TPH as diesel was not detected above laboratory detection limits in any other groundwater samples. With the exception of toluene detected at 0.6 μ g/L in SB-6, no other petroleum hydrocarbons were detected above laboratory detection limits in any of the groundwater samples analyzed. Results of the analytical testing are summarized in Table 1.

IV Conclusions and Recommendations

Although significant concentrations of petroleum hydrocarbons have been detected during groundwater monitoring at the property, the results of the most recent investigation suggest that the hydrocarbon plume is contained to beneath the property. Analysis of groundwater samples taken along the southern and western property boundary did not detect any TPH as gasoline or any of its constituents. TPH as diesel was detected in the groundwater in SB-1 at 2,400 μ g/L, however TPH as diesel was not detected in any of the other down gradient soil borings. The hydrocarbon plume is likely confined due to the low transmisivity of the clays which exist in the area.

Due to the continued presence of petroleum hydrocarbons in the groundwater beneath the former tank locations, AEI recommends the continuation of groundwater monitoring for one year. However, based on the recent subsurface investigation, it appears that the hydrocarbon plume has stabilized. Although TPH as diesel was detected in SB-1, the concentrations of TPH as diesel decrease significantly in all directions from the former tank location. Therefore, AEI recommends no further investigation into the lateral extent of the plume.

V Report Limitation

This report presents a summary of work completed by All Environmental, Inc. (AEI). The completed work includes observations and descriptions of site conditions encountered. 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 the required information, but it cannot be assumed that they are representative of areas not sampled. All conclusions and/or recommendations are based on these analyses and 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.

If you have any questions regarding our investigation, please do not hesitate to contact me at (519) 283-6000.

925

Sincerely,

Peter McIntyre Project Geologist

Joseph P. Derhake, PE, CAC

Senior Author

Cc: Scott Seery, Alameda County Health Care Services Agency

1131 Harbor Bay Parkway, Suite 250

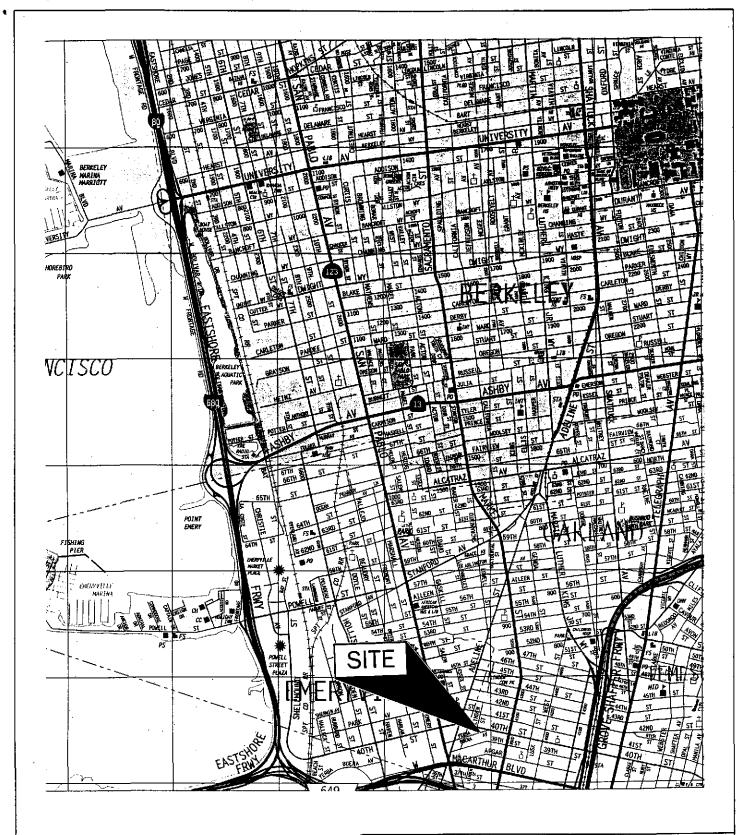
Alameda, CA 94502-6577

Figures

Tables

Attachment A: Soil Boring Logs

Attachment B: Sample Analytical Documentation





SOURCE: THOMAS GUIDE 1997 SCALE: 1" = 2,400'

ALL ENVIRONMENTAL, INC.

901 MORAGA ROAD, SUITE C, LAFAYETTE, CA

SITE LOCATION MAP

1075 40th STREET OAKLAND, CALIFORNIA

FIGURE 1

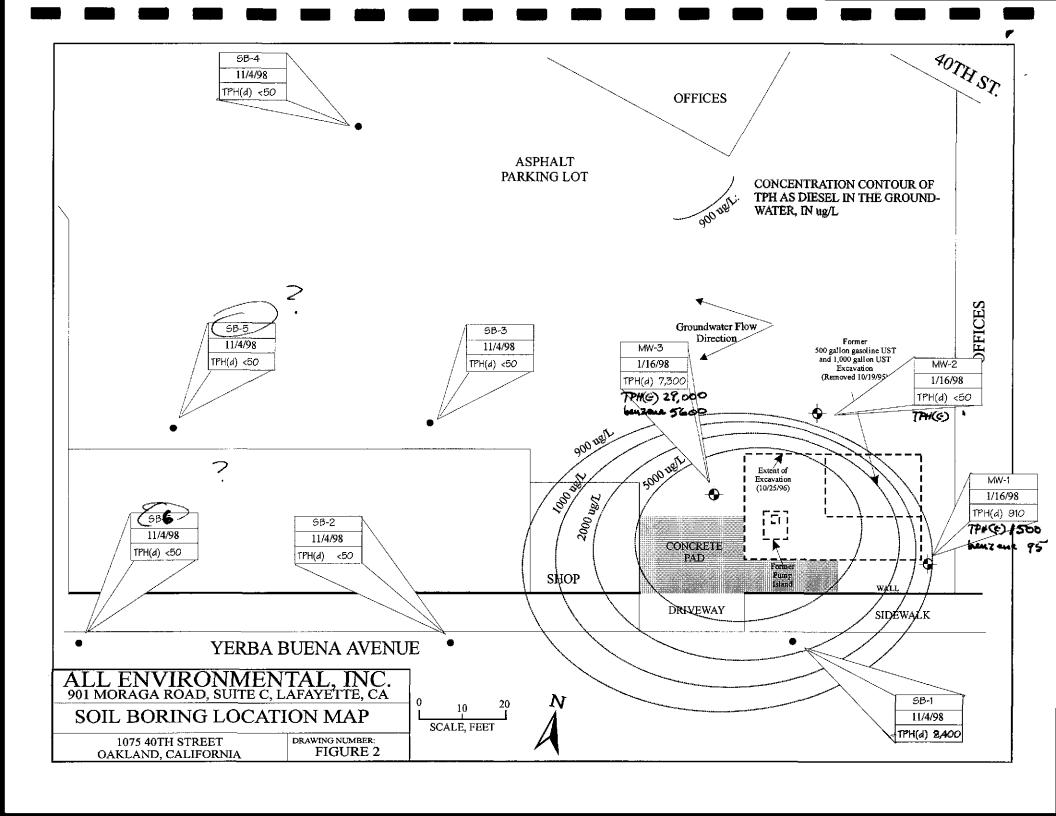


Table 1: Groundwater Sample Analytical Results

November 4, 1998

Sample ID	Consultant/ Lab	TPH as gasoline µg/L	TPH as diesel µg/L	MTBE µg/L	Benzene µg/L	Toluene jig/L	Ethylbenzen µg/L	Xylenes µg/L
SB-1	AEI/SAI-MAI	<50	2,400	<20	< 0.5	< 0.5	<0.5	<1.5
SB-2	AEI/SAI	<50	<50	<20	< 0.5	<0.5	<0.5	<1.5
SB-4	AEI/SAI	<50	<50	<20	<0.5	<0.5	<0.5	<1.5
SB-5	AEI/SAI	<50	<50	<20	<0.5	<0.5	<0.5	<1.5
SB-6	AEI/SAI	<50	< 50	<20	<0.5	0.6	<0.5	<1.5
MDL		50	50	20	0.5	0.5	0.5	1.5

MDL = Method Detection Limit

TPH = Total Petroleum Hydrocarbons

ND = Not detected above the Method Detection Limit

 $\mu g/L = micrograms per liter (ppb)$

AEl = All Environmental, Inc.

