2580

March 21, 2000

QUARTERLY GROUNDWATER MONITORING REPORT

First Quarter 2000

10700 MacArthur Boulevard
Oakland, California

Project No. 3067

Prepared For

Jay-Phares Corporation
10700 MacArthur Boulevard, Suite 200
Oakland, CA 94506

~~Prepared By~~

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March 21, 2000

Messrs. Ken Phares & John Jay
Jay-Phares Corporation
10700 MacArthur Boulevard, Suite 200
Oakland, CA 94605

RE: Quarterly Groundwater Monitoring and Sampling Report
First Quarter 2000
Foothill Square Shopping Center
10700 MacArthur Boulevard
Oakland, California
Project No. 3067

Dear John Jay & Ken Phares:

AEI Consultants (AEI) has prepared this report on behalf of The Jay-Phares Corporation, in response to their 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) and the Regional Water Quality Control Board (RWQCB). The purpose of this activity is to monitor groundwater quality associated with a former dry cleaning operation on the property. This report presents the findings of the First Quarter of 2000 groundwater monitoring and sampling conducted on January 20, 2000. Groundwater level measurements were taken at 12 wells and groundwater samples were collected from 10 of the wells.

Site Description and Background

The site is located in a mixed commercial and residential area of Oakland, California. The property is currently developed with the Foothill Square Shopping Center (FSSC), before which the site was a truck manufacturing plant (refer to Figure 1: Site Location Map). One of the former tenants of the FSSC was Young's Cleaners. The cleaners was located in the northern building, centrally on the property. Young's Cleaners operated from between 1984 and 1995. Prior to 1980, a coin operated dry-cleaner, occupied the same location from 1962 to 1980. The cleaners have been on the Cal-SITES database list since 1980. Please refer to Figure 2 for the location of the former Young's Cleaners.

In 1989, Western Geologic Resources (WGR) installed five groundwater monitoring wells (WGR-MW1 through WGR-MW5) on the property to investigate a release associated with the ARCO gas station located west of the property.

Between 1991 and 1993, RESNA Consultants (RESNA) conducted an investigation on behalf of ARCO to define the extent of hydrocarbon impact relating to the underground fuel release at the ARCO station. As a result of chlorinated solvents detected in several soil samples, the ACHCSA requested further investigation to define the vertical and lateral extent of tetrachloroethylene (PCE) at both the ARCO site and the Foothill Square Shopping Center.

In order to assess the source and extent of PCE impact, Augeas Corporation (Augeas) installed nine groundwater monitoring wells (AMW-1 through AMW-9) on the property between September 1994 and August 1995. Two other wells, MW-6 and MW-7, were also installed on the property by ARCO. Augeas sampled these nine wells and those previously installed on the property from October 1994 through September 1995. This sampling indicated the source of the PCE contamination to be a release of solvents from the former Young's Cleaners location and an associated underground sanitary sewer lateral.

Between October 1995 and January 1996, AEI excavated contaminated soil in and around the former dry cleaning facility. The excavation was extended to between 7 and 18 feet below ground surface. Approximately 2,400 cubic yards of soil was generated during the excavation. With the approval of the Bay Area Air Quality Management District, the stockpiled soil was spread over the southeast corner of the property for aeration. During the excavation, soil aeration, and subsequent paving of the parking lot area, four of the wells, WGR-MW1, WGR-MW5, AMW-2 and AMW-3, were damaged or covered over. Please refer to Figure 2 for locations of the remaining wells.

A Phase II subsurface investigation was performed by PES Environmental, Inc. (PES) in December 1996 and January 1997 to assess whether PCE groundwater contamination had migrated off-site. The results of this off-site groundwater sampling indicated that PCE was not present off-site in the shallow groundwater zone. Concentrations of PCE were detected in the deep groundwater zone to the west of the property along Myers Street and near the ARCO station. PES concluded that the PCE plume had not migrated substantially off-site but recommended the installation of two off-site sentry wells to monitor the stability of the PCE plume in the deep groundwater zone. Two wells, FHS-MW10 and FHS-MW-11 were installed west of the property by PES in March 1997.

Although well screening interval data is not currently available for all of the wells, in general wells identified as deep are screened from between approximately 40 and 56 feet bgs and wells identified as shallow are screened from between 20 and 30 feet bgs.

Groundwater monitoring conducted by PES and more recently by AEI indicated that concentrations of PCE up to 4,600 µg/L existed in the groundwater just west of the former Young's Cleaners in AMW-6. Also present in and around AMW-6 were

breakdown products of PCE [tricloroethene (TCE), cis 1,2 dichloroethene (cis 1,2 DCE), and trans 1,2 dichloroethene (trans 1,2 DCE)], indicating degradation of PCE is occurring in the subsurface.

Summary of Activities

AEI measured the depth to groundwater in the 12 remaining wells and collected water samples from 10 of the wells on January 20, 2000. The well locations are shown in Figure 2. The depth from the top of the well casings were measured prior to sampling with an electric water level indicator. The elevations of the top of the well casings were obtained from a previous groundwater monitoring report prepared by PES. The wells were purged using a battery powered submersible pump and a groundwater sample was collected from the seven wells using clean disposable Teflon bailers.

Temperature, pH, and turbidity were measured during the purging of the 7 wells. AEI removed at least 3 well volumes. Once the temperature, pH, and turbidity stabilized, a water sample was collected.

Water was poured from the bailers into 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).

Ten groundwater samples were submitted for chemical analyses for Volatile Halocarbons (VHCs) by EPA method 601/8010.

Field Results

No solvent odor was observed during the purging and sampling activities. However, a strong hydrocarbon (gasoline) odor was observed during the purging and collection of samples from wells MW-6 and MW-7. In the shallow groundwater zone located between 37.94 to 51.29 feet above mean sea level (msl), groundwater flow direction was calculated to be to the northwest. This flow direction is consistent with that obtained in October 1999. In the deeper, likely confined groundwater zone, the measured groundwater elevations were between 24.75 to 46.04 feet above msl. The calculated groundwater flow direction is to the southwest. This flow direction is also consistent with that obtained in October 1999.

Groundwater elevation data is summarized in Table 1. The groundwater elevation contours and the groundwater flow directions are shown in Figure 3 and Figure 4. Refer to Appendix A for the Groundwater Monitoring Well Field Sampling Forms.

Groundwater Quality

Significant levels of PCE, TCE, cis 1,2 DCE, and trans 1,2 DCE were detected in the shallow water samples taken from AMW-4 and AMW-6, with the highest concentrations detected in AMW-6, just south of the former Young's Cleaners. Levels of PCE up to 660 µg/L and 100 µg/L were also detected in deep water samples taken from MW-6 and AMW-9, respectively. PCE was detected at 7.5 µg/L in well FHS MW-11, east of the property, across MacArthur Boulevard.

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

Conclusions and Recommendations

Significant levels of PCE remain in the groundwater in the vicinity of the former Young's Cleaners. The PCE plume in the shallow groundwater appears to be stabilized and limited to just southwest of the former Young's Cleaners. The presence of TCE; cis 1,2 DCE; and trans 1,2 DCE in shallow wells AMW-4 and AMW-6 and deep well MW-6 indicate the degradation of PCE is occurring in the subsurface. Although significant concentrations of PCE continue to be detected in deep well MW-6, on the northwest corner of the property, results of samples analyzed from the off-site wells indicate that the contaminant plume is not migrating significantly off-site in the deeper groundwater zone.

Based on the apparent stability of the dissolved plume, AEI Consultants recommends the continued groundwater monitoring and sampling of the wells, however with a reduction in the frequency of sampling to semi-annual. AEI proposes to sample six wells, AMW-4, AMW-5, AMW-6, AMW-9, FHS MW-11, and MW-6 on a semi-annual basis with collection of samples from AMW-1, AMW-8, WGR MW-4, FHS MW-10, and MW-7 on an annual basis.

References

Augeas Corporation. *Report of Subsurface Investigation, Young's Cleaners, 10700 MacArthur Boulevard, Oakland, California, December 1995*

AEI Consultants Soil Remediation and Excavation Project Summary, *February 7, 1996*

PES Environmental, Inc. *Groundwater Monitoring Well Installation, Foothill Square Shopping Center, 10700 MacArthur Boulevard, Oakland, California, February 3, 1997*

PES Environmental, Inc. *Results of Additional Groundwater Investigation and Risk Evaluation, Former Young's Cleaners, Foothill Square Shopping Center, 10700 MacArthur Boulevard, Oakland, California, March 24, 1997*

PES Environmental, Inc. Quarterly Monitoring and Well Installation Report, *Former Young's Cleaners, Foothill Square Shopping Center, 10700 MacArthur Boulevard, Oakland, California, January 22, 1998*

AEI Consultants Quarterly Groundwater Monitoring Report, *Young's Cleaners, Foothill Shopping Center, 10700 MacArthur Boulevard, Oakland, California, April 20, 1999*

AEI Consultants Quarterly Groundwater Monitoring Report, *Young's Cleaners, Foothill Shopping Center, 10700 MacArthur Boulevard, Oakland, California, May 25, 1999*

AEI Consultants Quarterly Groundwater Monitoring Report, *Young's Cleaners, Foothill Shopping Center, 10700 MacArthur Boulevard, Oakland, California, October 25, 1999*

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

Peter McIntyre
Project Geologist

J. P. Derhake, PE
Principal

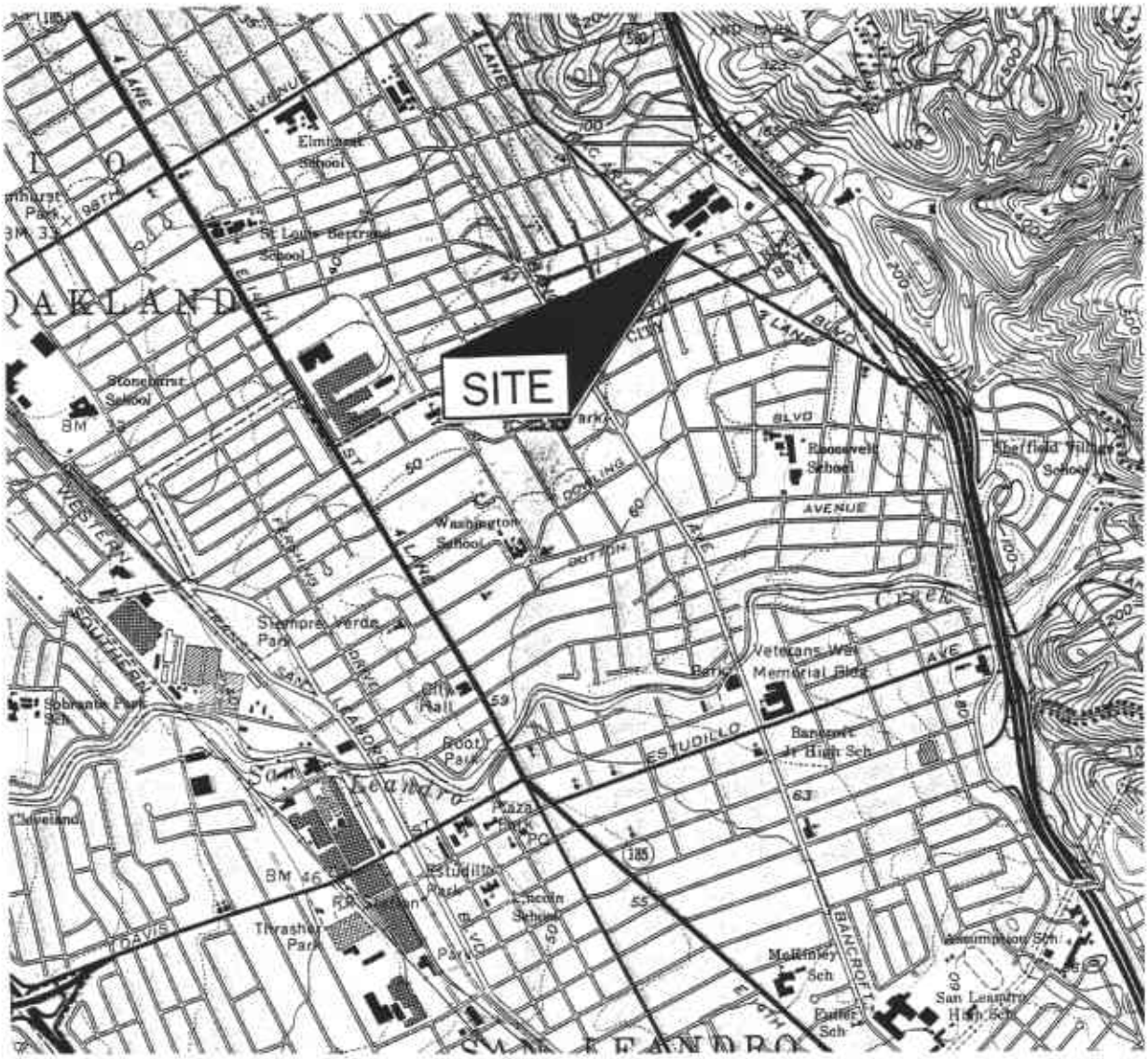
Figures

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Elevation – Deep Zone
Figure 4	Groundwater Elevation – Shallow Zone
Figure 5	PCE Concentrations – Deep Zone
Figure 6	PCE Concentrations – Shallow Zone

Appendices

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

cc: Barney Chan, Alameda County Health Care Services Agency
D. Lee, Regional Water Quality Control Board



SOURCE:
USGS SAN LEANDRO QUAD
SCALE: 1: 24,000

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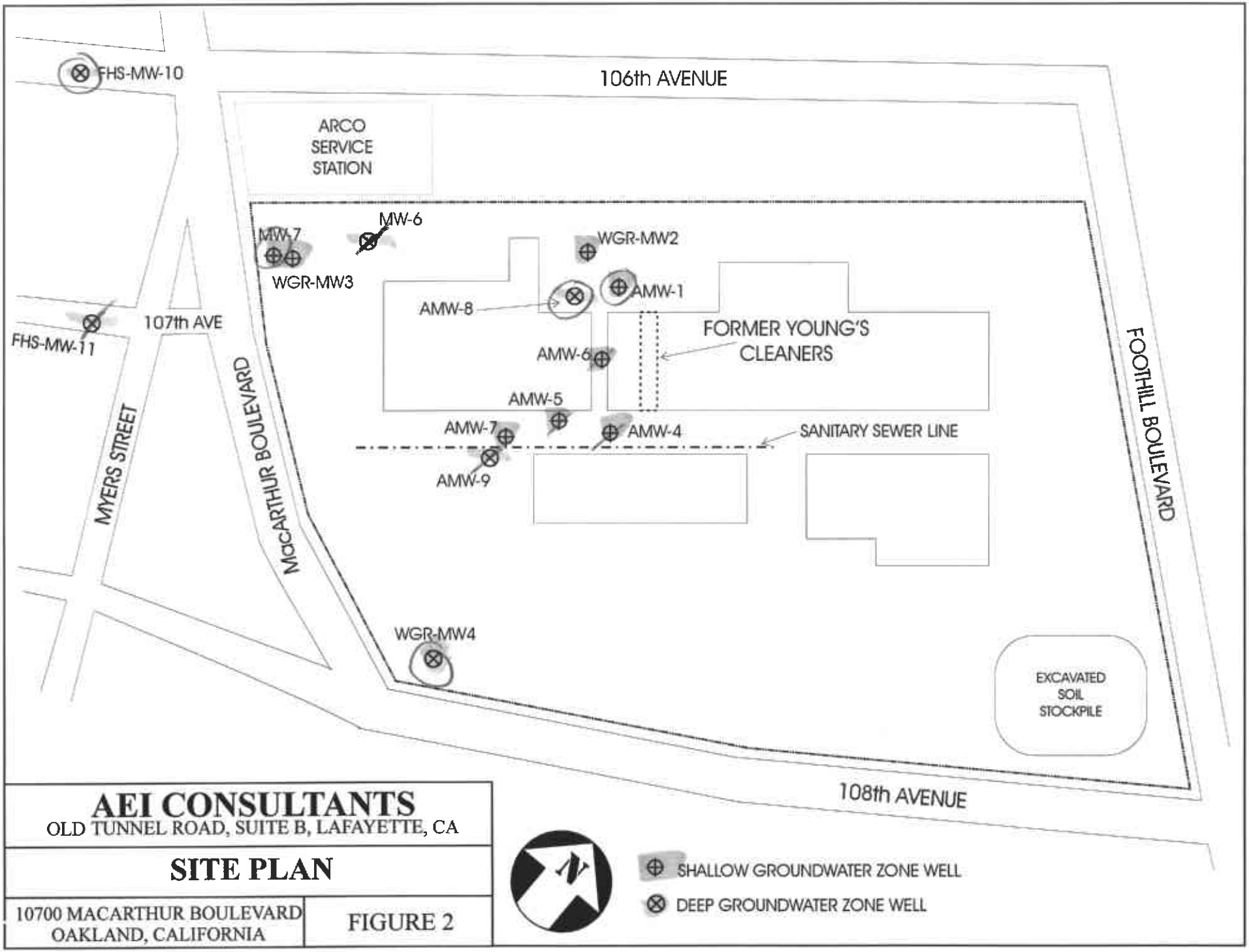
SITE LOCATION MAP

10700 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 3067



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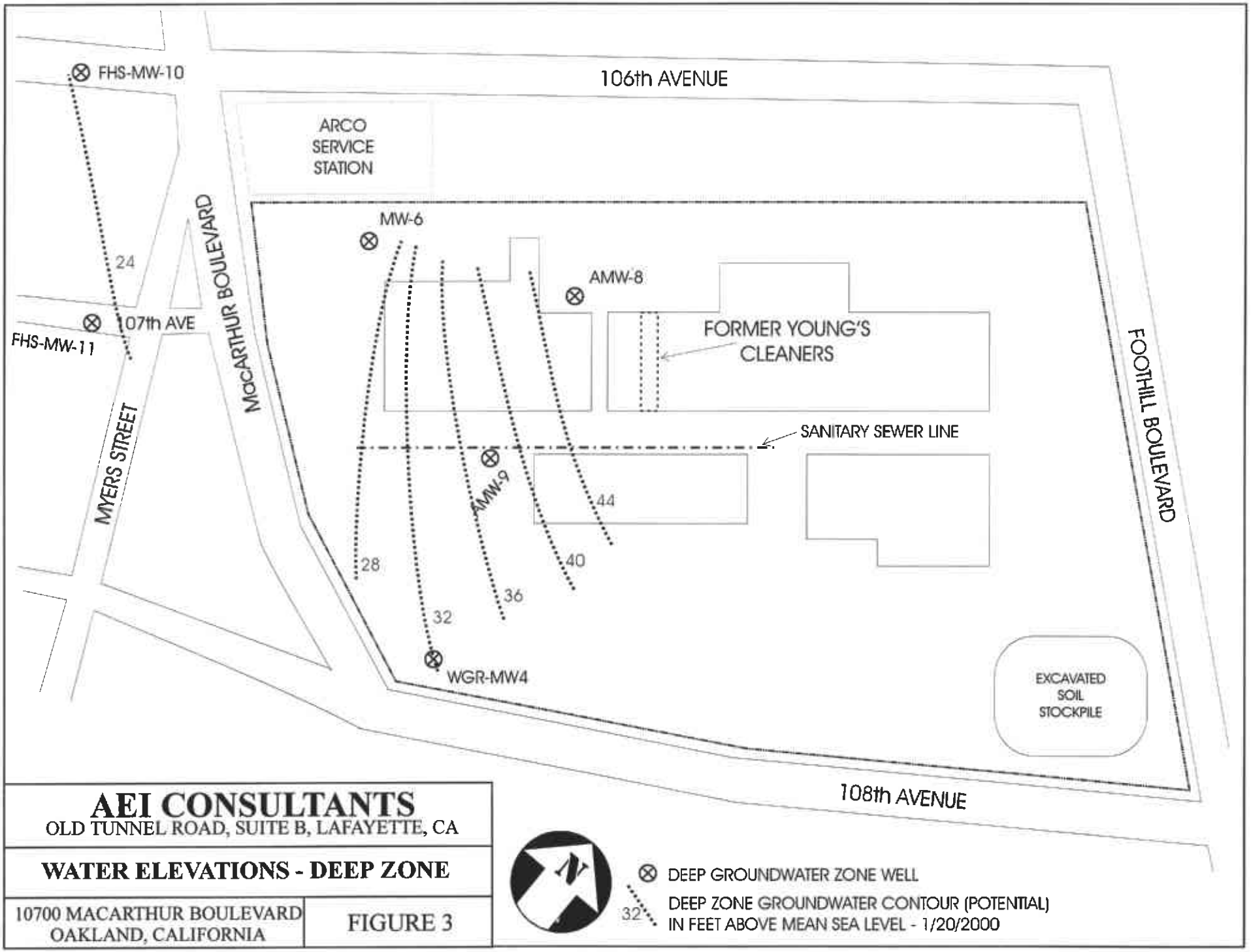
SITE PLAN

10700 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

FIGURE 2



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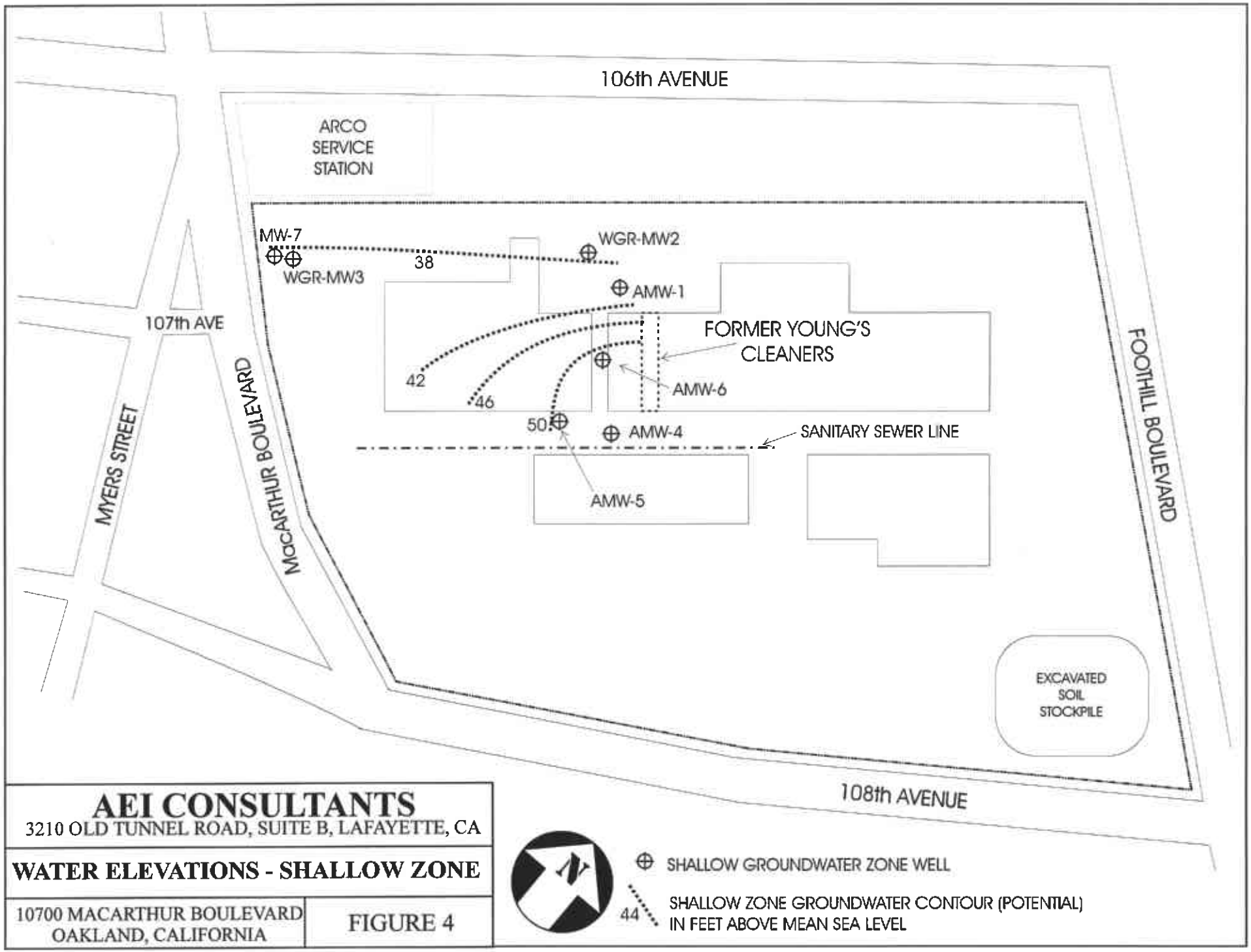
WATER ELEVATIONS - DEEP ZONE

10700 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

FIGURE 3



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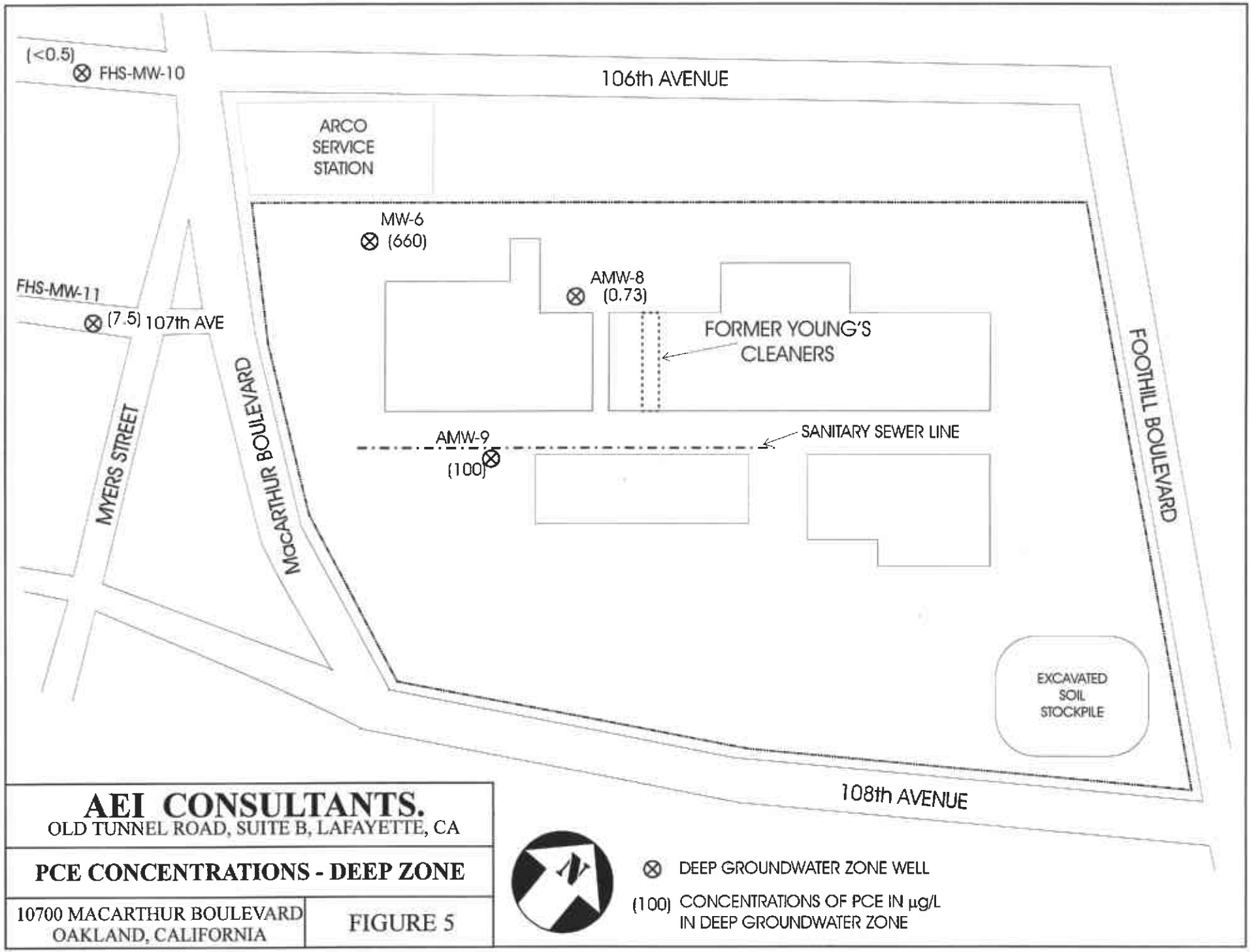
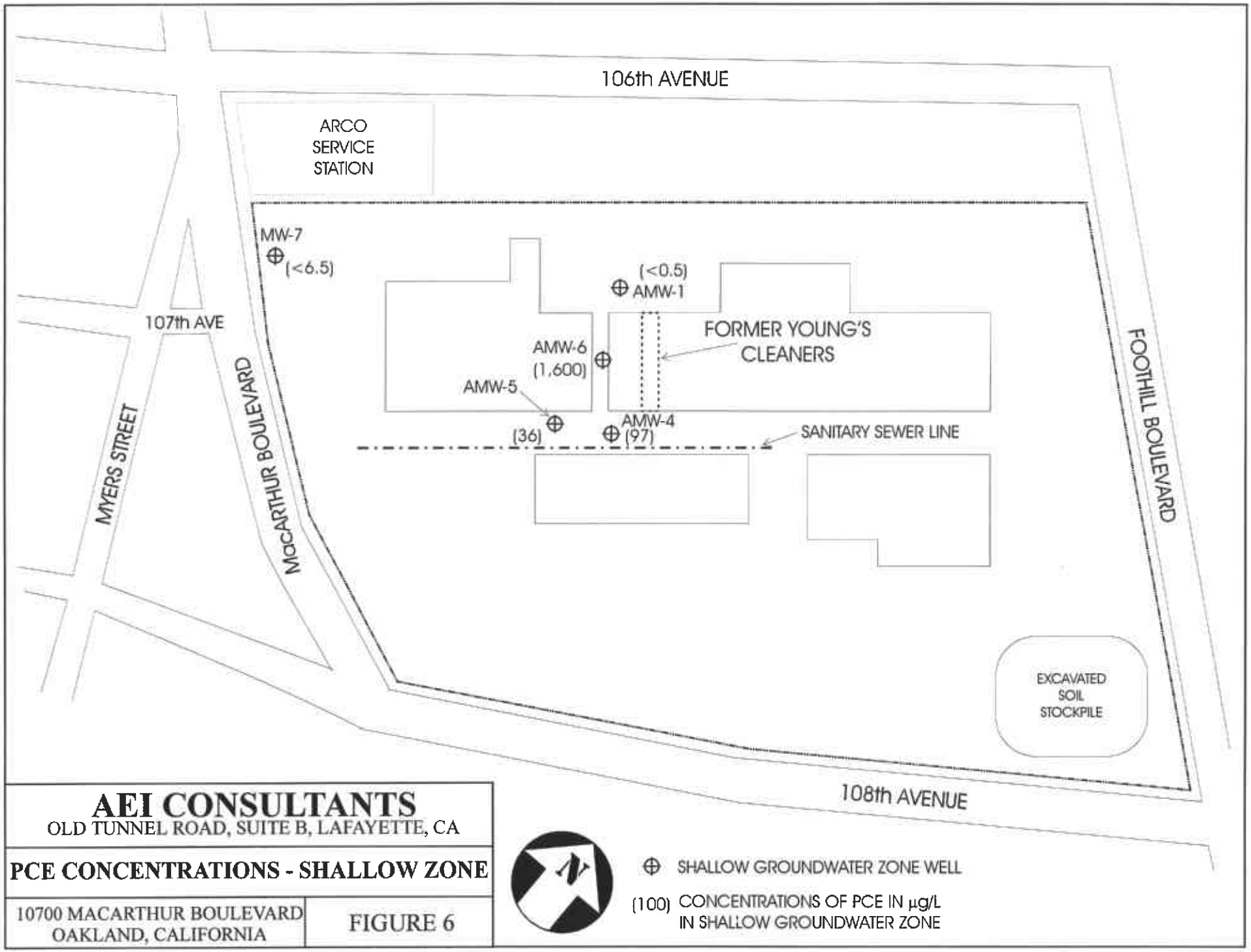
WATER ELEVATIONS - SHALLOW ZONE

10700 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

FIGURE 4


(<0.5)
FHS-MW-10
106th AVENUE
ARCO
SERVICE
STATION
MW-6
(660)
AMW-8
(0.73)
FHS-MW-11
(7.5)
107th AVE
FORMER YOUNG'S
CLEANERS
FOOTHILL BOULEVARD
MYERS STREET
MacARTHUR BOULEVARD
AMW-9
(100)
SANITARY SEWER LINE
EXCAVATED
SOIL
STOCKPILE
108th AVENUE
AEI CONSULTANTS.
OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA
PCE CONCENTRATIONS - DEEP ZONE
10700 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA
FIGURE 5
DEEP GROUNDWATER ZONE WELL
(100) CONCENTRATIONS OF PCE IN µg/L
IN DEEP GROUNDWATER ZONE



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PCE CONCENTRATIONS - SHALLOW ZONE

10700 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

FIGURE 6

⊕ SHALLOW GROUNDWATER ZONE WELL

(100) CONCENTRATIONS OF PCE IN µg/L
IN SHALLOW GROUNDWATER ZONE

Table 1
Groundwater Levels

Well ID (Aquifer zone)	Date	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (Potential) (ft msl)
AMW-1	1/29/99	64.51	23.01	41.50
(Shallow)	5/5/99	64.51	21.25	43.26
	10/9/99	64.51	24.14	40.37
	1/20/00	64.51	24.66	39.85
AMW-4	1/29/99	64.79	11.51	53.28
(Shallow)	5/5/99	64.79	10.14	54.65
	10/9/99	64.79	12.04	52.75
	1/20/00	64.79	13.50	51.29
AMW-5	1/29/99	64.97	13.87	51.10
(Shallow)	5/5/99	64.97	12.83	52.14
	10/9/99	64.97	14.25	50.72
	1/20/00	64.97	14.91	50.06
AMW-6	1/29/99	65.10	12.74	52.36
(Shallow)	5/5/99	65.10	11.30	53.80
	10/9/99	65.10	13.29	51.81
	1/20/00	65.10	14.21	50.89
AMW-7	1/29/99	64.24	14.91	49.33
(Shallow)	5/5/99	64.24	*	
	10/9/99	64.24	*	
	1/20/00	64.24	*	
AMW-8	1/29/99	64.55	16.86	47.69
(Deep)	5/5/99	64.55	14.46	50.09
	10/9/99	64.55	17.10	47.45
	1/20/00	64.55	18.51	46.04
AMW-9	1/29/99	63.48	23.22	40.26
(Deep)	5/5/99	63.48	21.40	42.08
	10/9/99	63.48	23.74	39.74
	1/20/00	63.48	24.92	38.56
WGR MW-2	1/29/99	63.18	23.41	39.77
(Shallow)	5/5/99	63.18	21.41	41.77
	10/9/99	63.18	24.62	38.56
	1/20/00	63.18	25.24	37.94
WGR MW-3	1/29/99	58.34	15.81	42.53
(Shallow)	5/5/99	58.34	18.43	39.91
	10/9/99	58.34	21.38	36.96
	1/20/00	58.34	19.76	38.58
WGR MW-4	1/29/99	60.02	26.23	33.79
(Deep)	5/5/99	60.02	23.80	36.22
	10/9/99	60.02	27.73	32.29
	1/20/00	60.02	27.97	32.05
FHS MW-10	1/29/99	52.34	23.91	28.43
(Deep)	5/5/99	52.34	20.55	31.79
	10/9/99	52.34	25.00	27.34
	1/20/00	52.34	27.23	25.11
FHS MW-11	1/29/99	54.06	26.38	27.68
(Deep)	5/5/99	54.06	22.72	31.34
	10/9/99	54.06	27.42	26.64
	1/20/00	54.06	29.31	24.75
MW-6	1/29/99	61.78	32.87	28.91
(Deep)	5/5/99	61.78	29.41	32.37
	9/10/99	61.78	33.98	27.80
	1/20/00	61.78	36.02	25.76
MW-7 (Shallow)	1/20/00	58.64	20.32	38.32

Notes: All well elevations are measured from the top of casing not from the ground surface.
ft msl = feet above mean sea level

* AMW-7 was opened during construction activities, with top soil being introduced to the well, water level and samples were not collected from this well

Table 2
Groundwater Sample Analytical Data

Well (aquifer zone)	Date	Consultant	cis 1,2 DCE µg/L	trans 1,2 DCE µg/L	PCE µg/L	TCE µg/L	VHCs* µg/L
AMW-1	3/23/95	Augeus	-	<0.5	<0.5	<0.5	<0.5
(shallow)	6/21/95	Augeus	-	<0.5	<0.5	<0.5	<0.5
	9/11/95	Augeus	-	<0.5	<0.5	<0.5	<0.5
	4/16/96	PES	<0.5	<0.5	<0.5	<0.5	<0.5
	7/17/96	PES	<0.5	<0.5	<0.5	<0.5	<0.5
	10/23/96	PES	<0.5	<0.5	<0.5	<0.5	<0.5
	9/29/97	PES	NS	NS	NS	NS	NS
	1/20/00	**AEI**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
AMW-4	5/15/95	Augeus	NR	<50	2400	<50	NR
(shallow)	6/21/95	Augeus	NR	<50	2500	<50	NR
	9/13/95	Augeus	NR	<25	1100	<25	NR
	4/16/96	PES	<10	<10	1200	10	NR
	7/17/96	PES	<10	<10	860	<10	NR
	10/23/96	PES	<0.5	<0.5	22	0.5	NR
	9/29/97	PES	<3	<3	340	3	NR
	1/29/99	AEI	<3	<3	100	<3	<3
	5/5/99	AEI	<5	<5	210	<5	<5
	9/10/99	AEI	10	<5	240	18	<5
	1/20/00	**AEI**	**46**	**<2.5**	**97**	**6.2**	**<2.5**
AMW-5	5/15/95	Augeus	NR	<0.5	1.2	<0.5	NR
(shallow)	6/21/95	Augeus	NR	<0.5	<0.5	<0.5	NR
	9/13/95	Augeus	NR	<0.5	<0.5	<0.5	NR
	4/16/96	PES	<0.5	<0.5	<0.5	<0.5	NR
	7/17/96	PES	<0.5	<0.5	0.6	<0.5	NR
	10/23/96	PES	<0.5	<0.5	0.8	<0.5	NR
	9/29/97	PES	<0.5	<0.5	13	<0.5	NR
	1/29/99	AEI	NA	NA	NA	NA	NA
	5/5/99	AEI	<1	<1	36	<1	<1
	9/10/99	AEI	<1	<1	35	<1	<1
	1/20/00	**AEI**	**<1**	**<1**	**36**	**<1**	**<1**
AMW-6	9/13/95	Augeus	NR	<25	930	<25	NR
(shallow)	4/16/96	PES	20	<10	1900	110	NR
	7/17/96	PES	<30	<30	3300	280	NR
	10/23/96	PES	<30	<30	2900	140	NR
	9/29/97	PES	220	70	4600	580	NR
	1/29/99	AEI	270	77	2400	390	<63
	5/5/99	AEI	370	110	2700	470	<71
	9/10/99	AEI	190	49	1400	250	<36
	1/20/00	**AEI**	**210**	**<35**	**1600**	**270**	**<35**
AMW-7	9/13/95	Augeus	NR	<25	2350	340	NR
(shallow)	4/16/96	PES	2200	60	2300	500	NR
	7/17/96	PES	2100	<30	2400	530	NR
	10/23/96	PES	3100	50	3400	610	NR
	9/29/97	PES	33	20	520	100	NR
	1/29/99	AEI	22	<3	95	12	<3
	5/5/99	AEI	NA	NA	NA	NA	NA
	9/10/99	AEI	NA	NA	NA	NA	NA
	1/20/00	**AEI**	NA	NA	NA	NA	NA
AMW-8	9/13/95	Augeus	-	<25	95	<25	<25
(deep	4/16/96	PES	<0.5	<0.5	0.8	<0.5	<0.5
	7/17/96	PES	<0.5	<0.5	1.6	<0.5	<0.5
	10/23/96	PES	<0.5	<0.5	<0.5	<0.5	<0.5
	9/29/97	PES	<0.5	<0.5	0.7	<0.5	<0.5
	1/20/00	**AEI**	**<0.5**	**<0.5**	**0.73**	**<0.5**	**<0.5**
AMW-9	9/13/95	Augeus	NR	<25	170	<25	NR
(deep)	4/16/96	PES	7	<3	170	4	NR
	7/17/96	PES	<3	<3	190	4	NR
	10/23/96	PES	<3	<3	190	<3	NR
	9/29/97	PES	<3	<3	110	<3	NR
	1/29/99	AEI	<4	<4	90	<4	<4
	5/5/99	AEI	<2.5	<2.5	94	<2.5	<2.5
	9/10/99	AEI	<2.1	<2.1	99	<2.1	<2.1
	1/20/00	**AEI**	**<0.5**	**<0.5**	**100**	**<0.5**	**<0.5**

Table 2 Continued

Well (aguifer zone)	Date	Consultant	cis 1,2 DCE µg/L	trans 1,2 DCE µg/L	PCE µg/L	TCE µg/L	VHCs* µg/L
FHS MW-10	10/9/97	PES	<0.5	<0.5	<0.5	<0.5	NR
(deep)	1/29/99	AEI	<0.5	<0.5	<0.5	<0.5	<0.5
	5/5/99	AEI	<0.5	<0.5	<0.5	<0.5	<0.5
	9/10/99	AEI	<0.5	<0.5	<0.5	<0.5	<0.5
	1/20/00	**AEI**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
FHS MW-11	9/29/97	PES	<0.5	<0.5	4	<0.5	NR
(deep)	1/29/99	AEI	<0.5	<0.5	7	<0.5	<0.5
	5/5/99	AEI	<0.5	<0.5	7.1	<0.5	<0.5
	9/10/99	AEI	<0.5	<0.5	7.5	<0.5	<0.5
	1/20/00	**AEI**	**<0.5**	**<0.5**	**7.5**	**<0.5**	**<0.5**
MW-6	3/11/95	EMCON	<20	<0.5	1300	<20	NR
(deep)	6/5/95	EMCON	<20	<20	2000	<20	NR
	8/29/95	EMCON	<20	<20	1300	<20	NR
	9/11/95	Augeus	NR	<50	2000	<50	NR
	11/16/95	EMCON	<20	<20	1300	<20	NR
	2/28/96	EMCON	<20	<20	960	<20	NR
	4/16/96	PES	10	10	1400	10	NR
	5/28/96	EMCON	<20	<20	970	<20	NR
	7/17/96	PES	<5	<5	590	<5	NR
	8/19/96	EMCON	<20	<20	820	<20	NR
	10/23/96	PES	<5	<5	680	<5	NR
	11/21/96	EMCON	<20	<20	680	<20	NR
	3/26/97	EMCON	<40	<40	830	<40	NR
	5/20/97	EMCON	<5	<5	270	<5	NR
	9/29/97	PES	<10	<10	670	<10	NR
	1/29/99	AEI	1.4	<1.3	49	3	<1.3
	5/5/99	AEI	19	<11	530	38	<11
	9/10/99	AEI	27	<12	560	53	<12
	1/20/00	**AEI**	**18**	**<8.5**	**660**	**31**	**<8.5**
MW-7	3/11/95	EMCON	NS	NS	NS	NS	NS
(shallow)	6/5/95	EMCON	<10	<10	<10	<10	<10
	8/29/95	EMCON	<10	<10	<10	<10	<10
	9/11/95	Augeus	85	<50	-	<50	<50
	11/16/95	EMCON	<20	<20	<20	<20	<20
	2/28/96	EMCON	<10	<10	<10	<10	<10
	4/16/96	PES	<0.5	<0.5	<0.5	<0.5	<0.5
	5/28/96	EMCON	<10	<10	<10	<10	<10
	7/17/96	PES	0.6	<0.5	<0.5	0.6	<0.5
	8/19/96	EMCON	<1	<1	<1	<1	<1
	10/23/96	PES	0.6	<0.5	<0.5	<0.5	<0.5
	11/21/96	EMCON	<10	<10	<10	<10	<10
	3/26/97	EMCON	<20	<20	<20	<20	<20
	5/20/97	EMCON	<10	<10	<10	<10	<10
	9/29/97	PES	<10	<10	<10	<10	<10
	1/20/00	**AEI**	**<6.5**	**<6.5**	**<6.5**	**<6.5**	**<6.5**
M.C.L.s			**6**	**10**	**5**	**5**	

M.C.L.s = Maximum Contaminant Levels, listed for detected chemicals only

NA = Not analyzed

NR = Not Reported

cis 1,2-Dichloroethene (cis 1,2 DCE)

trans 1,2-Dichloroethene (trans 1,2 DCE)

Tetrachloroethene (PCE)

Trichloroethene (TCE)

VHCs = All other chemicals by EPA method 601/8010

APPENDIX A

WELL FIELD SAMPLING FORMS

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: AMW-1 (shallow)

Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, 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	64.51
Depth of Well	34
Depth to Water	24.66
Water Elevation	39.85
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	4.48
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	6
Appearance of Purge Water	

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments
	2				Slightly turbid
	4				Turbid
	6				Turbid

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

No product odor

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM					
Monitoring Well Number: AMW-4 (shallow)					
Project Name: Drake Builders				Date of Sampling: 1/20/00	
Job Number: 3067				Name of Sampler: PJM	
Project Address: 10700 MacArthur Boulevard, 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				64.79	
Depth of Well				25	
Depth to Water				13.50	
Water Elevation				51.29	
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)				5.52	
4" casing: (TD - DTW)(0.65)(3)					
6" casing: (TD - DTW)(1.44)(3)					
Actual Volume Purged (gallons)				6	
Appearance of Purge Water				Slightly turbid	
GROUNDWATER SAMPLES					
Number of Samples/Container Size				2 VOAs	
Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)					
No solvent odor					

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: AMW-5 (shallow)	
Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, 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	64.97
Depth of Well	30
Depth to Water	14.91
Water Elevation	50.06
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	7.24
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	8
Appearance of Purge Water	Slightly turbid
GROUNDWATER SAMPLES	
Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments

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

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: AMW-6 (shallow)

Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, 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	65.10
Depth of Well	25
Depth to Water	14.21
Water Elevation	50.89
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	5.18
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	6
Appearance of Purge Water	Slightly turbid

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments

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

No solvent odor

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: AMW-8 (deep)	
Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, 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	64.55
Depth of Well	45
Depth to Water	18.51
Water Elevation	46.04
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	
Appearance of Purge Water	
GROUNDWATER SAMPLES	
Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
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: AMW-9 (deep)					
Project Name: Drake Builders				Date of Sampling: 1/20/00	
Job Number: 3067				Name of Sampler: PJM	
Project Address: 10700 MacArthur Boulevard, 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				63.48	
Depth of Well				54.3	
Depth to Water				24.92	
Water Elevation				38.56	
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)				14.1	
4" casing: (TD - DTW)(0.65)(3)					
6" casing: (TD - DTW)(1.44)(3)					
Actual Volume Purged (gallons)				16	
Appearance of Purge Water				Slightly turbid, clears	
GROUNDWATER SAMPLES					
Number of Samples/Container Size				2 VOAs	
Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)					
No solvent odor					

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: WGR MW-2 (shallow)

Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, Oakland	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"
Seal at Grade -- Type and Condition	Cement / Good
Well Cap & Lock -- OK/Replace	Replace
Elevation of Top of Casing	63.18
Depth of Well	28
Depth to Water	25.24
Water Elevation	37.94
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	
Appearance of Purge Water	

GROUNDWATER SAMPLES

Number of Samples/Container Size	

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments

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: WGR MW-3 (shallow)

Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, Oakland	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4"
Seal at Grade -- Type and Condition	Cement / Good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	58.34
Depth of Well	26.94
Depth to Water	19.76
Water Elevation	38.58
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	
Appearance of Purge Water	

GROUNDWATER SAMPLES

Number of Samples/Container Size	

Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments

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: WGR MW-4 (deep)	
Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, Oakland	
MONITORING WELL DATA	
Well Casing Diameter (2"/4"/6")	4"
Seal at Grade -- Type and Condition	Cement / Good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	60.02
Depth of Well	44.96
Depth to Water	27.97
Water Elevation	32.05
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	
Appearance of Purge Water	
GROUNDWATER SAMPLES	
Number of Samples/Container Size	

Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments

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: FHS MW-10 (deep)					
Project Name: Drake Builders				Date of Sampling: 1/20/00	
Job Number: 3067				Name of Sampler: PJM	
Project Address: 10700 MacArthur Boulevard, 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				52.34	
Depth of Well				51.94	
Depth to Water				27.23	
Water Elevation				25.11	
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)				11.86	
4" casing: (TD - DTW)(0.65)(3)					
6" casing: (TD - DTW)(1.44)(3)					
Actual Volume Purged (gallons)				14	
Appearance of Purge Water				Clear	
GROUNDWATER SAMPLES					
Number of Samples/Container Size				2 VOAs	
Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)					
No solvent odor					

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM					
Monitoring Well Number: FHS MW-11 (deep)					
Project Name: Drake Builders				Date of Sampling: 1/20/00	
Job Number: 3067				Name of Sampler: PJM	
Project Address: 10700 MacArthur Boulevard, 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				54.06	
Depth of Well				64.07	
Depth to Water				29.31	
Water Elevation				24.75	
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)				16.68	
4" casing: (TD - DTW)(0.65)(3)					
6" casing: (TD - DTW)(1.44)(3)					
Actual Volume Purged (gallons)				18	
Appearance of Purge Water				Clear	
GROUNDWATER SAMPLES					
Number of Samples/Container Size				2 VOAs	
Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)					
No solvent odor					

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-6 (deep)

Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, 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	61.78
Depth of Well	48.69
Depth to Water	36.02
Water Elevation	25.76
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	6.08
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	7
Appearance of Purge Water	Turbid, clears

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments

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

No solvent odor, moderate hydrocarbon (gasoline) odor during sample collection

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-7 (shallow)	
Project Name: Drake Builders	Date of Sampling: 1/20/00
Job Number: 3067	Name of Sampler: PJM
Project Address: 10700 MacArthur Boulevard, Oakland	
MONITORING WELL DATA	
Well Casing Diameter (2"/4"/6")	
Seal at Grade -- Type and Condition	
Well Cap & Lock -- OK/Replace	
Elevation of Top of Casing	58.64
Depth of Well	38
Depth to Water	20.32
Water Elevation	38.32
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	8.4
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	9
Appearance of Purge Water	
GROUNDWATER SAMPLES	
Number of Samples/Container Size	

Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)
Strong hydrocarbon (gasoline) odor and visible sheen present during purging / sampling

TD - Total Depth of Well
DTW - Depth To Water

APPENDIX B

LABORATORY ANALYTICAL AND CHAIN OF CUSTODY DOCUMENTATION

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. 3210 Old Tunnel Road, Suite B Lafayette, CA 94549-4157	Client Project ID: #3067; Foothill	Date Sampled: 01/20/00
		Date Received: 01/20/00
	Client Contact: Peter McIntyre	Date Extracted: 01/20/00
	Client P.O:	Date Analyzed: 01/20/00

01/27/00

Dear Peter:

Enclosed are:

1). the results of **1** samples from your **#3067; Foothill** project,

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

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

Yours truly,

Edward Hamilton, Lab Director

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: #3067; Foothill	Date Sampled: 01/20/00
3210 Old Tunnel Road, Suite B		Date Received: 01/20/00
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 01/22-01/27/00
	Client P.O:	Date Analyzed: 01/22-01/27/00

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	29428	29429	29430	29431	29432
Client ID	FHS-MW10	FHS-MW11	MW-6	MW-7	AMW-1
Matrix	W	W	W	W	W
Compound	Concentration*				
Bromodichloromethane	ND	ND	ND<8.5	ND<6.5	ND
Bromoform[b]	ND	ND	ND<8.5	ND<6.5	ND
Bromomethane	ND	ND	ND<8.5	ND<6.5	ND
Carbon Tetrachloride[c]	ND	ND	ND<8.5	ND<6.5	ND
Chlorobenzene	ND	ND	ND<8.5	ND<6.5	ND
Chloroethane	ND	ND	ND<8.5	ND<6.5	ND
2-Chloroethyl Vinyl Ether[d]	ND	ND	ND<8.5	ND<6.5	ND
Chloroform[e]	ND	ND	ND<8.5	ND<6.5	ND
Chloromethane	ND	ND	ND<8.5	ND<6.5	ND
Dibromochloromethane	ND	ND	ND<8.5	ND<6.5	ND
1,2-Dichlorobenzene	ND	ND	ND<8.5	ND<6.5	ND
1,3-Dichlorobenzene	ND	ND	ND<8.5	ND<6.5	ND
1,4-Dichlorobenzene	ND	ND	ND<8.5	ND<6.5	ND
Dichlorodifluoromethane	ND	ND	ND<8.5	ND<6.5	ND
1,1-Dichloroethane	ND	ND	ND<8.5	ND<6.5	ND
1,2-Dichloroethane	ND	ND	ND<8.5	ND<6.5	ND
1,1-Dichloroethene	ND	ND	ND<8.5	ND<6.5	ND
cis 1,2-Dichloroethene	ND	ND	18	ND<6.5	ND
trans 1,2-Dichloroethene	ND	ND	ND<8.5	ND<6.5	ND
1,2-Dichloropropane	ND	ND	ND<8.5	ND<6.5	ND
cis 1,3-Dichloropropene	ND	ND	ND<8.5	ND<6.5	ND
trans 1,3-Dichloropropene	ND	ND	ND<8.5	ND<6.5	ND
Methylene Chloride[f]	ND	ND	ND<8.5	ND<6.5	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND<8.5	ND<6.5	ND
Tetrachloroethene	ND	7.5	660	ND<6.5	ND
1,1,1-Trichloroethane	ND	ND	ND<8.5	ND<6.5	ND
1,1,2-Trichloroethane	ND	ND	ND<8.5	ND<6.5	ND
Trichloroethene	ND	ND	31	ND<6.5	ND
Trichlorofluoromethane	ND	ND	ND<8.5	ND<6.5	ND
Vinyl Chloride[g]	ND	ND	ND<8.5	ND<6.5	ND
% Recovery Surrogate	102	99	99	108	103
Comments				j	

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe

Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe

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

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

DHS Certification No. 1644

for Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
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All Environmental, Inc.	Client Project ID: #3067; Foothill	Date Sampled: 01/20/00
3210 Old Tunnel Road, Suite B		Date Received: 01/20/00
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 01/22-01/27/00
	Client P.O:	Date Analyzed: 01/22-01/27/00

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	29433	29434	29435	29436	29437
Client ID	AMW-4	AMW-5	AMW-6	AMW-8	AMW-9
Matrix	W	W	W	W	W
Compound	Concentration				
Bromodichloromethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Bromoform[b]	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Bromomethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Carbon Tetrachloride[c]	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Chlorobenzene	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Chloroethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
2-Chloroethyl Vinyl Ether[d]	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Chloroform [e]	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Chloromethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Dibromochloromethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,2-Dichlorobenzene	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,3-Dichlorobenzene	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,4-Dichlorobenzene	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Dichlorodifluoromethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,1-Dichloroethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,2-Dichloroethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,1-Dichloroethene	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
cis 1,2-Dichloroethene	46	ND<1.0	210	ND	ND<2.0
trans 1,2-Dichloroethene	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,2-Dichloropropane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
cis 1,3-Dichloropropene	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
trans 1,3-Dichloropropene	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Methylene Chloride[f]	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,1,2,2-Tetrachloroethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Tetrachloroethene	97	36	1600	0.73	100
1,1,1-Trichloroethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
1,1,2-Trichloroethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Trichloroethene	6.2	ND<1.0	270	ND	ND<2.0
Trichlorofluoromethane	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
Vinyl Chloride[g]	ND<2.5	ND<1.0	ND<35	ND	ND<2.0
% Recovery Surrogate	98	98	99	98	101
Comments					

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe

Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe

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

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Ave. South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

QC REPORT

EPA 8010/8020/EDB

Date: 01/22/00-01/23/00 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 12200					Instrument: GC-1		
Chlorobenzene	0.000	93.0	87.0	100.00	93	87	6.7
EDB	0.000	89.0	83.0	100.00	89	83	7.0
Trichloroethane	0.000	103.0	94.0	100.00	103	94	9.1
1,1-DCE	0.000	100.0	93.0	100.00	100	93	7.3

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

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

RPD means Relative Percent Deviation

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McCAMPBELL ANALYTICAL INC.

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

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

Report To: Pete McIntyre Bill To:
Company: All Environmental
~~901 Moraga Road Suite 75~~ 2010 Old Tunnel Rd ste B
Lafayette, CA 94549
Tele: (925) 283-6000 Fax: (925) 283-6121
Project #: 3067 Project Name: Foothill
Project Location: 197 / MacCanthur
Sampler Signature:

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other
FHS-MW-10		1/20/00		2	Vog	X					X	X		
FHS-MW-11				2	Vog	X					X	X		
MW-6				2	Vog	X					X	X		
MW-7				2	Vog	X					X	X		
AMW-1				2	Vog	X					X	X		
AMW-4				2	Vog	X					X	X		
AMW-5				2	Vog	X					X	X		
AMW-6				2	Vog	X					X	X		
AMW-8				2	Vog	X					X	X		
AMW-9		↓		2	Vog	X					X	X		

Analysis Request	Other	Comments
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 / 8240 / 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		

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Relinquished By:	Date:	Time:	Received By:
[signature]	1/20/00	4:36	Yen Cao
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks: