November 6, 2000

QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter, 2000

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

November 6, 2000

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

RE: Quarterly Groundwater Monitoring and Sampling Report
Third Quarter 2000
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 third episode of groundwater monitoring and sampling for the year 2000, conducted on August 29, 2000.

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 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. 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 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 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 into one composite sample for analysis in the laboratory. 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 detectable concentrations of petroleum hydrocarbons were found in the soil samples.

The analytical results of prior groundwater sampling episodes are included in Table 2. This report describes the results of the subsequent groundwater monitoring event which took place on August 29, 2000.

Summary of Activities

AEI measured the depth to groundwater in the four wells on August 29, 2000. 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 analysis 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 32.37 to 35.21 feet above Mean Sea Level (MSL). These groundwater elevations were an average of 2.57 feet lower than the previous monitoring episode. The direction of the groundwater flow at the time of measurement was towards the northwest. The latest estimated groundwater gradient is approximately 0.089 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 Forms.

Groundwater Quality

Concentrations of petroleum hydrocarbons have decreased significantly since the last sampling episode. The decrease in concentrations may be due to the shift in direction of groundwater flow and varying depths of groundwater. Analysis of groundwater samples from well MW-3 do indicate a significant decrease in hydrocarbon levels from the previous sampling episode; however elevated hydrocarbon levels still remain at 49,000 µg/L of TPH as gasoline, 9,400 µg/L of TPH as diesel, and 7,400 µg/L of benzene, 800 ug/L of toluene, 1,800 ug/L of ethylbenzene and 7,400 ug/L xylenes. TPH as gasoline and TPH as diesel were detected at significantly lower concentrations than in the previous sampling event in wells MW-1, MW-2 and MW-4, with the majority of levels below laboratory detection limits. Levels of MTBE were also detected at lower concentrations; however MTBE remains at 1900 ug/L and 22 ug/L in wells MW-2 and MW-4 respectively.

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

Recommendations

It is apparent from this monitoring episode that natural attenuation is occurring at the site; however significant concentrations 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 November, 2000, as per the requirements of the ACHCSA.

References

1. Phase II Soil and Groundwater Investigation report, October 7, 19996, prepared by AEI.
2. Excavation and Disposal of Contaminated Soil report, January 7, 1997, prepared by AEI.
3. Groundwater Monitoring Well Installation report, dated May 30, 1997, prepared by AEI.
4. Phase II Subsurface Investigation report, December 9, 1998, prepared by AEI.
5. Groundwater Monitoring Well and Sampling report, September 3, 1999, prepared by AEI.
6. Quarterly Groundwater Monitoring and Sampling Report, March 21, 2000, prepared by AEI.
7. Quarterly Groundwater Monitoring and Sampling Report, July 28, 2000, prepared by AEI.

