

**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

**RECEIVED**

8:54 am, Jun 24, 2011

Alameda County  
Environmental Health

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

Dear Mr. Wickham:

ACEH has issued the following requirement:

**“PERJURY STATEMENT**

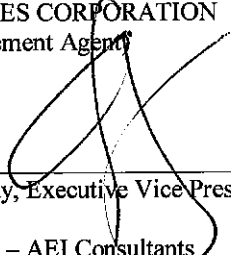
**All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document 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

June 23, 2011

## WELL REPLACEMENT AND GROUNDWATER MONITORING REPORT- 1<sup>st</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  
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Chicago

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Los Angeles

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San Jose

National Presence

Regional Focus

Local Solutions



June 23, 2011

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

**Subject: Well Replacement and Groundwater Monitoring Report –  
1<sup>st</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 well replacement and 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 May 12, 2011 well replacement activities, as well as the semi-annual monitoring activities conducted on May 27, 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.

### **Well Destruction Activities**

Due to the proximity of well AMW-6 to the proposed construction activities, it was determined that it would be necessary to relocate the well. Prior to initiating the well destruction activities, a well destruction permit (Permit No. W2011-0290) was obtained from the Alameda County Public Works Agency (ACPWA). A copy of the well permit is presented in Appendix A: Permit Documentation. The ACPWA was contacted with the schedule for the completion of the work and ACPWA personnel was onsite during the destruction of well AMW-6. In addition, onsite activities were performed under the direct supervision of AEI personnel.

On May 12, 2011, AMW-6 was destroyed by PeneCore Drilling (C 57- License No. 906889) by initially placing a tremie pipe at the bottom of the screened interval. Type I/II Portland neat cement (mixed at approximately 6 gallons of fresh water per 94 pound bag of cement) was then poured through the tremie pipe to the bottom of the well. Once the neat cement filled the monitoring well, a pressure of 25 pounds per square inch (psi) was applied to the well for approximately 5 minutes. The well was then topped off with neat cement.

The well box was temporarily left in place as construction activities are planned to remove the concrete around the well box and resurface the area. Displaced groundwater generated during the grouting activities was left onsite was stored on-site in sealed, labeled, department of transportation approved, 55-gallon and properly disposed of by A&S Environmental.

Furthermore, during sampling activities, it was observed that wells MW-6, MW-7, and WGR-MW-3 had been paved over. Based on Geotracker records, it appears that these wells were destroyed in conjunction with the ARCO no further action at the adjacent site. Previously, these wells had been shared between ARCO and the subject in order to monitor the dissolved groundwater plumes. Therefore, these wells were not able to be gauged or sampled.

### **Well Replacement Activities**

Prior to replacing well AMW-6, a well installation permit (Permit No. W2011-0291) was obtained from the ACPWA and Underground Service Alert North was notified to identify public utilities in the planned work area. The drilling work was performed by PeneCore under the direction of AEI professional staff. The ACPWA was given adequate notification of field schedule to perform an inspection, however a representative of the ACPWA was not present during grouting activities. A copy of the ACPWA drilling permit is included in Appendix A.

On May 12, 2011, AEI advanced one soil boring (AMW-6R) at the property, and converted the boring into a groundwater monitoring well. The borehole was initially logged using a truck mounted, direct push rig capable of spinning hollow stem augers. Soil samples were continuously

collected into clear plastic liners from approximately 8 feet below ground surface (bgs), to the terminus of the boring at 25 feet bgs. Soil samples were described by AEI personnel and logged using the unified soil classification system.

Soil from AMW-6R was described as consisting of concrete and fill material to a depth of approximately 3 feet bgs. The concrete was underlain by silty clay to an estimated depth of 8 feet bgs, where 4 inches of concrete was encountered. The concrete was encountered in three separate borings. The augers could not drill past the concrete during the first two attempts, however during the last attempt, the augers were able to drill through the concrete. Silty clay was observed beneath the concrete to a depth of approximately 16 feet bgs, where an increase of sand was observed. The sand was estimated at up to 40% to a depth of 19.5 feet bgs and included some trace gravel. Silty clay was observed beneath the sandy clay to a depth of 22.8 feet bgs where a thin (approximately 3 inches) lens of gravelly clay was observed. The gravelly clay was underlain by a soft clayey silt to the terminus of the boring, 25 feet bgs. Please refer to the boring log in Appendix B for complete drilling conditions.

Following logging activities, the borehole was converted into a groundwater monitoring well by overdrilling the well with 8.25 inch diameter hollow stem augers to a depth of approximately 23 feet bgs and placing 2" diameter, schedule 40 PVC casing with 10 feet of factory slotted 0.010-inch well screen through the augers. The screen interval was based on observed field conditions during drilling and previous well screen placement for the onsite groundwater monitoring wells. An annular sand pack (consisting of clean #2/12 Monterey Sand) was installed through the augers to approximately 2 feet above the screened interval. A 2 foot bentonite seal was placed above the sand and hydrated with water while the remainder of the boring was sealed with neat cement grout. A flush mounted traffic rated well box was installed over the casing, and an expanding, locking inner cap was placed on the casing top. The drilling and well installation work was performed under the ACPWA permit guidelines. DWR well registration forms (DWR Form 188) have been completed for the new well and has been forwarded to the ACPWA.

Soil cuttings generated during the drilling and well installation activities were stored on-site in sealed, labeled, department of transportation approved, 55-gallon and properly disposed of by A&S Environmental.

The newly installed monitoring well was developed by surging, bailing, and purging the wells to remove accumulated fines from the casing and stabilize the sand pack on May 27, 2011. The well was developed by purging the well until dry, approximately 12 gallons of water removed.

### **Summary of Monitoring Activities**

On May 27, 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 seven of the wells (AMW-1, AMW-4, AMW-5, AMW-6R, AMW-9, FHSMW-10, and FHSMW-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 increased between 2 and 4 feet in the wells since the last monitoring event. Groundwater levels in the shallow aquifer ranged from 41.62 to 54.54 feet above mean sea level (amsl). 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 30.68 to 48.63 feet above msl. Groundwater flow in the deep aquifer was toward the southwest at a hydraulic gradient of 0.03 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 C 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 210 micrograms per liter ( $\mu\text{g/L}$ ), 45  $\mu\text{g/L}$ , and 54  $\mu\text{g/L}$ , respectively. The concentrations in well AMW-6R are relatively similar to those seen in well AMW-6. The concentrations from the remaining shallow wells were relatively consistent with recent sampling data. The highest concentrations of PCE and TCE in the deeper zone were found in well FHS

MW-11 at a concentration of 63 µg/L and 1.9 µg/L, respectively. TCE and 1,2-DCE were not detected at or above the laboratory detection limit in the remaining deep groundwater samples. PCE was also detected in well AMW-9 at a concentration of 53 µg/L. The concentrations in FHS MW-11 continue to slightly increase during each sampling event.

