AEI CONSULTANTS
ENVIRONMENTAL & CIVIL ENGINEERING

2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597
Phone: (925) 283-6000 Fax: (925) 283-6121

√R0159

October 29, 2004

Mr. Amir Gholami
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Subject: 3635 13th Avenue
Oakland, California
STID 1121
AEI Project # 8499

Dear Mr. Gholami:

Enclosed is the 4th Quarter 2004 Groundwater Monitoring Report for the above referenced site.

Mr. Williamson is looking forward to your comment on the previously submitting Remedial Investigation Plan.

Thank you and if you have any questions please Peter McIntyre at (925) 283-6000, extension 104.

Sincerely,

Adrian Angel
Staff Geologist

October 29, 2004

GROUNDWATER MONITORING REPORT
4th Quarter, 2004

3635 13th Avenue
Oakland, California

AEI Project No. 8499

Prepared For

Mr. John Williamson
1511 Wellington Street
Oakland, CA 94602

Prepared By

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

AEI

AEI CONSULTANTS
2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597
Phone: (925) 283-6000 Fax: (925) 944-2895

October 29, 2004

Mr. John Williamson
1511 Wellington Street
Oakland, CA 94602

Subject: **Groundwater Monitoring Report**
4th Quarter, 2004
3635 13th Avenue
Oakland, California
AEI Project No. 8499
ACHCSA Case No. RO0000159

Dear Mr. Williamson:

AEI Consultants (AEI) has prepared this report on your behalf to document the required ongoing groundwater investigation at the above referenced property (Figure 1: Site Location Map). The investigation is being performed at the request of the Alameda County Health Care Services Agency (ACHCSA). The purpose of the groundwater monitoring and sampling activities is to further evaluate the release of petroleum hydrocarbons that occurred from the former underground storage tank (UST) and fuel dispensing system on the property. This report documents the monitoring and sampling event performed during the fourth quarter 2004, which occurred on October 8, 2004.

I Background

The subject property (hereinafter referred to as the "site" or "property") is located in a residential area of the City of Oakland, on the west corner of 13th Avenue and Excelsior Street. The site is approximately 4,000 square feet in size and is currently vacant and unimproved. The site is surrounded by fencing. The site was previously developed with a gasoline service station.

In December 1992, three underground storage tanks (USTs), one 250-gallon waste oil UST, one 500-gallon gasoline UST, and one 1,000-gallon gasoline UST were removed by Aqua Science Engineers, Inc. of San Ramon. Refer to Figure 2 for the former locations of the USTs. Soil samples collected beneath the former waste oil UST revealed concentrations of 8,200 mg/kg Total Oil and Grease (TOG), 290 mg/kg Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-g), and 225 mg/kg total lead. Soil samples collected from beneath the 1,000-gallon gasoline UST indicated maximum concentrations of 27 mg/kg TPH-g and 5.5 mg/kg benzene. Only minor concentrations of TPH as gasoline and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were found in samples collected beneath the 500-gallon gasoline UST [(1)].

In September 1993, AEI removed and disposed of approximately 360 cubic yards of contaminated soil from near the former waste oil UST. Sidewall samples collected from this excavation indicated that only minor contaminant concentrations remained in the soil. Following this project, the former 250-gallon waste oil UST was concluded to not pose a significant threat to the groundwater [(2)].

Three monitoring wells (MW-1 through MW-3) were installed in March 1994 [(3)]. Soil samples analyzed during the well installations contained only minor concentration of petroleum hydrocarbons. The wells were monitored on a quarterly basis from November 1994 to August 1995, when the ACHCSA approved a change in monitoring frequency to a biannual schedule. Historical water elevations and groundwater sample analytical data is presented in Table 1.

On November 16, 1995, AEI advanced a soil boring at each end of the former dispenser island to depths of 4.5 feet below ground surface (bgs) on the west end, and 10 feet bgs on the east. Soil samples were collected beneath the former dispensers at the request of the ACHCSA. Analysis of soil samples collected from the two borings indicated that concentrations of TPH-g and BTEX were below laboratory detection limits [(4)].

At the request of the ACHCSA, AEI prepared a workplan outlining a scope of work to further define the extent of impacted soil and groundwater beneath the site [(5)]. This investigation was performed between August 1997 and January 1998. Nine soil borings (SB1 through SB9) were advanced on the property and down-gradient of the former gasoline USTs [(6)]. The investigation revealed significant concentrations of contaminants in soil and groundwater and that the release had spread off-site in a southerly direction.

An additional workplan was prepared, outlining the installation of two additional groundwater monitoring wells [(7)]. However, due to the City of Oakland's requirement for liability insurance provided by the property owner for the wells, off-site monitoring wells could not be installed. A letter addendum to the workplan was prepared and approved to investigate the offsite extent of the release with temporary soil borings [(8)]. Soil and groundwater samples were collected from six additional soil borings (SB-10 to SB-15) between August and October 2003, the results of which were presented in the *Soil and Groundwater Investigation Report*, dated October 30, 2003. Locations of the former USTs, soil borings, and wells are shown on Figure 2.