Report Limitations and Signatures

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

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

Sincerely,
AEI Consultants

Orion Alcalay
Environmental Scientist

J. P. Derhake, PE, CAC
Senior Author

REGISTERED PROFESSIONAL ENGINEER
JOSEPH P. DERHAKE
C055476
Exp. 06/23/01
CIVIL
STATE OF CALIFORNIA

Figures

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

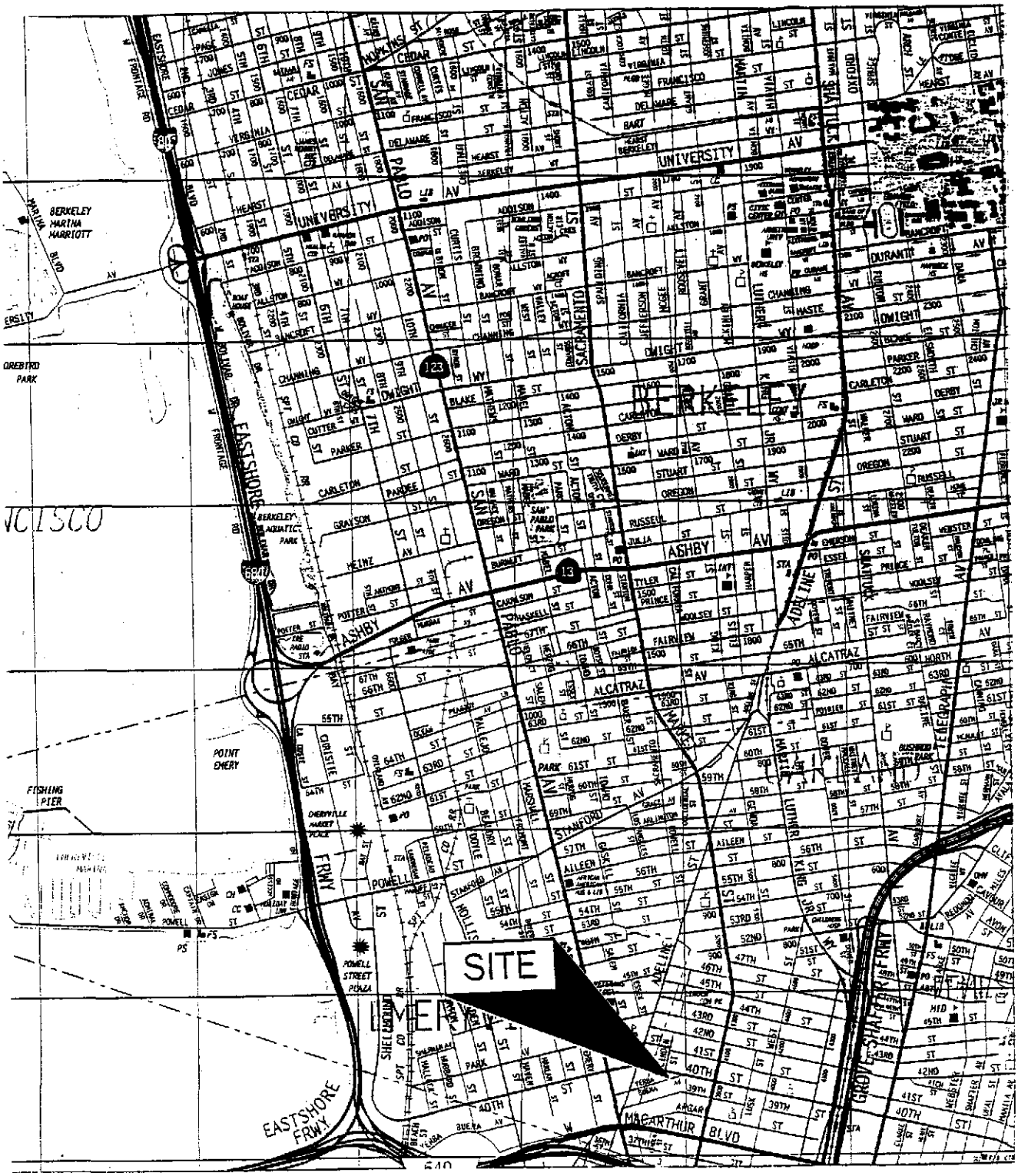
Tables

Table 1	Groundwater Levels
