



R0186

February 8, 2005

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

**Subject: Quarterly Groundwater Monitoring Report**  
Fourth Quarter 2004  
1075 40<sup>th</sup> Street  
Oakland, California  
AEI Project No. 3119

Alameda County  
FEB 14 2005  
Environmental Health

Dear Mr. Huang:

Enclosed is a copy of the quarterly groundwater report for the fourth quarter 2004 groundwater monitoring event.

Please call me or Robert Flory at (925) 944-2899 x122, if you have any questions.

Sincerely,  
AEI Consultants

Adrian Angel  
Staff Geologist

February 3, 2005

Alameda County  
FEB 14 2005  
Environmental Health

**GROUNDWATER MONITORING REPORT**  
*Fourth Quarter 2004*

1075 40th Street  
Oakland, California

Project No. 8326

Prepared For

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

Prepared By

**AEI Consultants**  
2500 Camino Diablo Blvd., Suite 200  
Walnut Creek, CA 94597  
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**AEI**

February 3, 2005

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

**Subject: Quarterly Groundwater Monitoring Report  
Fourth Quarter 2004**  
1075 40th Street  
Oakland, California  
Project No. 8326

Dear Mr. Upshaw:

AEI Consultants (AEI) has prepared this report on behalf of Fidelity Roof Company to document the ongoing groundwater investigation at the above referenced site (Figure 1: Site Location Map). The purpose of this activity was to monitor groundwater quality near the previously removed underground storage tanks (USTs). The work was performed in compliance with requirements of the Alameda County Health Care Services Agency (ACHCSA). This report presents the findings of the fourth quarter 2004 groundwater monitoring and sampling event conducted on December 13, 2004.

### **Site Description and Background**

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

On December 19, 1995, Tank Protect Engineering, Inc. removed one (1) 1,000-gallon diesel underground storage tank (UST) and one (1) 500-gallon gasoline UST from the southeast corner of the property. The removal of the tanks produced a single excavation. Analysis of the soil samples indicated that soil beneath the 1,000-gallon UST had been impacted by minor concentrations of total petroleum hydrocarbons as gasoline (TPH-g), TPH as diesel (TPH-d), benzene, toluene, ethylbenzene and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE).

On September 12, 1996, AEI advanced four soil borings near the former UST excavation. Analytical results from the subsurface investigation revealed significant levels of gasoline and diesel petroleum hydrocarbons present in soil and groundwater to the south and to the west of the open excavation. Due to the high concentrations of petroleum hydrocarbons within the groundwater, the ACHCSA required further investigation of the extent and magnitude of the groundwater contaminant plume.

On October 25, 1996, AEI extended the excavation laterally 7 feet to the south and 12 feet to the west. Soil was removed to a depth of 9 feet below ground surface (bgs). The dispenser island and associated piping were also removed. Analyses of the soil samples collected from the excavation sidewalls indicated that up to 150 mg/kg of TPH-g, 16 mg/kg of benzene, and 300 mg/kg of TPH-d remained within the western sidewall of the excavation.

On March 6, 1997, AEI installed three groundwater monitoring wells. At the request of the ACHCSA, six additional soil borings were drilled south and west of the well locations on November 4, 1998. TPH-d was detected at a concentration of 2,400 µg/L in groundwater to the south of the former excavation. No significant concentrations of petroleum hydrocarbons were detected from the other borings. Monitoring well MW-4 was installed on July 15, 1999, south of the former tank locations along Yerba Buena Avenue. Well construction details for the four (4) groundwater monitoring wells are summarized in Table 1.

On May 6, 2004, AEI installed one vapor extraction well (VES-1) and two (2) air sparge wells (AS1 and AS-1). Six (6) shallow vapor monitoring mini-wells (DP-I through DP-6) were installed on May 13, 2004. On May 19 through 20 AEI carried out a soil vapor extraction and air sparge pilot test. Currently the test data is undergoing analysis and a report summarizing the results of the pilot test is being prepared. Well construction details for the shallow vapor extraction well, the two (2) air sparge wells and the six (6) shallow vapor monitoring wells are summarized in Table 1.

### **Free Product Removal**

At the time of the last quarterly monitoring event (September 9, 2004) 0.66 feet of light non-aqueous phase liquid (LNAPL) was measured in MW-3. On September 23, 2004, 200 gallons of liquid (water and gasoline) were removed from well MW-3 by Excel Environmental Services. The liquid was removed by placing a 1-inch PVC stinger into the well and dewatering the well to 17 feet bgs for approximately 90 minutes. On September 29, 2004, 0.52 feet of LNAPL was measured in MW-3.

On October 22, 2004, 30 gallons of liquids were removed from MW-3 by extending the 1-inch PVC stinger into the top of the water approximately 6-inches and vacuuming for approximately 1 hour. On October 27, 2004, 0.32 feet of LNAPL was measured in well MW-3.

On November 4 and 23, 2004, 15 gallons of liquid was removed on each visit by vacuuming the surface of the groundwater. LNAPL measurements were on November 6 and 19, 2004 were 0.01 feet and 0.14 feet respectively. At the time of this monitoring event, the LNAPL thickness in MW-3 was 0.05 feet in thickness.

## Summary of Monitoring Activities

AEI measured the depth to groundwater in the four wells (MW-1 to MW-4) on December 13, 2004. Well locations are shown on Figure 2. Prior to sampling, the depth to water from the top of the well casings was measured with an electric water level indicator. Each well was then purged of at least 3 well volumes with a submersible pump. Temperature, pH, specific conductivity and oxidation-reduction potential (ORP) were measured during the purging of the wells and turbidity was visually noted. Once water levels had recovered to at least 90% of their original level, a water sample was collected.

The groundwater samples were collected from each well using clean disposable bailers. The water samples were collected into 1-liter amber glass bottles and 40 ml glass volatile organic analysis (VOA) vials. The VOAs were capped so no headspace or air bubbles were present within the sample containers. Samples were delivered on ice under proper chain of custody protocol to McCampell Analytical, Inc. of Pacheco, California (Department of Health Services Certification #1644).

Four groundwater samples were submitted for chemical analysis for TPH-g, MTBE, benzene, toluene, ethylbenzene, and xylenes (BTEX) by method SW 8021B/8015Cm and TPH-d by method SW 8015C.

## Field Results

A free phase fuel product with a thickness approximately 0.05 feet was present in well MW-3. Groundwater elevations for the current monitoring episode ranged from 35.41 to 38.55 feet above mean sea level (msl). These groundwater elevations were an average of 1.98 higher than the previous episode. Based on these water level measurements, the direction of the groundwater flow at the time of measurement was towards the northwest with a hydraulic gradient of 0.05 ft/ft. This flow direction and gradient are consistent with previous episodes.