II Summary of Activities

AEI measured depth to groundwater in the three monitoring wells (MW-1 to MW-3) on October 8, 2004. The depth from the top of the well casings was measured with an electric water level indicator prior to sampling. The wells were purged with a submersible pump. Temperature, pH, specific conductivity, and oxidation-reduction potential (ORP) were measured during the purging of the wells. Turbidity was visually noted. The wells were purged of at least 3 well volumes and allowed to recharge prior to sample collection. Once water levels recharged to at least 90% of their original levels, a water sample was collected from each well.

Water samples were collected with new, disposable bailers into 40-ml volatile organic analysis (VOA) vials and 1-liter amber bottles and capped so that no headspace or air bubbles were visible within the sample containers. Samples were delivered on ice under chain of custody protocol to McCampbell Analytical, Inc. of Pacheco, California (Department of Health Services Certification #1644).

The three groundwater samples were submitted for chemical analysis for the following:

- Total Petroleum Hydrocarbons (TPH) as gasoline (TPH-g) by EPA method 8015Cm
- TPH as diesel (TPH-d) by EPA method 8015C
- Benzene, toluene, ethyl benzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8021
- MTBE and tertiary butyl alcohol (TBA) by EPA method 8260B (MW-2 only)

III Field Results

No sheen or free product was encountered during monitoring activities. Groundwater levels for the current monitoring episode ranged from 179.45 to 183.94 feet above Mean Sea Level (MSL). These groundwater elevations were an average of 0.94 feet lower than the previous monitoring episode, which occurred on July 9, 2004. Based on these water level measurements, groundwater was calculated to flow in a southerly direction, with a gradient of 0.05 ft/ft. This groundwater flow direction and gradient are nearly identical to results of monitoring events since 2002.

Groundwater elevation data is summarized in Table 1. The groundwater elevation contours and the groundwater flow direction are shown in Figure 3. Refer to Appendix A for the Groundwater Monitoring Well Field Sampling Forms.

IV Groundwater Quality

The highest concentrations of hydrocarbons were detected again in MW-2. TPH-g and TPH-d were detected in this well at 6,900 µg/l and 890 µg/l, respectively. Benzene and MTBE were detected in this well at 1,500 µg/L and 84 µg/L, respectively. Concentrations of TPH-g, TPH-d, and BTEX slightly increased in MW-1 and MW-3, but decreased in MW-2. TBA concentration in MW-2 increased to 230 µg/L from 98 µg/L, since the previous event.

A summary of groundwater quality data is presented in Tables 1 and 2. Laboratory results and chain of custody documents are included in Appendix B.

V Conclusion and Recommendations

Again, AEI is recommending that quarterly monitoring be continued. Samples collected during the next event will be analyzed for the same constituents as analyzed during the 4th Quarter event. The next event is tentatively scheduled to occur in early January 2005.

AEI submitted a remedial investigation and interim corrective action plan in July 2004 to address remaining source area contamination [10]. This plan is currently under review by ACHCSA.

VI References

1. *Underground Storage Tank Removal Final Report*, January 20, 1993 – Aqua Science Engineers, Inc.
2. *Contaminated Soil Over-excavation Final Report*, November 18, 1999 – All Environmental, Inc.
3. *Soil Boring and Monitoring Well Installation Report*, December 14, 1994 – All Environmental, Inc.
4. *Phase II Limited Subsurface Investigation*, December 11, 1995 – All Environmental, Inc.
5. *Phase II Subsurface Investigation Workplan*, June 5, 1997 – All Environmental, Inc.
6. *Phase II Subsurface Investigation Report*, January 20, 1999 – All Environmental, Inc.
7. *Workplan*, December 3, 1999 – AEI Consultants
8. Letter to Amir Gholami of the ACHCSA, September 9, 2002 – AEI Consultants
9. *Soil and Groundwater Investigation Report*, October 30, 2003 – AEI Consultants
10. *Remedial Investigation and Corrective Action Plan*, July 19, 2004 – AEI Consultants

VII Report Limitation

This report presents a summary of work completed by AEI Consultants. 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 (925) 283-6000, extension 104.

Sincerely,

Adrian Angel
Staff Geologist

Peter McIntyre, RG
Project Manager

REGISTERED GEOLOGIST
PETER J. MCINTYRE
Exp. 5/31/06
No. 7702
STATE OF CALIFORNIA

Figures

Figure 1: Site Location Map
Figure 2: Site Plan
Figure 3: Water Table Contours 10/8/04
Figure 4: Groundwater Sample Analytical Data 10/8/04