Table 2	Groundwater Sample Analytical Data

Appendices

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

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



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

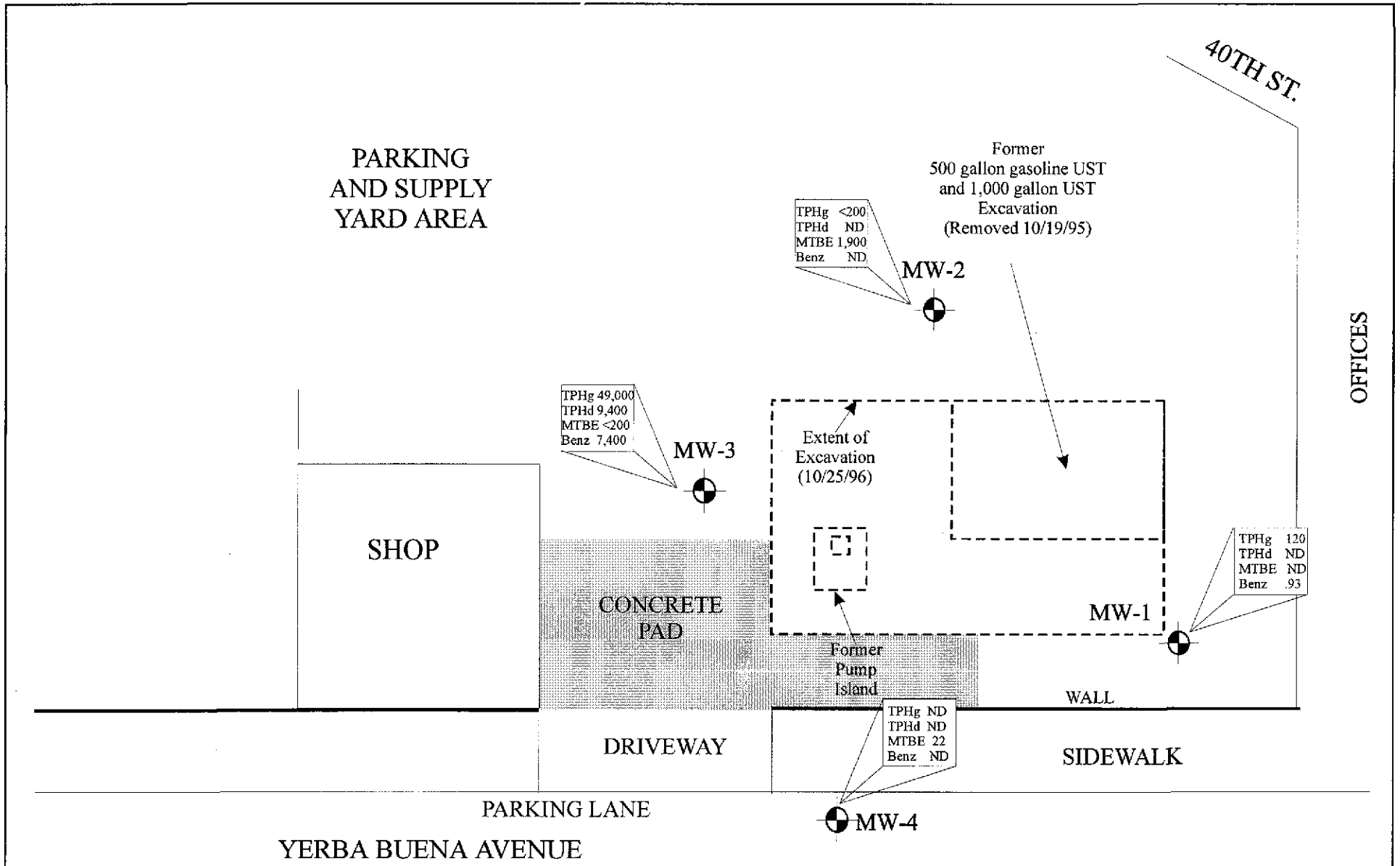
AEI CONSULTANTS

3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SITE LOCATION MAP

1075 40th STREET
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 3119



AEI CONSULTANTS

3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

WELL LOCATION MAP