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

## **Summary**

In May 2011, AEI replaced well AMW-6 with well AMW-6R due to upcoming construction activities. In addition, wells MW-6, MW-7, and WGR-MW3 were destroyed by ARCO as a result of case closure at their site. 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 October 2011.

### 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.

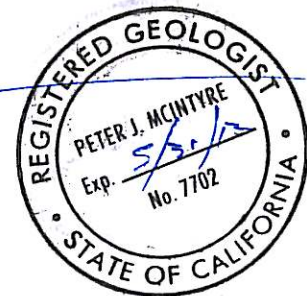
Sincerely,  
**AEI Consultants**



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

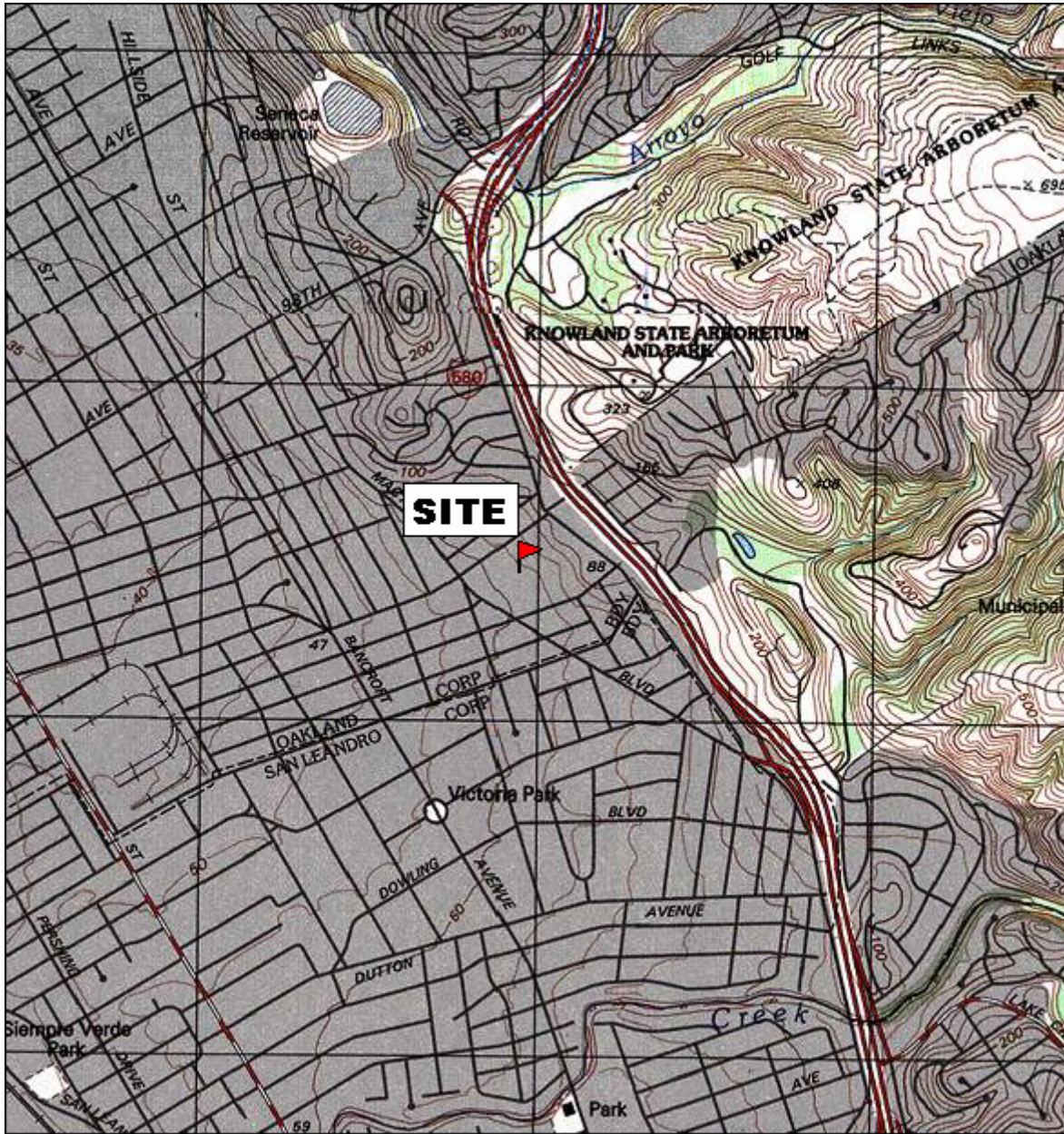
- Appendix A:** Permit Documentation
- Appendix B:** Boring Log
- Appendix C:** Groundwater Monitoring Well Field Sampling Forms
- Appendix D:** Laboratory Analyses with Chain of Custody Documentation

### Distribution:

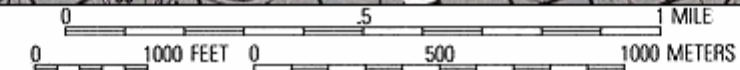
Mr. Jerry Wickham, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250,  
Alameda, CA 94502 (electronic copy)  
Jay-Phares Corporation, Attn; John Jay, 10700 MacArthur Blvd., Oakland, California 94605  
Geotracker electronic upload