Tables

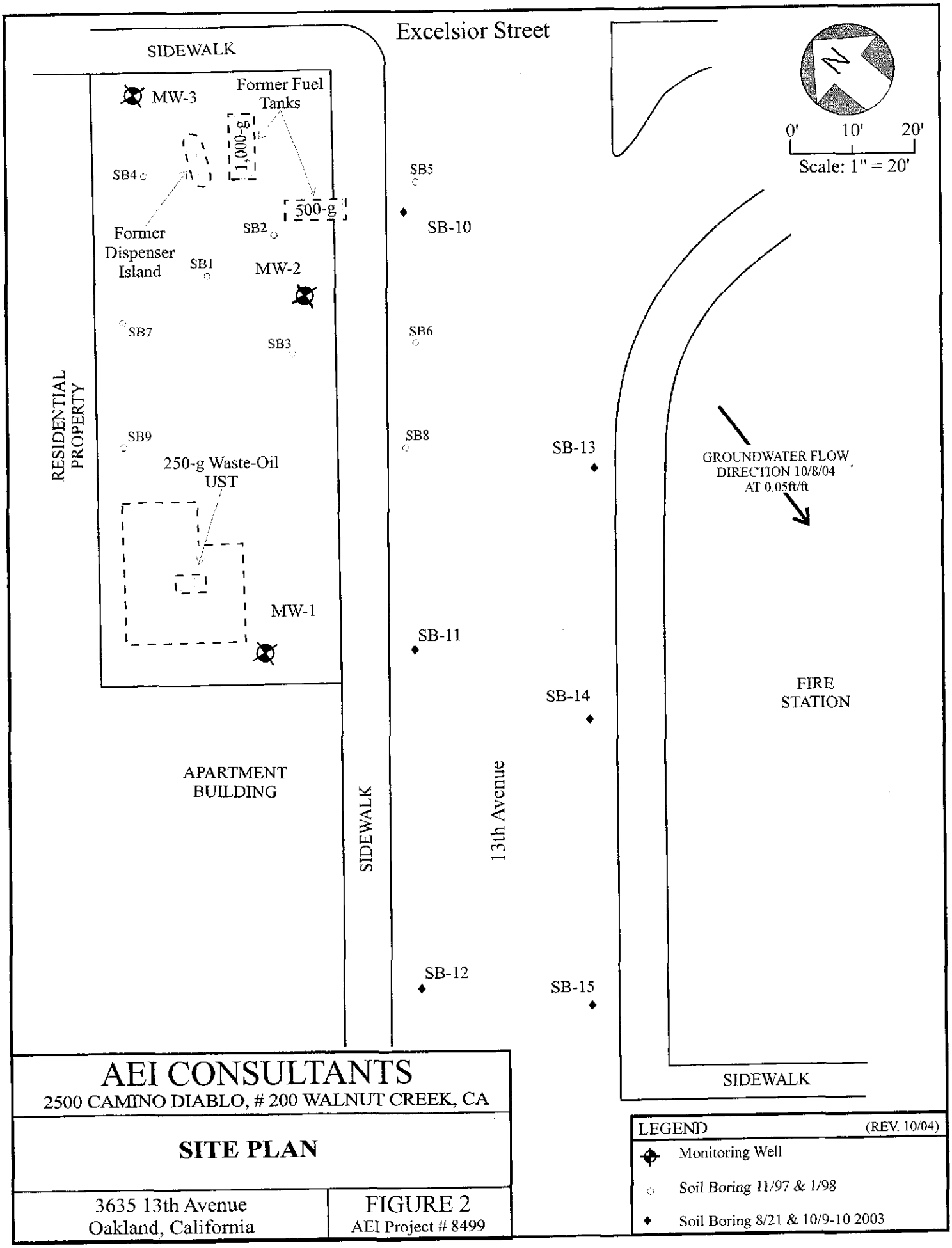
Table 1: Groundwater Monitoring Data
Table 2: Fuel Oxygenate Analyses

Attachments

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

Distribution: Mr. John Williamson
1511 Wellington Street, Oakland, CA 94602

Mr. Amir Gholami, ACHCSA
1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502



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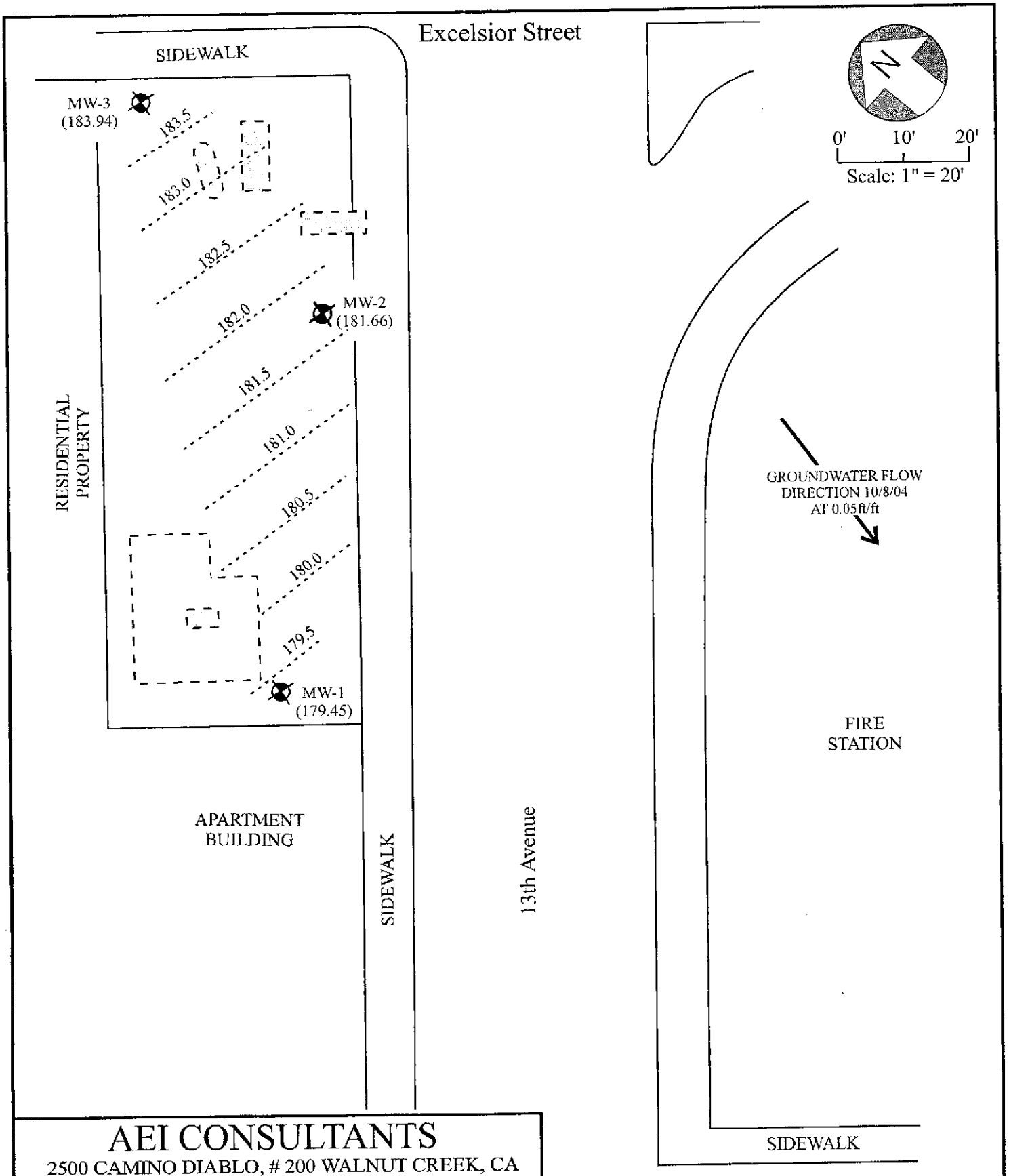
2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

SITE PLAN

3635 13th Avenue
Oakland, California

FIGURE 2
AEI Project # 8499



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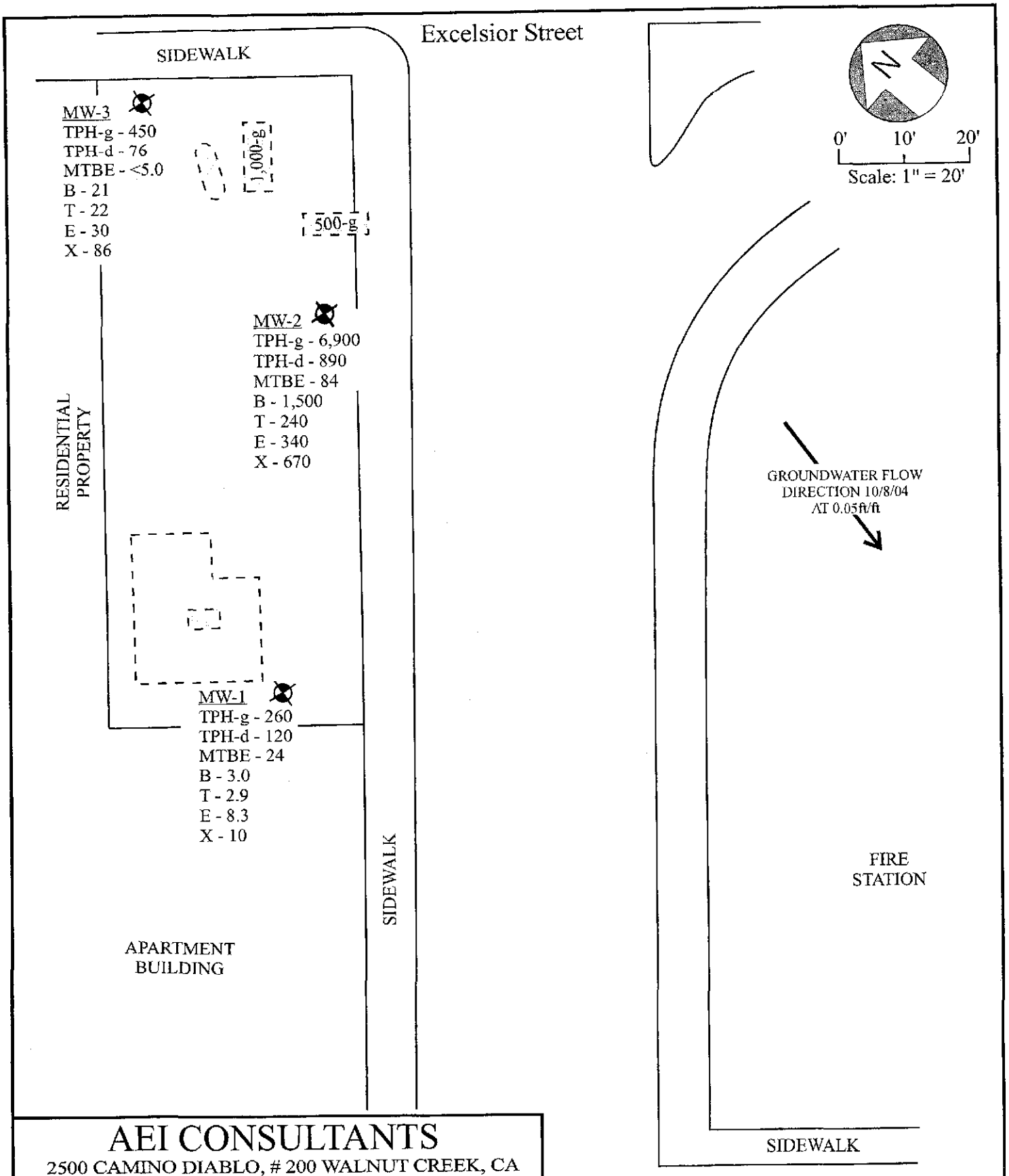
2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