1075 40TH STREET
OAKLAND, CALIFORNIA

FIGURE 2

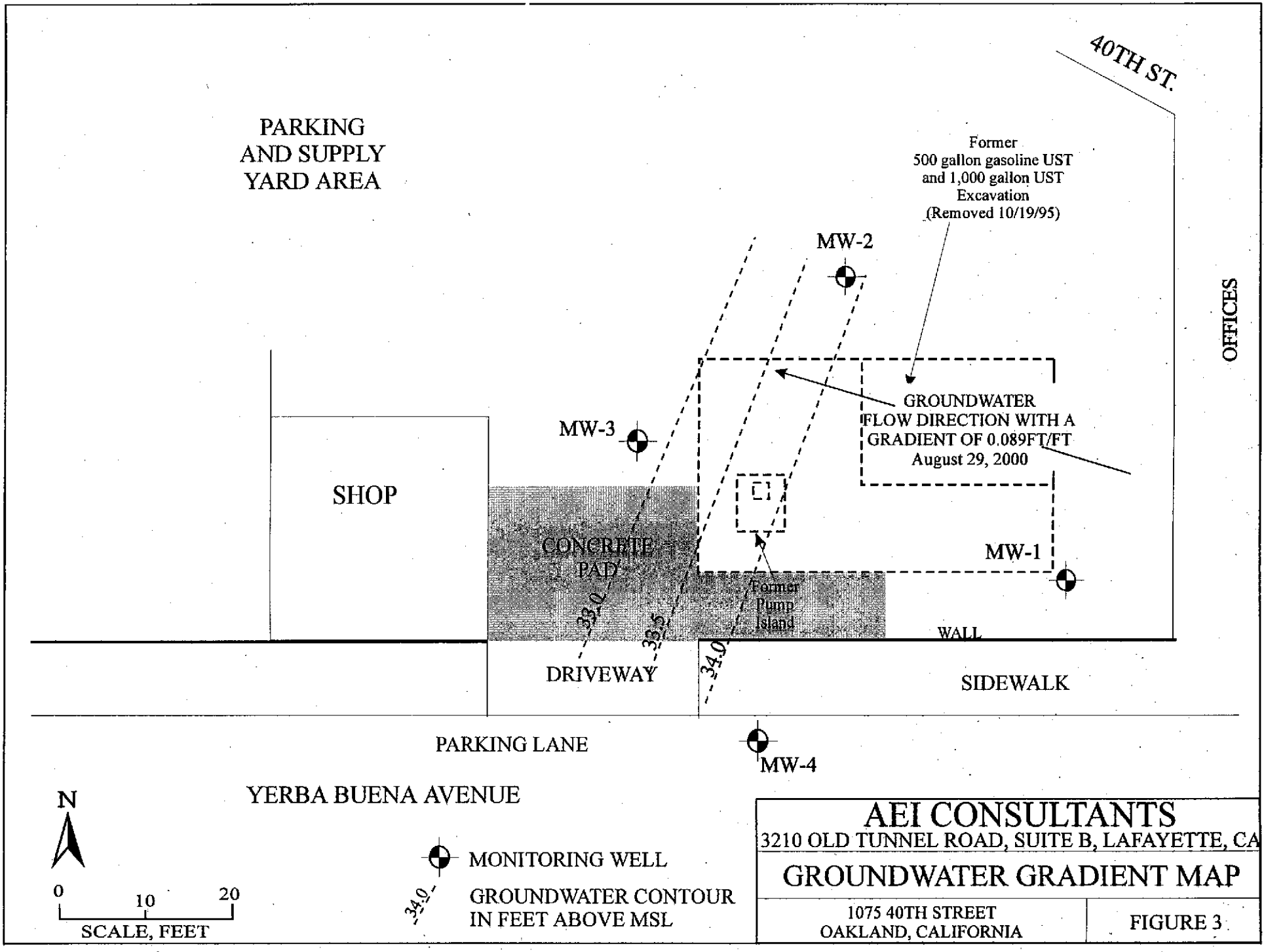

40TH ST.
PARKING
AND SUPPLY
YARD AREA
Former
500 gallon gasoline UST
and 1,000 gallon UST
Excavation
(Removed 10/19/95)
MW-2
OFFICES
GROUNDWATER
FLOW DIRECTION WITH A
GRADIENT OF 0.089FT/FT
August 29, 2000
MW-3
SHOP
CONCRETE
PAD
MW-1
Former
Pump
Island
33.0
33.5
34.0
WALL
DRIVEWAY
SIDEWALK
PARKING LANE
MW-4
YERBA BUENA AVENUE
N
0
10
20
SCALE, FEET
MONITORING WELL
34.0
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 3