## **FIGURES**

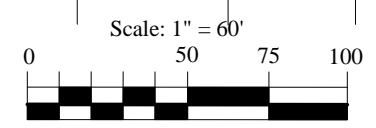
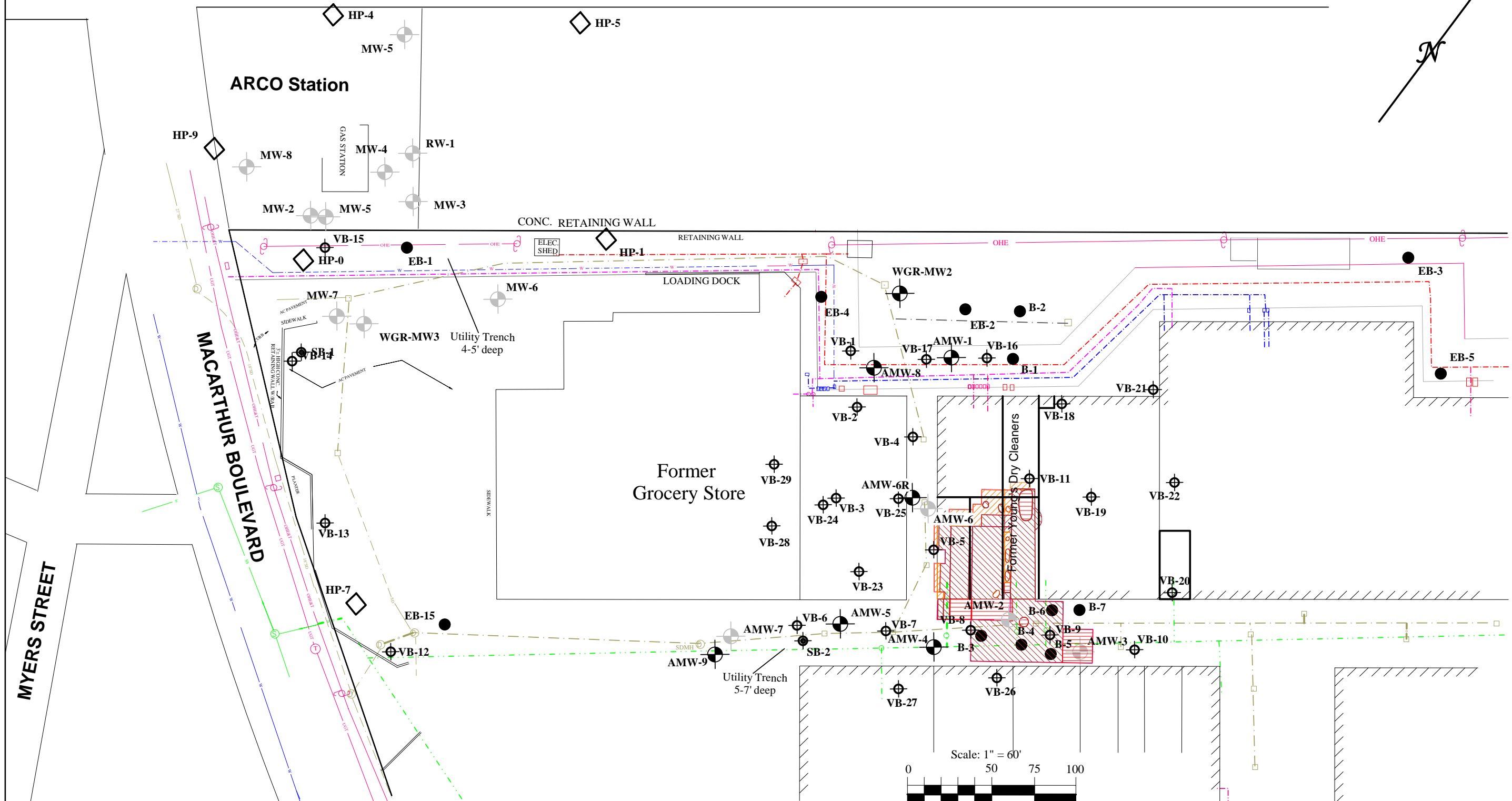
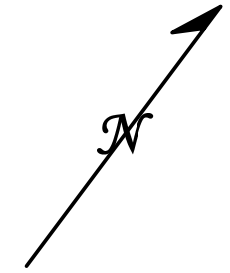


TN  $\star$  MN  
15 $\frac{1}{2}$  $^{\circ}$



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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



**KEY**

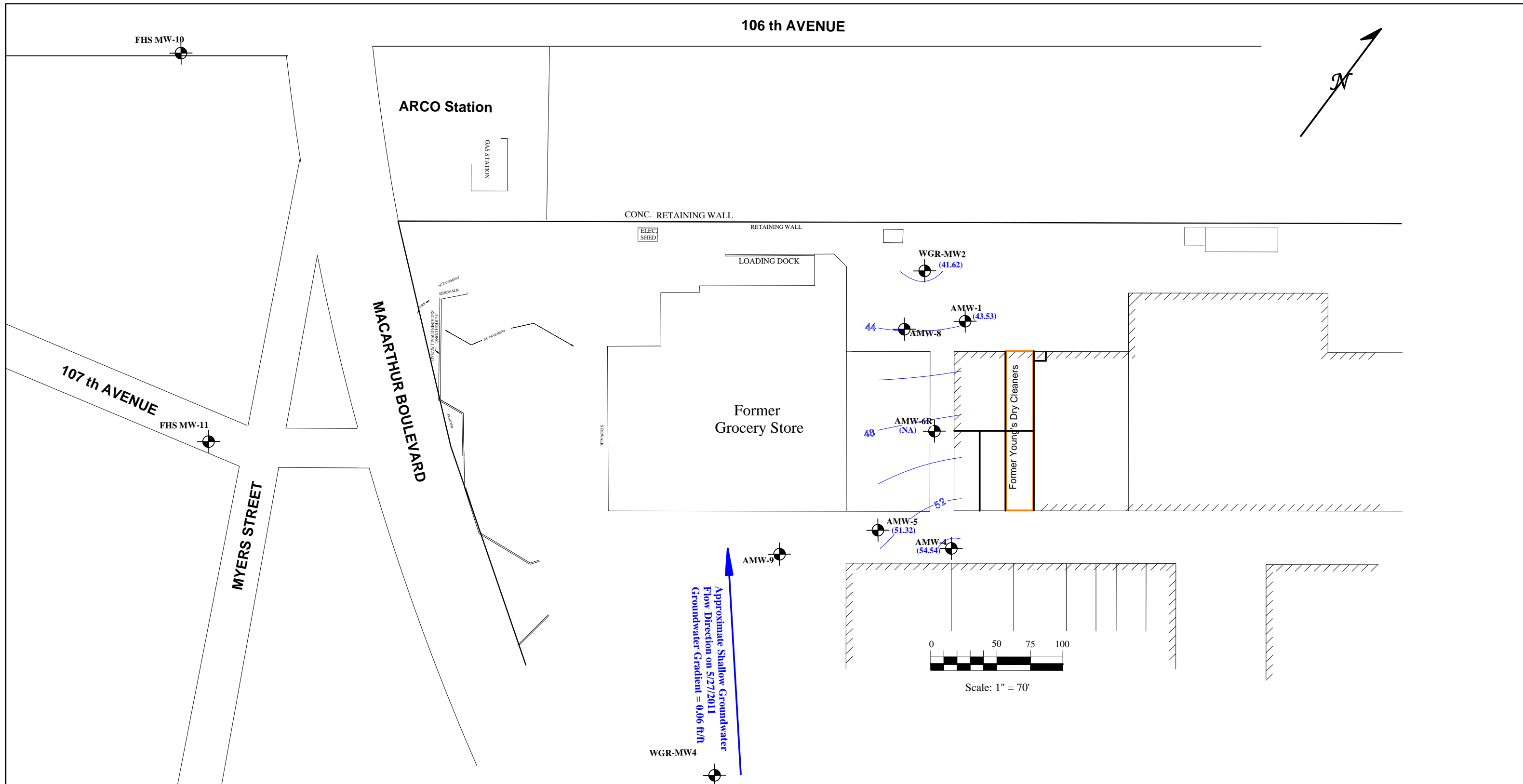
●	EB-1	Soil Boring - Kaldveer 1988
●	B-1	Soil Boring - Augeas 1994
◇	HP-8	CPT Boring/HydroPunch Sample - PES 1997
⊕	MW4	Groundwater Monitoring Well
○		Soil Vapor Sample
○		Soil Boring - AEI 2006

	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

<h1 style="margin: 0;">AEI CONSULTANTS</h1> <p style="margin: 0;">2500 CAMINO DIABLO, WALNUT CREEK, CA</p>	
<h2 style="margin: 0;">SITE PLAN</h2>	
<p>10700 MACARTHUR BLVD. OAKLAND, CALIFORNIA</p>	<p><b>FIGURE 2</b> PROJECT NO. 261829</p>



**KEY**

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

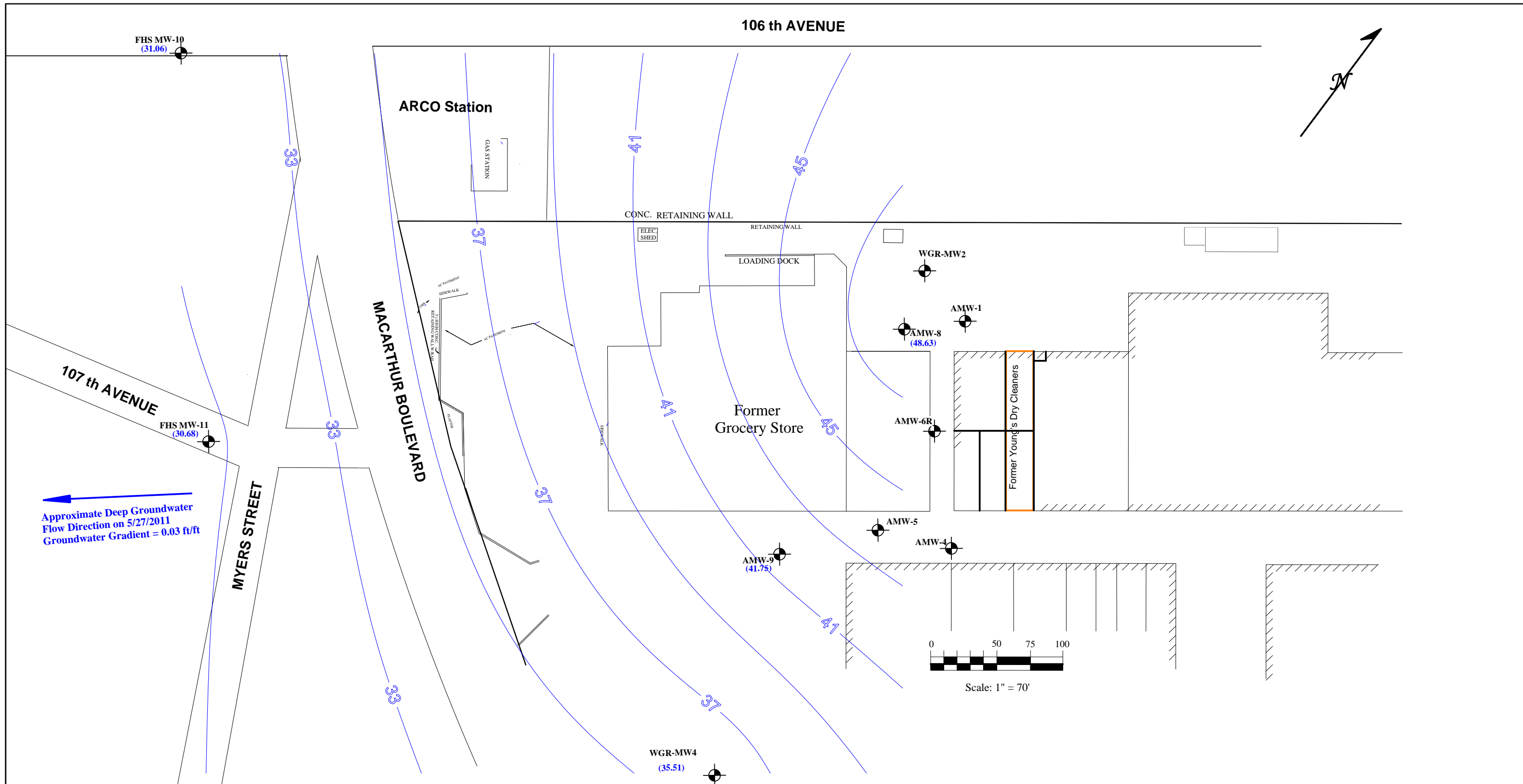
**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK, CA



**Groundwater Elevation Map -  
Shallow Wells**

10700 MACARTHUR BLVD.  
OAKLAND, CALIFORNIA

**FIGURE 3**  
PROJECT NO. 261829



**KEY**

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

**AEI CONSULTANTS**

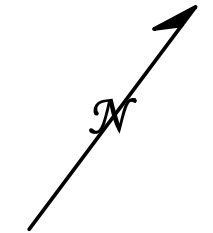
2500 CAMINO DIABLO, WALNUT CREEK, CA

**Groundwater Elevation Map -  
Deep Wells**

10700 MACARTHUR BLVD.  
OAKLAND, CALIFORNIA

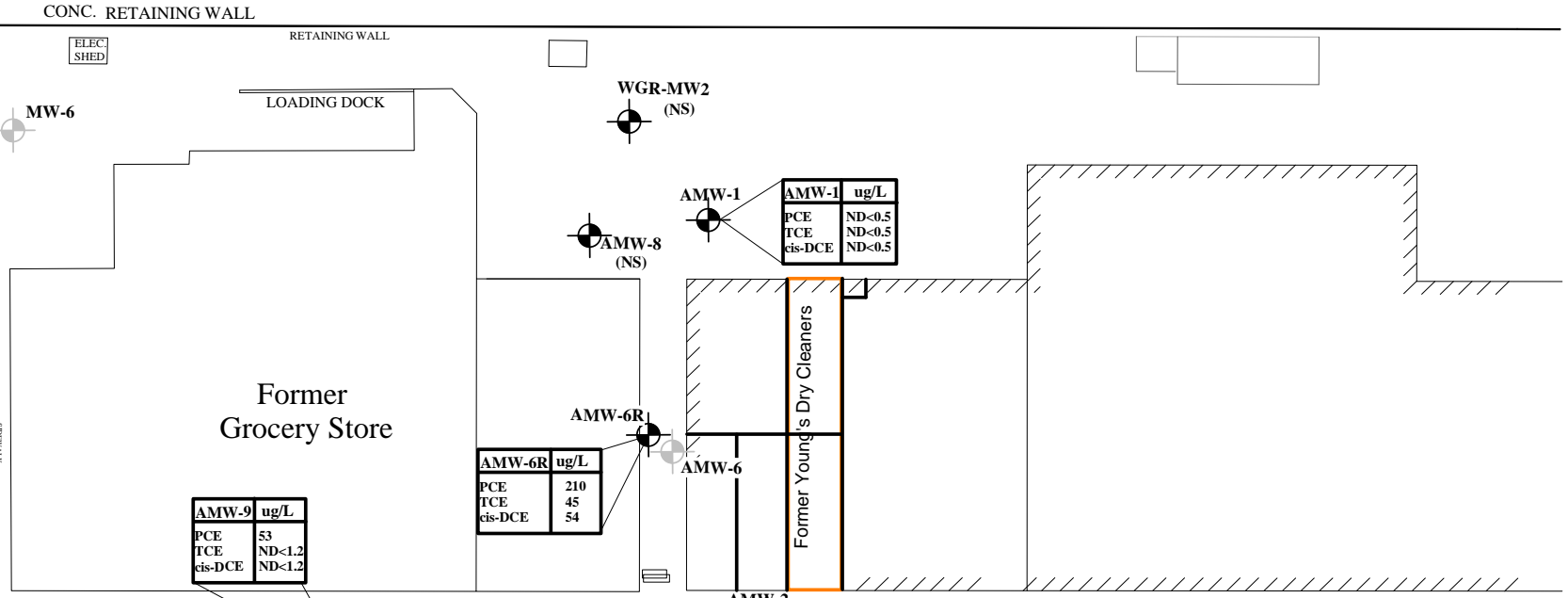
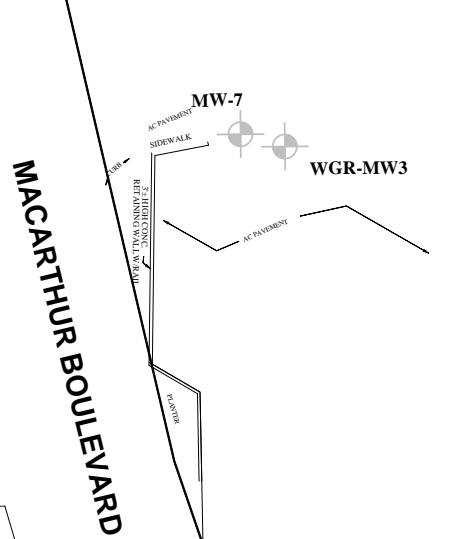
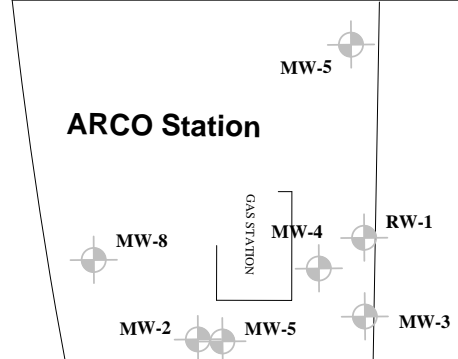
**FIGURE 4**  
PROJECT NO. 261829

106 th AVENUE



FHS MW-10 (NS)

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



107 th AVENUE

FHS MW-11 (NS)

FHS MW-11	ug/L
PCE	63
TCE	1.9
cis-DCE	ND<1.7

MYERS STREET

AMW-9 ug/L

AMW-9	ug/L
PCE	53
TCE	ND<1.2
cis-DCE	ND<1.2

AMW-6R ug/L

AMW-6R	ug/L
PCE	210
TCE	45
cis-DCE	54

AMW-1 ug/L

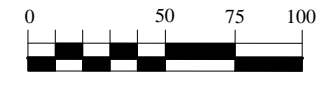
AMW-1	ug/L
PCE	ND<0.5
TCE	ND<0.5
cis-DCE	ND<0.5

AMW-5 ug/L

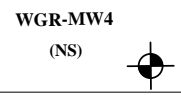
AMW-5	ug/L
PCE	23
TCE	1.9
cis-DCE	0.76

AMW-4 ug/L

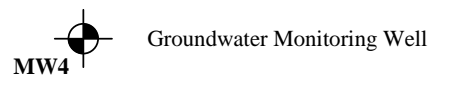
AMW-4	ug/L
PCE	1.9
TCE	0.75
cis-DCE	ND<0.5



Scale: 1" = 70'



KEY



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  
 (5/27/11)

10700 MACARTHUR BLVD.  
 OAKLAND, CALIFORNIA

**FIGURE 5**  
 PROJECT NO. 261829

## **TABLES**

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

Well ID (Aquifer zone)	Date	Screen Interval (ft bgs)	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
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		
<b>5/27/2011</b>	<b>64.51</b>	<b>20.98</b>	<b>43.53</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		
<b>5/27/2011</b>	<b>64.79</b>	<b>10.25</b>	<b>54.54</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		
<b>5/27/2011</b>	<b>64.97</b>	<b>13.65</b>	<b>51.32</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
	<b>5/27/2011</b>		<b>Well Destroyed and Replaced with AMW-6R</b>		
AMW-6R (Shallow)	<b>5/27/2011</b>	<b>13-23</b>	<b>NA</b>	<b>14.70</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		
	<b>5/27/2011</b>		<b>64.55</b>	<b>15.92</b>	<b>48.63</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
	<b>5/27/2011</b>		<b>63.48</b>	<b>21.73</b>	<b>41.75</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
			<b>5/27/2011</b>		<b>63.18</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
			<b>5/27/2011</b>		

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
	<b>5/27/2011</b>		<b>60.02</b>	<b>24.51</b>	<b>35.51</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
	<b>5/27/2011</b>		<b>52.34</b>	<b>21.28</b>	<b>31.06</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	
<b>5/27/2011</b>	<b>54.06</b>	<b>23.38</b>	<b>30.68</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	
<b>5/27/2011</b>	<b>Well Destroyed by ARCO; Case Closure at 10600 MacArthur Blvd.</b>					
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	
<b>5/27/2011</b>	<b>Well Destroyed by ARCO; Case Closure at 10600 MacArthur Blvd.</b>					

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
<b>AMW-1</b> <b>(shallow)</b>	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	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;RL</b>
<b>AMW-4</b> <b>(shallow)</b>	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	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>1.9</b>	<b>0.75</b>	<b>ND&lt;RL</b>	
<b>AMW-5</b> <b>(shallow)</b>	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	<b>0.76</b>	<b>ND&lt;0.5</b>	<b>23</b>	<b>1.9</b>	<b>ND&lt;RL</b>	

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
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	
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	

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		
<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		
<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	Augeus	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
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	



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

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

RL = Reporting Limit

**APPENDIX A**  
**PERMIT DOCUMENTATION**

# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 04/25/2011 By jamesy**

**Permit Numbers: W2011-0290 to W2011-0291**  
**Permits Valid from 05/09/2011 to 05/10/2011**

**Application Id:** 1303250276877  
**Site Location:** 10700 MacArthur Blvd.  
**Project Start Date:** 05/09/2011  
**Assigned Inspector:** Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

**City of Project Site:**Oakland

**Completion Date:**05/10/2011

**Applicant:** AEI Consultants - Jeremy Smith  
2500 Camino Diablo, Walnut Creek, CA 94519  
**Property Owner:** John Jay Phares Co.  
10700 MacArthur Blvd., Oakland, CA 94605  
**Client:** \*\* same as Property Owner \*\*  
**Contact:** Jeremy Smith

**Phone:** 925-746-6000 x128

**Phone:** --

**Phone:** --  
**Cell:** --

	<b>Total Due:</b>	\$794.00	
<b>Receipt Number: WR2011-0119</b>	<b>Total Amount Paid:</b>	\$794.00	
<b>Payer Name : Jeremy Smith</b>	<b>Paid By: VISA</b>		<b>PAID IN FULL</b>

**Works Requesting Permits:**

Well Destruction-Monitoring - 1 Wells  
Driller: PeneCore Drilling - Lic #: 906899 - Method: press

**Work Total: \$397.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2011-0290	04/25/2011	08/07/2011	AMW-6	8.00 in.	2.00 in.	10.00 ft	25.00 ft	2S/3W24E	No Records	No Records

**Specific Work Permit Conditions**

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

5. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend

## Alameda County Public Works Agency - Water Resources Well Permit

and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost and liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.

6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

7. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

8. Remove the Christy box or similar structure.

Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil.

After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

9. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

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Well Construction-Monitoring-Monitoring - 1 Wells

Driller: PeneCore Drilling - Lic #: 906899 - Method: hstem

**Work Total: \$397.00**

### Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2011-0291	04/25/2011	08/07/2011	AMW-6R	8.00 in.	2.00 in.	11.00 ft	25.00 ft

### Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits

## Alameda County Public Works Agency - Water Resources Well Permit

and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.
  5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.
  6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
  7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
  8. Minimum surface seal thickness is two inches of cement grout placed by tremie
  9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
  10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
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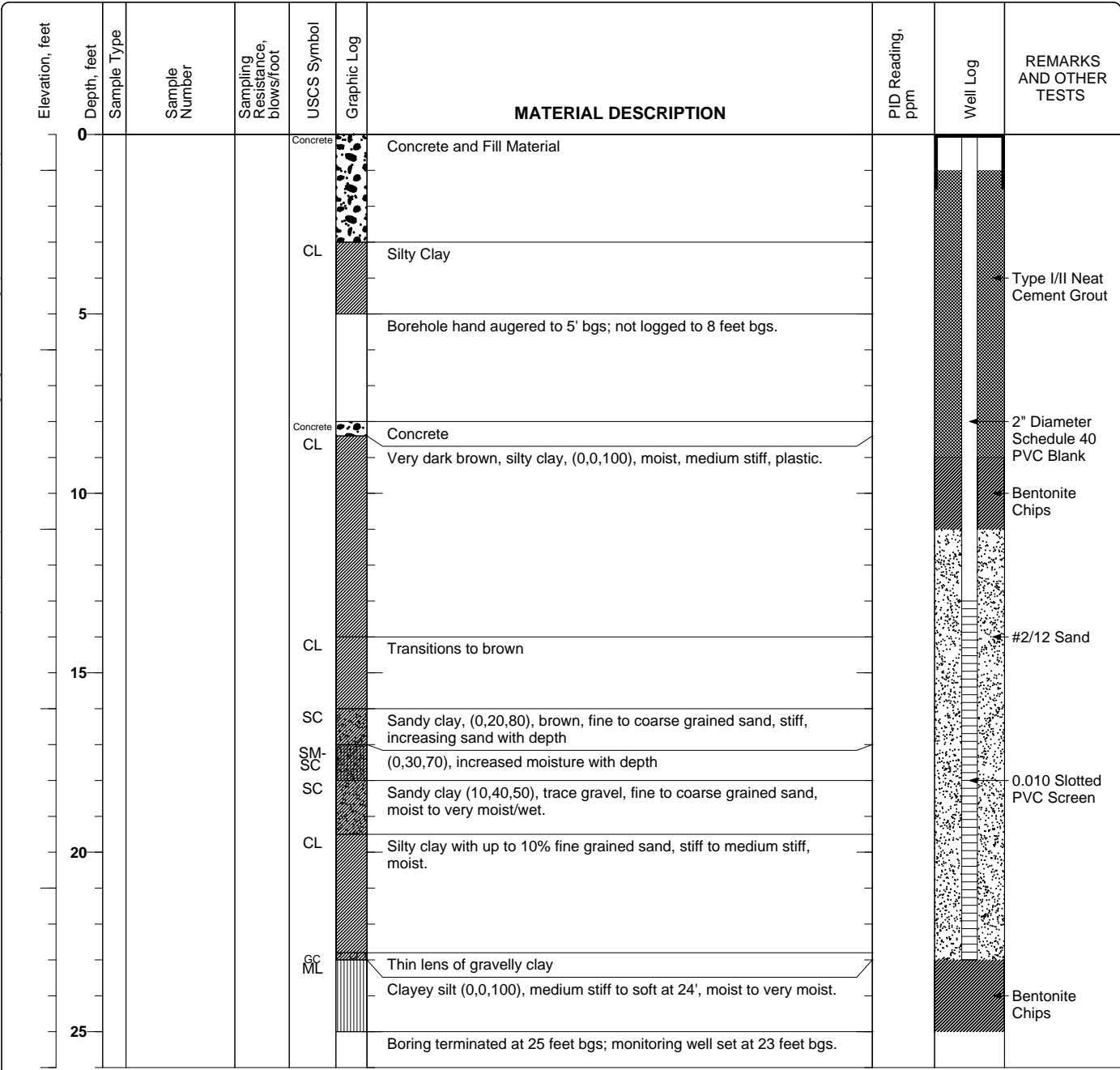
**APPENDIX B**  
**BORING LOG**

**Project: Foothill Square Shopping Center**  
**Project Location: 10700 MacArthur Blvd., Oakland, California**  
**Project Number: 261829**

# Log of Boring AMW-6R

Sheet 1 of 1

Date(s) Drilled <b>May 12, 2011</b>	Logged By <b>Jeremy Smith</b>	Checked By <b>Peter McIntyre</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>8 inch</b>	Total Depth of Borehole <b>25 feet bgs</b>
Drill Rig Type <b>Truck Mounted</b>	Drilling Contractor <b>Penecore</b>	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>None</b>	Well Permit
Borehole Backfill <b>Neat Cement</b>	Location	



Figure

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\CHARACTERIZATION\Foothill Square (261829), Oakland - JAS\Boring\_Logs\AMW-6R.bgs [HSA Well 30 Feet.tpl]

**APPENDIX C**

**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:	5/27/2011
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)	20.98		
Water Elevation (feet above msl)	43.53		
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)	11.5		
Actual Volume Purged (gallons)	12.0		
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
6:30	3	18.64	7.74	1,324	2.58	-43.2	Clear
	6	18.78	7.71	1,481	1.10	-77.8	Clear
	9	18.96	7.80	1,361	0.89	-118.7	Clear
6:45	12	18.95	7.80	1,360	--	--	Clear

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

Dry at 12 gallons

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

**Monitoring Well Number: AMW-4**

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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)	10.25		
Water Elevation (feet above msl)	54.54		
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)	7.1		
Actual Volume Purged (gallons)	7.0		
Appearance of Purge Water	Initially grey, cloudy after 2 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
8:20	1	18.61	8.06	756	3.78	-173.3	Grey
	2	18.53	8.10	746	2.40	-185.1	Cloudy
	3	18.72	8.06	738	1.57	-190.9	Cloudy
	4	18.95	8.01	787	1.38	-191.5	Cloudy
	5	19.03	7.98	837	1.26	-191.2	Cloudy
	6	19.06	7.96	854	1.27	-190.6	Cloudy
8:35	7	19.08	7.95	872	1.36	-189.4	Cloudy

**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:	5/27/2011
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)	13.65		
Water Elevation (feet above msl)	51.32		
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)	7.8		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	Initially Cloudy, clearing after 3 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
8:50	1	18.56	7.96	1,339	1.91	-120.8	Cloudy
	2	18.60	7.82	1,337	0.79	-147.3	Cloudy
	3	18.37	7.78	1,332	0.76	-156.7	Clear
	4	18.61	7.75	1,342	0.73	-175.8	Clear
	5	18.74	7.74	1,351	0.63	-182.9	Clear
	6	18.81	7.73	1,356	0.63	-186.5	Clear
	7	18.91	7.72	1,370	0.64	-187.2	Clear
9:05	8	18.96	7.69	1,389	0.73	-184.2	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:	5/27/2011
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)	14.70		
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)	4.0		
Actual Volume Purged (gallons)	4.0		
Appearance of Purge Water	Cloudy		
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
10:10	1	17.81	8.08	1,438	6.49	-115.6	Cloudy
	2	17.76	8.30	1,448	6.86	-142.9	Cloudy
	3	17.79	8.04	1,468	6.78	-150.1	Cloudy
10:20	4	17.84	7.98	1,456	6.52	-155.7	Cloudy

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

DTW Collected 4 hours after well development (purged dry)

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

**Monitoring Well Number: AMW-8**

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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)	15.92		
Water Elevation (feet above msl)	48.63		
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: AMW-9**

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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)	21.73		
Water Elevation (feet above msl)	41.75		
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>15.6</b>		
Actual Volume Purged (gallons)	16.0		
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
9:15	2	20.61	7.72	1,651	3.57	-141.7	Clear
	4	20.72	7.83	726	4.43	-157.0	Clear
	6	20.73	7.82	711	4.62	-153.9	Clear
	8	20.73	7.82	722	4.69	-153.7	Clear
	10	20.75	7.80	735	4.50	-150.5	Clear
	12	20.78	7.72	744	4.05	-152.6	Clear
	14	20.79	7.68	758	3.94	-154.7	Clear
9:40	16	20.80	7.66	765	3.76	-155.1	Clear

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

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

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

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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 <span style="float:right">▼</span>		
Elevation of Top of Casing (feet above msl)	63.18		
Depth of Well	28.00		
Depth to Water (from top of casing)	21.56		
Water Elevation (feet above msl)	41.62		
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 (μ 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-3**

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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 <span style="float:right">▼</span>		
Elevation of Top of Casing (feet above msl)	NA		
Depth of Well	NA		
Depth to Water (from top of casing)	NA		
Water Elevation (feet above msl)	NA		
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)	NA		
Appearance of Purge Water	NA		
Free Product Present?	NA	Thickness (ft):	-

**GROUNDWATER SAMPLES**

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

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

Well Destroyed by Arco Consultant - Case Closure for ARCO Station at 10600 MacArthur Blvd.



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

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

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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)	24.51		
Water Elevation (feet above msl)	35.51		
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: FHS MW-10**

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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)	21.28		
Water Elevation (feet above msl)	31.06		
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>14.7</b>		
Actual Volume Purged (gallons)	14.0		
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
7:45	2	18.79	7.38	540	11.49	91.4	Clear
	4	18.96	7.31	559	2.57	29.7	Clear
	6	19.00	7.27	562	1.69	-2.9	Clear
	8	19.03	7.24	563	1.32	-24.9	Clear
	10	19.04	7.24	563	1.18	-34.9	Clear
	12	19.04	7.22	563	1.09	-40.2	Clear
8:05	14	19.04	7.22	563	0.98	-50.7	Clear

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

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

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

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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)	23.38		
Water Elevation (feet above msl)	30.68		
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)	19.5		
Actual Volume Purged (gallons)	20.0		
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
7:00	2	19.47	12.04	987	5.66	-233.9	Clear
	4	19.47	8.81	635	1.49	-145.2	Clear
	6	19.48	8.23	640	1.22	-149.1	Clear
	8	19.48	7.93	643	1.18	-154.5	Clear
	10	19.48	7.74	644	1.09	-159.6	Clear
	12	19.48	7.72	642	1.06	-161.7	Clear
	14	19.48	7.71	642	1.02	-162.1	Clear
	16	19.49	7.68	643	1.00	-162.8	Clear
7:30	18	19.49	7.65	643	0.99	-163.7	Clear
	20	19.49	7.63	643	0.99	-164.8	Clear

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

--

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

**Monitoring Well Number: MW-6**

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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)	NA		
Depth of Well	NA		
Depth to Water (from top of casing)	NA		
Water Elevation (feet above msl)	NA		
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)			
Appearance of Purge Water			
Free Product Present?	na	Thickness (ft):	-

**GROUNDWATER SAMPLES**

Number of Samples/Container Size				3 VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments

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

Well Destroyed by Arco Consultant - Case Closure for ARCO Station at 10600 MacArthur Blvd.

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

**Monitoring Well Number: MW-7**

Project Name:	Foothill Square	Date of Sampling:	5/27/2011
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)	NA		
Depth of Well	NA		
Depth to Water (from top of casing)	NA		
Water Elevation (feet above msl)	NA		
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				NA			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments

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

Well Destroyed by Arco Consultant - Case Closure for ARCO Station at 10600 MacArthur Blvd.

**APPENDIX D**

**LABORATORY ANALYSES WITH CHAIN OF CUSTODY  
DOCUMENTATION**

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #261829; Foothill Square	Date Sampled: 05/27/11
		Date Received: 05/27/11
	Client Contact: Jeremy Smith	Date Reported: 06/06/11
	Client P.O.: #WC083076	Date Completed: 06/06/11

**WorkOrder: 1105909**

June 13, 2011

Dear Jeremy:

Enclosed within are:

- 1) The results of the 7 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.

