



ALL ENVIRONMENTAL, INC.

Environmental Engineering & Construction

May 25, 1999

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

Subject: Quarterly Groundwater Monitoring Report
Foothill Square Shopping Center
10700 MacArthur Boulevard
Oakland, California
Project No. 3067

#875
5/25/99

Dear Mr. Chan:

Enclosed a copy of the Quarterly Groundwater Monitoring and Sampling Report for the second quarter 1999 for the former Young's Cleaners case at the above referenced property.

Please contact me at (925) 283-6000 if you have any questions.

Sincerely,
ALL ENVIRONMENTAL, INC.

Peter McIntyre
Project Geologist

ENVIRONMENTAL
PROTECTION
99 MAY 26 PM 4: 32

Corporate Headquarters:

901 Moraga Road, Suite C
Lafayette, CA 94549-4567
Phone : (925) 283-6000
Fax: (925) 283-6121

(800) 801-3224
www.all-environmental.com

Los Angeles Office:

2309 Pacific Coast Hwy, Suite 206
Hermosa Beach, CA 90254-2753
Phone: (310) 798-4255
Fax: (310) 798-2841

May 25, 1999

**QUARTERLY GROUNDWATER MONITORING
REPORT**
Second Quarter 1999

10700 MacArthur Boulevard
Oakland, California

Project No. 3067

Prepared For

Mr. Richard Gilcrease
Drake Builders
5201 Sacramento Avenue
Richmond, CA 94804

Prepared By

All Environmental, Inc.
901 Moraga Road, Suite C
Lafayette, CA 94549
(925) 283-6000

AEI



ALL ENVIRONMENTAL, INC.

Environmental Engineering & Construction

May 25, 1999

Mr. Richard Gilcrease
Drake Builders, Inc.
5201 Sacramento Avenue
Richmond, CA 94804

**RE: Quarterly Groundwater Monitoring and Sampling Report
Second Quarter 1999**

Foothill Square Shopping Center
10700 MacArthur Boulevard
Oakland, California
Project No. 3067

Dear Mr. Gilcrease:

All Environmental, Inc. (AEI) has prepared this report on behalf of Drake Builders, 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). 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 Second Quarter of 1999 groundwater monitoring and sampling conducted on May 5, 1999. Groundwater level measurements were taken at 12 wells and groundwater samples were collected from 7 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.

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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 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

[trichloroethene (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.

In a letter dated October 30, 1998, the ACHCSA requested the further sampling of three shallow wells: AMW-4, AMW-6, and AMW-7 and four deep wells: AMW-9, FHS MW-10, FHS MW-11, and MW-6. The following report describes the groundwater monitoring and sampling activities for the second quarter of 1999 conducted by AEI on May 5, 1999.

Summary of Activities

AEI measured the depth to groundwater in the 12 remaining wells and collected water samples from 7 of the wells on May 5, 1999. Well AMW-7 was not measured or sampled during this episode of sampling. The well box and locking cap were damaged when surrounding concrete was removed associated with a construction project. A water sample was collected and analyzed from AMW-5 as a substitution for AMW-7. 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).

Seven 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. In the shallow groundwater zone located between approximately 39.91 to 54.65 feet above mean sea level, flow direction was calculated to be to the northwest. This is consistent with the flow direction obtained in February 1999. In the deeper, likely confined groundwater zone the measured groundwater elevations were calculated to be between 31.34 to 50.09 feet above mean sea level. This is also consistent with previous results.

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, AMW-5, and AMW-6, with the highest concentrations detected in AMW-6, just south of the former Young's Cleaners. Levels of PCE up to 530 µg/L were also detected in deep water samples taken from AMW-9 and MW-6. PCE was detected at 7.1 µg/L in sentry 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 presence of TCE; cis 1,2 DCE; and trans 1,2 DCE in shallow wells AMW-6 and AMW-7 indicate the degradation of PCE is occurring in the subsurface. Results of samples analyzed from the off-site sentry wells indicate that the contaminant plume is not migrating significantly off-site in the deeper groundwater zone.

All Environmental, Inc. recommends the continued quarterly groundwater monitoring and sampling of the wells. AEI proposes to collect water samples from the same wells sampled during the previous episode and obtain water level measurements from all accessible wells. The next monitoring and sampling episode is scheduled for early August 1999, as per the requirements of the ACHCSA.

References

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

All Environmental, Inc. *Soil Remediation and Excavation Project Summary, February 7, 1996*

All Environmental, Inc. *Quarterly Groundwater Monitoring Report, Young's Cleaners, Foothill Shopping Center, 10700 MacArthur Boulevard, Oakland, California, April 20, 1999*

Drake Builders, Inc.

Project No. 3067

May 25, 1999

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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*

Report Limitations and Signatures


This report presents a summary of work completed by All Environmental, Inc., 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.

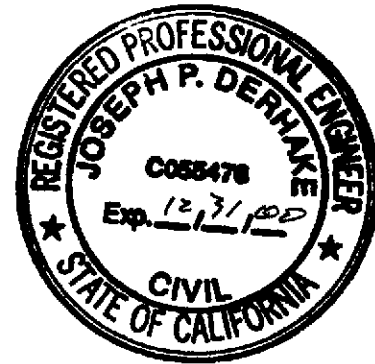
Sincerely,
All Environmental, Inc.