Table 1
Groundwater Levels

Well ID	Date	Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
MW-1	3/19/97	45.41	8.25	37.16
	6/20/97	45.41	9.10	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
	2/24/00	45.49	7.65	37.84
	5/24/00	45.49	8.47	37.02
	8/29/00	**45.49**	**10.28**	**35.21**
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
	2/24/00	44.98	7.03	37.95
	5/24/00	44.98	8.01	36.97
	8/29/00	**44.98**	**11.07**	**33.91**
MW-3	3/19/97	44.32	7.59	36.73
	10/8/97	44.32	9.98	34.34
	6/20/97	44.32	8.36	35.96
	1/16/98	44.32	9.18	35.14
	8/5/99	44.37	10.56	33.81
	11/18/99	44.37	10.92	33.45
	2/24/00	44.37	8.49	35.88
	5/24/00	44.37	8.42	35.95
	8/29/00	**44.37**	**12.00**	**32.37**
MW-4	8/5/99	43.48	8.79	34.69
	11/18/99	43.48	8.11	35.37
	2/24/00	43.48	5.19	38.29
	5/24/00	43.48	7.23	36.25
	8/29/00	**43.48**	**9.04**	**34.44**

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 (mg/l)	MTBE (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-Benzene (mg/l)	Xylenes (mg/l)	TPHd (mg/l)
MW - 1	3/19/97	AEI/MAI	<50	23	<0.5	<0.5	<0.5	<0.5	<50
	6/23/97	AEI/MAI	1,300	14	150	2.1	12	19	420
	10/8/97	AEI/MAI	56	5.8	2.8	<0.5	<0.5	<0.5	66
	1/16/98	AEI/MAI	1,500	<33	95	0.72	69	8.4	910
	8/5/99	AEI/MAI	160	<15	1.6	<0.5	0.56	1.1	63
	11/18/99	AEI/MAI	79	<5.0	<0.5	<0.5	<0.5	<0.5	<50
	2/24/00	AEI/MAI	300	<5.0	14	0.82	3.5	1.6	160
	5/24/00	AEI/MAI	1,300	ND<10	93	<0.5	17	1.6	480
	8/29/00	**AEI/MAI**	**120**	**<5.0**	**0.93**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW - 2	3/19/97	AEI/MAI	<50	65	<0.5	<0.5	<0.5	<0.5	<50
	6/23/97	AEI/MAI	<50	70	3.4	<0.5	<0.5	<0.5	<50
	10/8/97	AEI/MAI	<50	90	<0.5	<0.5	<0.5	<0.5	<50
	1/16/98	AEI/MAI	<50	65	<0.5	<0.5	<0.5	<0.5	<50
	8/5/99	AEI/MAI	<50	600	<0.5	<0.5	<0.5	<0.5	<50
	11/18/99	AEI/MAI	<50	370	<0.5	<0.5	<0.5	<0.5	<50
	2/24/00	AEI/MAI	<50	880	<0.5	<0.5	<0.5	<0.5	<50
	5/24/00	AEI/MAI	ND<250	2,200	<0.5	<0.5	<0.5	<0.5	62
	8/29/00	**AEI/MAI**	**ND<200**	**1,900**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW -3	3/19/97	AEI/MAI	26,000	230	3,000	530	340	2,300	5,000
	6/23/97	AEI/MAI	25,000	270	4,400	120	540	1,500	7,000
	10/8/97	AEI/MAI	17,000	ND<280	4,400	47	280	410	5,100
	1/16/98	AEI/MAI	29,000	ND<360	5,600	740	950	3,500	7,300
	8/5/99	AEI/MAI	31,000	ND<200	5,400	150	1100	2,300	5,100
	11/18/99	AEI/MAI	74,000	ND<1,000	8,100	5,000	2,100	8,100	490,000
	2/24/00	AEI/MAI	110,000	ND<200	12,000	1,400	2,900	14,000	6,300
	5/24/00	AEI/MAI	87,000	ND<200	13,000	1,900	2,900	14,000	26,000
	8/29/00	**AEI/MAI**	**49,000**	**ND<200**	**7,400**	**800**	**1,800**	**7,400**	**9,400**
MW-4	8/5/99	AEI/MAI	<50	37	<0.5	<0.5	<0.5	<0.5	<50
	11/18/99	AEI/MAI	<50	20	<0.5	<0.5	<0.5	<0.5	<50
	2/24/00	AEI/MAI	<50	20	<0.5	<0.5	<0.5	<0.5	<50
	5/24/00	AEI/MAI	120	31	1.3	<0.5	<0.5	<0.5	140
	8/29/00	**AEI/MAI**	**<50**	**22**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Notes:
ug/L= micrograms per liter
ND= Not detected
MTBE= Methyl Tertiary Butyl Ether
TPHg= Total Petroleum Hydrocarbons as gasoline
TPHd= Total Petroleum Hydrocarbons as diesel
AEI All Environmental, Inc.
MAI McCampbell Analytical Inc., Pacheco, California