Groundwater elevation data and groundwater sample analytical data are summarized in Tables 2 and 3. The groundwater elevation contours and the groundwater flow direction are shown on Figure 4. Refer to Appendix A for Groundwater Monitoring Well Field Sampling Forms, which include field measurements and observations made during the monitoring activities.

## Groundwater Quality

TPH-g, TPH-d, benzene and ethylbenzene were detected in MW-1 at 240 µg/L, 150 µg/L, 11 µg/L, and 5.6 µg/L, respectively. These analytes had been at non-detectable concentrations at the time of the last monitoring event. MTBE, toluene and xylenes were not detected in MW-1 at standard detection limits of ND<5.0 µg/L, ND<0.5 µg/L and ND<0.5 µg/L.

TPH-g, MTBE, toluene and xylenes were detected in MW-2 at 77 µg/L, 4,200 µg/L, 0.83 µg/L, and 1.9 µg/L, respectively. TPH-g, toluene and xylenes had been at non-detectable concentrations at the time of the last monitoring event. TPH-d, benzene and ethylbenzene were not detected in MW-2 at standard detection limits of ND<50 µg/L, ND<0.5 µg/L and ND<0.5 µg/L.

Well MW-3 was not sampled due to the presence of 0.05 feet of LNAPL. This is a decrease of 0.61 feet since the last quarter.

TPH-g, TPH-d and BTEX continued to be at non-detectable concentration in MW-4. MTBE was detected at a concentration of 16 µg/L in MW-4. Groundwater sample analytical data is presented in Table 3. Laboratory results and chain of custody documents are included in Appendix B.

### **Summary**

Significant hydrocarbons remain in the groundwater beneath the site, particularly west and north of the former excavation. Although seasonal concentration fluctuations have been observed, long-term concentrations trends do not reveal that significant attenuation of the dissolved phase hydrocarbons is occurring. LNAPL removal from MW-3 has reduced the thickness of LNAPL from 0.66 feet in September 2004 to 0.05 feet in December 2004. AEI will continue quarterly monitoring, with the next episode scheduled for April 2005.

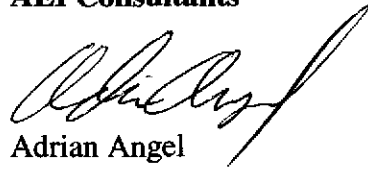
Installation of the remediation system is planned as soon as approval is received from the ACHCSA.

### **Report Limitations and Signatures**

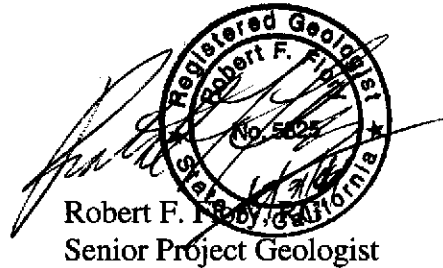
This report presents a summary of work completed by AEI Consultants including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information,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

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

Sincerely,  
AEI Consultants



Adrian Angel  
Staff Geologist



Robert F. Fitch  
Senior Project Geologist

**Figures**

- Figure 1 Site Location Map*
- Figure 2 Site Plan*
- Figure 3 Sample Analytical Data*
- Figure 4 Water Table Contours*

**Tables**

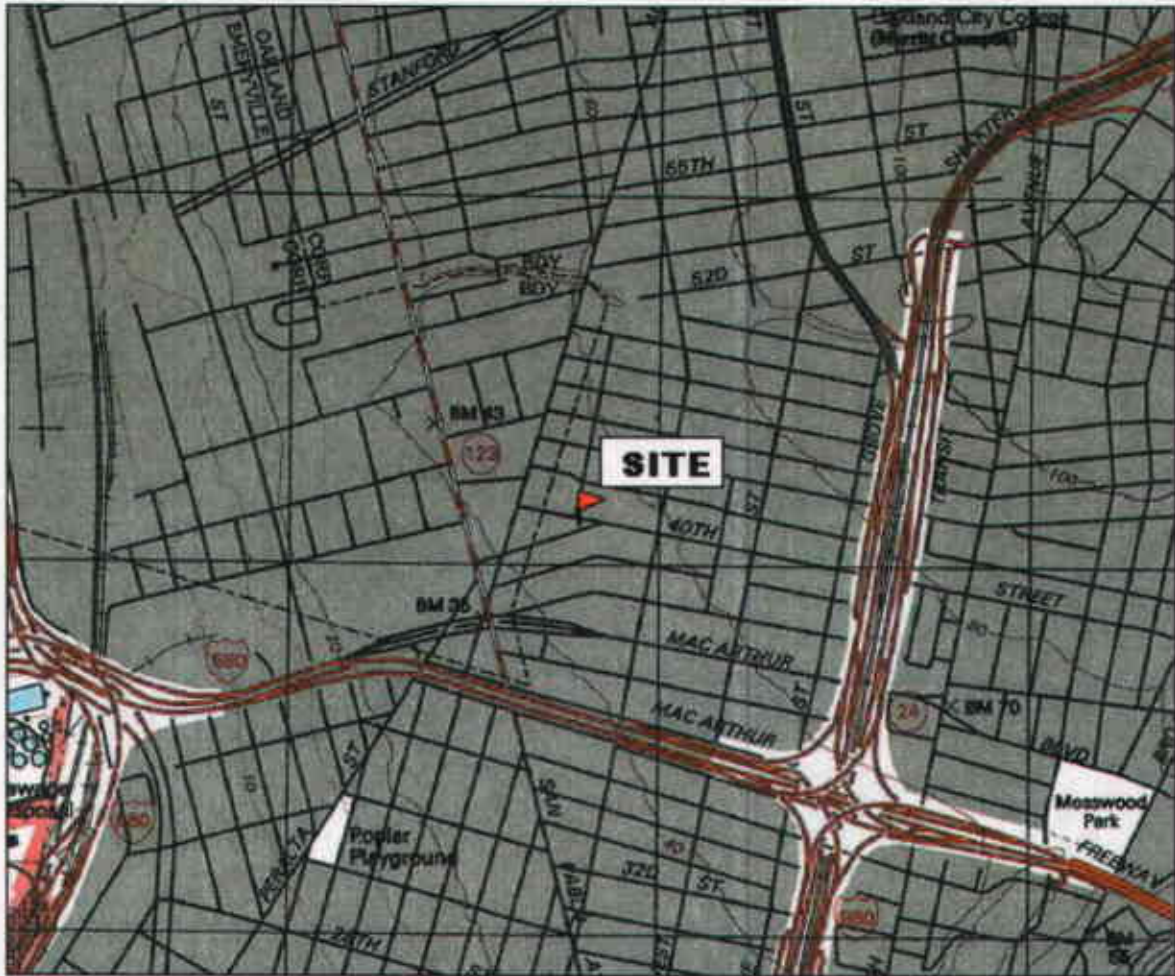
- Table 1 Well Construction Details*
- Table 2 Groundwater Elevation Data*
- Table 3 Groundwater Analytical Data*
- Table 4 Fuel Oxygenate Analytical Data*