SAI = SunStar Analitical, Inc., Tustin, California

MAI = McCampbell Analytical, Inc., Pacheco, California

Borehole #: SB-1

Date: 11/3/98

Project: FIDELITY ROOF CO

Total Depth: 16 FEET

Client: MONTY UPSHAW

Logged By: PJM

Location: 1075 40TH STREET

Responsible Professional JPD

		SUBSURFACE PROFILE	(SAMPLE	E		
Depth	Symbol	Description	Number	Туре	Blows/ft	Well Data	Remarks
0-	9603-5745	Ground Surface					,
1 - 2 -	000 000 900	FILL Asphalt, gravel and sand					
3 - 4 - 5 -		SANDY CLAY Greenish grey clay with 5% sand with sands increasing with depth	'SB-1 4'	SS	NA		No odor, 0.0 ppm
6- 7- 8-			SB-1 8'	ss	NA		
9- 10-	-						Hydropunch 8 to 12 feet, No GW
11 - 12 -	4					▼	?
13- 14-	- :						Hydropunch 12 to 16 feet, No GW PVC inserted to 16 feet
15-							Slow water generation
16-	-	End of Borehole					
17.	_						
18- 19-	_						
20-	_						
21-	-						
22	-						

All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549

Drilled By: VIRONEX

Hole Size: 2"

Drill Type: GEOPROBE

Drill Method: DIRECT PUSH

Borehole #: SB-2

Date: 11/3/98

Project: FIDELITY ROOF CO

Total Depth: 15 FEET

Client: MONTY UPSHAW

Logged By: PJM

Location: 1075 40TH STREET

Responsible Professional JPD

		SUBSURFACE PROFILE	;	SAMPLI	Ξ		
Depth	Symbol	Description	Number	Туре	Blows/ft	Well Data	Remarks
0 1 2 3 4 5 6		Ground Surface FILL Asphalt, gravel and sand SANDY CLAY Sandy clay, with gravel and 20% sand Medium grey, N5	SB-2 4	SS	NA .		0.0 ppm
7 7 8 9 10 11		CLAYEY SAND Stiff clayey sand	SB-2 8'	SS	NA		hydropunch to 12, no GW
12- 13- 14- 15- 16-		End of Borehole			1	•	hydropunch to 15, no GW PVC inserted to 15 Slow water generation
17- 18- 19- 20- 21- 22-							

Drilled By: VIRONEX

All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549

Drill Type: GEOPROBE

Sheet: 1 of 1

Hole Size: 2"

Drill Method: DIRECT PUSH

Borehole #: SB-3

Date: 11/3/98

Project: FIDELITY ROOF CO

Total Depth: 20 FEET

Client: MONTY UPSHAW

Logged By: PJM

Location: 1075 40 STREET

Responsible Proffesional: JPD

		SUBSURFACE PROFILE		SAMPL	E		
Depth	Symbol	Description	Number	Туре	Blows/ft	Well Data	Remarks
0-	947 C/C (970)	Ground Surface			<u>'</u> }		
1 - 2 - 3		SURFACE AND FILL Asphalt above sand and gravel					
4_							
			SB-3 4'	SS	NA	1	,
5-		CLAY Stiff clay, grevish red to black with					no odor
6-		Stiff clay, greyish red to black with gravel to 15 mm and sand to 5%					0.0 ppm
7-			SB-3 8'	SS	NA_		
8 -	//////		30-30	- 55	INA		
9							
10-]						
11-							
12-							no GW generated
13							, and the second
14-							
15] [Understand to 20
-							Hydropunch to 20
16_	1						PVC inserted to 20
17_	- - - -						
18-							No GW generated after 3 hrs
19-							
20] <u> </u>	End of Borehole					
21-		End of Doronolo					
22							