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-1	
Project Name: Fidelity Roof, Co	Date of Sampling: 8/29/00
Job Number: 3119	Name of Sampler: PM
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	45.49
Depth of Well	21.0
Depth to Water	10.28
Water Elevation	35.21
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5.15
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	6
Appearance of Purge Water	Slightly cloudy
GROUNDWATER SAMPLES	
Number of Samples/Container Size	(2) 40 ml VOAS, 1-liter amber bottle

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
10:33	1	65.8	6.87	800	Clear
10:36	3	66.2	6.72	810	Clear, No Odor
10:40	5	66.4	6.70	830	

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)
No hydrocarbon sheen or odor

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name: Fidelity Roof, Co	Date of Sampling: 8/29/00
Job Number: 3119	Name of Sampler: PM
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	44.98
Depth of Well	21.0
Depth to Water	11.07
Water Elevation	33.91
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	4.77
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	6
Appearance of Purge Water	Slightly murky

GROUNDWATER SAMPLES

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

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
10:52	1	67.7	6.55	2,140	Turbid
10:55	3	68.4	6.68	1,190	Clear, No Odor
10:59	5	68.5	6.72	1,180	Clear, No Odor

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

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name: Fidelity Roof, Co	Date of Sampling: 8/29/00
Job Number: 3119	Name of Sampler: OA
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	12.00
Water Elevation	32.37
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	4.32
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	6
Appearance of Purge Water	Murky

GROUNDWATER SAMPLES

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

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
11:09	1	67.0	6.50	1,490	Clear, Strong Odor Sheen Visible
11:13	3	67.9	6.51	1,610	
11:47	5	67.8	6.51	1,580	Strong Odor

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

Slow recharge- Pump stopped after 3-gallons

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS- GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-4	
Project Name: Fidelity Roof, Co	Date of Sampling: 8/29/00
Job Number: 3119	Name of Sampler: PM
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	43.48
Depth of Well	20.0
Depth to Water	9.04
Water Elevation	34.44
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5.26
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	6
Appearance of Purge Water	Slightly murky
GROUNDWATER SAMPLES	
Number of Samples/Container Size	(2) 40 ml VOAS, 1-liter amber bottle

Time	Vol Remvd (gal)	Temp (deg F)	pH	Cond (mS)	Comments
12:05	1	69.8	6.72	1,047	Turbid
12:08	3	69.4	6.75	1,035	Turbid
12:14	5	68.5	6.71	1,045	Turbid, No Odor

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.	Client Project ID: #3119; Fidelity Roof	Date Sampled: 08/29/2000
3210 Old Tunnel Road, Suite B		Date Received: 08/29/2000
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 08/29-09/05/2000
	Client P.O:	Date Analyzed: 08/29-09/05/2000

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
46197	MW-1	W	120,a	ND	0.93	ND	ND	ND	117
46198	MW-2	W	ND<200	1900	ND	ND	ND	ND	98
46199	MW-3	W	49,000,a,h	ND<200	7400	800	1800	7400	113
46200	MW-4	W	ND	22	ND	ND	ND	ND	98
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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All Environmental, Inc.	Client Project ID: #3119; Fidelity Roof	Date Sampled: 08/29/2000
3210 Old Tunnel Road, Suite B		Date Received: 08/29/2000
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 08/29-09/06/2000
	Client P.O:	Date Analyzed: 09/01-09/06/2000

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
46197	MW-1	W	ND	101
46198	MW-2	W	ND	100
46199	MW-3	W	9400,d,h	107
46200	MW-4	W	ND	100
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.