**Appendices**

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

cc:

ACHCSA  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577



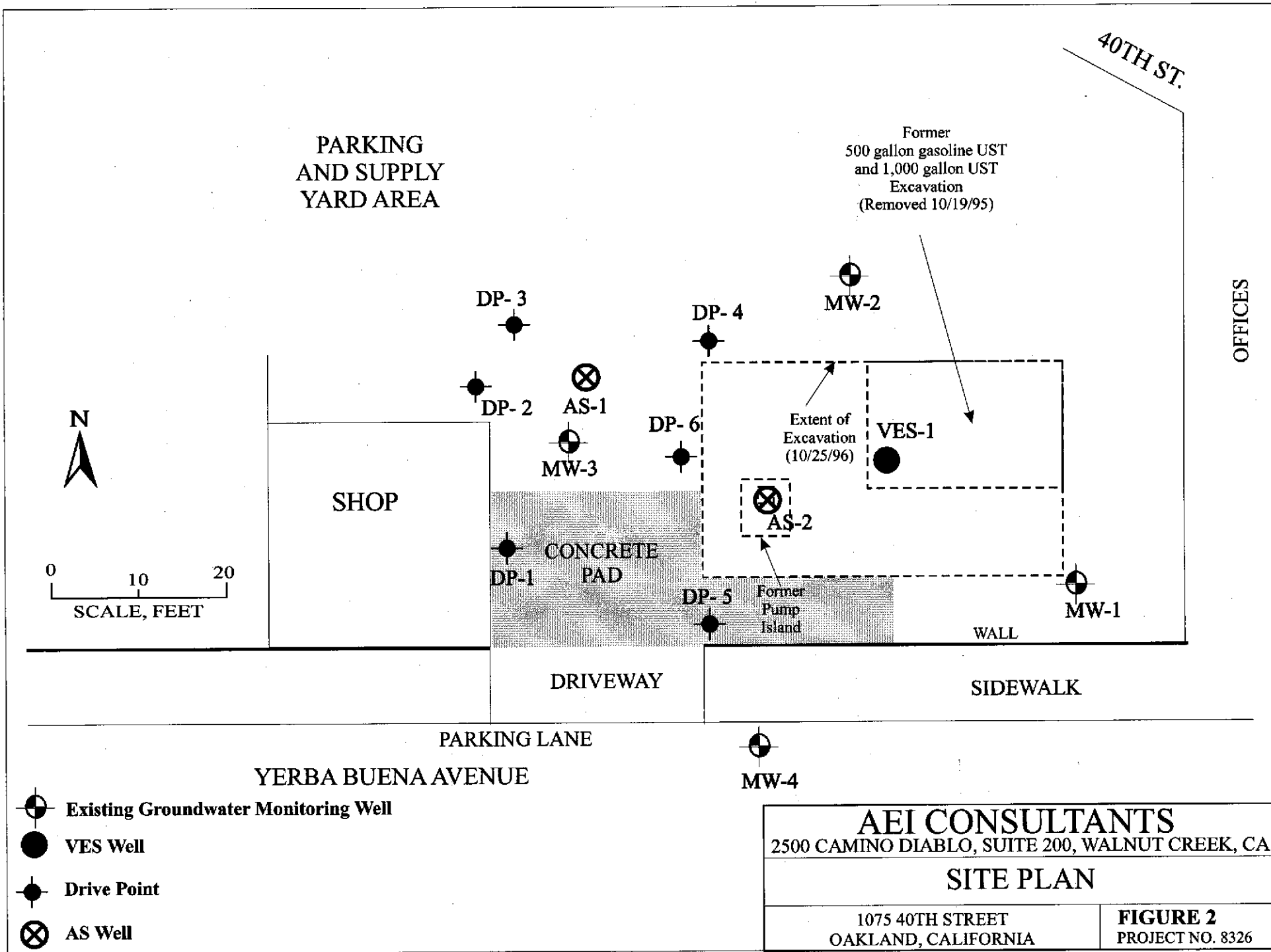
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<b>AEI CONSULTANTS</b>	
<b>SITE LOCATION MAP</b>	
1075 40 <sup>th</sup> STREET OAKLAND, CALIFORNIA	<b>FIGURE 1</b> PROJECT No. 8326





**AEI CONSULTANTS**  
 2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

**SITE PLAN**

1075 40TH STREET  
 OAKLAND, CALIFORNIA

**FIGURE 2**  
 PROJECT NO. 8326

PARKING  
AND SUPPLY  
YARD AREA

40TH ST.

TPHg 77  
TPHd ND<50  
MTBE 4,200  
Benzene ND<0.5

FORMER LOCATION OF 500 AND  
1,000-GALLON USTS  
(Removed 10/19/95)

MW-2

TPHg FP = 0.05'  
TPHd -  
MTBE -  
Benzene -

MW-3

Extent of  
Excavation  
(10/25/96)

OFFICES

SHOP

CONCRETE  
PAD

TPHg 240  
TPHd 150  
MTBE ND<5.0  
Benzene 11

MW-1

Former  
Pump  
Island

WALL

TPHg ND<50  
TPHd ND<50  
MTBE 16  
Benzene ND<0.5

DRIVEWAY

SIDEWALK

PARKING LANE

MW-4

YERBA BUENA AVENUE



Monitoring Well

Groundwater results are expressed in  $\mu\text{g/L}$ .

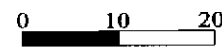
TPHg = Total petroleum hydrocarbons as gasoline

TPHd = Total petroleum hydrocarbons as diesel

MTBE = Methyl tertiary butyl ether

FP = free product present

Scale: 1" = 20'



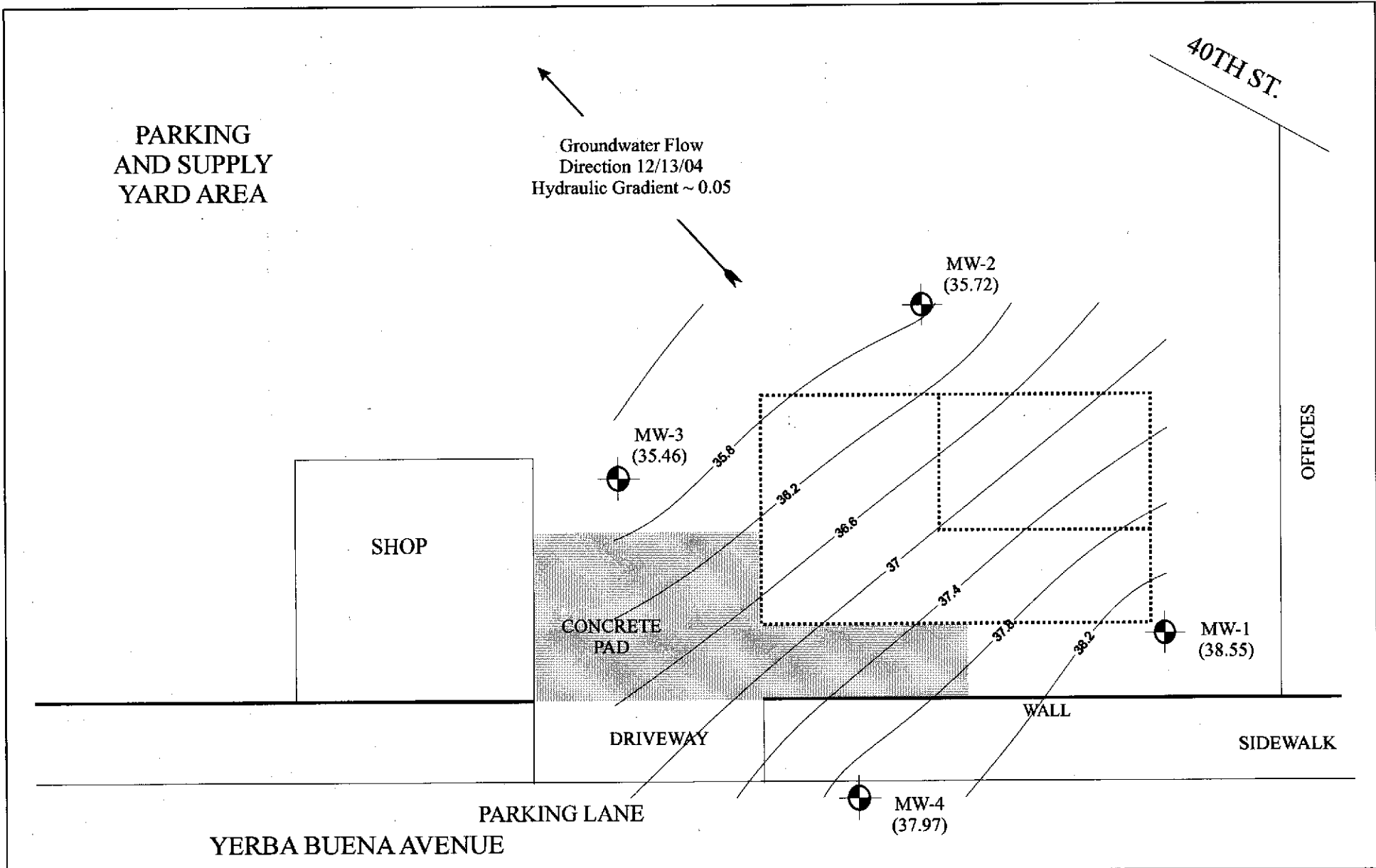
## AEI CONSULTANTS


2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

### SAMPLE ANALYTICAL DATA - 12/13/04

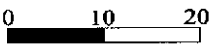
1075 40TH AVENUE  
OAKLAND, CALIFORNIA

Figure 3  
AEI Project: 8326




 MW-3  
 (33.88)

Monitoring Well  
 Water table elevations in feet above mean sea level

Scale: 1" = 20'  




**AEI CONSULTANTS**  
 2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

**GROUNDWATER GRADIENT**

1075 40TH AVENUE  
 OAKLAND, CALIFORNIA

**Figure 4**  
 AEI Project: 8326

**Table 1: Well Construction Details, Fidelity Roof Company, 1075 40th Street, Oakland, California**

Well ID	Date Drilled	Elevation (ft msl)	Water Depth 12/13/04 (ft)	Boring Depth (ft)	Slotted Casing (ft)	Slot Size (in)	Blank Casing (ft)	Sand Interval (ft)	Sand Size	Bentonite Interval (ft)	Grout Interval (ft)
MW-1	03/06/97	45.41	6.94	21.0	6-21	0.020	0.5-6	5-21	#3	4-5	0.5-4
MW-2	03/19/97	44.94	9.26	21.0	6-21	0.020	0.5-6	5-21	#3	4-5	0.5-4
MW-3	03/19/97	44.32	8.91	21.0	6-21	0.020	0.5-6	5-21	#3	4-5	0.5-4
MW-4	08/05/99	43.48	5.51	20.0	5-21	0.020	0.55	4-20	#3	3-4	0.5-3
AS-1	05/06/04	45.2 est	---	30.0	25-30	0.010	0.75-25	22-30	2/12	19-22	1.0-19
AS-2	05/06/04	45.2 est.	---	30.0	25-30	0.010	0.75-25	22-30	2/12	19-22	1.0-19
VE-1	05/06/04	45.0 est.	---	10.0	5-10	0.010	0.75-10	4-10	2/12	3-4	1.0-3
DP-1	05/13/04	44.0 est.	---	16.0	5.5-15.5	# 40 mesh	5.5-0.5	4.5-15.5	#30	3.5-4.5	0.75-3.5
DP-2	05/13/04	44.6 est.	---	16.0	5.5-15.5	# 40 mesh	5.5-0.5	4.5-15.5	#30	3.5-4.5	0.75-3.5
DP-3	05/13/04	44.7 est.	---	16.0	5.5-15.5	# 40 mesh	5.5-0.5	4.5-15.5	#30	3.5-4.5	0.75-3.5
DP-4	05/13/04	44.8 est.	---	16.0	5.5-15.5	# 40 mesh	5.5-0.5	4.5-15.5	#30	3.5-4.5	0.75-3.5
DP-5	05/13/04	45.0 est.	---	16.0	5.5-15.5	# 40 mesh	5.5-0.5	4.5-15.5	#30	3.5-4.5	0.75-3.5
DP-6	05/13/04	44.3 est.	---	16.0	5.5-15.5	# 40 mesh	5.5-0.5	4.5-15.5	#30	3.5-4.5	0.75-3.5

**Notes:**

All well elevations are measured from the top of the casing and  
ft msl = feet above mean sea level

**Table 2: Groundwater Elevation Data, Fidelity Roofing, 1075 40th Street, Oakland, California**

<b>Well ID</b>	<b>Date</b>	<b>Elevation (ft msl)</b>	<b>Depth to Water (ft)</b>	<b>Groundwater Elevation (ft msl)</b>
<b>MW-1</b>	03/19/97	45.41	8.25	37.16
	06/20/97	45.41	9.10	36.31
	10/08/97	45.41	9.95	35.46
	01/16/98	45.41	7.57	37.84
	08/05/99	45.49	10.16	35.33
	11/18/99	45.49	8.52	36.97
	02/24/00	45.49	7.65	37.84
	05/24/00	45.49	8.47	37.02
	08/29/00	45.49	10.28	35.21
	01/12/01	45.49	8.50	36.99
	04/18/01	45.49	8.77	36.72
	07/27/01	45.49	10.50	34.99
	11/06/01	45.49	10.28	35.21
	02/13/02	45.49	8.47	37.02
	05/14/02	45.49	9.50	35.99
	08/15/02	45.49	10.39	35.10
	11/14/02	45.49	9.08	36.41
	02/12/03	45.49	8.36	37.13
	05/16/03	45.49	8.49	37.00
	08/29/03	45.49	9.91	35.58
12/02/03	45.49	8.88	36.61	
03/08/04	45.49	7.66	37.83	
06/08/04	45.49	9.39	36.10	
09/10/04	45.49	9.95	35.54	
12/13/04	45.49	<b>6.94</b>	<b>38.55</b>	
<b>MW-2</b>	03/19/97	44.94	8.40	36.54
	06/20/97	44.94	8.85	36.09
	10/08/97	44.94	9.80	35.14
	01/16/98	44.94	5.28	39.66
	08/05/99	44.98	9.32	35.66
	11/18/99	44.98	10.20	34.78
	02/24/00	44.98	7.03	37.95
	05/24/00	44.98	8.01	36.97
	08/29/00	44.98	11.07	33.91
	01/12/01	44.98	8.60	36.38
	04/18/01	44.98	8.80	36.18
	07/27/01	44.98	11.10	33.88
	11/06/01	44.98	12.21	32.77
	02/13/02	44.98	7.98	37.00
	05/14/02	44.98	10.48	34.50
	08/15/02	44.98	10.64	34.34
	11/14/02	44.98	11.69	33.29
	02/12/03	44.98	9.07	35.91
	05/16/03	44.98	11.25	33.73
	08/29/03	44.98	12.19	32.79
12/02/03	44.98	10.92	34.06	
03/08/04	44.98	8.41	36.57	
06/08/04	44.98	10.19	34.79	
09/10/04	44.98	10.84	34.14	
12/13/04	44.98	<b>9.26</b>	<b>35.72</b>	

**Table 2: Groundwater Elevation Data, Fidelity Roofing, 1075 40th Street, Oakland, California**

<b>Well ID</b>	<b>Date</b>	<b>Elevation (ft msl)</b>	<b>Depth to Water (ft)</b>	<b>Groundwater Elevation (ft msl)</b>
<b>MW-3</b>	03/19/97	44.32	7.59	36.73
	10/08/97	44.32	9.98	34.34
	06/20/97	44.32	8.36	35.96
	01/16/98	44.32	9.18	35.14
	08/05/99	44.37	10.56	33.81
	11/18/99	44.37	10.92	33.45
	02/24/00	44.37	8.49	35.88
	05/24/00	44.37	8.42	35.95
	08/29/00	44.37	12.00	32.37
	01/12/01	44.37	10.50	33.87
	04/18/01	44.37	9.50	35.22
	07/27/01	44.37	11.61	32.76
	11/06/01	44.37	11.73	32.64
	02/13/02	44.37	9.36	35.01
	05/14/02	44.37	9.00	35.37
	08/15/02	44.37	11.72	32.65
	11/14/02	44.37	11.28	33.09
	02/12/03	44.37	10.17	34.20
	05/16/03	44.37	11.47	32.90
	08/29/03	44.37	11.92	32.45
12/02/04	44.37	10.96	33.41	
03/08/04	44.37	10.49	33.88	
06/08/04	44.37	9.89	34.48	
09/10/04	44.37	11.54	32.83	
12/13/04	44.37	8.96	35.41	
<b>MW-4</b>	08/05/99	43.48	8.79	34.69
	11/18/99	43.48	8.11	35.37
	02/24/00	43.48	5.19	38.29
	05/24/00	43.48	7.23	36.25
	08/29/00	43.48	9.04	34.44
	01/12/01	43.48	6.40	37.08
	04/18/01	43.48	7.30	36.18
	07/27/01	43.48	9.16	34.32
	11/06/01	43.48	9.03	34.45
	02/13/02	43.48	6.60	36.88
	05/14/02	43.48	7.19	36.29
	08/15/02	43.48	8.97	34.51
	11/14/02	43.48	7.52	35.96
	02/12/03	43.48	6.37	37.11
	05/16/03	43.48	6.81	36.67
	08/29/03	43.48	8.56	34.92
	12/02/03	43.48	6.02	37.46
	03/08/04	43.48	5.75	37.73
	06/08/04	43.48	8.19	35.29
	09/10/04	43.48	8.84	34.64
12/13/04	43.48	5.51	37.97	

**Notes:**

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 Elevation Data, Fidelity Roofing, 1075 40th Street, Oakland, California**

Well ID	Date	Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
1	03/19/97	36.81	---	---
2	06/20/97	35.58	-1.23	---
3	10/08/97	35.52	-0.06	---
4	01/16/98	37.55	2.03	---
5	08/05/99	34.87	-2.67	---
6	11/18/99	35.14	0.27	---
7	02/24/00	37.49	2.35	---
8	05/24/00	36.55	-0.94	---
9	08/29/00	33.98	-2.57	NW (0.09)
10	01/12/01	36.08	2.10	W (0.06)
11	04/18/01	36.08	0.00	W (0.02)
12	07/27/01	33.99	-2.09	W (0.02)
13	11/06/01	33.77	-0.22	NW (0.05)
14	02/13/02	36.48	2.71	NW (0.05)
15	05/14/02	35.54	-0.94	N (0.04)
16	08/15/02	34.15	-1.39	W (0.05)
17	11/14/02	34.69	0.54	N (0.08)
18	02/12/03	36.09	1.40	NW (0.03)
19	05/16/03	35.08	-1.01	NW (0.06)
20	08/29/03	33.94	-1.14	NW (0.04)
21	12/02/03	35.39	1.45	NW (0.05)
22	03/08/04	36.50	1.12	NW (0.04)
23	06/08/04	35.17	-1.34	NW (0.02)
24	09/10/04	34.93	-0.23	NW (0.007)
25	12/13/04	36.91	1.98	NW (0.05)

**Table 3: Groundwater Analytical Data, Fidelity Roofing, 1075 40th Street, Oakland, California**

Well ID	Date	Depth to Water (ft)	TPHg (ug/L)	TPHd (ug/L)	MTBE by 8021B (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)
MW - 1	03/19/97	8.25	ND<50	ND<50	23	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	06/23/97	9.10	1,300	420	14	150	2.1	12	19
	10/08/97	9.95	56	66	5.8	2.8	ND<0.5	ND<0.5	ND<0.5
	01/16/98	7.57	1,500	910	ND<33	95	0.72	69	8.4
	08/05/99	10.16	160	63	ND<15	1.6	ND<0.5	0.56	1.1
	11/18/99	8.52	79	ND<50	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	02/24/00	7.65	300	160	ND<5.0	14	0.82	3.5	1.6
	05/24/00	8.47	1,300	480	ND<10	93	ND<0.5	17	1.6
	08/29/00	10.28	120	<0.5	ND<5.0	0.93	ND<0.5	ND<0.5	ND<0.5
	01/12/01	8.50	360	170	ND<5.0	16	ND<0.5	9.3	0.69
	04/18/01	8.77	1,100	410	2,800	63	ND<0.5	34	0.73
	07/27/01	10.50	130	66	ND<5.0	1.6	ND<0.5	ND<0.5	ND<0.5
	11/06/01	10.28	ND<50	<50	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	02/13/02	8.47	430	270	ND<5.0	17	0.51	11	0.64
	05/14/02	9.50	340	170	ND<5.0	21	ND<0.5	5.3	0.67
	08/15/02	10.39	96	53	ND<5.0	0.66	ND<0.5	ND<0.5	ND<0.5
	11/14/02	9.08	ND<50	ND<50	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	02/12/03	8.36	710	120	ND<5.0	28	4.3	32	130
	05/16/03	8.49	1,100	340	ND<15	54	4.1	40	100
	08/29/03	9.91	1,200	280	ND<5.0	46	5.1	55	230
	12/02/03	8.88	ND<50	ND<50	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	03/08/04	7.66	120	240 <sup>1,2</sup>	ND<5.0	2.9	ND<0.5	ND<0.5	0.71
	06/08/04	9.39	ND<50	78 <sup>2</sup>	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
09/10/04	9.95	ND<50	ND<50	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
12/13/04	6.94	240	150 <sup>1,2</sup>	ND<5.0	11	ND<0.5	5.6	<0.5	
MW - 2	03/19/97	8.40	ND<50	ND<50	65	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	06/23/97	8.85	ND<50	ND<50	70	3.4	ND<0.5	ND<0.5	ND<0.5
	10/08/97	9.80	ND<50	ND<50	90	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	01/16/98	5.28	ND<50	ND<50	65	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	08/05/99	9.32	ND<50	ND<50	600	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	11/18/99	10.20	ND<50	ND<50	370	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	02/24/00	7.03	ND<50	ND<50	880	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	05/24/00	8.01	ND<250	62	2,200	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	08/29/00	11.07	ND<200	ND<50	1,900	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	01/12/01	8.60	470	70	2,000	8.7	3.1	16	73
	04/18/01	8.80	ND<50	ND<50	2,800	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	07/27/01	11.10	ND<100	ND<50	3,300	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	11/06/01	12.21	ND<100	ND<50	3,000	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	02/13/02	7.98	54	ND<50	3,200	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	05/14/02	10.48	ND<150	ND<50	3,800	4.8	<1.0	<1.0	<1.0
	08/15/02	10.64	ND<50	ND<50	2,900	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	11/14/02	11.69	ND<120	ND<50	3,800	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	02/12/03	9.07	1,100	120	3,200	57	7	55	210
	05/16/03	11.25	530	85	6,000	35	3.6	22	79
	08/29/03	12.19	2,400	1200	4,800	39	5.8	77	320
	12/02/03	10.96	ND<100	ND<50	3,300	ND<1.0	ND<1.0	ND<1.0	ND<1.0
	03/08/04	8.41	ND<250	ND<50	4,600	ND<2.5	ND<2.5	ND<2.5	ND<2.5
	06/08/04	10.19	ND<120	ND<50	3,400	ND<1.2	ND<1.2	ND<1.2	ND<1.2
09/10/04	10.84	ND<250	ND<250	4,100	ND<2.5	ND<2.5	ND<2.5	ND<2.5	
12/13/04	8.41	77	ND<50	4,200	ND<0.5	0.83	ND<0.5	1.9	



Table 3: Groundwater Analytical Data, Fidelity Roofing, 1075 40th Street, Oakland, California

Well ID	Date	Depth to Water (ft)	TPHg (ug/L)	TPHd (ug/L)	MTBE by 8021B (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)
MW-3	03/19/97	7.59	26,000	5,000	230	3,000	530	340	2,300
	06/23/97	9.98	25,000	7,000	270	4,400	120	540	1,500
	10/08/97	8.36	17,000	5,100	ND<280	4,400	47	280	410
	01/16/98	9.18	29,000	7,300	ND<360	5,600	740	950	3,500
	08/05/99	10.56	31,000	5,100	ND<200	5,400	150	1100	2,300
	11/18/99	10.92	74,000	49,000	ND<1000	8,100	5,000	2,100	8,100
	02/24/00	8.49	110,000	6,300	ND<200	12,000	1,400	2,900	14,000
	05/24/00	8.42	87,000	26,000	ND<200	13,000	1,900	2,900	14,000
	08/29/00	12.00	49,000	9,400	ND<200	7,400	800	1,800	7,400
	01/12/01	10.50	69,000	21,000	ND<300	8,600	980	2,600	11,000
	04/18/01	9.50	75,000	13,000	ND<500	9,200	1,200	2,500	12,000
	07/27/01	11.61	75,000	85,000	ND<650	8,700	1,100	2,600	12,000
	11/06/01	11.73	89,000	86,000	ND<200	7,900	910	2,800	12,000
	02/13/02	9.36	85,000	13,000	ND<2000	8,500	830	2,600	11,000
	05/14/02	9.00	94,000	35,000	ND<1000	9,700	1,100	3,400	15,000
	08/15/02	11.72	37,000	9,700	ND<1200	5,200	430	1,800	5,900
	11/14/02	11.28	66,000	23,000	ND<1,200	8,300	860	3,000	11,000
	02/12/03	10.17	61,000	8,400	ND<500	6,800	500	2,400	9,800
	05/16/03	11.47	59,000	17,000	ND<500	6,200	320	2,000	6,500
	08/29/03	11.92	78,000	100,000	ND<1200	6,800	440	2,900	11,000
	12/02/03	11.32	68,000	46,000	ND<1000	7,600	450	2,900	10,000
03/08/04	10.49	79,000	160,000	ND<250	7,700	570	300	13,000	
06/08/04	9.89	90,000 <sup>4</sup>	26,000 <sup>1,2,4,5</sup>	ND<1200	6,700	580	2,500	13,000	
06/08/04	11.54	NA - Free Product		ND<100*	7,600*	540*	3,500*	14,000*	
12/13/04	8.91	NA - Free Product = 0.05 ft		-	-	-	-	-	
MW-4	08/05/99	8.79	ND<50	ND<50	37	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	11/18/99	8.11	ND<50	ND<50	20	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	02/24/00	5.19	ND<50	ND<50	20	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	05/24/00	7.23	120	140	31	1.3	ND<0.5	ND<0.5	ND<0.5
	08/29/00	9.04	ND<50	ND<50	22	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	01/12/01	6.40	ND<50	81	25	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	04/18/01	7.30	30	170	35	2.4	1.1	0.66	4.2
	07/27/01	9.16	87	110	26	1.8	ND<0.5	2	10
	11/06/01	9.03	200	59	21	4.5	1	5.2	24
	02/13/02	6.60	ND<50	91	15	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	05/14/02	7.19	260	140	26	12	2.7	11	49
	08/15/02	8.97	ND<50	ND<50	12	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	11/14/02	7.52	ND<50	ND<50	11	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	02/12/03	6.37	170	130	16	3.1	0.66	6.4	27
	05/16/03	6.81	ND<50	60	23	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	08/29/03	8.56	610	120	10	16	2.7	30	130
	12/02/03	6.02	ND<50	ND<50	7.7	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	03/08/04	5.75	ND<50	ND<50	10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	06/08/04	8.19	ND<50	ND<50	11	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	09/10/04	8.84	ND<50	ND<50	10	ND<0.5	ND<0.5	ND<0.5	ND<0.5
12/13/04	5.75	ND<50	ND<50	16	ND<0.5	ND<0.5	ND<0.5	ND<0.5	

Notes:

ug/L= micrograms per liter

MTBE= Methyl Tertiary Butyl Ether

TPHg= Total Petroleum Hydrocarbons as gasoline

TPHd= Total Petroleum Hydrocarbons as diesel

\* + Analysis by 8260

1 - gasoline range compounds are significant

2 - diesel range compounds are significant; no recognizable pattern

3 - unmodified or weakly modified diesel is significant

4 - lighter than water immiscible sheen/product is present

5- oil range compounds are significant

**Table 4: Fuel Oxygenate Analytical Data, Fidelity Roofing, 1075 40th Street, Oakland, California**

Well ID	Date	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE benzene (µg/L)	MTBE (µg/L)
MW-1	06/08/04	ND<0.5	ND<5.0	ND<0.5	1.5	ND<0.5	ND<0.5	1.0
	09/10/04	ND<0.5	ND<5.0	ND<0.5	NA	ND<0.5	ND<0.5	1.0
	12/13/04	Not analyzed, MTBE analyzed by 8021B						
MW-2	06/08/04	ND<100	ND<1000	ND<100	ND<100	ND<100	ND<100	4,300
	09/10/04	ND<50	ND<500	ND<50	ND<50	ND<50	ND<50	2,800
	12/13/04	Not analyzed, MTBE analyzed by 8021B						
MW-3	06/08/04	ND<5.0	ND<50	ND<5.0	ND<5.0	ND<5.0	ND<5.0	99
	09/10/04	ND<100	ND<1000	ND<100	ND<100	ND<100	ND<100	ND<100
	12/13/04	Not analyzed, MTBE analyzed by 8021B						
MW-4	06/08/04	ND<0.5	ND<5.0	ND<0.5	0.79	ND<0.5	ND<0.5	15
	09/10/04	ND<0.5	ND<5.0	ND<0.5	NA	ND<0.5	ND<0.5	8.2
	12/13/04	Not analyzed, MTBE analyzed by 8021B						

Notes:

Notes:

(µg/L)  
TAME  
TBA  
EDB

micrograms per liter  
tert-Amyl methyl ether  
t-Butyl alcohol  
1,2-Dibromethane

1,2-DCA  
DIPE  
ETBE  
MTBE

1,2-Dichloroethane  
Diisopropyl ether  
Ethyl tert-butyl ether  
Methyl Tertiary Butyl Ether

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-1**

Project Name:	Fidelity Roof Company	Date of Sampling:	12/13/2004
Job Number:	3119	Name of Sampler:	Adrian Nieto
Project Address:	1075 40th Avenue, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		▼
Elevation of Top of Casing (feet above msl)	45.49		
Depth of Well	21.00		
Depth to Water (from top of casing)	6.94		
Water Elevation (feet above msl)	38.55		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	6.7		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	Initially light brown, clears quickly		
Free Product Present?	No	Thickness (ft):	

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ S/cm)	DO (mg/L)	ORP (meV)	Comments
	2	20.09	-	1019	0.04	482.9	
	4	19.94	-	1023	0.05	486.5	
	6	20.97	-	1058	0.02	264.3	
	8	20.64	-	1057	0.01	301.9	

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

Initially light brown with no hydrocarbon odors. Clears quickly

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-2**

Project Name:	Fidelity Roof Company	Date of Sampling:	12/13/2004
Job Number:	3119	Name of Sampler:	Adrian Nieto
Project Address:	1075 40th Avenue, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK	▼	
Elevation of Top of Casing (feet above msl)	44.98		
Depth of Well	21.00		
Depth to Water (from top of casing)	9.26		
Water Elevation (feet above msl)	35.72		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	5.6		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	Initially brown, clears quickly		
Free Product Present?	no	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ S/cm)	DO (mg/L)	ORP (meV)	Comments
	2	21.47	-	1560	0.62	349.2	
	4	22.15	-	1628	0.73	369.4	
	6	21.90	-	1628	0.08	321.0	

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

Initially brown with no hydrocarbon odors. Clears quickly

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	Fidelity Roof Company	Date of Sampling:	12/13/2004
Job Number:	3119	Name of Sampler:	Adrian Nieto
Project Address:	1075 40th Avenue, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		▼
Elevation of Top of Casing (feet above msl)	44.37		
Depth of Well	21.00		
Depth to Product (from top of casing)	8.91		
Depth to Water (from top of casing)	8.96		
Water Elevation (feet above msl)	35.41		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	5.8		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	Initially brown, clears quickly		
Free Product Present?	yes	Thickness (ft):	0.05

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments

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

Initially brown with no hydrocarbon odors. Clears quickly

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-4**

Project Name:	Fidelity Roof Company	Date of Sampling:	12/13/2004
Job Number:	3119	Name of Sampler:	Adrian Nieto
Project Address:	1075 40th Avenue, Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2	
Wellhead Condition	OK	▼
Elevation of Top of Casing (feet above msl)	43.48	
Depth of Well	20.00	
Depth to Water (from top of casing)	5.51	
Water Elevation (feet above msl)	37.97	
Well Volumes Purged	3	
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	7.0	
Actual Volume Purged (gallons)	8.0	
Appearance of Purge Water	Initially brown, clears at 1.5 gallons	
Free Product Present?	No	Thickness (ft):

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ S/cm)	DO (mg/L)	ORP (meV)	Comments
	2	21.86	7.56	1106	0.50	491.6	
	4	21.46	7.75	1053	0.59	488.9	
	6	22.13	7.90	1161	0.39	498.8	
	8	22.27	7.91	1307	0.06	490.4	

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

Initially brown with no hydrocarbon odors. Clears at 1.5 gallons

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	Fidelity Roof Company	Date of Sampling:	9/29/2004
Job Number:	8326	Name of Sampler:	Adrian Nieto
Project Address:	1075 40th Avenue, Oakland, CA		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		▼
Elevation of Top of Casing (feet above msl)	44.37		
Depth of Well	21.00		
Depth to Product (from top of casing)	11.04		
Depth to Water (from top of casing)	11.56		
Water Elevation (feet above msl)	32.81		
Well Volumes Purged			
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)			
Actual Volume Purged (gallons)			
Appearance of Purge Water			
Free Product Present?	yes	Thickness (ft):	0.52

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments

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

Excel removed 200 gallons from MW-3 on 9/23/04

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	Fidelity Roof Company	Date of Sampling:	10/27/2004
Job Number:	8326	Name of Sampler:	Adrian Nieto
Project Address:	1075 40th Avenue, Oakland, CA		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		▼
Elevation of Top of Casing (feet above msl)	44.37		
Depth of Well	21.00		
Depth to Product (from top of casing)	11.24		
Depth to Water (from top of casing)	11.56		
Water Elevation (feet above msl)	32.81		
Well Volumes Purged			
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)			
Actual Volume Purged (gallons)			
Appearance of Purge Water			
Free Product Present?	yes	Thickness (ft):	0.32

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments

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

Excel removed 30 gallons from MW-3 on 10/22/04



**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	Fidelity Roof Company	Date of Sampling:	11/6/2004
Job Number:	8326	Name of Sampler:	Adrian Nieto
Project Address:	1075 40th Avenue, Oakland, CA		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	44.37		
Depth of Well	21.00		
Depth to Product (from top of casing)	6.92		
Depth to Water (from top of casing)	6.93		
Water Elevation (feet above msl)	37.44		
Well Volumes Purged			
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)			
Actual Volume Purged (gallons)			
Appearance of Purge Water			
Free Product Present?	yes	Thickness (ft):	0.01

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments

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

Excel removed 15 gallons from MW-3 on 11/04/04

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	Fidelity Roof Company	Date of Sampling:	11/19/2004
Job Number:	8326	Name of Sampler:	Adrian Nieto
Project Address:	1075 40th Avenue, Oakland, CA		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	44.37		
Depth of Well	21.00		
Depth to Product (from top of casing)	8.19		
Depth to Water (from top of casing)	8.33		
Water Elevation (feet above msl)	36.04		
Well Volumes Purged			
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)			
Actual Volume Purged (gallons)			
Appearance of Purge Water			
Free Product Present?	yes	Thickness (ft):	0.14

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				2 40mL VOA, 1 1L			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments

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

Initially brown with no hydrocarbon odors. Clears quickly



**McC Campbell Analytical, Inc.**

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8326; Fidelity Roof	Date Sampled: 12/13/04
		Date Received: 12/13/04
	Client Contact: Robert Flory	Date Reported: 12/17/04
	Client P.O.:	Date Completed: 12/17/04

**WorkOrder: 0412266**

December 17, 2004

Dear Robert:

Enclosed are:

- 1). the results of 3 analyzed samples from your #8326; Fidelity Roof 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. McC Campbell 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,

Angela Rydelius, Lab Manager







QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0412266

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 14281		Spiked Sample ID: 0412269-002a				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	60	99.6	97.6	2.00	101	105	3.88	70 - 130	70 - 130
MTBE	ND	10	91.5	89.7	1.97	112	97.1	14.1	70 - 130	70 - 130
Benzene	ND	10	106	102	4.00	115	104	9.84	70 - 130	70 - 130
Toluene	ND	10	107	103	4.25	109	97.3	11.0	70 - 130	70 - 130
Ethylbenzene	ND	10	109	106	3.41	112	101	10.2	70 - 130	70 - 130
Xylenes	ND	30	100	95.3	4.78	96.3	96	0.347	70 - 130	70 - 130
%SS:	91	10	112	108	2.96	113	103	9.23	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



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### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0412266

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 14288		Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	7500	N/A	N/A	N/A	107	104	2.74	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	107	104	2.74	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.


% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

 QA/QC Officer

**McC Campbell Analytical, Inc.**

**CHAIN-OF-CUSTODY RECORD**



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

WorkOrder: 0412266

ClientID: AEL

**Report to:**

Robert Flory  
 All Environmental, Inc.  
 2500 Camino Diablo, Ste. #200  
 Walnut Creek, CA 94597

TEL: (925) 283-6000  
 FAX: (925) 283-6121  
 ProjectNo: #8326; Fidelity Roof  
 PO:

**Bill to:**

Diane  
 All Environmental, Inc.  
 2500 Camino Diablo, Ste. #200  
 Walnut Creek, CA 94597

**Requested TAT:**

5 days

*Date Received:* 12/13/2004

*Date Printed:* 12/13/2004

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
0412266-001	MW-1	Water	12/13/04	<input type="checkbox"/>	A	A	B													
0412266-002	MW-2	Water	12/13/04	<input type="checkbox"/>	A		B													
0412266-003	MW-4	Water	12/13/04	<input type="checkbox"/>	A		B													

**Test Legend:**

1	G-MBTEX_W	2	PREF REPORT	3	TPH(D)_W	4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

**Comments:**

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