VIRONEX VIRONEX

All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549

Sheet 1 of 1

2" 2"

GEOPROBE GEOPROBE

DIRECT PUSH DIRECT PUSH

Borehole #: SB-4

Date: 11/3/98

Project: FIDELITY ROOF CO

Total Depth: 19 FEET

Client: MONTY UPSHAW

Logged By: PJM

Location: 1075 40TH STREET

Responsible Professional JPD

		SUBSURFACE PROFILE		SAMPL	E		
Depth	Symbol	Description	Number	Туре	Blows/ft	Well Data	Remarks
0		Ground Surface					100, 00
1 · 2 -	7000 6000 77777	FILL Asphalt, gravel and sand					
3 - 4 -		CLAY Dark grey clay with 5% sand, very stiff	SB-4 4'	SS	NA NA		0.0 ppm
5 - 6 - 7 - 8 -		SANDY SILT sandy silt with gravel up to 15 mm	\$B-4 8'	SS	NA NA		
9-	4						hydropunch to 12, no GW
10- 11- 12- 13- 14- 15- 16- 17- 18- 19-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	End of Borehole				*	hydropunch to 19, no GW PVC inserted to 19 Slow water generation
21 - 22 -							

Drilled By: VIRONEX

All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549

Drill Type: GEOPROBE

Hole Size: 2"

Drill Method: DIRECT PUSH

Borehole #: SB-5

Date: 11/3/98

Project: FIDELITY ROOF CO

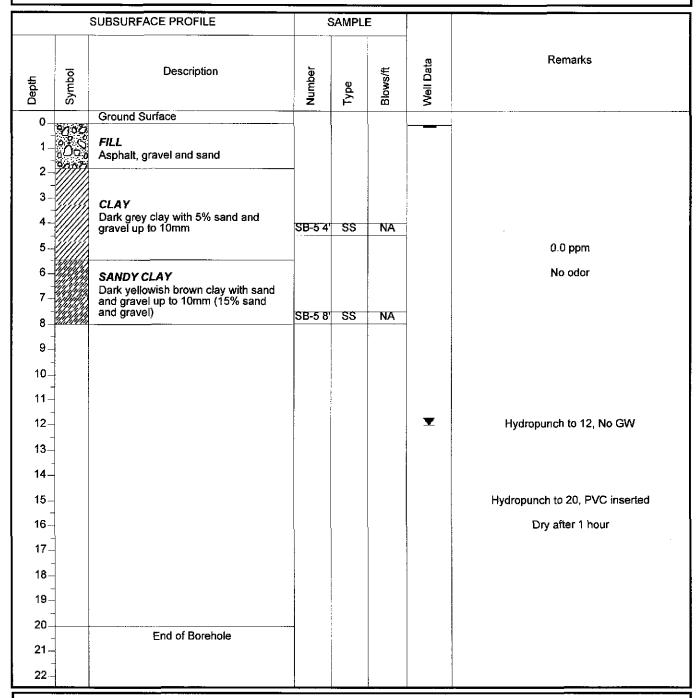
Total Depth: 20 FEET

Client: MONTY UPSHAW

Logged By: PJM

Location: 1075 40TH STREET

Responsible Professional JPD



Drilled By: VIRONEX

Hole Size: 2"

Drill Type: GEOPROBE

All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549

Drill Method: DIRECT PUSH

Borehole #: SB-6

Date: 11/3/98

Project: FIDELITY ROOF CO

Total Depth: 20 FEET

Client: MONTY UPSHAW

Logged By: PJM

Location: 1075 40TH STREET

Responsible Professional JPD

		SUBSURFACE PROFILE		SAMPLI	=		
-							
Depth	Symbol	Description	Number	Туре	Blows/ft	Well Data	Remarks
0-	9000	Ground Surface					
1 2		FILL Asphalt, gravel and sand					
3-							
4-			SB-6 4	SS	NA		
5-		CLAYEY SAND					0.0 ppm
6-		Light grey clayey sand with gravel					No odor
7		Color change to orange/brown					
8-			SB-6 8'	SS	NA		
1 .							
9	-						
10-							
11-							Hydropunch to 12, No GW
12-	-						
13-	-						
14-	-					;	
15							Hydropunch to 16, No GW
16-							, , , , , ,
17-						_	
18-							Hydropunch to 20
19-						:	Water Samples Collected
20	_	End of Borehole					
21-	-	and of defende					
22-	-						