WATER TABLE CONTOURS 10/8/04

3635 13th Avenue Oakland, California	FIGURE 3 AEI Project # 8499

LEGEND (REV. 10/04)

- Monitoring Well, with water table elevation in ft above msl (10/8/04)
- Water table contours in ft above msl Interval = 0.5 ft



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2500 CAMINO DIABLO, # 200 WALNUT CREEK, CA

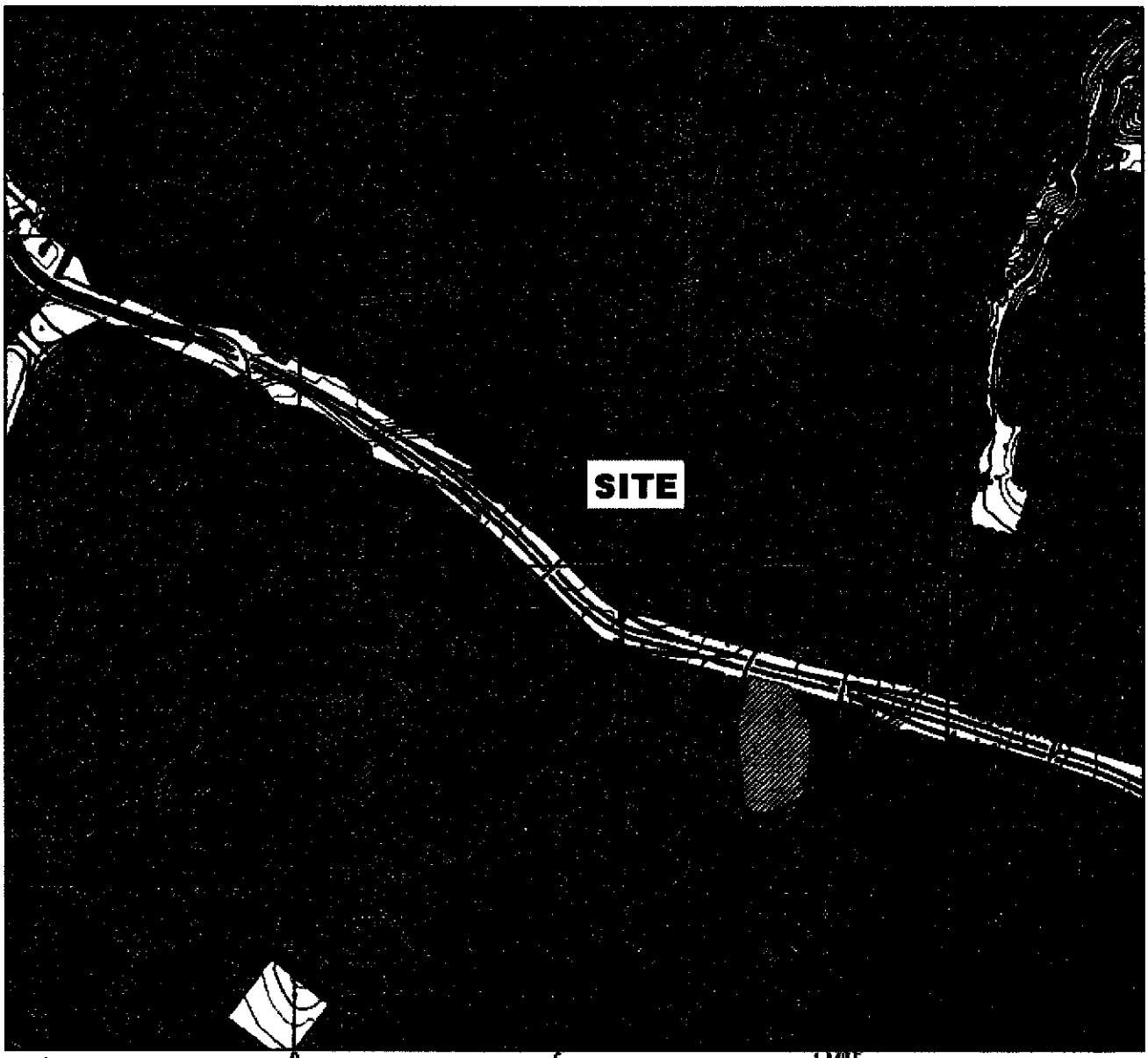
GROUNDWATER SAMPLE ANALYTICAL DATA 10/8/04

3635 13th Avenue Oakland, California	FIGURE 4 AEI Project # 8499

LEGEND (REV. 10/04)

- Monitoring Well

All data in µg/l
See Tables 1 & 2 for details



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AEI CONSULTANTS	
SITE LOCATION MAP	
3635 13th AVENUE OAKLAND, CALIFORNIA	**FIGURE 1** PROJECT NO. 8499

Table 1
Groundwater Monitoring Data

Well ID	Date	Well Elevation	Depth to Water	Water Table Elevation	TPH-g (µg/l) EPA 8015M	TPH-d (µg/l) EPA 8015M	TOG (mg/l) EPA 5520	MTBE (µg/l)	Benzene (µg/l)	Toluene (µg/l) EPA 8020 / 8021	E-benzene (µg/l) EPA 8020 / 8021	Xylenes (µg/l) EPA 8020 / 8021
MW - 1	11/22/1994	194.75	10.92	183.83	210	<50	<0.5	-	<0.5	<0.5	<0.5	2.3
	2/23/1995	194.75	10.58	184.17	140	<50	1.2	-	<0.5	<0.5	0.6	1.5
	5/24/1995	194.75	10.94	183.81	<50	<50	<0.5	-	<0.5	<0.5	<0.5	<0.5
	8/18/1995	194.75	14.52	180.23	2800	<50	<0.5	-	25	6.2	22	30
	2/7/1996	194.75	4.43	190.32	<50	<50	<0.5	-	<0.5	<0.5	<0.5	<0.5
	9/6/1996	194.75	13.60	181.15	<50	<50	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
	6/19/1997	194.75	13.07	181.68	630	400	<5.0	15	25	9.7	100	14
	1/24/2002	194.75	9.53	185.22	60	<50	-	<5.0	3.3	2.8	2.0	6.0
	7/15/2003	194.75	12.85	181.90	87	<50	-	<5.0	15	4.9	3.3	9.2
	10/10/2003	194.75	14.58	180.17	81	110	-	<5.0	<0.5	0.62	0.57	0.5
	4/6/2004	194.75	10.92	183.83	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	7/9/2004	194.75	14.34	180.41	130	80	-	<35	<0.5	<0.5	2.8	0.78
	10/8/2004	**194.75**	**15.30**	**179.45**	**260**	**120**	-	**24**	**3.0**	**2.9**	**8.3**	**10**
MW - 2	11/22/1994	196.44	12.54	183.90	11000	<50	<0.5	-	35	21	7.2	50
	2/23/1995	196.44	12.35	184.09	4000	<50	1.6	-	<0.5	<0.5	2.5	5.7
	5/24/1995	196.44	12.11	184.33	8600	<50	<0.5	-	95	37	37	70
	8/18/1995	196.44	16.25	180.19	7200	<50	<0.5	-	43	21	21	71
	2/7/1996	196.44	9.34	187.10	11000	<50	0.6	-	17	9.3	9.3	25
	9/6/1996	196.44	15.22	181.22	15000	1900	<5.0	ND	4300	920	460	1600
	6/19/1997	196.44	13.33	183.11	26000	2900	<5.0	<200	5300	1500	910	3200
	1/24/2002	196.44	9.72	186.72	34000	5300	-	<200	3100	1100	1100	2900
	7/15/2003	196.44	12.42	184.02	18000	6600	-	<1000	2300	310	690	1600
	10/10/2003	196.44	13.79	182.65	19000	1800	-	<500	2700	460	850	1800
	4/6/2004	196.44	10.55	185.89	6900	1300	-	<200	1100	100	380	780
	7/9/2004	196.44	13.78	182.66	17000	4400	-	<450	2800	240	710	1300
	10/8/2004	**196.44**	**14.78**	**181.66**	**6900**	**890**	-	**<150**	**1500**	**240**	**340**	**670**
MW -3	11/22/1994	198.93	11.53	187.40	200	<50	3	-	<0.5	<0.5	<0.5	2
	2/23/1995	198.93	11.89	187.04	1500	<50	0.9	-	6.6	6.4	4.2	13
	5/24/1995	198.93	12.71	186.22	710	<50	<0.5	-	2.5	3.2	3.1	16
	8/18/1995	198.93	16.14	182.79	310	<50	<0.5	-	3.1	2.1	2.2	11
	2/7/1996	198.93	6.22	192.71	400	<50	2.2	-	1.4	2.5	2.2	7
	9/6/1996	198.93	13.51	185.42	<50	<50	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
	6/19/1997	198.93	12.46	186.47	<50	<50	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5
	1/24/2002	198.93	10.08	188.85	58	<50	-	<5.0	4	2.7	2.3	6.7
	7/15/2003	198.93	12.45	186.48	<50	<50	-	<5.0	<0.5	<0.5	<0.5	<0.5
	10/10/2003	198.93	14.00	184.93	350	75	-	<5.0	14	16	23	60
	4/6/2004	198.93	10.78	188.15	<50	<50	-	<5.0	<0.5	1.7	<0.5	1.7
	7/9/2004	198.93	14.14	184.79	260	<50	-	<5.0	12	13	14	36
	10/8/2004	**198.93**	**14.99**	**183.94**	**450**	**76**	-	**<5.0**	**21**	**22**	**30**	**86**

Well Elevation in feet above mean sea level (msl)
Depth to water in feet below the tops of the well casings
Water Table Elevations in feet above msl
TPH-g - Total petroleum hydrocarbons (TPH) as gasoline

TOG - Total oil and grease
MTBE - Methyl tertiary butyl ether
E-benzene: Ethyl-benzene
TPH-d - TPH as diesel

mg/l - milligrams per liter
µg/l - micrograms per liter
- = sample not analyzed by this method
ND = non detect (detection limit not known)

Table 2
Fuel Oxygenate Analyses

Well ID	Date	TAME (µg/l)	TBA (µg/l)	EDB (µg/l)	1,2-DCA (µg/l)	DIPE (µg/l)	Ethanol (µg/l)	ETBE (µg/l)	Methanol (µg/l)	MTBE (µg/l)
		EPA method 8260								
MW - 1	4/6/2004	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<0.5	<500	<0.5
	7/9/2004	-	-	-	-	-	-	-	-	-
	10/8/2004	-	-	-	-	-	-	-	-	-
MW - 2	4/6/2004	<5.0	110	<5.0	<5.0	<5.0	<500	<5.0	<5000	87
	7/9/2004	-	98	-	-	-	-	-	-	120
	10/8/2004	-	**230**	-	-	-	-	-	-	**84**
MW-3	4/6/2004	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<0.5	<500	<0.5
	7/9/2004	-	-	-	-	-	-	-	-	-
	10/8/2004	-	-	-	-	-	-	-	-	-

TAME: tert amyle methyl ether
TBA: t-butyl alcohol
EDB: 1,2-Dibromoethane
1,2-DCA: 1,2-Dichloroethane
DIPE: Diisopropyl ether
ETBE: Ethyl tert-butyl ether
MTBE: Methyl tert-butyl ether
µg/l - micrograms per liter
- = sample not analyzed by this method
ND = non detect

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Williamson	Date of Sampling:	10/8/2004
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2	
Wellhead Condition	OK	
Elevation of Top of Casing (feet above msl)	194.75	
Depth of Well	23.50	
Depth to Water (from top of casing)	15.30	
Water Elevation (feet above msl)	179.45	
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)	**3.9**	
Actual Volume Purged (gallons)	5.0	
Appearance of Purge Water	clears at 2 gallons	
Free Product Present?	no	Thickness (ft):

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	1	20.14	6.59	2340	2.84	-55	
	3	20.11	6.58	2340	2.42	-124	
	5	20.33	6.56	2250	2.75	-102	

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

Brown with no hydrocarbon odor, clears at 2 gallons. Went dry at 4 gallons, waited 7 minutes to recharge

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Williamson	Date of Sampling:	10/8/2004
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")		2
Wellhead Condition	OK	
Elevation of Top of Casing (feet above msl)		196.44
Depth of Well		36.00
Depth to Water (from top of casing)		14.78
Water Elevation (feet above msl)		181.66
Well Volumes Purged		3
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)		**10.2**
Actual Volume Purged (gallons)		11.0
Appearance of Purge Water		clears at 2 gallons
Free Product Present?	no	Thickness (ft):

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	3	20.72	7.69	1320	4.10	-186	
	6	21.24	6.29	1250	3.0	-184	
	9	20.88	6.61	1370	2.12	-162	
	11	20.46	6.56	1350	1.60	-193	

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

Initially dark grey, strong hydrocarbon odor. Clears by 2 gallons,

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GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Williamson	Date of Sampling:	10/8/2004
Job Number:	6906	Name of Sampler:	A Nieto
Project Address:	3635 13th Avenue, Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	198.93		
Depth of Well	35.50		
Depth to Water (from top of casing)	14.99		
Water Elevation (feet above msl)	183.94		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**9.8**		
Actual Volume Purged (gallons)	11.0		
Appearance of Purge Water	clears at 2 gallons		
Free Product Present?	no	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size: 3 VOAs & 1-liter

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	3	20.30	7.18	9330	2.89	-127	
	6	20.55	7.10	9240	2.42	-124	
	9	19.97	7.00	9400	2.75	-102	
	11	19.88	-	9400	2.32	-108	

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

Brown with no hydrocarbon odors, clears at 2 gallons

McCampbell Analytical, Inc.

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

INVOICE for ANALYTICAL SERVICES

Project Name: #8499; Williamson
PO Number: N/A
Date Sampled: 10/8/04
Date Received: 10/8/04

Invoice N°: 0410123

INV DATE: ***October 14, 2004***
Print DATE: *October 14, 2004*

Report To: Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

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

Description	TAT	Matrix	Qty	Mult	Unit Price	Test Total
Tests:						
MTBE by 8260B	5 days	Water	1	1	$90.00	$90.00
TPH(d)	5 days	Water	3	1	$45.00	$135.00
TPH(g) + MBTEX	5 days	Water	3	1	$45.00	$135.00
					SubTotal:	$360.00

Invoice Total: $360.00

*** ALL FAXED INVOICES ARE FOR YOUR INFORMATION ONLY - PLEASE PAY OFF ORIGINAL**

Please include the invoice number with your check and remit to Accounts Receivable at the letter head address. MAI also accepts credit card (Visa/Master Card/Discover/American Express) payment. Please call Account Receivable for details on this service.

MAI's EDF charge does not include the EDF charge for subcontracted analyses. The minimum *EDF charge per workorder* is $25.00. For invoice total greater than $5000.00, EDF will be 2% of the total invoice. The EDF charge for subcontracted analyses will be identical to Subcontractor's fee.

Terms are net 30 days from the invoice date. After this period 1.5% interest per month will be charged. Overdue accounts are responsible for all legal and collection fees. If you have any questions about billing, please contact Accounts Receivable at McCampbell Analytical.

McCampbell Analytical, Inc.

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

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #8499; Williamson	Date Sampled: 10/08/04
		Date Received: 10/08/04
	Client Contact: Peter McIntyre	Date Reported: 10/14/04
	Client P.O.:	Date Completed: 10/14/04

WorkOrder: 0410123

October 14, 2004

Dear Peter:

Enclosed are:

1). the results of **3** analyzed samples from your **#8499; Williamson 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,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #8499; Williamson	Date Sampled: 10/08/04
2500 Camino Diablo, Ste. #200		Date Received: 10/08/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 10/09/04-10/12/04
	Client P.O.:	Date Analyzed: 10/09/04-10/12/04

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0410123

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	260,a,i	24	3.0	2.9	8.3	10	1	109
002A	MW-2	W	6900,a	ND<150	1500	240	340	670	10	111
003A	MW-3	W	450,a	ND	21	22	30	86	1	101
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #8499; Williamson	Date Sampled: 10/08/04
2500 Camino Diablo, Ste. #200		Date Received: 10/08/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 10/08/04
	Client P.O.:	Date Analyzed: 10/12/04-10/13/04

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

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0410123

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0410123-001C	MW-1	W	120,d,i	1	105
0410123-002C	MW-2	W	890,d,b	1	106
0410123-003C	MW-3	W	76,d	1	105

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/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) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc.	Client Project ID: #8499; Williamson	Date Sampled: 10/08/04
2500 Camino Diablo, Ste. #200		Date Received: 10/08/04
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 10/11/04
	Client P.O.:	Date Analyzed: 10/11/04

Methyl tert-Butyl Ether and t-Butyl alcohol*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0410123

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	t-Butyl alcohol (TBA)	DF	% SS
0410123-002B	MW-2	W	84	230	10	103

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	0.5	5.0	µg/L
	S	NA	NA	NA

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content; k) client defined reporting limit.

RL = Reporting Limit; MDL = Method Detection Limit; DF = Dilution Factor; J = Estimated value; concentration detected between the MDL and RL.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0410123

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 13521 Spiked Sample ID: 0410119-006A

Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	96.8	97.4	0.612	95.1	97.4	2.39	70	130
MTBE	ND	10	97.7	106	8.23	89	91.7	2.98	70	130
Benzene	ND	10	102	104	1.96	94.2	99.6	5.55	70	130
Toluene	ND	10	94.6	96.2	1.68	87.9	93.7	6.37	70	130
Ethylbenzene	ND	10	98.7	101	2.18	98.5	98.7	0.176	70	130
Xylenes	ND	30	85.7	85.7	0	86	89.7	4.17	70	130
%SS:	88.0	10	106	106	0	104	105	1.16	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.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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

QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0410123

EPA Method: SW8015C Extraction: SW3510C BatchID: 13517 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	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	105	100	4.67	70	130
%SS:	N/A	2500	N/A	N/A	N/A	112	108	3.56	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

McCampbell Analytical, Inc.

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QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0410123

EPA Method: SW8260B Extraction: SW5030B BatchID: 13519 Spiked Sample ID: 0410113-010C

Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Methyl-t-butyl ether (MTBE)	ND	10	107	104	3.04	95.7	90.9	5.18	70	130
%SS1:	101	10	105	105	0	101	99	1.42	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.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

QA/QC Officer

DHS Certification No. 1644

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0410123 **ClientID: AEL**

Report to:
Peter McIntyre
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #8499; Williamson
PO:

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

Requested TAT: 5 days

Date Received: 10/8/04
Date Printed: 10/8/04

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
0410123-001	MW-1	Water	10/8/04	☐	A	B	C												
0410123-002	MW-2	Water	10/8/04	☐	A	B	C												
0410123-003	MW-3	Water	10/8/04	☐	A	B	C												

Test Legend:

1	G-MBTEX_W	2	MTBE_W	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.

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☐ Yes ☒ No

Report To: Peter McIntyre	Bill To: same
Company: AEI Consultants	
2500 Camino Diablo, Suite 200	
Walnut Creek, CA 94597	E-Mail: pmcintyre@aeiconsultants.com
Tele: (925) 944-2899	Fax: (925) 944-2895
Project #: 8499	Project Name: Williamson
Project Location: 13th Ave, Oakland	
Sampler Signature: Adrian Wilson	

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other: MTBE + TBA (8260)	Comments
MW-1		10/8/08													X	X														X	
MW-2		↓													X	X															
MW-3		↓													X	X															

Relinquished By:	Date:	Time:	Received By:
Adrian Wilson	10/08	5:20p	McVall
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

	VOAS	O&G	METALS	OTHER
ICE/t° ✓	PRESERVATION	✓			
GOOD CONDITION ✓	APPROPRIATE				
HEAD SPACE ABSENT ✓	CONTAINERS	✓			
DECHLORINATED IN LAB ____	PERSERVED IN LAB ____				