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QC REPORT

Date: 08/29/00 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 83100				Instrument: GC-3			
Surrogate1	0.000	101.0	100.0	100.00	101	100	1.0
Xylenes	0.000	291.0	289.0	300.00	97	96	0.7
Ethyl Benzene	0.000	98.0	97.0	100.00	98	97	1.0
Toluene	0.000	99.0	98.0	100.00	99	98	1.0
Benzene	0.000	101.0	100.0	100.00	101	100	1.0
MTBE	0.000	96.0	92.0	100.00	96	92	4.3
GAS	0.000	840.0	831.8	1000.00	84	83	1.0
SampleID: 83000				Instrument: GC-11 A			
Surrogate1	0.000	128.0	129.0	100.00	128	129	0.8
TPH (diesel)	0.000	372.0	375.0	300.00	124	125	0.8

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

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

RPD means Relative Percent Deviation

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QC REPORT

Date: 09/01/00-09/02/00 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 9100					Instrument: GC-3		
Surrogate1	0.000	99.0	99.0	100.00	99	99	0.0
Xylenes	0.000	296.0	293.0	300.00	99	98	1.0
Ethyl Benzene	0.000	98.0	97.0	100.00	98	97	1.0
Toluene	0.000	101.0	101.0	100.00	101	101	0.0
Benzene	0.000	103.0	103.0	100.00	103	103	0.0
MTBE	0.000	106.0	108.0	100.00	106	108	1.9
GAS	0.000	871.9	894.3	1000.00	87	89	2.5
SampleID: 9300					Instrument: GC-11 B		
Surrogate1	0.000	112.0	111.0	100.00	112	111	0.9
TPH (diesel)	0.000	317.0	294.0	300.00	106	98	7.5

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

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

RPD means Relative Percent Deviation

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CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

✓	SAMPLE ID	DATE	TIME	MATRIX	TPH(g), BTEX, MTBE SOIL: EPA 5030/8015M, 8020 WATER: EPA 5030/8015m, 602	TPH(d) SOIL: EPA 8015/8015m WATER: EPA 5030/8015M	BTEX, MTBE SOIL: EPA 8020 WATER: EPA 602	TOTAL OIL & GREASE SOIL: EPA 413.1 or STD. 5520 D/E&F WATER: STD. 5520 B&F	VOLATILE HALOCARBONS SOIL: EPA 8010 WATER: EPA 601	VOC's SOIL: EPA 8260 WATER: EPA 624	SEMI-VOLATILE ORGANICS SOIL: EPA 8270/3550 WATER: EPA 625/3510	TOTAL LEAD SOIL: 6010 (ICP) WATER: 239.2 (AA)	LUFT 5 METALS SOIL: EPA 7420, 7190, 7420, 7060, 7060 WATER:	HOLD	# OF CONTAINERS
✓	MW-1	8/29		water	X	X								46197	3
✓	MW-2	"		"	X	X								46198	3
✓	MW-3	"		"	X	X								46199	3
✓	MW-4	"		"	X	X								46200	3

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATION APPROPRIATE ✓
CONTAINERS ✓

	VOAS	O&G	METALS	OTHER
	✓			

COMMENTS / INSTRUCTIONS

ANALYTICAL LABORATORY: McCampbell Analytical
ADDRESS:
PHONE ( ) FAX ( )

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
SIGNATURE: John Ormerod	SIGNATURE: Maria V.	SIGNATURE:	SIGNATURE:
PRINTED NAME: AEI	PRINTED NAME: Maria V	PRINTED NAME:	PRINTED NAME:
COMPANY:	COMPANY: MAI	COMPANY:	COMPANY:
DATE: 8/29/00 TIME: 5:37	DATE: 8/29 TIME: 3:37	DATE: TIME:	DATE: TIME: