

**MacArthur Boulevard Associates  
c/o Jay-Phares Corporation  
10700 MacArthur Boulevard  
Oakland, CA 94605  
510-562-9500**

December 7, 2010

Jerry Wickham  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

**Subject: Designation of Authorized Agents of  
MacArthur Boulevard Associates  
10700 MacArthur Blvd.  
Oakland, California  
AEI Project # 261829  
Toxics Case No. RO0002580**

**RECEIVED**

*10:39 am, Dec 01, 2011*

Alameda County  
Environmental Health

Dear Mr. Wickham:

ACEH has issued the following requirement:

**“PERJURY STATEMENT**

**All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case."**

This purpose of this letter is to designate and identify Jeremy Smith and Peter McIntyre of AEI Consultants, either acting alone or together, as “authorized representatives” of MacArthur Boulevard Associates, a California limited partnership, for the purpose of executing and submitting to ACEH on its behalf any cover letter or perjury statement in compliance with the above-quoted requirement.

Sincerely,

MACARTHUR BOULEVARD ASSOCIATES  
(a California limited partnership)

BY: JAY-PHARES CORPORATION  
(Its Management Agent)

By: \_\_\_\_\_  
John Jay, Executive Vice President

cc: Jeremy Smith – AEI Consultants



# AEI Consultants

Environmental & Engineering Services

November 30, 2011

## GROUNDWATER MONITORING REPORT- 2<sup>nd</sup> SEMESTER 2011

**Property Identification:**

10700 MacArthur Boulevard  
Oakland, California 94605

AEI Project No. 261829  
Toxics Case No. RO0002580

**Prepared for:**

Jay-Phares Corporation  
Attn: Mr. John Jay  
10700 MacArthur Blvd., Suite 200  
Oakland, CA 94605

**Prepared by:**

AEI Consultants  
2500 Camino Diablo  
Walnut Creek, CA 94597  
(925) 746-6000

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Local Solutions



November 30, 2011

Jay-Phares Corporation  
Attn: Mr. John Jay  
10700 MacArthur Blvd., Suite 200  
Oakland, CA 94605

**Subject: Groundwater Monitoring Report – 2<sup>nd</sup> Semester, 2011**  
10700 MacArthur Boulevard  
Oakland, California 94605  
AEI Project No. 261829  
Toxics Case No. RO0002580

Dear Mr. Jay:

AEI Consultants (AEI) has prepared this groundwater monitoring report on behalf of The Jay-Phares Corporation, the manager of the Foothill Square Shopping Center (Figure 1: Site Location Map). The documentation of groundwater quality beneath and around the site was performed to monitor the stability of the chlorinated volatile organic compound (VOC) plume beneath the property.

This report was prepared in accordance with the requirements of the Alameda County Health Care Services Agency (ACHCSA). This report summarizes the activities and results of the semi-annual monitoring activities conducted on October 19, 2011.

### Background

The subject property (hereinafter referred to as the site or property) is located at 10700 MacArthur Boulevard (Figure 1). The site is approximately 13.5 acres in size and is currently developed with the Foothill Square Shopping Center. The shopping center consists of five buildings, together totaling approximately 155,600 square feet. The area of concern is the former Youngs Cleaners, located on the north side of the property.

The site is situated in a mixed commercial and residential area of Oakland. The site is bound by MacArthur Boulevard to the west, Foothill Boulevard to the east, and 108th Avenue to the south. An ARCO gasoline station is located adjacent to the northwest and residences to the north. Refer to Figure 2 for a site plan of the western section of the Foothill Square Shopping Center property.

Extensive site assessment activities have been conducted to date including the installation of multiple monitoring wells, soil borings, and soil vapor borings, as well as source removal excavation. The most recent investigation included additional soil vapor borings which completed vapor phase contaminate delineation for the site. An approval for pilot study site

mitigation activities has been obtained from the ACHCSA, however the pilot study has yet to commence. For a complete history of previous site investigation activities as well as planned pilot study details, please refer to AEI's *Supplemental Soil Vapor Investigation Report* dated June 25, 2008.

## Summary of Monitoring Activities

On October 19, 2011, AEI gauged the groundwater levels in each of the accessible ten active groundwater monitoring wells at the site (AMW-1, AMW-4, AMW-5, AMW-6R, AMW-8, AMW-9, WGR-MW2, WGR-MW-4, FHS MW-10, and FHS MW-11) and groundwater samples were collected from nine of the wells (AMW-1, AMW-4, AMW-5, AMW-6R, AMW-8, AMW-9, WGR-MW-4, FHS MW-10, and FHS MW-11) in accordance with the approved sampling schedule. All accessible wells were first opened and water levels allowed to equilibrate with atmospheric pressure. The depth to water from the top of the well casings was measured prior to sampling with an electric water level indicator. The wells to be sampled were then purged of at least three well volumes either using a battery powered submersible pump or bailed by hand. Field data sheets are included in Appendix A.

Temperature, pH, specific conductivity, dissolved oxygen, and oxidation-reduction potential (ORP) were measured and the turbidity was visually noted during the purging of the wells. Once the above parameters had stabilized, and the wells were allowed to recharge to a minimum of 90% of their original water volume, a water sample was collected. Groundwater samples were collected from each well using clean, disposable plastic bailers.

Groundwater samples were collected from each well to be sampled into three 40 ml volatile organic analysis (VOA) vials. The samples were capped so that neither head space nor air bubbles were visible within the sample containers. Samples were labeled with unique identifiers, stored over water ice, and placed under chain of custody. The samples were transported to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification #1644). Groundwater samples were analyzed for halogenated volatile organic compounds (HVOCs) using EPA Method 8260.

## Field Results

Generally, the wells at the site are categorized as being screened either in a shallow water bearing zone or a deeper water bearing zone. Shallow zone wells (AMW-1, AMW-4, AMW-5, AMW-6R, and WGR MW2) are screened between approximately 15 to 35 feet bgs, and deeper wells (AMW-8, AMW-9, WGR MW4, and FHS MW-10 and FHS MW-11) are generally screened in the 35 to 60 feet bgs range. Screen intervals, where known, are presented in Table 1.

Overall, groundwater levels at the site decreased up to approximately 4 feet in the wells since the last monitoring event. Groundwater levels in the shallow aquifer ranged from 39.12 to 52.37 feet above mean sea level (msl). Groundwater was determined to flow to the northwest at a hydraulic gradient of 0.06 feet per foot. Typically, groundwater in the shallow wells flows towards the west, and it is expected that removing WGR-MW3 and MW-7 from the gauging event has caused the apparent change in direction. Groundwater levels in the deeper, apparently confined/semi-confined aquifer, ranged from 26.83 to 47.40 feet above msl.

Groundwater flow in the deep aquifer was toward the southwest at a hydraulic gradient of 0.04 feet per foot, relatively consistent with previous findings.

Groundwater measurement data are summarized in Table 1. The groundwater elevation contours are shown in Figures 3 and 4. Refer to Appendix A for Groundwater Monitoring Well Field Sampling Forms.

### **Groundwater Quality**

The highest concentrations of tetrachloroethene (PCE), trichloroethylene (TCE), and cis-1,2 dichloroethylene (cis-1,2 DCE) detected in groundwater from the shallow wells was from well AMW-6R at 570 micrograms per liter ( $\mu\text{g/L}$ ), 86  $\mu\text{g/L}$ , and 86  $\mu\text{g/L}$ , respectively. These concentrations were each higher than during the initial sampling event, however within concentration ranges seen in well MW-6. The concentrations in groundwater from the remaining shallow wells were relatively consistent with recent sampling data. The highest concentration of PCE in the deeper zone was found in well FHS MW-11 at a concentration of 49  $\mu\text{g/L}$ , which represents a decrease since the last sampling event. PCE was also detected in well AMW-9 at a concentration of 30  $\mu\text{g/L}$ , a historical low for this well. TCE and 1,2-DCE were not detected at or above the laboratory detection limit in any of the deep groundwater samples.

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. Refer to Figure 5 for a summary of VOC concentrations in the wells sampled during this event.

### **Summary**

In general, chlorinated VOC concentrations in groundwater beneath the site appear relatively stable. The ACHCSA, in a letter dated July 10, 2008, concurred that no further characterization is necessary to investigate shallow soil vapor beneath the site and AEI may commence with the pilot testing activities at the site. The pilot testing activities are currently scheduled to take place in conjunction with site remodeling activities, which have not yet been scheduled. However, tenants in the vicinity of the proposed pilot study activities have since been relocated and the tenant spaces are currently empty. Furthermore, the units will remain empty and not be occupied until pilot study activities have been completed. The pilot study was previously due on April 16, 2010; however, the remodeling activities have not been scheduled. A new date has not been established for the pilot study; however, tenant spaces will remain vacant pending the results of the pilot study activities. The ACHCSA will be notified once a pilot study schedule has been established. The monitoring well network will continue to be sampled by AEI in accordance with the approved sampling schedule, with the next sampling event scheduled during April 2012.

### Report Limitations and signatures

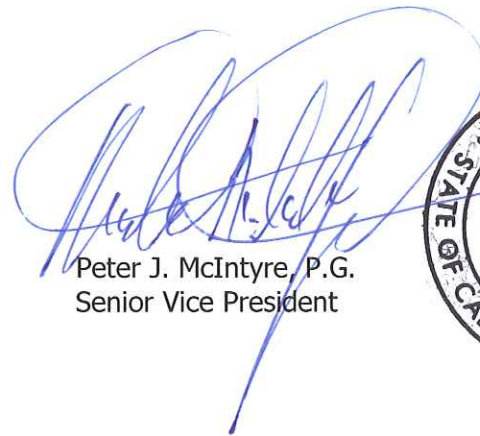
This report presents a summary of work completed by AEI Consultants. The completed work includes observations and descriptions of site conditions encountered. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide the requested 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 consulting 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 one of us at (925) 746-6000.

Sincerely,  
**AEI Consultants**



Jeremy Smith, REA II  
Senior Project Manager



Peter J. McIntyre, P.G.  
Senior Vice President



### Figures

- Figure 1: Site Location Map
- Figure 2: Site Plan
- Figure 3: Groundwater Elevation Map – Shallow Wells
- Figure 4: Groundwater Elevation Map – Deep Wells
- Figure 5: Groundwater Analytical Data

### Tables

- Table 1: Groundwater Level Data
- Table 2: Groundwater Sample Analytical Data

**Appendix A:** Groundwater Monitoring Well Field Sampling Forms

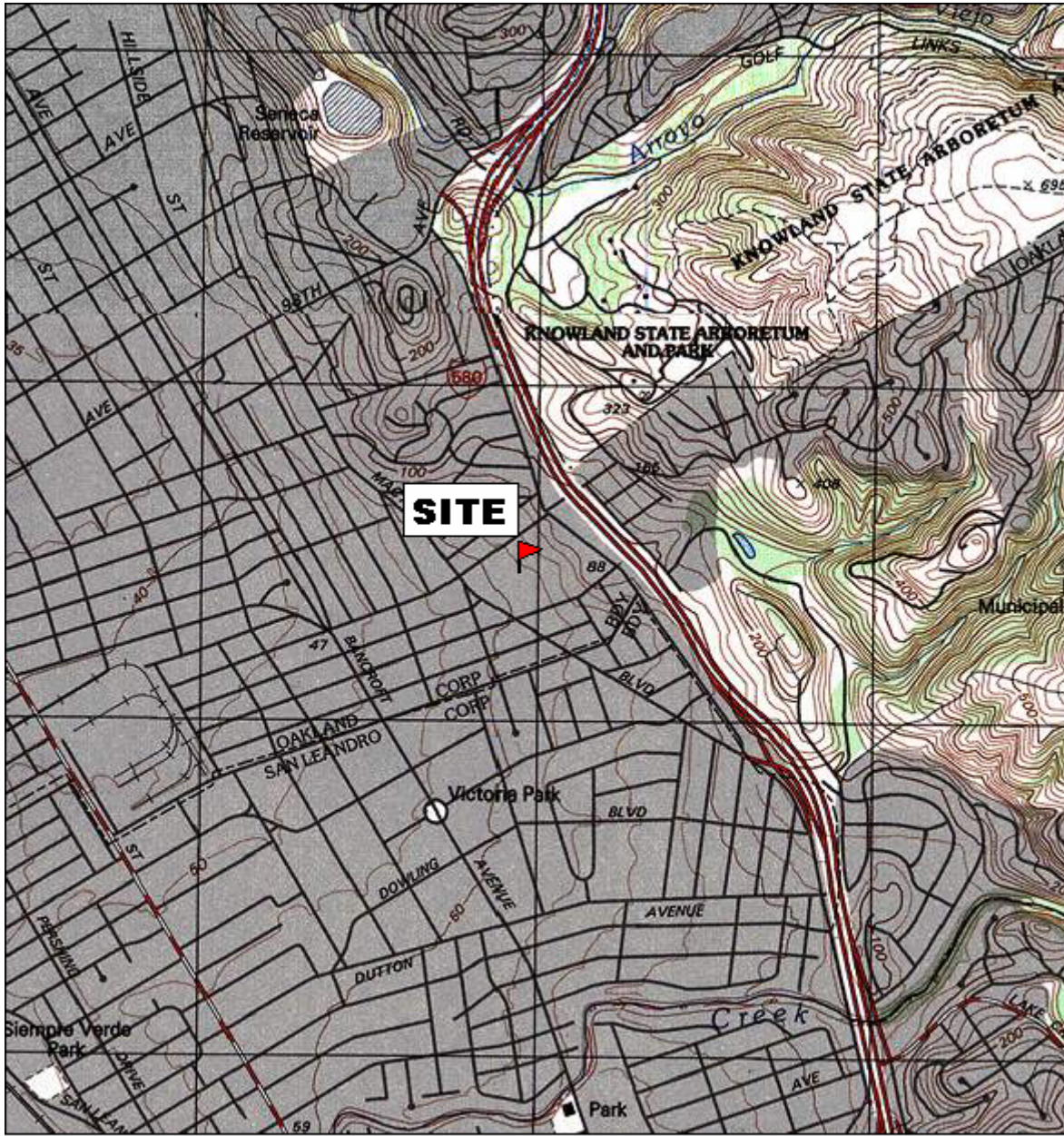
**Appendix B:** Laboratory Analyses with Chain of Custody Documentation

### Distribution:

Mr. Jerry Wickham, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250,  
Alameda, CA 94502 (electronic copy)  
Jay-Phares Corporation, Attn; John Jay, 10700 MacArthur Blvd., Oakland, California 94605  
Geotracker electronic upload

## **FIGURES**





TN  $\star$  MN  
15 $\frac{1}{2}$  $^{\circ}$

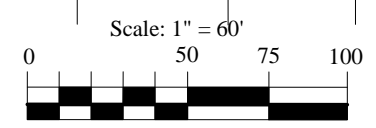
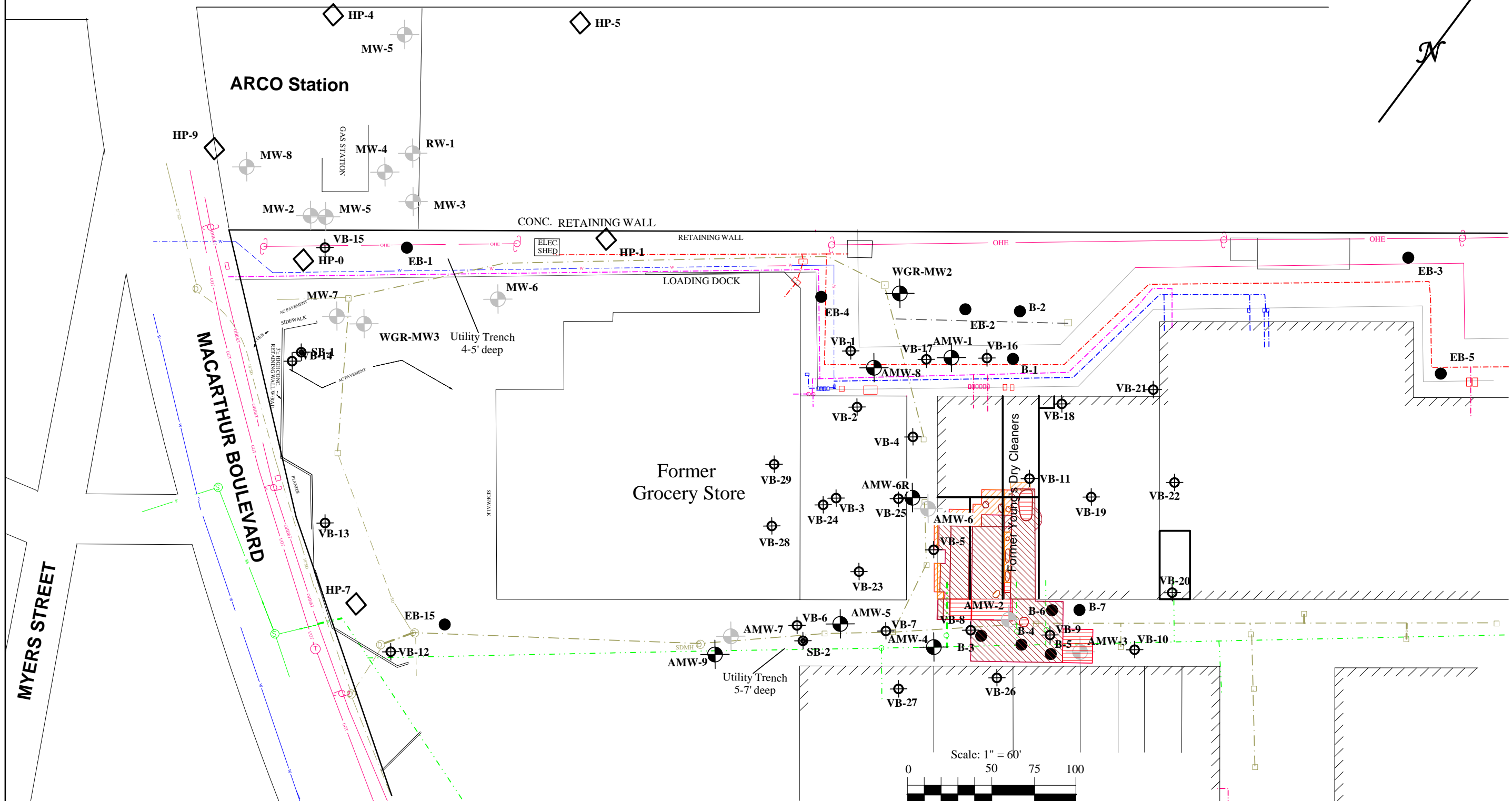
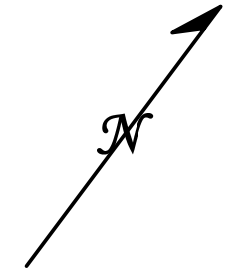


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<b>AEI CONSULTANTS</b> 2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597	
<b>SITE LOCATION MAP</b>	
10700 MACARTHUR BLVD OAKLAND, CALIFORNIA	<b>FIGURE 1</b> PROJECT No. 261829



106 th AVENUE



**KEY**

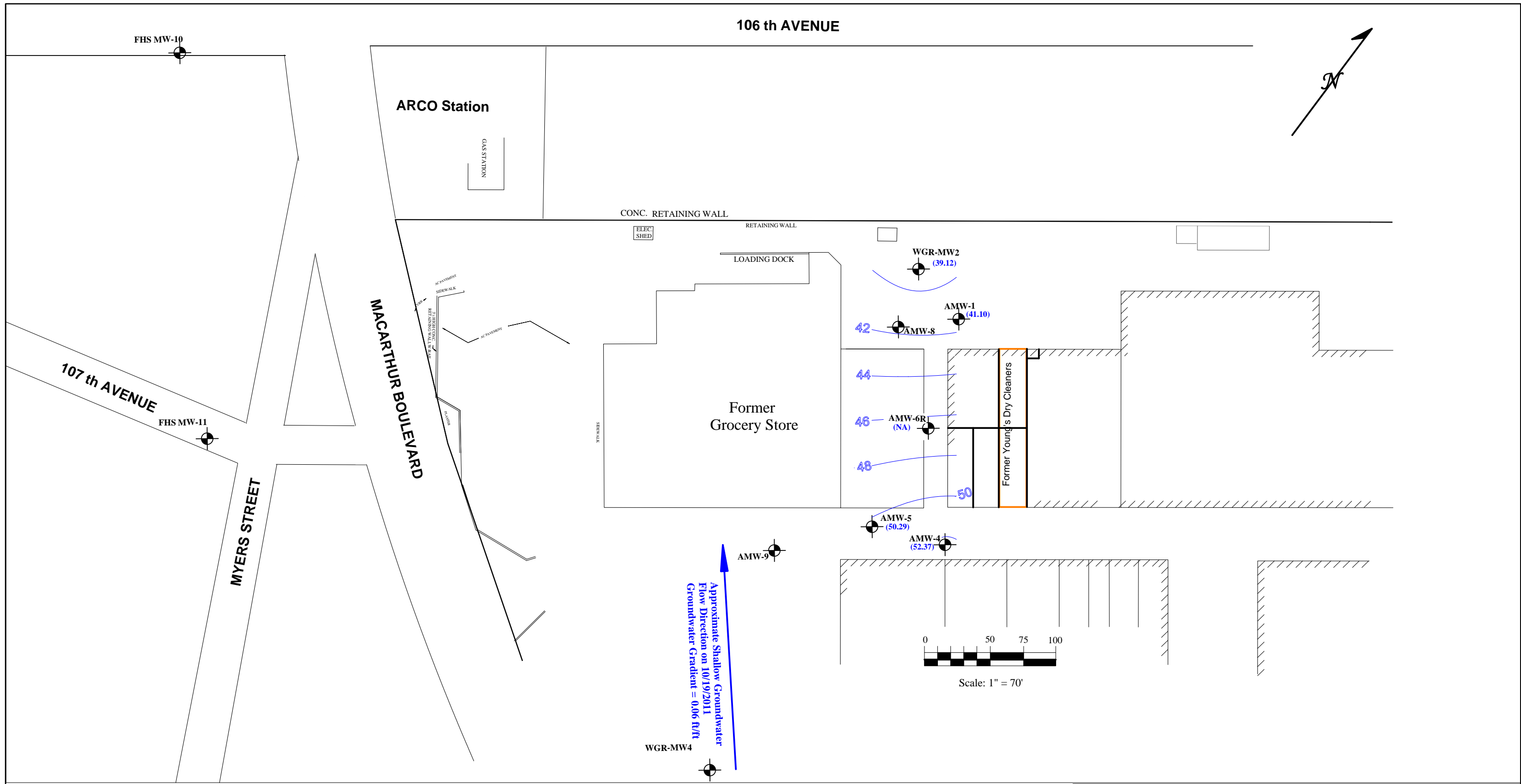
EB-1 ●	Soil Boring - Kaldveer 1988
B-1 ●	Soil Boring - Augeas 1994
HP-8 ◊	CPT Boring/HydroPunch Sample - PES 1997
MW4 ●	Groundwater Monitoring Well
⊕	Soil Vapor Sample
⊙	Soil Boring - AEI 2006

	Excavated to depth of 5 to 7 feet bgs
	Excavated to depth of 8 to 13 feet bgs
	Excavated to depth of 14 to 18 feet bgs
	Abandoned Monitoring Well

	On Site Storm Drain
	Off Site Storm Drain
	On Site Sanitary Sewer
	Off Site Sanitary Sewer
	On Site Underground Power
	On Site Gas Line

Drafted 6/30/05 - RFF on Dirk Slooten base  
Revised 05/08 by J.SMITH

<b>AEI CONSULTANTS</b>	
2500 CAMINO DIABLO, WALNUT CREEK, CA	
<b>SITE PLAN</b>	
10700 MACARTHUR BLVD. OAKLAND, CALIFORNIA	<b>FIGURE 2</b> PROJECT NO. 261829



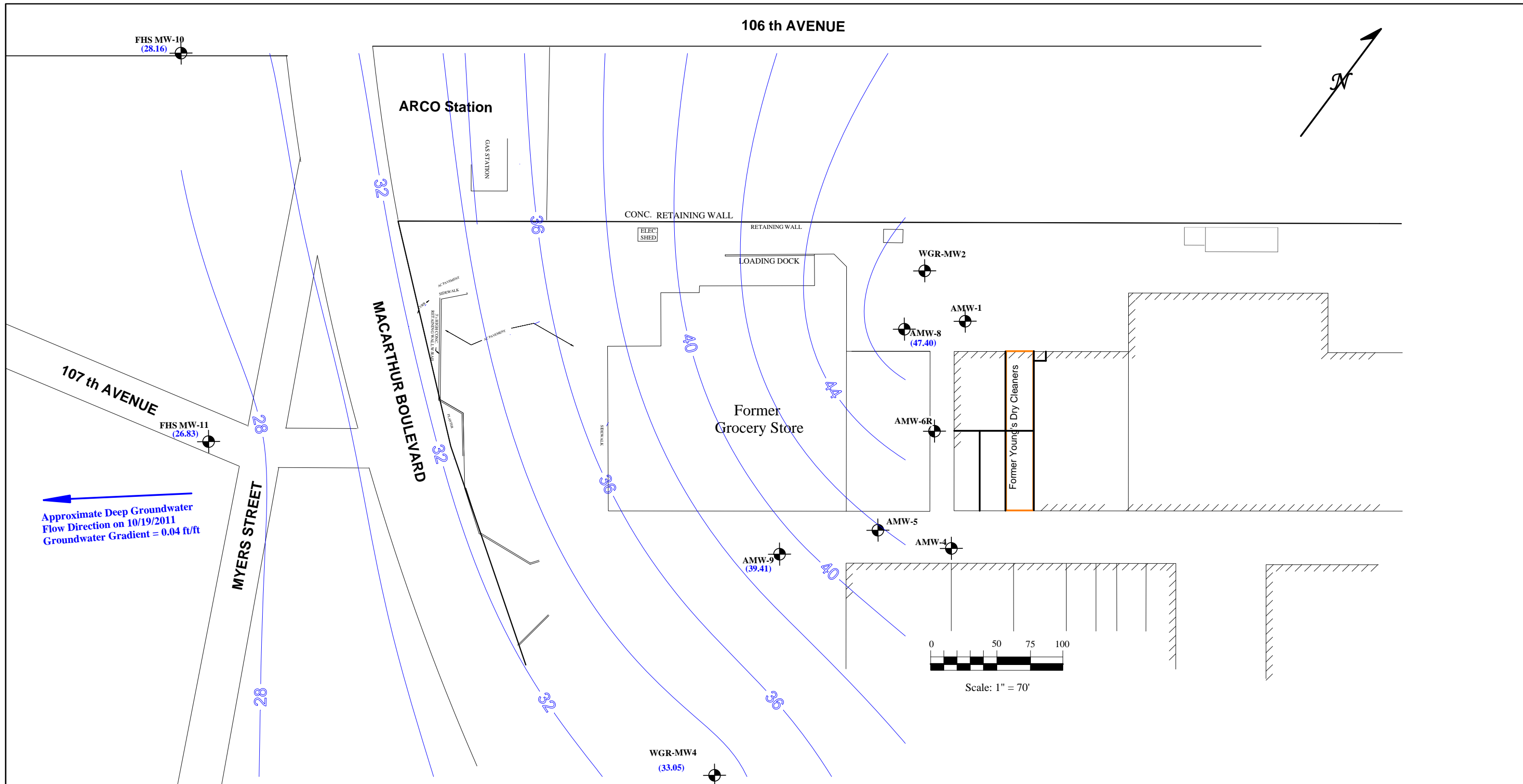
**KEY**

Groundwater Monitoring Well



MW4 (49.91) = Groundwater Elevation (feet)

Groundwater Contour in 2 foot intervals

<b>AEI CONSULTANTS</b>	
2500 CAMINO DIABLO, WALNUT CREEK, CA	
<b>Groundwater Elevation Map - Shallow Wells</b>	
10700 MACARTHUR BLVD. OAKLAND, CALIFORNIA	<b>FIGURE 3</b> PROJECT NO. 261829



**KEY**

-  Groundwater Monitoring Well
- MW4
- (49.91) = Groundwater Elevation (feet)
-  Groundwater Contour in 2 foot intervals

**AEI CONSULTANTS**

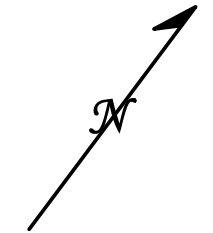
2500 CAMINO DIABLO, WALNUT CREEK, CA

**Groundwater Elevation Map -  
Deep Wells**

10700 MACARTHUR BLVD.  
OAKLAND, CALIFORNIA

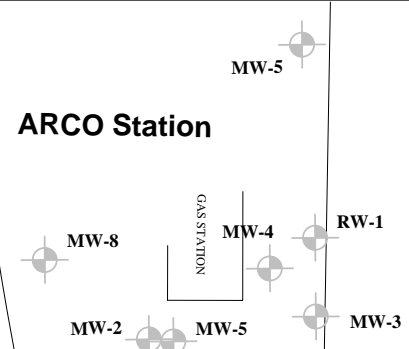
**FIGURE 4**  
PROJECT NO. 261829

106 th AVENUE



FHS MW-10

FHS MW-10	ug/L
PCE	ND<0.5
TCE	ND<0.5
cis-DCE	ND<0.5



MACARTHUR BOULEVARD

CONC. RETAINING WALL

ELEC. SHED

RETAINING WALL

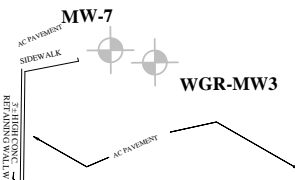
LOADING DOCK

107 th AVENUE

MYERS STREET

FHS MW-11

FHS MW-11	ug/L
PCE	49
TCE	ND<1.0
cis-DCE	ND<1.0



Former Grocery Store

AMW-9

AMW-9	ug/L
PCE	30
TCE	ND<0.5
cis-DCE	ND<0.5

AMW-8

AMW-8	ug/L
PCE	ND<0.5
TCE	ND<0.5
cis-DCE	ND<0.5

AMW-1

AMW-1	ug/L
PCE	ND<0.5
TCE	ND<0.5
cis-DCE	ND<0.5

AMW-6R

AMW-6R	ug/L
PCE	570
TCE	86
cis-DCE	86

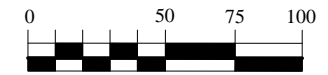
Former Young's Dry Cleaners

AMW-5

AMW-5	ug/L
PCE	20
TCE	1.5
cis-DCE	ND<0.5

AMW-4

AMW-4	ug/L
PCE	1.2
TCE	0.68
cis-DCE	6.0



Scale: 1" = 70'

WGR-MW4

WGR-MW4	ug/L
PCE	ND<0.5
TCE	ND<0.5
cis-DCE	ND<0.5

- KEY**
- Abandoned Monitoring Well
  - Groundwater Monitoring Well

PCE = tetrachloroethene  
 TCE = trichloroethene  
 cis-DCE = cis 1,2-Dichloroethene  
 ug/L = micrograms per liter (ppb)  
 NS = not sampled

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

Groundwater Analytical Data  
 (10/19/11)

10700 MACARTHUR BLVD.  
 OAKLAND, CALIFORNIA

**FIGURE 5**  
 PROJECT NO. 261829

## **TABLES**



**Table 1**  
**Groundwater Level Data**  
**10700 MacArthur Blvd., Oakland, California**

<b>Well ID (Aquifer zone)</b>	<b>Date</b>	<b>Screen Interval (ft bgs)</b>	<b>Well Elevation (ft msl)</b>	<b>Depth to Water (ft)</b>	<b>Groundwater Elevation (ft msl)</b>
AMW-1 (Shallow)	1/29/1999	24-34	64.51	23.01	41.50
	5/5/1999		64.51	21.25	43.26
	10/9/1999		64.51	24.14	40.37
	1/20/2000		64.51	24.66	39.85
	8/8/2000		64.51	23.30	41.21
	2/15/2001		64.51	23.22	41.29
	8/29/2001		64.51	24.38	40.13
	3/12/2002		64.51	21.29	43.22
	9/27/2002		64.51	23.62	40.89
	3/25/2003		64.51	22.45	42.06
	10/2/2003		64.51	24.31	40.20
	10/17/2006		64.51	22.91	41.60
	5/3/2007		64.51	18.61	45.90
	10/17/2007		64.51	23.97	40.54
	4/1/2008		64.51	22.02	42.49
	10/2/2008		64.51	24.21	40.30
	4/2/2009		64.51	22.49	42.02
	10/2/2009		64.51	24.38	40.13
	4/9/2010		64.51	21.68	42.83
	11/10/2010		64.51	24.11	40.40
5/27/2011	64.51	20.98	43.53		
	<b>10/19/2011</b>		<b>64.51</b>	<b>23.41</b>	<b>41.10</b>
AMW-4 (Shallow)	1/29/1999	15-25	64.79	11.51	53.28
	5/5/1999		64.79	10.14	54.65
	10/9/1999		64.79	12.04	52.75
	1/20/2000		64.79	13.50	51.29
	8/8/2000		64.79	11.74	53.05
	2/15/2001		64.79	12.32	52.47
	8/29/2001		64.79	12.40	52.39
	3/12/2002		64.79	10.13	54.66
	9/27/2002		64.79	12.14	52.65
	3/25/2003		64.79	11.03	53.76
	10/2/2003		64.79	12.33	52.46
	10/17/2006		64.79	12.76	52.03
	5/3/2007		64.79	11.11	53.68
	10/17/2007		64.79	12.64	52.15
	4/1/2008		64.79	11.49	53.30
	10/2/2008		64.79	13.34	51.45
	4/2/2009		64.79	12.21	52.58
	10/2/2009		64.79	13.91	50.88
	4/9/2010		64.79	11.23	53.56
	11/10/2010		64.79	12.85	51.94
5/27/2011	64.79	10.25	54.54		
	<b>10/19/2011</b>		<b>64.79</b>	<b>12.42</b>	<b>52.37</b>
AMW-5 (Shallow)	1/29/1999	20-30	64.97	13.87	51.10
	5/5/1999		64.97	12.83	52.14
	10/9/1999		64.97	14.25	50.72
	1/20/2000		64.97	14.91	50.06
	8/8/2000		64.97	14.14	50.83
	2/15/2001		64.97	14.32	50.65
	8/29/2001		64.97	14.72	50.25
	3/12/2002		64.97	13.12	51.85
	9/27/2002		64.97	14.62	50.35
	3/25/2003		64.97	13.45	51.52
	10/2/2003		64.97	14.74	50.23
	10/17/2006		64.97	14.15	50.82
	5/3/2007		64.97	13.92	51.05
	10/17/2007		64.97	15.06	49.91
	4/1/2008		64.97	14.14	50.83
	10/2/2008		64.97	15.72	49.25
	4/2/2009		64.97	14.62	50.35
	10/2/2009		64.97	16.18	48.79
	4/9/2010		64.97	13.98	50.99
	11/10/2010		64.97	15.78	49.19
5/27/2011	64.97	13.65	51.32		
	<b>5/27/2011</b>		<b>64.97</b>	<b>14.68</b>	<b>50.29</b>

Table 1: Continued

Well ID (Aquifer zone)	Date	Screen Interval (ft bgs)	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
AMW-6 (Shallow)	1/29/1999	? - 25	65.10	12.74	52.36
	5/5/1999		65.10	11.30	53.80
	10/9/1999		65.10	13.29	51.81
	1/20/2000		65.10	14.21	50.89
	8/8/2000		65.10	12.95	52.15
	2/15/2001		65.10	12.64	52.46
	8/29/2001		65.10	13.65	51.45
	3/12/2002		65.10	11.41	53.69
	9/27/2002		65.10	13.25	51.85
	3/25/2003		65.10	12.22	52.88
	10/2/2003		65.10	14.74	50.36
	10/17/2006		65.10	11.46	53.64
	5/3/2007		65.10	13.04	52.06
	10/17/2007		65.10	13.87	51.23
	4/1/2008		65.10	12.64	52.46
	10/2/2008		65.10	14.54	50.56
	4/2/2009		65.10	13.38	51.72
	10/2/2009		65.10	16.03	49.07
4/9/2010	65.10	12.75	52.35		
11/10/2010	65.10	14.56	50.54		
	Well Destroyed and Replaced with AMW-6R				
AMW-6R (Shallow)	5/27/2011	13-23	NA	14.70	NA
	<b>10/19/2011</b>		<b>NA</b>	<b>14.50</b>	<b>NA</b>
AMW-7 (Shallow)	1/29/1999	Unknown	64.24	14.91	49.33
	5/5/1999			Well Covered during construction	
AMW-8 (Deep)	1/29/1999	? - 45	64.55	16.86	47.69
	5/5/1999		64.55	14.46	50.09
	10/9/1999		64.55	17.10	47.45
	1/20/2000		64.55	18.51	46.04
	8/8/2000		64.55	16.71	47.84
	2/15/2001		64.55	17.31	47.24
	8/29/2001		64.55	18.30	46.25
	3/12/2002		64.55	16.03	48.52
	9/27/2002		64.55	18.03	46.52
	3/25/2003		64.55	17.31	47.24
	10/2/2003		64.55	21.54	43.01
	10/17/2006		64.55	16.05	48.5
	5/3/2007		64.55	23.01	41.54
	10/17/2007		64.55	18.34	46.21
	4/1/2008		64.55	17.49	47.06
	10/2/2008		64.55	19.10	45.45
	4/2/2009		64.55	18.18	46.37
	10/2/2009		64.55	19.75	44.80
4/9/2010	64.55	17.76	46.79		
11/10/2010	64.55	19.41	45.14		
5/27/2011	64.55	15.92	48.63		
<b>10/19/2011</b>	<b>64.55</b>	<b>17.15</b>	<b>47.40</b>		

Table 1: Continued

Well ID (Aquifer zone)	Date	Screen Interval (ft bgs)	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
AMW-9 (Deep)	1/29/1999	? - 55	63.48	23.22	40.26
	5/5/1999		63.48	21.40	42.08
	10/9/1999		63.48	23.74	39.74
	1/20/2000		63.48	24.92	38.56
	8/8/2000		63.48	23.01	40.47
	2/15/2001		63.48	21.20	42.28
	8/29/2001		63.48	22.59	40.89
	3/12/2002		63.48	21.94	41.54
	9/27/2002		63.48	24.16	39.32
	3/25/2003		63.48	23.00	40.48
	10/2/2003		63.48	23.80	39.68
	10/17/2006		63.48	23.07	40.41
	5/3/2007		63.48	23.17	40.31
	10/17/2007		63.48	24.97	38.51
	4/1/2008		63.48	22.97	40.51
	10/2/2008		63.48	25.65	37.83
	4/2/2009		63.48	23.80	39.68
	10/2/2009		63.48	25.98	37.50
	4/9/2010		63.48	22.80	40.68
	11/10/2010		63.48	25.36	38.12
5/27/2011	63.48	21.73	41.75		
<b>10/19/2011</b>	<b>63.48</b>	<b>24.07</b>	<b>39.41</b>		
WGR MW-2 (Shallow)	1/29/1999	23-28	63.18	23.41	39.77
	5/5/1999		63.18	21.41	41.77
	10/9/1999		63.18	24.62	38.56
	1/20/2000		63.18	25.24	37.94
	8/8/2000		63.18	23.41	39.77
	8/29/2001		63.18	25.09	38.09
	3/12/2002		63.18	21.86	41.32
	9/27/2002		63.18	24.69	38.49
	3/25/2003		63.18	23.71	39.47
	10/2/2003		63.18	25.13	38.05
	10/17/2006		63.18	23.91	39.27
	5/3/2007		63.18	24.11	39.07
	10/17/2007		63.18	NA	NA
	4/1/2008		63.18	22.83	40.35
	10/2/2008		63.18	25.53	37.65
	4/2/2009		63.18	23.23	39.95
	10/2/2009		63.18	25.70	37.48
	4/9/2010		63.18	22.36	40.82
	11/10/2010		63.18	24.79	38.39
	5/27/2011		63.18	21.56	41.62
<b>10/19/2011</b>	<b>63.18</b>	<b>24.06</b>	<b>39.12</b>		
WGR MW-3 (Shallow)	1/29/1999	22-27	58.34	15.81	42.53
	5/5/1999		58.34	18.43	39.91
	10/9/1999		58.34	21.38	36.96
	1/20/2000		58.34	19.76	38.58
	8/8/2000		58.34	20.88	37.46
	8/29/2001		58.34	21.22	37.12
	3/12/2002		58.34	14.80	43.54
	9/27/2002		58.34	22.32	36.02
	3/25/2003		58.34	18.07	40.27
	10/2/2003		58.34	22.22	36.12
	10/17/2006		58.34	21.85	36.49
	5/3/2007		58.34	18.37	39.97
	10/17/2007		58.34	NA	NA
	4/1/2008		58.34	18.74	39.60
	10/2/2008		58.34	23.62	34.72
	4/2/2009		58.34	17.89	40.45
	10/2/2009		58.34	22.16	36.18
	4/9/2010		58.34	15.71	42.63
	11/10/2010		58.34	21.75	36.59
	5/27/2011		Well Destroyed by ARCO; Case Closure at 10600 MacArthur Blvd.		

Table 1: Continued

Well ID (Aquifer zone)	Date	Screen Interval (ft bgs)	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
WGR MW-4 (Deep)	1/29/1999	23-45	60.02	26.23	33.79
	5/5/1999		60.02	23.80	36.22
	10/9/1999		60.02	27.73	32.29
	1/20/2000		60.02	27.97	32.05
	8/8/2000		60.02	26.00	34.02
	2/15/2001		60.02	26.55	33.47
	8/29/2001		60.02	27.14	32.88
	3/12/2002		60.02	24.90	35.12
	9/27/2002		60.02	27.09	32.93
	3/25/2003		60.02	25.75	34.27
	10/2/2003		60.02	27.41	32.61
	10/17/2006		60.02	26.31	33.71
	5/3/2007		60.02	26.13	33.89
	10/17/2007		60.02	28.33	31.69
	4/1/2008		60.02	25.91	34.11
	10/2/2008		60.02	28.85	31.17
	4/2/2009		60.02	25.77	34.25
	10/2/2009		60.02	28.81	31.21
	4/9/2010		60.02	25.01	35.01
	11/10/2010		60.02	28.14	31.88
5/27/2011	60.02	24.51	35.51		
<b>10/19/2011</b>	<b>60.02</b>	<b>26.97</b>	<b>33.05</b>		
FHS MW-10 (Deep)	1/29/1999	42-52	52.34	23.91	28.43
	5/5/1999		52.34	20.55	31.79
	10/9/1999		52.34	25.00	27.34
	1/20/2000		52.34	27.23	25.11
	8/8/2000		52.34	24.06	28.28
	2/15/2001		52.34	24.16	28.18
	8/29/2001		52.34	26.11	26.23
	3/12/2002		52.34	23.94	28.40
	9/27/2003		52.34	25.86	26.48
	3/25/2003		52.34	23.20	29.14
	10/6/2003		52.34	26.39	25.95
	10/17/2006		52.34	24.35	27.99
	5/3/2007		52.34	23.97	28.37
	10/17/2007		52.34	27.71	24.63
	4/1/2008		52.34	23.79	28.55
	10/2/2008		52.34	28.40	23.94
	4/2/2009		52.34	23.80	28.54
	10/2/2009		52.34	28.51	23.83
	4/9/2010		52.34	22.04	30.30
	11/10/2010		52.34	NA	NA
5/27/2011	52.34	21.28	31.06		
<b>10/19/2011</b>	<b>52.34</b>	<b>24.18</b>	<b>28.16</b>		

Table 1: Continued

Well ID (Aquifer zone)	Date	Screen Interval (ft bgs)	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)	
FHS MW-11 (Deep)	1/29/1999	59-64	54.06	26.38	27.68	
	5/5/1999		54.06	22.72	31.34	
	10/9/1999		54.06	27.42	26.64	
	1/20/2000		54.06	29.31	24.75	
	8/8/2000		54.06	26.11	27.95	
	2/15/2001		54.06	26.43	27.63	
	8/29/2001		54.06	28.28	25.78	
	3/12/2002		54.06	21.61	32.45	
	9/27/2002		54.06	27.93	26.13	
	3/25/2003		54.06	45.21	8.85	
	10/2/2003				Well Inaccessible	
	10/17/2006		54.06	26.54	27.52	
	5/3/2007		54.06	26.25	27.81	
	10/17/2007		54.06	29.88	24.18	
	4/1/2008		54.06	26.02	28.04	
	10/2/2008		54.06	30.61	23.45	
	4/2/2009		54.06	26.09	27.97	
	10/5/2009*		54.06	30.80	23.26	
	4/9/2010		54.06	21.51	32.55	
	11/10/2010		54.06	NA	NA	
5/27/2011	54.06	23.38	30.68			
<b>10/19/2011</b>	<b>54.06</b>	<b>27.23</b>	<b>26.83</b>			
MW-6 (Deep)	1/29/1999	37.5-56	61.78	32.87	28.91	
	5/5/1999		61.78	29.41	32.37	
	9/10/1999		61.78	33.98	27.80	
	1/20/2000		61.78	36.02	25.76	
	8/8/2000		61.78	32.73	29.05	
	2/15/2001		61.78	33.34	28.44	
	8/29/2001		61.78	34.98	26.80	
	3/12/2002		61.78	30.72	31.06	
	9/27/2002		61.78	34.50	27.28	
	3/25/2003		61.78	32.08	29.70	
	10/2/2003		61.78	34.86	26.92	
	10/17/2006		61.78	32.58	29.20	
	5/3/2007		61.78	32.54	29.24	
	10/17/2007		61.78	36.20	25.58	
	4/1/2008		61.78	32.39	29.39	
	10/2/2008		61.78	36.86	24.92	
	4/2/2009		61.78	32.67	29.11	
	10/2/2009		61.78	36.98	24.80	
	4/9/2010		61.78	30.09	31.69	
	11/10/2010		61.78	35.87	25.91	
5/27/2011			Well Destroyed by ARCO; Case Closure at 10600 MacArthur Blvd.			
MW-7 (Shallow)	1/20/2000	17.5-37.5	58.64	20.32	38.32	
	8/8/2000		58.64	20.50	38.14	
	2/15/2001		58.64	16.95	41.69	
	8/29/2001		58.64	21.61	37.03	
	3/12/2002		58.64	17.03	41.61	
	9/27/2002		58.64	22.73	35.91	
	3/25/2003		58.64	19.09	39.55	
	10/2/2003		58.64	22.46	36.18	
	10/17/2006		58.64	22.19	36.45	
	5/3/2007		58.64	19.52	39.12	
	10/17/2007		58.64	21.49	37.15	
	4/1/2008		58.64	19.73	38.91	
	10/2/2008		58.64	24.64	34.00	
	4/2/2009		58.64	18.60	40.04	
	10/2/2009		58.64	22.60	36.04	
	4/9/2010		58.64	17.57	41.07	
	11/10/2010		58.64	22.16	36.48	
5/27/2011			Well Destroyed by ARCO; Case Closure at 10600 MacArthur Blvd.			

Notes: All well elevations are measured from the top of casing not from the ground surface.  
ft msl = feet above mean sea level  
\* = Car parked over well, reading taken 3 days later than other wells.  
NA = not available



**Table 2**  
**Groundwater Sample Analytical Data**  
**10700 MacArthur Blvd., Oakland, California**

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 (shallow)	3/23/95	Augeus	-	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	6/21/95	Augeus	-	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/11/95	Augeus	-	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	4/16/96	PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	7/17/96	PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	10/23/96	PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/29/97	PES	NS	NS	NS	NS	NS
	1/20/00	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	8/8/00	AEI	NS	NS	NS	NS	NS
	2/15/01	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	8/29/01	AEI	NS	NS	NS	NS	NS
	3/12/02	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/27/02	AEI	NS	NS	NS	NS	NS
	3/25/03	AEI	ND<0.5	ND<0.5	1.8	ND<0.5	ND<0.5
	10/2/03	AEI	NS	NS	NS	NS	NS
	10/17/06	AEI	ND<0.5	ND<0.5	2.2	ND<0.5	ND<RL
	5/2/07	AEI	ND<0.5	ND<0.5	ND<0.5	0.69	ND<RL
	10/17/07	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	4/1/08	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	10/2/08	AEI	ND<0.5	ND<0.5	0.60	ND<0.5	ND<RL
	4/2/09	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	10/2/09	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	4/9/10	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
10/25/10	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
5/27/11	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
10/19/11	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
AMW-4 (shallow)	5/15/95	Augeus	NR	ND<50	2400	ND<50	NR
	6/21/95	Augeus	NR	ND<50	2500	ND<50	NR
	9/13/95	Augeus	NR	ND<25	1100	ND<25	NR
	4/16/96	PES	ND<10	ND<10	1200	10	NR
	7/17/96	PES	ND<10	ND<10	860	ND<10	NR
	10/23/96	PES	ND<0.5	ND<0.5	22	0.5	NR
	9/29/97	PES	ND<3	ND<3	340	3	NR
	1/29/99	AEI	ND<3	ND<3	100	ND<3	ND<3
	5/5/99	AEI	ND<5	ND<5	210	ND<5	ND<5
	9/10/99	AEI	10	ND<5	240	18	ND<5
	1/20/00	AEI	46	ND<2.5	97	6.2	ND<2.5
	8/8/00	AEI	ND<5	ND<5	440	8	ND<5
	2/15/01	AEI	ND<2.5	ND<2.5	81	2.6	ND<2.5
	8/29/01	AEI	ND<2.5	ND<2.5	230	4.6	ND<2.5
	3/12/02	AEI	ND<5.0	ND<5.0	190	ND<5.0	ND<5.0
	9/27/02	AEI	ND<5.0	ND<5.0	220	ND<5.0	10***
	3/25/03	AEI	1.2	ND<1.0	22	1.9	ND<1.0
	10/2/03	AEI	2.8	ND<0.5	50	2.8	ND<0.5
	10/17/06	AEI	9.9	ND<0.5	6.5	ND<0.5	ND<RL
	5/3/07	AEI	2.7	ND<0.5	5.1	1.2	ND<RL**
	10/17/07	AEI	4.0	ND<0.5	6.2	ND<0.5	ND<RL
	4/1/08	AEI	3.3	ND<0.5	5.8	2.6	0.85**
	10/2/08	AEI	11.0	ND<1.0	34	2.9	ND<RL <sup>3</sup>
4/2/09	AEI	2.8	ND<0.5	8.0	0.76	ND<RL <sup>4</sup>	
10/2/09	AEI	11	ND<0.5	4.3	0.89	ND<RL <sup>5</sup>	
4/9/10	AEI	1.9	ND<0.5	11	1.6	ND<RL <sup>7</sup>	
10/22/10	AEI	ND<0.5	ND<0.5	0.76	0.53	ND<RL	
5/27/11	AEI	ND<0.5	ND<0.5	1.9	0.75	ND<RL	
10/19/11	AEI	6.0	ND<0.5	1.2	0.68	ND<RL	
AMW-5 (shallow)	5/15/95	Augeus	NR	ND<0.5	1.2	ND<0.5	NR
	6/21/95	Augeus	NR	ND<0.5	ND<0.5	ND<0.5	NR
	9/13/95	Augeus	NR	ND<0.5	ND<0.5	ND<0.5	NR
	4/16/96	PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NR
	7/17/96	PES	ND<0.5	ND<0.5	0.6	ND<0.5	NR
	10/23/96	PES	ND<0.5	ND<0.5	0.8	ND<0.5	NR
	9/29/97	PES	ND<0.5	ND<0.5	13	ND<0.5	NR
	1/29/99	AEI	NA	NA	NA	NA	NA
	5/5/99	AEI	ND<1	ND<1	36	ND<1	ND<1
	9/10/99	AEI	ND<1	ND<1	35	ND<1	ND<1
	1/20/00	AEI	ND<1	ND<1	36	ND<1	ND<1
	8/8/00	AEI	ND<0.5	ND<0.5	50	0.72	ND<0.5
	2/15/01	AEI	ND<0.5	ND<0.5	26	0.76	ND<0.5
	8/29/01	AEI	ND<0.5	ND<0.5	28	0.87	ND<0.5
	3/12/02	AEI	ND<0.5	ND<0.5	25	0.75	ND<0.5
	9/27/02	AEI	ND<0.5	ND<0.5	17	ND<0.5	ND<0.5
	3/25/03	AEI	ND<1.0	ND<1.0	23	ND<1.0	ND<1.0
	10/2/03	AEI	ND<0.5	ND<0.5	20	0.58	ND<0.5
	10/17/06	AEI	0.68	ND<0.5	22	0.88	ND<RL
	5/3/07	AEI	0.91	ND<0.5	42	2.0	ND<RL
	10/17/07	AEI	1.2	ND<0.5	42	2.0	ND<RL
	4/1/08	AEI	1.7	ND<0.5	50	2.8	ND<RL
	10/2/08	AEI	1.5	ND<1.0	46	2.3	ND<RL
4/2/09	AEI	ND<1.7	ND<1.7	56	2.9	ND<RL	
10/2/09	AEI	0.87	ND<0.5	31	1.4	ND<RL	
4/9/10	AEI	ND<1.0	ND<1.0	35	2.1	ND<RL	
10/22/10	AEI	0.93	ND<1.0	29	2.0	ND<RL	
5/27/11	AEI	0.76	ND<0.5	23	1.9	ND<RL	
10/19/11	AEI	ND<0.5	ND<0.5	20	1.5	ND<RL	

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-6 (shallow)	9/13/95	Augeus	NR	ND<25	930	ND<25	NR	
	4/16/96	PES	20	ND<10	1900	110	NR	
	7/17/96	PES	ND<30	ND<30	3300	280	NR	
	10/23/96	PES	ND<30	ND<30	2900	140	NR	
	9/29/97	PES	220	70	4600	580	NR	
	1/29/99	AEI	270	77	2400	390	ND<63	
	5/5/99	AEI	370	110	2700	470	ND<71	
	9/10/99	AEI	190	49	1400	250	ND<36	
	1/20/00	AEI	210	ND<35	1600	270	ND<35	
	8/8/00	AEI	150	56	1100	180	ND<25	
	2/15/01	AEI	190	40	930	200	ND<25	
	8/29/01	AEI	77	17	780	110	ND<10	
	3/12/02	AEI	150	37	1300	170	ND<25	
	9/27/02	AEI	67	ND<17	490	91	ND<17	
	3/25/2003	AEI	94	ND<33	740	110	ND<33	
	10/2/2003	AEI	66	13	440	60	ND<10	
	10/17/2006	AEI	32	4.9	98	14	ND<RL	
	5/3/2007	AEI	32	ND<5.0	120	22	ND<RL	
	10/17/2007	AEI	48	8.4	140	27	ND<RL <sup>2</sup>	
	4/1/2008	AEI	39	6.2	140	24	ND<RL	
	10/2/2008	AEI	43	7.1	130	26	ND<RL	
	4/2/2009	AEI	50	8.1	250	37	ND<RL	
	10/2/2009	AEI	55	11	240	44	ND<RL <sup>6</sup>	
4/9/2010	AEI	56	ND<25	530	61	ND<RL		
10/22/2010	AEI	48	10	260	42	ND<RL		
5/27/2011			Destroyed and Replaced with Well AMW-6R					
AMW-6R (shallow)	5/27/2011	AEI	54	7.5	210	45	ND<RL	
	10/19/2011	AEI	86	ND<12	570	86	ND<RL	
AMW-7 (shallow)	9/13/95	Augeus	NR	ND<25	2350	340	NR	
	4/16/96	PES	2200	60	2300	500	NR	
	7/17/96	PES	2100	ND<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	ND<3	95	12	ND<3	
	5/5/99	AEI		Well Covered During Construction				
AMW-8 (deep)	9/13/95	Augeus	-	ND<25	95	ND<25	ND<25	
	4/16/96	PES	ND<0.5	ND<0.5	0.8	ND<0.5	ND<0.5	
	7/17/96	PES	ND<0.5	ND<0.5	1.6	ND<0.5	ND<0.5	
	10/23/96	PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	9/29/97	PES	ND<0.5	ND<0.5	0.7	ND<0.5	ND<0.5	
	1/20/00	AEI	ND<0.5	ND<0.5	0.73	ND<0.5	ND<0.5	
	8/8/00	AEI	NS	NS	NS	NS	NS	
	2/15/01	AEI	ND<0.5	ND<0.5	1.7	ND<0.5	ND<0.5	
	8/29/01	AEI	NS	NS	NS	NS	NS	
	3/12/02	AEI	ND<0.5	ND<0.5	7.5	ND<0.5	ND<0.5	
	9/27/02	AEI	NS	NS	NS	NS	NS	
	3/25/03	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	10/2/03	AEI	NS	NS	NS	NS	NS	
	10/17/06	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
	5/3/07	AEI	NS	NS	NS	NS	NS	
	10/17/07	AEI	ND<0.5	ND<0.5	1.6	ND<0.5	ND<RL	
	4/1/08	AEI	NS	NS	NS	NS	NS	
	10/2/08	AEI	ND<0.5	ND<0.5	1.3	ND<0.5	ND<RL	
	4/2/09	AEI	NS	NS	NS	NS	NS	
	10/2/09	AEI	ND<0.5	ND<0.5	1.4	ND<0.5	ND<RL	
4/9/10	AEI	NS	NS	NS	NS	NS		
10/25/10	AEI	ND<0.5	ND<0.5	2.2	ND<0.5	ND<RL		
5/27/11	AEI	NS	NS	NS	NS	NS		
10/19/11	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL		
AMW-9 (deep)	9/13/95	Augeus	NR	ND<25	170	ND<25	NR	
	4/16/96	PES	7	ND<3	170	4	NR	
	7/17/96	PES	ND<3	ND<3	190	4	NR	
	10/23/96	PES	ND<3	ND<3	190	ND<3	NR	
	9/29/97	PES	ND<3	ND<3	110	ND<3	NR	
	1/29/99	AEI	ND<4	ND<4	90	ND<4	ND<4	
	5/5/99	AEI	ND<2.5	ND<2.5	94	ND<2.5	ND<2.5	
	9/10/99	AEI	ND<2.1	ND<2.1	99	ND<2.1	ND<2.1	
	1/20/00	AEI	ND<0.5	ND<0.5	100	ND<0.5	ND<0.5	
	8/8/00	AEI	ND<2.5	ND<2.5	130	ND<2.5	ND<2.5	
	2/15/01	AEI	ND<1.0	ND<1.0	69	ND<1.0	ND<1.0	
	8/29/01	AEI	ND<2.5	ND<2.5	98	ND<2.5	ND<2.5	
	3/12/02	AEI	ND<2.5	ND<2.5	100	ND<2.5	ND<2.5	
	9/27/02	AEI	ND<5.0	ND<5.0	80	ND<5.0	ND<5.0	
	3/25/03	AEI	4.1	ND<2.5	48	ND<2.5	ND<2.5	
	10/2/03	AEI	4.8	<0.5	36	1.1	ND<0.5	
	10/17/06	AEI	ND<1.7	ND<1.7	73	ND<1.7	ND<RL	
	5/3/07	AEI	ND<2.5	ND<2.5	86	ND<2.5	ND<RL	
	10/17/07	AEI	ND<2.5	ND<2.5	130	ND<2.5	ND<RL	
	4/1/08	AEI	ND<2.5	ND<2.5	130	ND<2.5	ND<RL	
	10/2/08	AEI	ND<2.5	ND<2.5	110	ND<2.5	ND<RL	
	4/2/09	AEI	ND<2.5	ND<2.5	180	ND<2.5	ND<RL	
	10/2/09	AEI	ND<2.5	ND<2.5	140	ND<2.5	ND<RL	
	4/9/10	AEI	ND<5.0	ND<5.0	160	ND<5.0	ND<RL	
	10/22/10	AEI	ND<1.7	ND<1.7	93	ND<1.7	ND<RL	
	5/27/11	AEI	ND<1.2	ND<1.2	53	ND<1.2	ND<RL	
	10/19/11	AEI	ND<0.5	ND<0.5	30	ND<0.5	ND<RL	

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
<b>FHS MW-10 (deep)</b>	10/9/97	PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	NR
	1/29/99	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	5/5/99	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/10/99	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	1/20/00	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	8/8/00	AEI	NS	NS	NS	NS	NS
	2/15/01	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	8/29/01	AEI	NS	NS	NS	NS	NS
	3/12/02	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/27/02	AEI	NS	NS	NS	NS	NS
	3/25/03	AEI	1.7	ND<1.0	18	2.5	5.0**
	10/6/03	AEI	ND<0.5	ND<0.5	1.4	ND<0.5	1.0**
	10/17/06	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	5/3/2007 <sup>1</sup>	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	10/17/07	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	4/1/08	AEI	ND<0.5	ND<0.5	0.88	ND<0.5	ND<RL
	10/2/08	AEI	ND<0.5	ND<0.5	3.4	ND<0.5	1.4**
	4/2/09	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	10/2/09	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	4/9/10	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
	10/22/10	AEI	NS	NS	NS	NS	NS
	5/27/11	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL
10/19/11	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL <sup>8</sup>	
<b>FHS MW-11 (deep)</b>	9/29/97	PES	ND<0.5	ND<0.5	4	ND<0.5	NR
	1/29/99	AEI	ND<0.5	ND<0.5	7	ND<0.5	ND<0.5
	5/5/99	AEI	ND<0.5	ND<0.5	7.1	ND<0.5	ND<0.5
	9/10/99	AEI	ND<0.5	ND<0.5	7.5	ND<0.5	ND<0.5
	1/20/00	AEI	ND<0.5	ND<0.5	7.5	ND<0.5	ND<0.5
	8/8/00	AEI	ND<0.5	ND<0.5	38	ND<0.5	ND<0.5
	2/15/01	AEI	ND<0.5	ND<0.5	18	ND<0.5	ND<0.5
	8/29/01	AEI	ND<0.5	ND<0.5	16	ND<0.5	ND<0.5
	3/12/02	AEI	ND<0.5	ND<0.5	13	ND<0.5	0.77**
	9/27/02	AEI	ND<1	ND<1	13	ND<1	6.4** 1.1***
	3/25/03	AEI	0.78	ND<0.5	12	0.88	4.0** 1.0****
	10/2/03		Well Inaccessible				
	10/17/06	AEI	ND<0.5	ND<0.5	20	ND<0.5	ND<RL
	5/3/2007 <sup>1</sup>	AEI	ND<0.5	ND<0.5	25	1.1	ND<RL
	10/17/07	AEI	ND<0.5	ND<0.5	31	0.71	ND<RL
	4/1/08	AEI	ND<0.5	ND<0.5	26	0.61	ND<RL
	10/2/08	AEI	ND<0.5	ND<0.5	31	0.74	ND<RL
	4/2/09	AEI	ND<0.5	ND<0.5	32	0.71	ND<RL
	10/5/09	AEI	ND<0.5	ND<0.5	32	0.70	ND<RL
	4/9/10	AEI	ND<1.0	ND<1.0	32	ND<1.0	ND<RL
	10/22/10	AEI	NS	NS	NS	NS	NS
	5/27/11	AEI	ND<1.7	ND<1.7	63	1.9	NS
10/19/11	AEI	ND<1.0	ND<1.0	49	ND<1.0	ND<RL	
<b>MW-6 (deep)</b>	3/11/95	EMCON	ND<20	ND<0.5	1300	ND<20	NR
	6/5/95	EMCON	ND<20	ND<20	2000	ND<20	NR
	8/29/95	EMCON	ND<20	ND<20	1300	ND<20	NR
	9/11/95	Augueus	NR	ND<50	2000	ND<50	NR
	11/16/95	EMCON	ND<20	ND<20	1300	ND<20	NR
	2/28/96	EMCON	ND<20	ND<20	960	ND<20	NR
	4/16/96	PES	10	10	1400	10	NR
	5/28/96	EMCON	ND<20	ND<20	970	ND<20	NR
	7/17/96	PES	ND<5	ND<5	590	ND<5	NR
	8/19/96	EMCON	ND<20	ND<20	820	ND<20	NR
	10/23/96	PES	ND<5	ND<5	680	ND<5	NR
	11/21/96	EMCON	ND<20	ND<20	680	ND<20	NR
	3/26/97	EMCON	ND<40	ND<40	830	ND<40	NR
	5/20/97	EMCON	ND<5	ND<5	270	ND<5	NR
	9/29/97	PES	ND<10	ND<10	670	ND<10	NR
	1/29/99	AEI	1.4	ND<1.3	49	3	ND<1.3
	5/5/99	AEI	19	ND<11	530	38	ND<11
	9/10/99	AEI	27	ND<12	560	53	ND<12
	1/20/00	AEI	18	ND<8.5	660	31	ND<8.5
	8/8/00	AEI	98	16	1700	170	ND<5
	2/15/01	AEI	64	ND<10	650	87	ND<10
	8/29/01	AEI	19	ND<5.0	550	38	ND<5.0
	3/12/02	AEI	61	ND<20	1200	99	ND<20
	9/27/02	AEI	ND<12	ND<12	300	27	ND<12
	3/25/03	AEI	2.6	ND<2.5	49	3.8	ND<2.5
	10/2/03	AEI	13	ND<5.0	340	21	ND<5.0
	10/17/06	AEI	16	ND<5.0	320	18	ND<RL
5/3/07	AEI	0.92	ND<0.5	39	2.1	ND<RL	
10/17/07	AEI	10	ND<5.0	310	18	ND<RL	
4/1/08	AEI	6.8	ND<1.7	76	9.2	ND<RL	
10/2/08	AEI	21	ND<12	380	33	ND<RL	
4/2/09	AEI	17	ND<10	420	28	ND<RL	
10/2/09	AEI	22	ND<10	410	29	ND<RL	
4/9/10	AEI	5.5	ND<5.0	160	10	ND<RL	
10/25/10	AEI	26	ND<10	400	30	ND<RL	
5/27/11		Well Destroyed by ARCO; Case Closure at 10600 MacArthur Blvd.					

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	
MW-7 (shallow)	3/11/95	EMCON	NS	NS	NS	NS	NS	
	6/5/95	EMCON	ND<10	ND<10	ND<10	ND<10	ND<10	
	8/29/95	EMCON	ND<10	ND<10	ND<10	ND<10	ND<10	
	9/11/95	Augeus	85	ND<50	-	ND<50	ND<50	
	11/16/95	EMCON	ND<20	ND<20	ND<20	ND<20	ND<20	
	2/28/96	EMCON	ND<10	ND<10	ND<10	ND<10	ND<10	
	4/16/96	PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	5/28/96	EMCON	ND<10	ND<10	ND<10	ND<10	ND<10	
	7/17/96	PES	0.6	ND<0.5	ND<0.5	0.6	ND<0.5	
	8/19/96	EMCON	ND<1	ND<1	ND<1	ND<1	ND<1	
	10/23/96	PES	0.6	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	11/21/96	EMCON	ND<10	ND<10	ND<10	ND<10	ND<10	
	3/26/97	EMCON	ND<20	ND<20	ND<20	ND<20	ND<20	
	5/20/97	EMCON	ND<10	ND<10	ND<10	ND<10	ND<10	
	9/29/97	PES	ND<10	ND<10	ND<10	ND<10	ND<10	
	1/20/00	AEI	ND<6.5	ND<6.5	ND<6.5	ND<6.5	ND<6.5	
	8/8/00	AEI	NS	NS	NS	NS	NS	
	2/15/01	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	8/29/01	AEI	NS	NS	NS	NS	NS	
	3/12/02	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	9/27/02	AEI	NS	NS	NS	NS	NS	
	3/25/03	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	10/2/03	AEI	NS	NS	NS	NS	NS	
	10/17/06	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL****	
	5/3/07	AEI	NS	NS	NS	NS	NS	
	10/17/07	AEI	ND<10	ND<10	ND<10	ND<10	ND<RL	
	4/1/08	AEI	NS	NS	NS	NS	NS	
	10/2/08	AEI	ND<1.0	ND<1.0	2.2	ND<1.0	ND<RL	
	4/2/09	AEI	NS	NS	NS	NS	NS	
	10/2/09	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
	4/9/10	AEI	NS	NS	NS	NS	NS	
	10/22/10	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
5/27/11	Well Destroyed by ARCO; Case Closure at 10600 MacArthur Blvd.							
WGR MW-2 (Shallow)	10/17/06	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
	5/3/07	AEI	NS	NS	NS	NS	NS	
	10/17/07	AEI	NS	NS	NS	NS	NS	
	4/1/08	AEI	NS	NS	NS	NS	NS	
	10/2/08	AEI	NS	NS	NS	NS	NS	
	4/2/09	AEI	NS	NS	NS	NS	NS	
	10/2/09	AEI	NS	NS	NS	NS	NS	
	4/9/10	AEI	NS	NS	NS	NS	NS	
	10/22/10	AEI	NS	NS	NS	NS	NS	
	5/27/11	AEI	NS	NS	NS	NS	NS	
	10/19/11	AEI	NS	NS	NS	NS	NS	
WGR MW-3 (Shallow)	10/17/06	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
	5/3/07	AEI	NS	NS	NS	NS	NS	
	10/17/07	AEI	NS	NS	NS	NS	NS	
	4/1/08	AEI	NS	NS	NS	NS	NS	
	10/2/08	AEI	NS	NS	NS	NS	NS	
	4/2/09	AEI	NS	NS	NS	NS	NS	
	10/2/09	AEI	NS	NS	NS	NS	NS	
	4/9/10	AEI	NS	NS	NS	NS	NS	
	10/22/10	AEI	NS	NS	NS	NS	NS	
	5/27/11	Well Destroyed by ARCO; Case Closure at 10600 MacArthur Blvd.						
	WGR MW-4 (deep)	4/16/96	PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
7/17/96		PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
10/23/96		PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
9/29/97		PES	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
2/15/01		AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
8/29/01		AEI	NS	NS	NS	NS	NS	
3/12/02		AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
9/27/02		AEI	NS	NS	NS	NS	NS	
3/25/03		AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
10/2/03		AEI	NS	NS	NS	NS	NS	
10/17/06		AEI	ND<0.5	ND<0.5	0.62	ND<0.5	ND<RL	
5/3/07		AEI	NS	NS	NS	NS	NS	
10/17/07		AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
4/1/08		AEI	NS	NS	NS	NS	NS	
10/2/08		AEI	ND<0.5	ND<0.5	0.55	ND<0.5	ND<RL	
4/2/09		AEI	NS	NS	NS	NS	NS	
10/2/09		AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
4/9/10		AEI	NS	NS	NS	NS	NS	
10/22/10		AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL	
5/27/11		AEI	NS	NS	NS	NS	NS	
10/19/11	AEI	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<RL		

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
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**Table 2 Notes:**

Please refer to the Laboratory Analytical Data for further detailed lab information including Reporting Limits and Dilution Factors

\*VHCs = All other chemicals by EPA method 601/8010 or 8260

\*\* Chloroform (trichloromethane)

NS = Well not sampled

\*\*\* Dibromochloromethane

NR = Not Reported

\*\*\*\* Methylene Chloride

µg/L = micrograms per liter (parts per billion)

\*\*\*\*\* bromodichloromethane

Tetrachloroethene (PCE)

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

Trichloroethene (TCE)

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

<sup>1</sup> = Reported by laboratroy without letters FHS as prefix

<sup>2</sup> = Vinyl Chloride detected at a concentration of 1.9 ug/L

<sup>3</sup> = Vinyl Chloride detected at a concentration of 2.0 ug/L

<sup>4</sup> = Vinyl Chloride detected at a concentration of 0.66 ug/L

<sup>5</sup> = Vinyl Chloride detected at a concentration of 4.0 ug/L

<sup>6</sup> = Vinyl Chloride detected at a concentration of 11 ug/L

<sup>7</sup> = Chloroform detected at a concentration of 0.69 ug/L

<sup>8</sup> = Chloroform detected at a concentration of 0.64 ug/L

\* Available data from AMW-7 is presented although this well was covered during 1999 construction activities

RL = Reporting Limit



**APPENDIX A**

**GROUNDWATER MONITORING WELL  
FIELD SAMPLING FORMS**

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

**Monitoring Well Number: AMW-1**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	64.51		
Depth of Well	45.00		
Depth to Water (from top of casing)	23.41		
Water Elevation (feet above msl)	41.10		
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)	<b>10.4</b>		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	Clear		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3-VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
7:45	2	19.19	7.38	1,284	3.10	-56.5	Clear
	4	19.21	7.40	1,303	2.30	-72.1	Clear
	6	19.20	7.42	1,310	1.61	-88.2	Clear
8:00	8	19.22	7.42	1,314	0.73	-89.7	Clear

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

Dry at around 9 gallons

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

**Monitoring Well Number: AMW-4**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	64.79		
Depth of Well	25.00		
Depth to Water (from top of casing)	12.42		
Water Elevation (feet above msl)	52.37		
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)	<b>6.0</b>		
Actual Volume Purged (gallons)	6.0		
Appearance of Purge Water	Clear		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
9:00	2	19.23	8.11	684	2.85	-180.5	Clear
	4	19.25	8.16	688	1.54	-177.3	Clear
9:15	6	19.25	8.16	692	1.20	-167.1	Clear

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


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

**Monitoring Well Number: AMW-5**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	64.97		
Depth of Well	30.00		
Depth to Water (from top of casing)	14.68		
Water Elevation (feet above msl)	50.29		
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)	7.4		
Actual Volume Purged (gallons)	7.0		
Appearance of Purge Water	Clear		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
10:35	2	19.20	7.90	1,296	1.82	-111.0	Clear
	4	19.19	7.85	1,290	1.01	-108.3	Clear
	6	19.18	7.82	1,288	0.83	-115.4	Clear
10:45	7	19.18	7.82	1,287	0.75	-125.3	Clear

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


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

**Monitoring Well Number: AMW-6R**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)			
Depth of Well	23.00		
Depth to Water (from top of casing)	14.50		
Water Elevation (feet above msl)	NA		
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)	4.1		
Actual Volume Purged (gallons)	4.0		
Appearance of Purge Water	Clear		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
12:20	1	19.20	8.00	1,338	5.87	-132.5	Clear
	2	19.18	7.98	1,343	5.80	-130.4	Clear
	3	19.18	7.98	1,350	5.33	-128.7	Clear
12:30	4	19.18	7.97	1,355	5.13	-120.1	Clear

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




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

**Monitoring Well Number: AMW-8**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	64.55		
Depth of Well	45.00		
Depth to Water (from top of casing)	17.15		
Water Elevation (feet above msl)	47.40		
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)	<b>13.4</b>		
Actual Volume Purged (gallons)	13.0		
Appearance of Purge Water	Clear		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
8:15	3	19.26	7.70	1,313	2.23	-101.2	Clear
	6	19.28	7.71	1,323	1.62	-95.7	Clear
	9	19.25	7.69	1,331	0.96	-88.3	Clear
8:30	13	19.24	7.68	1,338	0.63	-62.1	Clear

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


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

**Monitoring Well Number: AMW-9**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	63.48		
Depth of Well	54.30		
Depth to Water (from top of casing)	24.07		
Water Elevation (feet above msl)	39.41		
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)	<b>14.5</b>		
Actual Volume Purged (gallons)	14.0		
Appearance of Purge Water	Clear		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
11:00	3	19.25	7.83	852	3.82	-150.4	Clear
	6	19.22	7.88	843	3.60	-155.3	Clear
	9	19.23	7.85	840	3.03	-160.1	Clear
	12	19.21	7.80	835	2.85	-164.2	Clear
11:15	14	19.21	7.81	830	2.79	-168.8	Clear

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


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

**Monitoring Well Number: WGR MW-2**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	63.18		
Depth of Well	28.00		
Depth to Water (from top of casing)	24.06		
Water Elevation (feet above msl)	39.12		
Well Volumes Purged	NA		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	NA		
Actual Volume Purged (gallons)	Not sampled		
Appearance of Purge Water	--		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

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

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

Well not sampled in accordance with sampling schedule

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

**Monitoring Well Number: WGR MW-4**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	60.02		
Depth of Well	44.96		
Depth to Water (from top of casing)	26.97		
Water Elevation (feet above msl)	33.05		
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)	35.1		
Actual Volume Purged (gallons)	30.0		
Appearance of Purge Water	Initially clear, cloudy around 25 gallons		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
9:45	5	19.28	8.10	813	3.21	-110.8	Clear
	10	19.27	8.08	822	2.68	-118.3	Clear
	15	19.28	8.04	828	2.02	-121.4	Clear
	20	19.28	7.99	832	1.68	-128.1	Clear
10:15	25	19.28	7.97	833	1.27	-130.3	Cloudy

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

Well dry by 30 gallons

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

**Monitoring Well Number: FHS MW-10**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	52.34		
Depth of Well	51.94		
Depth to Water (from top of casing)	24.18		
Water Elevation (feet above msl)	28.16		
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)	<b>13.3</b>		
Actual Volume Purged (gallons)	13.0		
Appearance of Purge Water	Clear		
Free Product Present?	n/a	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
7:00	3	19.32	7.30	621	7.83	-101.8	Clear
	6	19.31	7.32	630	3.27	-98.3	Clear
	9	19.30	7.31	638	1.23	-88.7	Clear
	12	19.30	7.33	640	1.05	-70.6	Clear
7:30	13	19.30	7.33	644	0.95	-68.3	Clear

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


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

**Monitoring Well Number: FHS MW-11**

Project Name:	Foothill Square	Date of Sampling:	10/19/2011
Job Number:	261829	Name of Sampler:	J. Sigg
Project Address:	10700 MacArthur Blvd., Oakland		

**MONITORING WELL DATA**

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	54.06		
Depth of Well	64.07		
Depth to Water (from top of casing)	27.23		
Water Elevation (feet above msl)	26.83		
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)	17.7		
Actual Volume Purged (gallons)	18.0		
Appearance of Purge Water	Clear		
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity ( $\mu$ sec/cm)	DO (mg/L)	ORP (meV)	Comments
11:30	3	19.88	8.01	898	4.37	-189.4	Clear
	6	19.90	7.95	890	2.20	-190.7	Clear
	9	19.91	7.90	885	1.20	-185.4	Clear
	12	19.91	7.88	880	1.13	-180.3	Clear
	15	19.92	7.83	873	0.98	-179.4	Clear
11:50	18	19.92	7.80	865	0.90	-170.5	Clear

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

--

## **APPENDIX B**

### **LABORATORY ANALYTICAL REPORT WITH CHAIN OF CUSTODY DOCUMENTATION**



## Analytical Report

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #261829; Foothill Square	Date Sampled: 10/19/11
		Date Received: 10/19/11
	Client Contact: Jeremy Smith	Date Reported: 10/24/11
	Client P.O.: #WC083297	Date Completed: 10/21/11

**WorkOrder: 1110575**

October 24, 2011

Dear Jeremy:

Enclosed within are:

- 1) The results of the **9** analyzed samples from your project: **#261829; Foothill Square,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
 Laboratory Manager  
 McC Campbell Analytical, Inc.

*The analytical results relate only to the items tested.*









### Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **10/19/2011 1:57:48 PM**  
 Project Name: **#261829; Foothill Square** Checklist completed and reviewed by: **Maria Venegas**  
 WorkOrder N°: **1110575** Matrix: Water Carrier: Client Drop-In

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
 Container/Temp Blank temperature Cooler Temp: 8.2°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted   
 Sample labels checked for correct preservation? Yes  No   
 Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

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Client contacted: Date contacted: Contacted by:

Comments:



AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #261829; Foothill Square	Date Sampled: 10/19/11
	Client Contact: Jeremy Smith	Date Received: 10/19/11
	Client P.O.: #WC083297	Date Extracted: 10/20/11
		Date Analyzed: 10/20/11

**Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1110575

Lab ID	1110575-001A	1110575-002A	1110575-003A	1110575-004A	Reporting Limit for DF=1	
Client ID	AMW-1	AMW-4	AMW-5	AMW-6R	S	W
Matrix	W	W	W	W		
DF	1	1	1	25		
Compound	Concentration				µg/kg	µg/L
Bromodichloromethane	ND	ND	ND	ND<12	NA	0.5
Bromoform	ND	ND	ND	ND<12	NA	0.5
Bromomethane	ND	ND	ND	ND<12	NA	0.5
Carbon Tetrachloride	ND	ND	ND	ND<12	NA	0.5
Chlorobenzene	ND	ND	ND	ND<12	NA	0.5
Chloroethane	ND	ND	ND	ND<12	NA	0.5
Chloroform	ND	ND	ND	ND<12	NA	0.5
Chloromethane	ND	ND	ND	ND<12	NA	0.5
Dibromochloromethane	ND	ND	ND	ND<12	NA	0.5
1,2-Dibromoethane (EDB)	ND	ND	ND	ND<12	NA	0.5
1,2-Dichlorobenzene	ND	ND	ND	ND<12	NA	0.5
1,3-Dichlorobenzene	ND	ND	ND	ND<12	NA	0.5
1,4-Dichlorobenzene	ND	ND	ND	ND<12	NA	0.5
Dichlorodifluoromethane	ND	ND	ND	ND<12	NA	0.5
1,1-Dichloroethane	ND	ND	ND	ND<12	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND<12	NA	0.5
1,1-Dichloroethene	ND	ND	ND	ND<12	NA	0.5
cis-1,2-Dichloroethene	ND	6.0	ND	86	NA	0.5
trans-1,2-Dichloroethene	ND	ND	ND	ND<12	NA	0.5
1,2-Dichloropropane	ND	ND	ND	ND<12	NA	0.5
cis-1,3-Dichloropropene	ND	ND	ND	ND<12	NA	0.5
trans-1,3-Dichloropropene	ND	ND	ND	ND<12	NA	0.5
Freon 113	ND	ND	ND	ND<250	NA	10
Methylene chloride	ND	ND	ND	ND<12	NA	0.5
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND<12	NA	0.5
1,1,1,2,2-Tetrachloroethane	ND	ND	ND	ND<12	NA	0.5
Tetrachloroethene	ND	1.2	20	570	NA	0.5
1,1,1-Trichloroethane	ND	ND	ND	ND<12	NA	0.5
1,1,2-Trichloroethane	ND	ND	ND	ND<12	NA	0.5
Trichloroethene	ND	0.68	1.5	86	NA	0.5
Trichlorofluoromethane	ND	ND	ND	ND<12	NA	0.5
Vinyl Chloride	ND	ND	ND	ND<12	NA	0.5

**Surrogate Recoveries (%)**

%SS1:	98	96	85	91	
%SS2:	98	94	88	97	
%SS3:	96	94	94	95	
<b>Comments</b>					

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

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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



AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #261829; Foothill Square	Date Sampled: 10/19/11
	Client Contact: Jeremy Smith	Date Received: 10/19/11
	Client P.O.: #WC083297	Date Extracted: 10/20/11
		Date Analyzed: 10/20/11

**Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1110575

Lab ID	1110575-005A	1110575-006A	1110575-007A	1110575-008A	Reporting Limit for DF=1	
Client ID	AMW-8	AMW-9	FHS MW-10	FHS MW-11	S	W
Matrix	W	W	W	W		
DF	1	1	1	2		
Compound	Concentration				µg/kg	µg/L
Bromodichloromethane	ND	ND	ND	ND<1.0	NA	0.5
Bromoform	ND	ND	ND	ND<1.0	NA	0.5
Bromomethane	ND	ND	ND	ND<1.0	NA	0.5
Carbon Tetrachloride	ND	ND	ND	ND<1.0	NA	0.5
Chlorobenzene	ND	ND	ND	ND<1.0	NA	0.5
Chloroethane	ND	ND	ND	ND<1.0	NA	0.5
Chloroform	ND	ND	0.64	ND<1.0	NA	0.5
Chloromethane	ND	ND	ND	ND<1.0	NA	0.5
Dibromochloromethane	ND	ND	ND	ND<1.0	NA	0.5
1,2-Dibromoethane (EDB)	ND	ND	ND	ND<1.0	NA	0.5
1,2-Dichlorobenzene	ND	ND	ND	ND<1.0	NA	0.5
1,3-Dichlorobenzene	ND	ND	ND	ND<1.0	NA	0.5
1,4-Dichlorobenzene	ND	ND	ND	ND<1.0	NA	0.5
Dichlorodifluoromethane	ND	ND	ND	ND<1.0	NA	0.5
1,1-Dichloroethane	ND	ND	ND	ND<1.0	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND<1.0	NA	0.5
1,1-Dichloroethene	ND	ND	ND	ND<1.0	NA	0.5
cis-1,2-Dichloroethene	ND	ND	ND	ND<1.0	NA	0.5
trans-1,2-Dichloroethene	ND	ND	ND	ND<1.0	NA	0.5
1,2-Dichloropropane	ND	ND	ND	ND<1.0	NA	0.5
cis-1,3-Dichloropropene	ND	ND	ND	ND<1.0	NA	0.5
trans-1,3-Dichloropropene	ND	ND	ND	ND<1.0	NA	0.5
Freon 113	ND	ND	ND	ND<20	NA	10
Methylene chloride	ND	ND	ND	ND<1.0	NA	0.5
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND<1.0	NA	0.5
1,1,1,2,2-Tetrachloroethane	ND	ND	ND	ND<1.0	NA	0.5
Tetrachloroethene	ND	30	ND	49	NA	0.5
1,1,1-Trichloroethane	ND	ND	ND	ND<1.0	NA	0.5
1,1,2-Trichloroethane	ND	ND	ND	ND<1.0	NA	0.5
Trichloroethene	ND	ND	ND	ND<1.0	NA	0.5
Trichlorofluoromethane	ND	ND	ND	ND<1.0	NA	0.5
Vinyl Chloride	ND	ND	ND	ND<1.0	NA	0.5

**Surrogate Recoveries (%)**

%SS1:	95	95	100	97	
%SS2:	99	99	97	98	
%SS3:	95	95	95	97	
<b>Comments</b>					

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

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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





AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #261829; Foothill Square	Date Sampled: 10/19/11
	Client Contact: Jeremy Smith	Date Received: 10/19/11
	Client P.O.: #WC083297	Date Extracted: 10/20/11
		Date Analyzed: 10/20/11

**Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1110575

Lab ID	1110575-009A				Reporting Limit for DF = 1	
Client ID	WGR MW-4					
Matrix	W				S	W
DF	1					

Compound	Concentration				µg/kg	µg/L
Bromodichloromethane	ND				NA	0.5
Bromoform	ND				NA	0.5
Bromomethane	ND				NA	0.5
Carbon Tetrachloride	ND				NA	0.5
Chlorobenzene	ND				NA	0.5
Chloroethane	ND				NA	0.5
Chloroform	ND				NA	0.5
Chloromethane	ND				NA	0.5
Dibromochloromethane	ND				NA	0.5
1,2-Dibromoethane (EDB)	ND				NA	0.5
1,2-Dichlorobenzene	ND				NA	0.5
1,3-Dichlorobenzene	ND				NA	0.5
1,4-Dichlorobenzene	ND				NA	0.5
Dichlorodifluoromethane	ND				NA	0.5
1,1-Dichloroethane	ND				NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.5
1,1-Dichloroethene	ND				NA	0.5
cis-1,2-Dichloroethene	ND				NA	0.5
trans-1,2-Dichloroethene	ND				NA	0.5
1,2-Dichloropropane	ND				NA	0.5
cis-1,3-Dichloropropene	ND				NA	0.5
trans-1,3-Dichloropropene	ND				NA	0.5
Freon 113	ND				NA	10
Methylene chloride	ND				NA	0.5
1,1,1,2-Tetrachloroethane	ND				NA	0.5
1,1,1,2,2-Tetrachloroethane	ND				NA	0.5
Tetrachloroethene	ND				NA	0.5
1,1,1-Trichloroethane	ND				NA	0.5
1,1,2-Trichloroethane	ND				NA	0.5
Trichloroethene	ND				NA	0.5
Trichlorofluoromethane	ND				NA	0.5
Vinyl Chloride	ND				NA	0.5

**Surrogate Recoveries (%)**

%SS1:	101			
%SS2:	98			
%SS3:	97			

**Comments**

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

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 62010

WorkOrder: 1110575

EPA Method: SW8260B		Extraction: SW5030B							Spiked Sample ID: 1110566-003B			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Chlorobenzene	ND	10	104	106	2.07	108	107	0.628	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	107	110	3.40	114	114	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	114	122	7.20	120	121	0.693	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	94.7	95.1	0.474	98	98.6	0.553	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	107	110	2.95	112	113	0.698	70 - 130	30	70 - 130	30
%SS1:	116	25	115	116	1.30	115	116	0.781	70 - 130	30	70 - 130	30
%SS2:	108	25	110	110	0	110	109	0.279	70 - 130	30	70 - 130	30
%SS3:	104	2.5	100	101	0.723	101	102	0.673	70 - 130	30	70 - 130	30

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

#### BATCH 62010 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1110575-001A	10/19/11 8:00 AM	10/20/11	10/20/11 1:50 PM	1110575-002A	10/19/11 9:15 AM	10/20/11	10/20/11 9:19 PM
1110575-003A	10/19/11 10:45 AM	10/20/11	10/20/11 3:17 PM	1110575-004A	10/19/11 12:30 PM	10/20/11	10/20/11 9:59 PM
1110575-005A	10/19/11 8:30 AM	10/20/11	10/20/11 4:37 PM	1110575-006A	10/19/11 11:15 AM	10/20/11	10/20/11 5:17 PM
1110575-007A	10/19/11 7:30 AM	10/20/11	10/20/11 5:58 PM	1110575-008A	10/19/11 11:50 AM	10/20/11	10/20/11 11:20 PM
1110575-009A	10/19/11 10:15 AM	10/20/11	10/20/11 7:18 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$ ;  $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$ .

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 freon 113 may occasionally appear in the method blank at low levels.