Peter McIntyre
Project Geologist



J. P. Derhake, PE, CAC
Senior Author



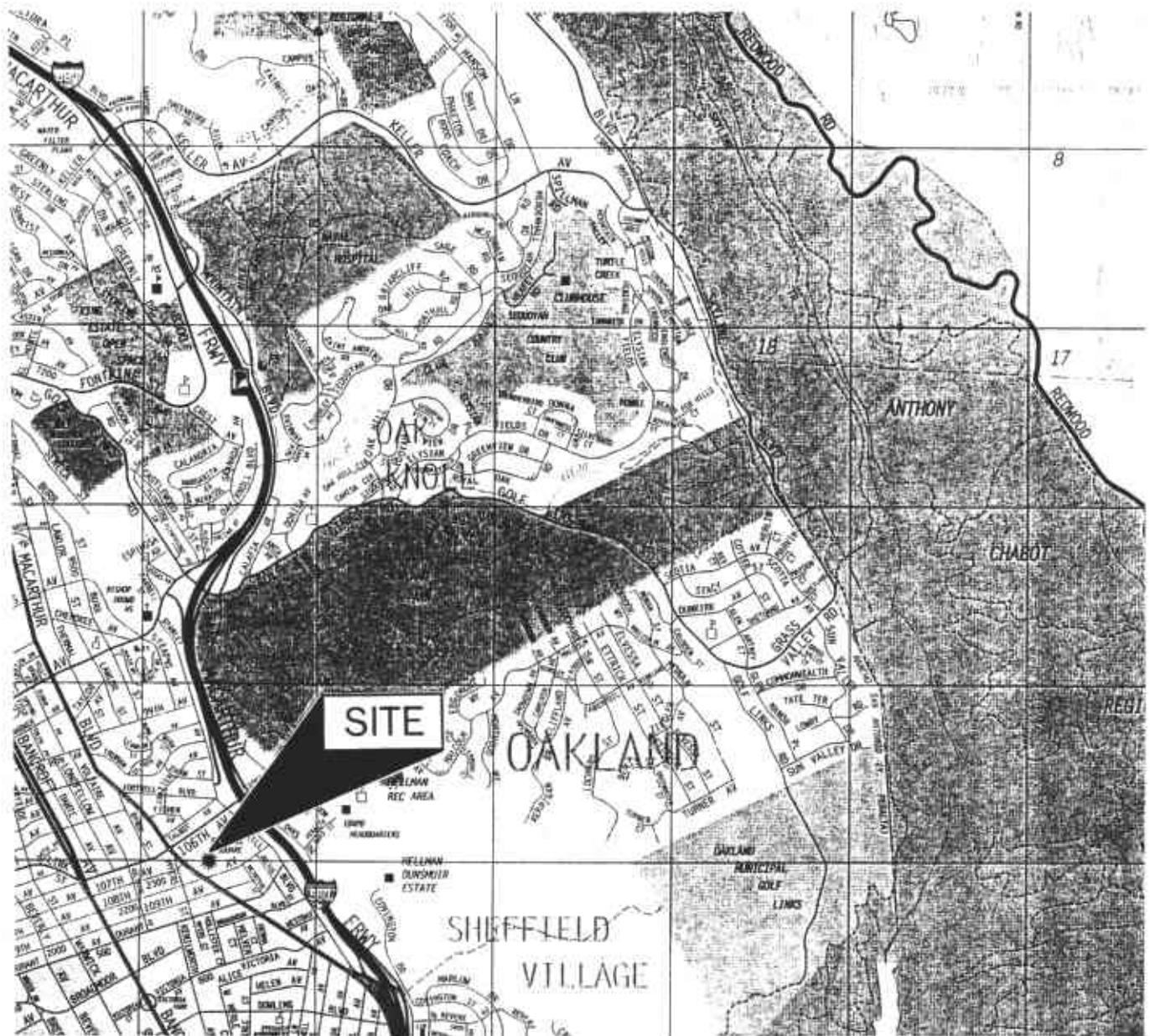
Figures

- | | |
|----------|--------------------------------------|
| 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



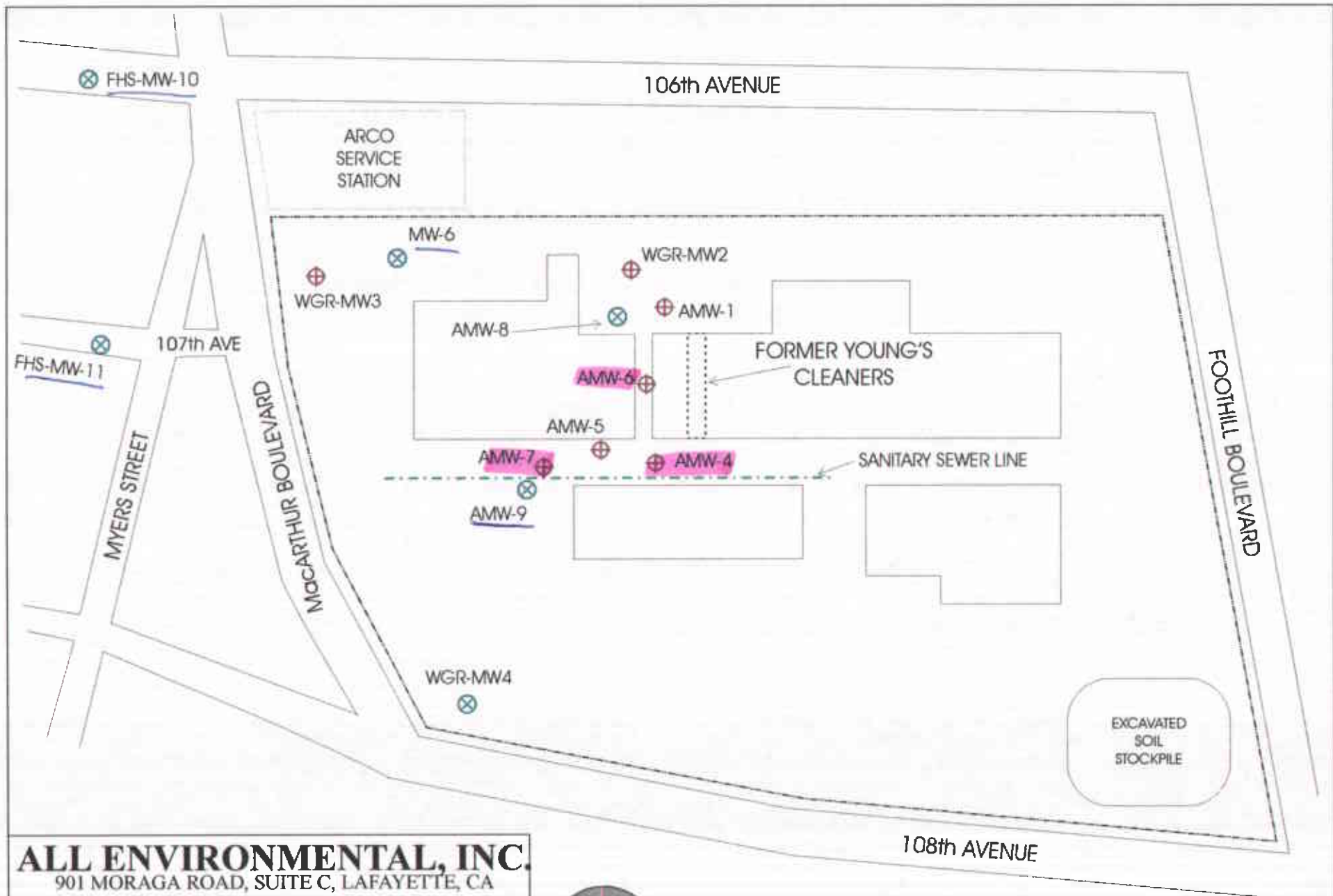
SOURCE:
 THOMAS GUIDE
 1997 EDITION
 SCALE: 1 in. = 2,400 ft.

ALL ENVIRONMENTAL, INC.
 901 MORAGA ROAD, SUITE C, LAFAYETTE, CA

SITE LOCATION MAP

10700 FOOTHILL BOULEVARD
 OAKLAND, CALIFORNIA

FIGURE 1



ALL ENVIRONMENTAL, INC.
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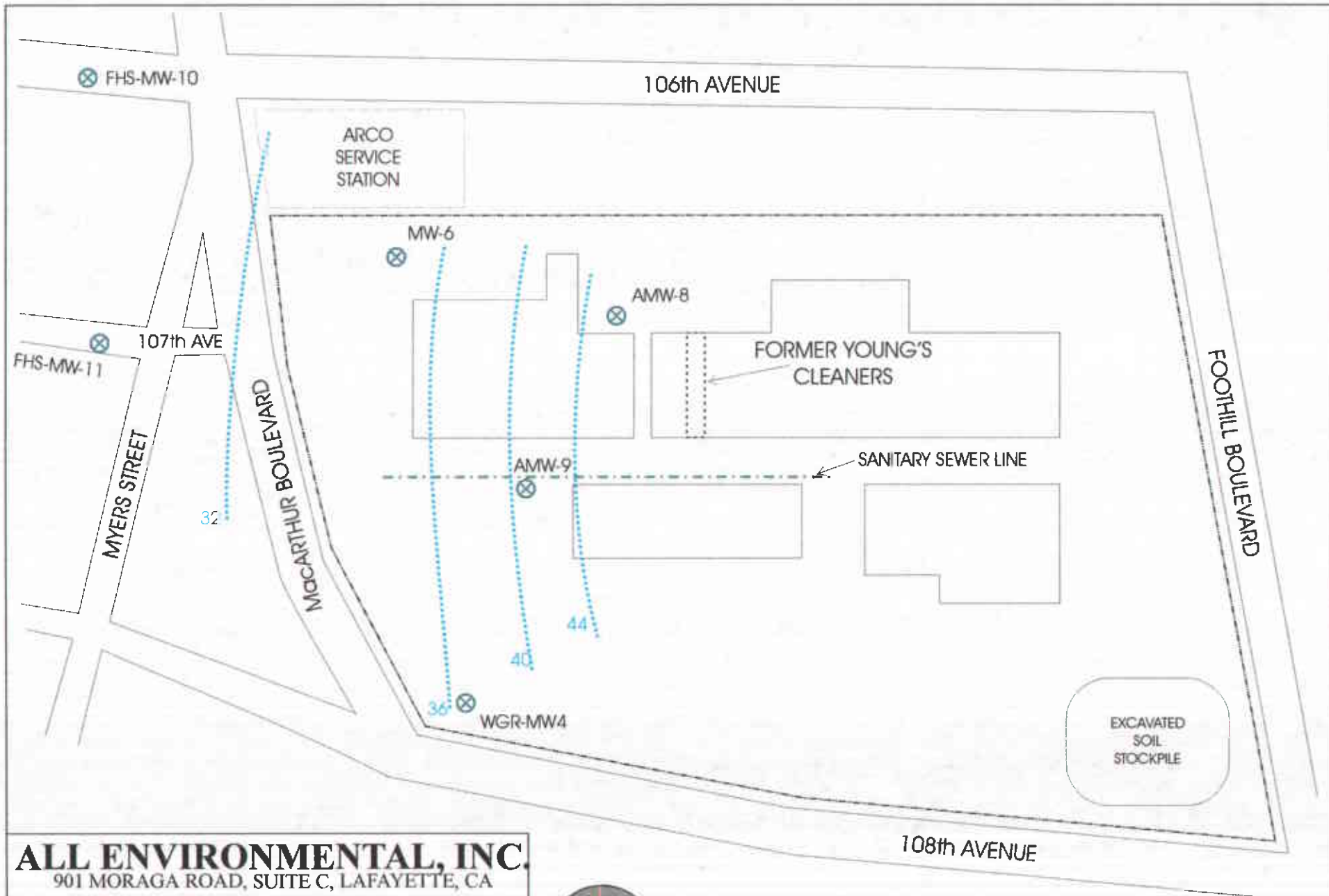
SITE PLAN

10700 MACARTHUR BOULEVARD
 OAKLAND, CALIFORNIA

FIGURE 2



- ⊕ SHALLOW GROUNDWATER ZONE WELL
- ⊗ DEEP GROUNDWATER ZONE WELL



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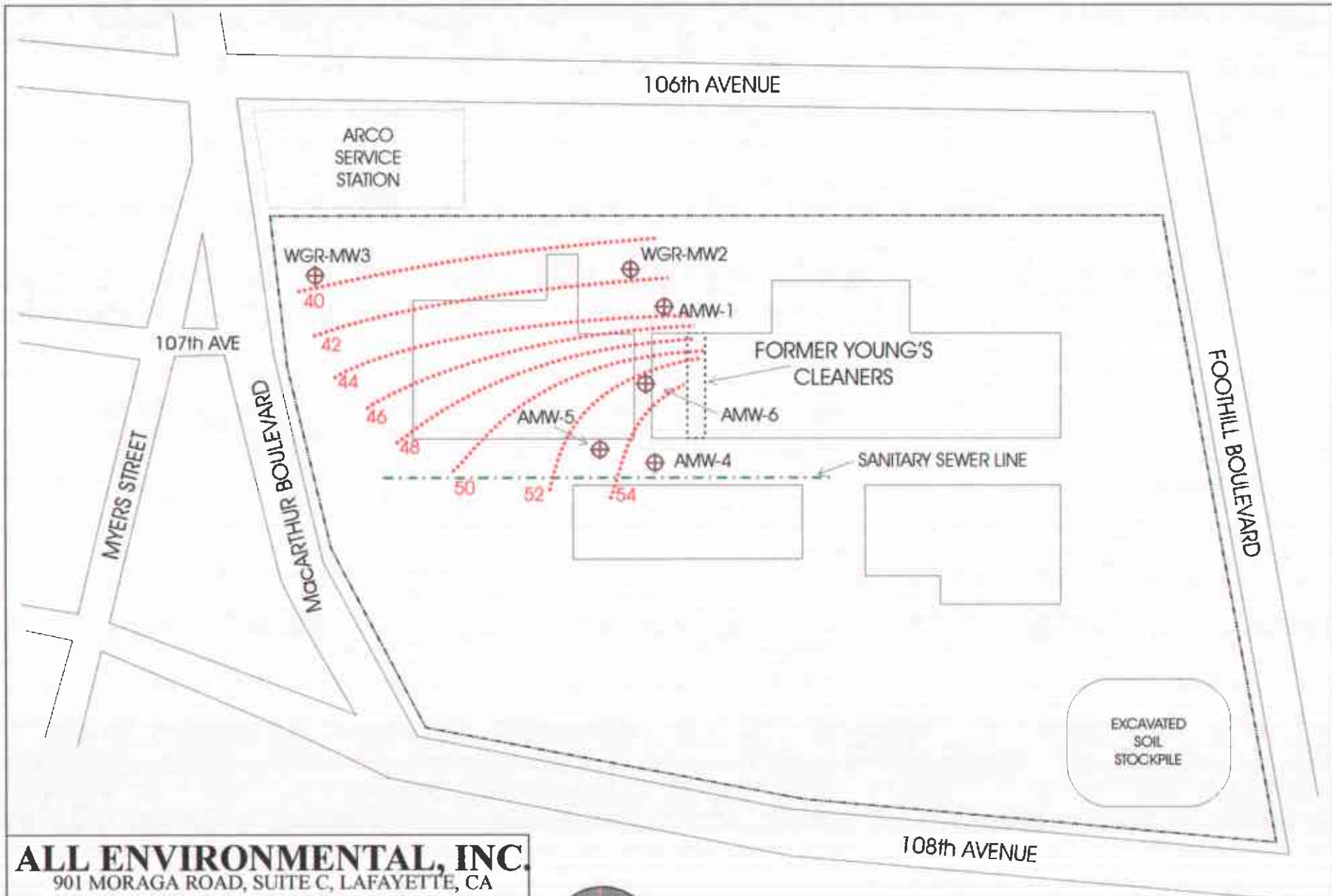
WATER ELEVATIONS - DEEP ZONE

10700 MACARTHUR BOULEVARD
 OAKLAND, CALIFORNIA

FIGURE 3



- ⊗ DEEP GROUNDWATER ZONE WELL
- ⋯ DEEP ZONE GROUNDWATER CONTOUR (POTENTIAL) IN FEET ABOVE MEAN SEA LEVEL



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WATER ELEVATIONS - SHALLOW ZONE

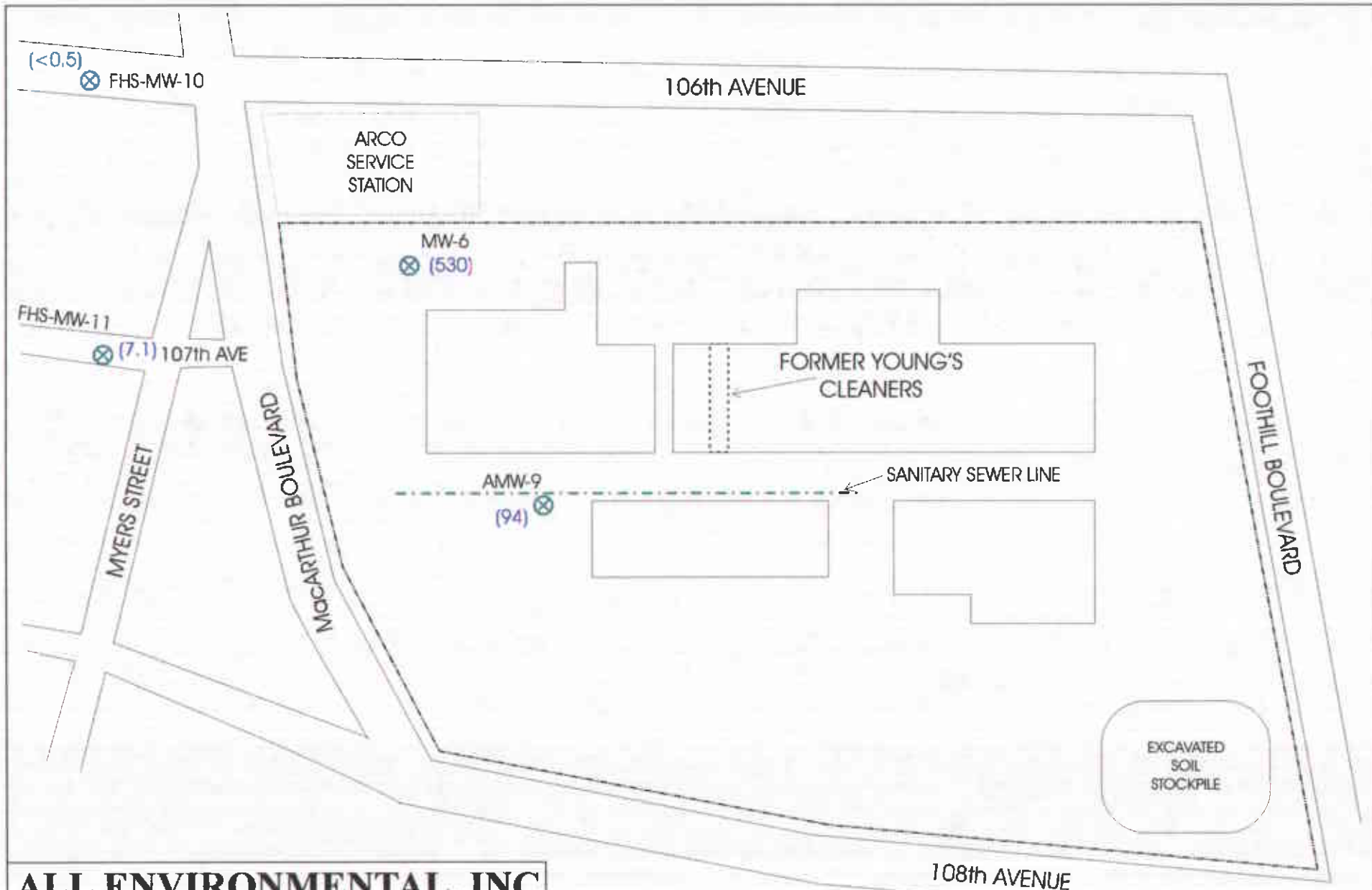
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FIGURE 4



⊕ SHALLOW GROUNDWATER ZONE WELL

- - - 44 - - - SHALLOW ZONE GROUNDWATER CONTOUR (POTENTIAL)
 IN FEET ABOVE MEAN SEA LEVEL



ALL ENVIRONMENTAL, INC.
 901 MORAGA ROAD, SUITE C, LAFAYETTE, CA

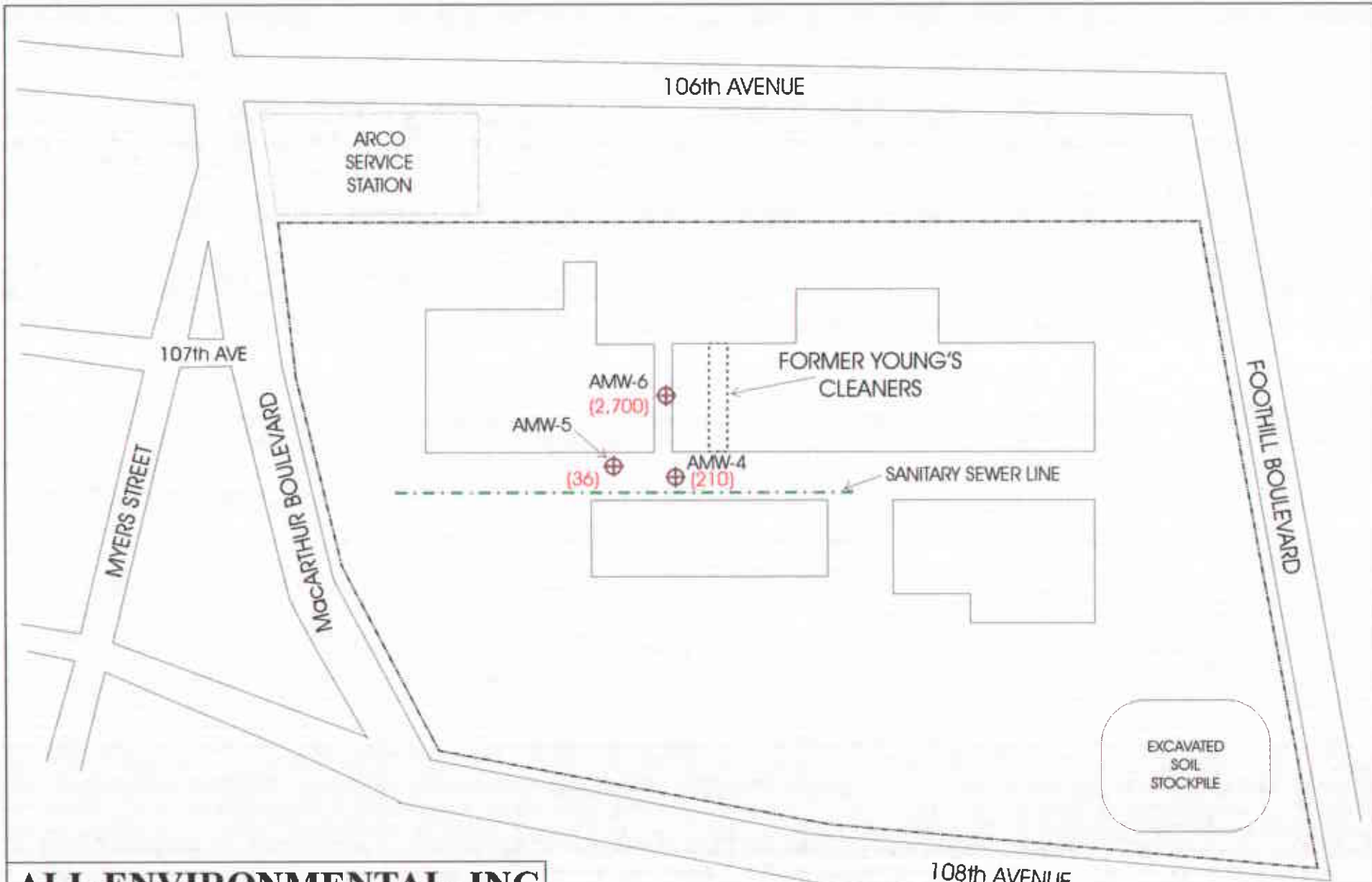
PCE CONCENTRATIONS - DEEP ZONE

10700 MACARTHUR BOULEVARD
 OAKLAND, CALIFORNIA

FIGURE 5



-  DEEP GROUNDWATER ZONE WELL
-  CONCENTRATIONS OF PCE IN $\mu\text{g/L}$ IN DEEP GROUNDWATER ZONE



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PCE CONCENTRATIONS - SHALLOW ZONE

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FIGURE 6



- ⊕ SHALLOW GROUNDWATER ZONE WELL
- (100) CONCENTRATIONS OF PCE IN $\mu\text{g/L}$ IN SHALLOW GROUNDWATER ZONE

**Table 1
Groundwater Levels**

Well ID (Aquifer zone)	Date	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
AMW-1 (Shallow)	1/29/99 5/5/99	64.51 64.51	23.01 21.25	64.51 43.26
AMW-4 (Shallow)	1/29/99 5/5/99	64.79 64.79	11.51 10.14	53.28 54.65
AMW-5 (Shallow)	1/29/99 5/5/99	64.97 64.97	13.87 12.83	51.10 52.14
AMW-6 (Shallow)	1/29/99 5/5/99	65.10 65.10	12.74 11.30	52.36 53.80
AMW-7 (Shallow)	1/29/99 5/5/99	64.24 64.24	14.91 *	49.33
AMW-8 (Deep)	1/29/99 5/5/99	64.55 64.55	16.86 14.46	47.69 50.09
AMW-9 (Deep)	1/29/99 5/5/99	63.48 63.48	23.22 21.40	40.26 42.08
WGR MW-2 (Shallow)	1/29/99 5/5/99	63.18 63.18	23.41 21.41	39.77 41.77
WGR MW-3 (Shallow)	1/29/99 5/5/99	58.34 58.34	15.81 18.43	42.53 39.91
WGR MW-4 (Deep)	1/29/99 5/5/99	60.02 60.02	26.23 23.80	33.79 36.22
FHS MW-10 (Deep)	1/29/99 5/5/99	52.34 52.34	23.91 20.55	28.43 31.79
FHS MW-11 (Deep)	1/29/99 5/5/99	54.06 54.06	26.38 22.72	27.68 31.34
MW-6 (Deep)	1/29/99 5/5/99	61.78 61.78	32.87 29.41	28.91 32.37

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	trans 1,2 DCE	PCE	TCE	VHCs*
			µg/L	µg/L	µg/L	µg/L	µg/L
AMW-4 (shallow)	5/15/95	Augeus	NR	<50	2400	<50	NR
	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
AMW-5 (shallow)	5/15/95	Augeus	NR	<0.5	1.2	<0.5	NR
	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
AMW-6 (shallow)	9/13/95	Augeus	NR	<25	930	<25	NR
	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
AMW-7 (shallow)	9/13/95	Augeus	NR	<25	2350	340	NR
	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
AMW-9 (deep)	9/13/95	Augeus	NR	<25	170	<25	NR
	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

Table 2 Continued

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
FHS MW-10 (deep)	10/9/97	PES	<0.5	<0.5	<0.5	<0.5	NR
	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
FHS MW-11 (deep)	9/29/97	PES	<0.5	<0.5	4	<0.5	NR
	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
MW-6 (deep)	3/11/95	EMCON	<20	<0.5	1300	<20	NR
	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	
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

**GROUNDWATER MONITORING WELL FIELD
SAMPLING FORMS**

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: AMW-1 (shallow)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	21.25
Water Elevation	43.26
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

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM					
Monitoring Well Number: AMW-4 (shallow)					
Project Name: Drake Builders			Date of Sampling: 5/5/99		
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			10.14		
Water Elevation			54.65		
Three Well Volumes (gallons)*					
2" casing: (TD - DTW)(0.16)(3)			7.13		
4" casing: (TD - DTW)(0.65)(3)					
6" casing: (TD - DTW)(1.44)(3)					
Actual Volume Purged (gallons)					
Appearance of Purge Water			8		
GROUNDWATER SAMPLES					
Number of Samples/Container Size			2 VOAs		
Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments
	2	62.7	9.92	959	Turbid
	4	63.0	10.01	1200	
	7	62.5	10.12	1234	
COMMENTS (i.e., sample odor, well recharge time & percent, etc.)					
No solvent odor					

TD - Total Depth of Well
DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: AMW-5 (shallow)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	12.83
Water Elevation	52.14
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	8.24
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	9
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
	3	76	10.2	1407	
	5	74.4	10.4	1331	
	7	67.7	9.87	1285	

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

No solvent odor

TD - Total Depth of Well
DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: AMW-6 (shallow)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	11.30
Water Elevation	53.8
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	6.58
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
	2	63.8	10.00	1400	
	4	67.2	9.93	1423	
	7	62.8	10.05	1377	

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

No solvent odor

TD - Total Depth of Well

DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: AMW-7 (shallow)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	64.24
Depth of Well	24.75
Depth to Water	14.21
Water Elevation	50.03 *

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.)

* Well not sampled due to damage occurring during construction activities

TD - Total Depth of Well
DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: AMW-8 (deep)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	14.46
Water Elevation	50.09

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

**ALL ENVIRONMENTAL INC. – GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: AMW-9 (deep)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	21.40
Water Elevation	42.08
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	15.79
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	17
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
	4	74.3	10.22	1343	
	9	78.6	10.59	1390	
	13	80.2	10.44	1421	

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

No solvent odor

TD - Total Depth of Well
DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: WGR MW-2 (shallow)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	21.41
Water Elevation	41.77

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

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: WGR MW-3 (shallow)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	18.43
Water Elevation	39.91

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

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: WGR MW-4 (deep)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	23.8
Water Elevation	36.22

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

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: FHS MW-10 (deep)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	20.55
Water Elevation	31.79
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	15.07
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
	4	71.7	10.24	350	
	8	68.3	10.12	351	
	12	66.3	10.12	344	

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

No solvent odor

TD - Total Depth of Well
DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: FHS MW-11 (deep)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	22.72
Water Elevation	31.34
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	19.85
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	22
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
	5	72.3	10.16	431	
	10	72.4	10.12	424	
	15	71.1	9.92	414	

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

No solvent odor

TD - Total Depth of Well
DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: MW-6 (deep)

Project Name: Drake Builders	Date of Sampling: 5/5/99
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	29.41
Water Elevation	32.37
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	9.25
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	10
Appearance of Purge Water	Turbid

GROUNDWATER SAMPLES

Number of Samples/Container Size		2 VOAs			
Time	Vol Remvd (gal)	Temp (deg C)	pH	Cond (mS)	Comments
	3	77.4	10.70	1194	
	6	74.3	10.64	1138	
	9	72.2	10.33	1114	

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

No solvent odor

TD - Total Depth of Well
DTW - Depth To Water

APPENDIX B

**LABORATORY ANALYSES WITH
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. 901 Moraga Road, Suite C Lafayette, CA 94549	Client Project ID: #3067; Drake	Date Sampled: 05/05/99
		Date Received: 05/05/99
	Client Contact: Peter McIntyre	Date Extracted: 05/05/99
	Client P.O:	Date Analyzed: 05/05/99

05/12/99

Dear Peter:

Enclosed are:

- 1). the results of 7 samples from your #3067; Drake 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.

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All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549	Client Project ID: #3067; Drake	Date Sampled: 05/05/99
		Date Received: 05/05/99
	Client Contact: Peter McIntyre	Date Extracted: 05/05-05/07/99
	Client P.O:	Date Analyzed: 05/05-05/07/99

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	10454	10455	10456	10457
Client ID	AMW-4	AMW-5	AMW-6	AMW-9
Matrix	W	W	W	W
Compound	Concentration			
Bromodichloromethane	ND<5	ND<1	ND<71	ND<2.5
Bromoform ^(b)	ND<5	ND<1	ND<71	ND<2.5
Bromomethane	ND<5	ND<1	ND<71	ND<2.5
Carbon Tetrachloride ^(c)	ND<5	ND<1	ND<71	ND<2.5
Chlorobenzene	ND<5	ND<1	ND<71	ND<2.5
Chloroethane	ND<5	ND<1	ND<71	ND<2.5
2-Chloroethyl Vinyl Ether ^(d)	ND<5	ND<1	ND<71	ND<2.5
Chloroform ^(e)	ND<5	ND<1	ND<71	ND<2.5
Chloromethane	ND<5	ND<1	ND<71	ND<2.5
Dibromochloromethane	ND<5	ND<1	ND<71	ND<2.5
1,2-Dichlorobenzene	ND<5	ND<1	ND<71	ND<2.5
1,3-Dichlorobenzene	ND<5	ND<1	ND<71	ND<2.5
1,4-Dichlorobenzene	ND<5	ND<1	ND<71	ND<2.5
Dichlorodifluoromethane	ND<5	ND<1	ND<71	ND<2.5
1,1-Dichloroethane	ND<5	ND<1	ND<71	ND<2.5
1,2-Dichloroethane	ND<5	ND<1	ND<71	ND<2.5
1,1-Dichloroethene	ND<5	ND<1	ND<71	ND<2.5
cis 1,2-Dichloroethene	ND<5	ND<1	370	ND<2.5
trans 1,2-Dichloroethene	ND<5	ND<1	110	ND<2.5
1,2-Dichloropropane	ND<5	ND<1	ND<71	ND<2.5
cis 1,3-Dichloropropene	ND<5	ND<1	ND<71	ND<2.5
trans 1,3-Dichloropropene	ND<5	ND<1	ND<71	ND<2.5
Methylene Chloride ^(f)	ND<5	ND<1	ND<71	ND<2.5
1,1,2,2-Tetrachloroethane	ND<5	ND<1	ND<71	ND<2.5
Tetrachloroethene	210	36	2700	94
1,1,1-Trichloroethane	ND<5	ND<1	ND<71	ND<2.5
1,1,2-Trichloroethane	ND<5	ND<1	ND<71	ND<2.5
Trichloroethene	ND<5	ND<1	470	ND<2.5
Trichlorofluoromethane	ND<5	ND<1	ND<71	ND<2.5
Vinyl Chloride ^(g)	ND<5	ND<1	ND<71	ND<2.5
% Recovery Surrogate	99	99	100	100
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.



McCAMPBELL ANALYTICAL INC.

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All Environmental, Inc. 901 Moraga Road, Suite C Lafayette, CA 94549	Client Project ID: #3067; Drake	Date Sampled: 05/05/99
		Date Received: 05/05/99
	Client Contact: Peter McIntyre	Date Extracted: 05/05-05/07/99
	Client P.O.:	Date Analyzed: 05/05-05/07/99

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	10458	10459	10460	
Client ID	MW-6	MW-10	MW-11	
Matrix	W	W	W	
Compound	Concentration			
Bromodichloromethane	ND<11	ND	ND	
Bromoform ^(b)	ND<11	ND	ND	
Bromomethane	ND<11	ND	ND	
Carbon Tetrachloride ^(c)	ND<11	ND	ND	
Chlorobenzene	ND<11	ND	ND	
Chloroethane	ND<11	ND	ND	
2-Chloroethyl Vinyl Ether ^(d)	ND<11	ND	ND	
Chloroform ^(e)	ND<11	ND	ND	
Chloromethane	ND<11	ND	ND	
Dibromochloromethane	ND<11	ND	ND	
1,2-Dichlorobenzene	ND<11	ND	ND	
1,3-Dichlorobenzene	ND<11	ND	ND	
1,4-Dichlorobenzene	ND<11	ND	ND	
Dichlorodifluoromethane	ND<11	ND	ND	
1,1-Dichloroethane	ND<11	ND	ND	
1,2-Dichloroethane	ND<11	ND	ND	
1,1-Dichloroethene	ND<11	ND	ND	
cis 1,2-Dichloroethene	19	ND	ND	
trans 1,2-Dichloroethene	ND<11	ND	ND	
1,2-Dichloropropane	ND<11	ND	ND	
cis 1,3-Dichloropropene	ND<11	ND	ND	
trans 1,3-Dichloropropene	ND<11	ND	ND	
Methylene Chloride ^(f)	ND<17	ND	ND	
1,1,2,2-Tetrachloroethane	ND<11	ND	ND	
Tetrachloroethene	530	ND	7.1	
1,1,1-Trichloroethane	ND<11	ND	ND	
1,1,2-Trichloroethane	ND<11	ND	ND	
Trichloroethene	38	ND	ND	
Trichlorofluoromethane	ND<11	ND	ND	
Vinyl Chloride ^(g)	ND<11	ND	ND	
% Recovery Surrogate	99	98	102	
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.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 925-798-1620 Fax: 925-798-1622

QC REPORT FOR EPA 8010/8020/EDB

Date: 05/04/99-05/05/99

Matrix: WATER

Analyte	Concentration (ug/L)				% Recovery		RPD
	Sample (#10011)	MS	MSD	Amount Spiked	MS	MSD	
1,1-DCE	0.0	9.8	9.7	10.0	98	97	1.0
Trichloroethene	0.0	8.8	8.8	10.0	88	88	0.0
EDB	0.0	8.9	8.8	10.0	89	88	1.1
Chlorobenzene	0.0	9.7	9.5	10.0	97	95	2.1
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobz (PID)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100



ALL ENVIRONMENTAL, INC.
 Environmental Engineering & Construction
 901 Moraga Road, Suite C
 Lafayette, CA 94549
 (925) 283-6000 Fax: (925) 283-6121

CHAIN OF CUSTODY

PAGE / OF /

149977ALE18TAT: RUSH / 24 hr / 48 hr / 5 day / other

AEI PROJECT MANAGER Peter McIntyre
 PROJECT NAME Drake
 PROJECT NUMBER 3067
 TOTAL # OF CONTAINERS 14
 RCVD. GOOD CONDITION/COLD Y N

TPH (g), BTEX, MTBE
 SOIL: EPA 8150/8015M, 8020
 WATER: EPA 8030/8015M, 8012
 TPH (d)
 SOIL: EPA 8030/8015M
 WATER: EPA 8030/8015M
 BTEX, MTBE
 SOIL: EPA 8020
 WATER: EPA 8020
 TOTAL OIL & GREASE
 SOIL: EPA 415.1 OF STD. 5520.17/24F
 WATER: STD. 5520.18F
 VOLATILE HALOCARBONS
 SOIL: EPA 8010
 WATER: EPA 801
 VOC's
 SOIL: EPA 8240
 WATER: EPA 824
 SEMI-VOLATILE ORGANICS
 SOIL: EPA 8270/3580
 WATER: EPA 825/3510
 TOTAL LEAD (Pb)
 SOIL: 6010 (C)
 WATER: 291.2 (A)
 LUFT 5 METALS
 SOIL: EPA 7130, 7136, 7139, 7120, 7020, 705
 WATER:

HOLD # OF CONTAINERS

SAMPLE ID	DATE	TIME	MATRIX	TPH (g), BTEX, MTBE	TPH (d)	BTEX, MTBE	TOTAL OIL & GREASE	VOLATILE HALOCARBONS	VOC's	SEMI-VOLATILE ORGANICS	TOTAL LEAD (Pb)	LUFT 5 METALS	HOLD	# OF CONTAINERS
* AMW - 4	9/5		water	X										N
(*) AMW - 5				X										N
(*) AMW - 6				X										N
* AMW - 9				X										N
(*) MW - 6				X										N
(*) MW - 10				X										N
(*) MW - 11				X										N
														10454
														10455
														10456
														10457
														10458
														10459
														10460

ICE/GOOD CONDITION HEADSPACE ABSENT PRESERVATION APPROPRIATE CONTAINERS
 VOAS O&G METALS OTHER

COMMENTS / INSTRUCTIONS
McCampbell
 ANALYTICAL LABORATORY
 ADDRESS
 PHONE () FAX ()

RELINQUISHED BY
 SIGNATURE
 PRINTED NAME
 COMPANY
 DATE 5/5/99 TIME 6:10

RECEIVED BY
 SIGNATURE
 PRINTED NAME
 COMPANY
 DATE 5/5/99 TIME 6:10

RELINQUISHED BY
 SIGNATURE
 PRINTED NAME
 COMPANY
 DATE TIME

RECEIVED BY
 SIGNATURE
 PRINTED NAME
 COMPANY
 DATE TIME

TB MV