Drilled By: VIRONEX

All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549

Drill Type: GEOPROBE

Hole Size: 2"

Drill Method: DIRECT PUSH

Quality Control Analysis EPA 8020

Client: All Environmental, Inc. Project Manager: Peter McIntyre Date Analyzed: 11/9/98

Batch: T-814 Matrix: Water

Sample Spiked 814-01

Project Number

1893

Matrix Spike and Matrix Spike Duplicate Analysis

	•							QC	Limits
Compound	Conc.Spike Added(µg/L)	Sample Result	Conc. MS	% Rec.	Conc. MSD	% Rec.	RPD	RPD	Percent Recovery
BENZENE	100	0	96	96	94	94	2.2	20	70-130
TOLUENE	100	0	97	97	94	94	2.9	20	70-130
ETHYLBENZENE	100	0	98	98	94	94	3.4	20	70-130
TOTAL XYLENES	200	0	197	98	189	94	4.0	20	70-130

Analytical Report EPA 8015M & 8020

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: Method Blank

Date Sampled: NA Date Received: NA Date Analyzed: 11/9/98

Laboratory ID: T814-MB Matrix: Water

<u>Surrogate Compounds</u> 4-Bromofluorobenzene Conc.(µg/L) 53.0 %Rec. 106

Compound	Concentration (µg/L)	Detection Limit
TPH Gas	ND	50
MTBE	ND	20
Benzene	ND	0.5
Toluene	ND	0.5
Ethyl benzene	ND	0.5
Xylenes	ND	1.5

Analytical Report EPA 8015M & 8020

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: 884

Date Sampled: 11/3/98

Date Received: 11/5/98 Date Analyzed: 11/9/98

Laboratory ID: T814-16

Matrix: Water

Surrogate Compounds

4-Bromofluorobenzene

Conc.(µg/L)

50.4

%Rec. 101

Compound	Concentration (µg/L)	Detection Limit
TPH Gas	ND	50
MTBE	ND	20
Benzene	ND	0.5
Toluene	ND .	0.5
Ethyl benzene	ND	0.5
Xylenes	ND	1.5

Analytical Report EPA 8015M & 8020

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: 85-2

Date Sampled: 11/3/98 Date Received: 11/5/98 Date Analyzed: 11/9/98 Laboratory ID: T814-09

Matrix: Water

Surrogate Compounds

4-Bromofluorobenzene

Conc.(µg/L)

49.8

%Rec. 100

Compound	Concentration (μg/L)	Detection Limit
TPH Gas	ND	50
MTBE	ND	20
Benzene	ND	0.5
Toluene	ND	. 0.5
Ethyl benzene	ND	0.5
Xylenes	ND	1.5

Analytical Report EPA 8015M & 8020

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: \$84

Date Sampled: 11/3/98 Date Received: 11/5/98 Date Analyzed: 11/9/98 Laboratory ID: T814-15

Matrix: Water

Surrogate Compounds 4-Bromofluorobenzene

Conc.(µg/L) 49.9 %Rec. 100

Compound	Concentration (µg/L)	Detection Limit		
TPH Gas	ND	50		
MTBE	ND	20		
Benzene	ND ND	0.5		
Toluene	ND	0.5		
Ethyl benzene	ND	0.5		
Xylenes	ND	1.5		

Analytical Report EPA 8015M & 8020

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: 88-5

Date Sampled: 11/3/98
Date Received: 11/5/98

Date Analyzed: 11/9/98

Laboratory ID: T814-12

Matrix: Water

Surrogate Compounds 4-Bromofluorobenzene Conc.(µg/L)

%Rec. 102

51.1

Compound	Concentration (µg/L)	Detection Limit
TPH Gas	ND	50
MTBE	ND	20
Benzene	ND	0.5
Toluene	ND	0.5
Ethyl benzene	ND	0.5
Xylenes	ND	1.5

Analytical Report EPA 8015M & 8020

Client: All Environmental, Inc.
Project Manager: Peter McIntyre

Project Manager: Peter McIntyre

Project Number

1893

Sample ID: SB-6

Date Sampled: 11/3/98 Date Received: 11/5/98 Date Analyzed: 11/9/98 Laboratory ID: T814-01

Matrix: Water

Surrogate Compounds

4-Bromofluorobenzene

Conc.(µg/L)

46.6

%Rec.

93

Compound	Concentration (µg/L)	Detection Limit				
TPH Gas	ND	50				
MTBE	ND	20				
Benzene	ND ND	0.5				
Toluene	0.6	0.5				
Ethyl benzene	ND	0.5				
Xylenes	ND	1.5				

Quality Control Analysis EPA 8015

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Date Analyzed: 11/10/98

Batch: T-814 Matrix: Water

Sample Spiked 815-14

Project Number

1893

Matrix Spike and Matrix Spike Duplicate Analysis

	·							QC I	_imi <u>ts</u>
Compound	Conc. Spike Added(µg/L)	Sample Result	Cond. MS	% Rec.	Conc. MSD	% Rec.	RPD	RPD	Percent Recovery
8015M TPH	500	0 '	472	94	426	85	10.1	20	70-130

Analytical Report EPA 8015

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: Method Blank

Date Sampled: NA
Date Received: NA
Date Extracted: 11/12/98
Date Analyzed: 11/12/98
Laboratory ID: T814-MB

Matrix: Water

Compound	Concentration (ug/L)	Detection Limit
TPH Diesel	ND	50

Reviewed and Approved by:

Date: 1/-/3-78

Analytical Report EPA 8015

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: Se 2 19

Date Sampled: 11/3/98

Date Received: 11/5/98
Date Extracted: 11/12/98
Date Analyzed: 11/12/98
Laboratory ID: T814-09

Matrix: Water

Compound	Concentration (ug/L)	Detection Limit
TPH Diesel	ND	50

Analytical Report EPA 8015

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: SB-4

Date Sampled: 11/3/98 3

Date Received: 11/5/98
Date Extracted: 11/12/98

Date Analyzed: 11/12/98 Laboratory ID: T814-15

Matrix: Water

Compound	Concentration (ug/L)	Detection Limit
TPH Diesel	ND	50

Analytical Report EPA 8015

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: **38-5**

Date Sampled: 11/3/98 Date Received: 11/5/98 Date Extracted: 11/12/98

Date Analyzed: 11/12/98 Laboratory ID: T814-12

Matrix: Water

.

Compound	Concentration (ug/L)	Detection Limit
TPH Diesel	ND	50

Analytical Report EPA 8015

Client: All Environmental, Inc. Project Manager: Peter McIntyre

Project Number

1893

Sample ID: 38 8 %

Date Sampled: 11/3/98

Date Received: 11/5/98 Date Extracted: 11/12/98 Date Analyzed: 11/12/98

Laboratory ID: T814-01

Matrix: Water

Compound	Concentration (ug/L)	Detection Limit
TPH Diesel	ND	50

Chain of Custody Record

+	_	w Ave, Ste. 4 A 92780	06	
Ĭ		14) 505-4010	D Fax (714)	505-4028
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Sample ID	Date Sampled	Time	Sample Type	Container Type		0208	EPA 8260	EPA :	EPA.8015M	EPA 8015M (gas & diesel)	EPA 7420 Total Lead	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 CAM Metals			Laboratory ID #	Preservative	Comments	otal # of containers
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SunStar Laboratories, Inc. 3002 Dow Ave, Ste. 406 Tustin, CA 92780 Phone (714) 505-4010 Fax (714) 505-4028

Chain of Custody Record

Client:							Location: Fide I'dy Koo					ge: Z of Z ent Project#: 1893 SF9810-1731			-						
Date Sample ID Sampled	Time	Sample Type	Container Type	EPA 8010	EPA 8020	EPA 8260	EPA 8270	EPA 8015M (gasoline)	EPA 8015M (diesel)	EPA 8015M (gas & diesel)	EPA 7420 Total Lead	EPA 6010/7000 RCRA (8) Metals	EPA 6010/7000 CAM Metals			Laboratory ID #	Preservative	C	omments		Total # of containers
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Relinquished by: (signature) Sample disposal Instructions Disposal @ \$2.00 e	14 14/21	Received by	(signature)		Pielo	Date	// / Ti	me					l tim	•							

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

All Environmental, Inc.	Client Project ID: #1893; Fidelity	Date Sampled: 11/04/98				
901 Moraga Road, Suite C		Date Received: 11/04/98				
Lafayette, CA 94549	Client Contact: Peter McIntyre	Date Extracted: 11/04/98				
	Client P.O:	Date Analyzed: 11/04/98				

11/11/98

Dear Peter:

Enclosed are:

- 1). the results of 1 samples from your #1893; Fidelity project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

110 Second 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 Environ	nental, Inc.	Client Pro	pject ID: #1893; Fidelity	Date Sampled: 11/94/98					
901 Moraga	Road, Suite C			Date Received: 11/04/98					
Lafayette, C.	A 94549	Client Co	ntact: Peter McIntyre	Date Extracted: 11/04/98					
		Client P.C):	Date Analyzed: 11/05/98					
EPA methods m	Diesel Ra nodified 8015, and 3550 o	nge (C10-	C23) Extractable Hydrocarbon	s as Diesel * GCFID(3550) or GCFI	D(3510)				
Lab ID	Client ID	Matrix							
98152	SB-1	w	2409,d/b,i	2400,d/b,i					
	·								
,									
					-				
Reporting Lin	mit unless otherwise	w	50 ug/L						
stated; ND means not detected above the reporting limit		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.

^{&#}x27;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.

QC REPORT FOR HYDROCARBON ANALYSES

Date:

11/04/98-11/05/98

Matrix:

WATER

	Concentration (mg/L)				% Recovery		1
Analyte	Sample			Amount		•	RPD
.	(#97977).	MS	MSD	Spiked 	MS	MSD	
	}]			
TPH (gas)	0.0	92.9	93.1	100.0	92.9	93.1	0.3
Benzene	0.0	10.4	10.1	10.0	104.0	101.0	2.9
Toluene	0.0	10.6	10.5	10.0	106.0	105.0	0.9
Ethyl Benzene	0.0	10.8	10.4	10.0	108.0	104.0	3.8
Xylenes	0.0	32.6	31.6	30.0	108.7 	105.3	3.1
TPH(diesel)	0.0	173	180	150	115	120	3.9
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

Chain of Custody ALL ENVIRONMENTAL, INC. 901 Moraga Road, Suite C Lafayette, CA 94549 (925) 283-6000 FAX: (925) 283-6121 Peter McInty Re AEI PROJECT MANAGER: ___ NUMBER OF CONTAINERS ANALYSIS REQUEST PROJECT NAME: Fielel: H) PROJECT NUMBER: 1893 **TOTAL # OF CONTAINERS:** RECD. GOOD COND./COLD: Good /Car / SAMPLE I.D. DATE TIME MATRIX 9 45 5× 4/ 98152 VOAS | O&G | METALS | OTHER PRESERVATION **GOOD CONDITION** APPROPRIATE HEAD SPACE ARSENT RELINQUISHED BY: RELINQUISHED BY: RECEIVED BY: ANALYTICAL LAB: M - Cam be RECEIVED BY: Signature MCIntyur Signature Signature Signature 1. ZiceA PHONE: ().... . FAX: (') . Printed Name Printed Name Printed Name Printed Name INSTRUCTIONS/COMMENTS: Company Company Company Company Date