1105909

**McCAMPBELL ANALYTICAL INC.**

1534 Willow Pass Road  
Pittsburg, CA 94565

Telephone: (925) 252-9262

Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

**TURN AROUND TIME**

RUSH  24 HR  48 HR  72 HR  5 DAY

EDF Required?  Yes  No

Report To: **Jeremy Smith** Bill To: **same** P.O. # **WC083076**  
 Company: **AEI Consultants**  
 2500 Camino Diablo  
 Walnut Creek, CA 94597 E-Mail: **jasmith@aeiconsultants.com**  
 Tele: (925) 746-6000 Fax: (925) 746-6099  
 Project #: **261829** Project Name: **Foothill Square**  
 Project Location: **10700 MacArthur Blvd. Oakland, CA**  
 Sampler Signature: *[Signature]*

Analysis Request

Other

Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED			
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other
AMW-1		5-27-11	0645	3	VOA									
AMW-4			0835	3										
AMW-5			0905	3										
AMW-6R			1620	3										
AMW-9			0940	3										
<del>AMW-6</del>														
FHS MW-10			0805	3										
FHS MW-11			0730	3										

BTEX & TPH as Gas (602/8020 + 8015)/MTBE	
TPH as Diesel (8015) w/silica Gel Cleanup	
Total Petroleum Oil & Grease (5520 E&F/B&F)	
Total Petroleum Hydrocarbons (418.1)	
HVOCs EPA 8260	X
BTEX ONLY (EPA 602 / 8020)	X
EPA 608 / 8080	X
EPA 608 / 8080 PCB's ONLY	X
EPA 624 / 8260	X
EPA 625 / 8270	X
PAH's / PNA's by EPA 625 / 8270 / 8310	X
CAM-17 Metals	
LUFT 5 Metals	
Lead (7240/7421/239.2/6010)	
RCI	

Relinquished By: *[Signature]* Date: **5-27-11** Time: **1420** Received By: *[Signature]*  
 Relinquished By: **Envirotech T.L.** Date: **5/29/11** Time: **16:15** Received By: *[Signature]*  
 Relinquished By: *[Signature]* Date: **5/27/11** Time: **1700** Received By: *[Signature]*

ICE/# 7.2 PRESERVATION            VOAS            O&G            METALS            OTHER             
 GOOD CONDITION            APPROPRIATE             
 HEAD SPACE ABSENT            CONTAINERS             
 DECHLORINATED IN LAB            PERSERVED IN LAB



# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1105909

ClientCode: AEL

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

Report to:	Jeremy Smith	Email: jasmith@aeiconsultants.com	Bill to:	Jeanette Brown	Requested TAT: 5 days
	AEI Consultants	cc:		AEI Consultants	Date Received: 05/27/2011
	2500 Camino Diablo, Ste. #200	PO: #WC083076		2500 Camino Diablo, Ste. #200	Date Printed: 05/27/2011
	Walnut Creek, CA 94597	ProjectNo: #261829; Foothill Square		Walnut Creek, CA 94597	
	(925) 283-6000 FAX (925) 944-2895			jbrown@aeiconsultants.com	

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1105909-001	AMW-1	Water	5/27/2011 6:45	<input type="checkbox"/>	A	A											
1105909-002	AMW-4	Water	5/27/2011 8:35	<input type="checkbox"/>	A												
1105909-003	AMW-5	Water	5/27/2011 9:05	<input type="checkbox"/>	A												
1105909-004	AMW-6R	Water	5/27/2011 10:20	<input type="checkbox"/>	A												
1105909-005	AMW-9	Water	5/27/2011 9:40	<input type="checkbox"/>	A												
1105909-006	FHS MW-10	Water	5/27/2011 8:05	<input type="checkbox"/>	A												
1105909-007	FHS MW-11	Water	5/27/2011 7:30	<input type="checkbox"/>	A												

**Test Legend:**

1	8010BMS_W	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Ana Venegas

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



**Sample Receipt Checklist**

Client Name: **AEI Consultants**

Date and Time Received: **5/27/2011 8:22:33 PM**

Project Name: **#261829; Foothill Square**

Checklist completed and reviewed by: **Ana Venegas**

WorkOrder N°: **1105909** Matrix Water

Carrier: Rob Pringle (MAI Courier)

**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: 7.2°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.

-----

Client contacted:

Date contacted:

Contacted by:

Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #261829; Foothill Square	Date Sampled: 05/27/11
	Client Contact: Jeremy Smith	Date Received: 05/27/11
	Client P.O.: #WC083076	Date Extracted: 06/02/11-06/04/11
		Date Analyzed: 06/02/11-06/04/11

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1105909

Lab ID	1105909-001A	1105909-002A	1105909-003A	1105909-004A	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	10		

Compound	Concentration				µg/kg	µg/L
Bromodichloromethane	ND	ND	ND	ND<5.0	NA	0.5
Bromoform	ND	ND	ND	ND<5.0	NA	0.5
Bromomethane	ND	ND	ND	ND<5.0	NA	0.5
Carbon Tetrachloride	ND	ND	ND	ND<5.0	NA	0.5
Chlorobenzene	ND	ND	ND	ND<5.0	NA	0.5
Chloroethane	ND	ND	ND	ND<5.0	NA	0.5
Chloroform	ND	ND	ND	ND<5.0	NA	0.5
Chloromethane	ND	ND	ND	ND<5.0	NA	0.5
Dibromochloromethane	ND	ND	ND	ND<5.0	NA	0.5
1,2-Dibromoethane (EDB)	ND	ND	ND	ND<5.0	NA	0.5
1,2-Dichlorobenzene	ND	ND	ND	ND<5.0	NA	0.5
1,3-Dichlorobenzene	ND	ND	ND	ND<5.0	NA	0.5
1,4-Dichlorobenzene	ND	ND	ND	ND<5.0	NA	0.5
Dichlorodifluoromethane	ND	ND	ND	ND<5.0	NA	0.5
1,1-Dichloroethane	ND	ND	ND	ND<5.0	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND<5.0	NA	0.5
1,1-Dichloroethene	ND	ND	ND	ND<5.0	NA	0.5
cis-1,2-Dichloroethene	ND	ND	0.76	54	NA	0.5
trans-1,2-Dichloroethene	ND	ND	ND	7.5	NA	0.5
1,2-Dichloropropane	ND	ND	ND	ND<5.0	NA	0.5
cis-1,3-Dichloropropene	ND	ND	ND	ND<5.0	NA	0.5
trans-1,3-Dichloropropene	ND	ND	ND	ND<5.0	NA	0.5
Freon 113	ND	ND	ND	ND<100	NA	10
Methylene chloride	ND	ND	ND	ND<5.0	NA	0.5
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND<5.0	NA	0.5
1,1,1,2,2-Tetrachloroethane	ND	ND	ND	ND<5.0	NA	0.5
Tetrachloroethene	ND	1.9	23	210	NA	0.5
1,1,1-Trichloroethane	ND	ND	ND	ND<5.0	NA	0.5
1,1,2-Trichloroethane	ND	ND	ND	ND<5.0	NA	0.5
Trichloroethene	ND	0.75	1.9	45	NA	0.5
Trichlorofluoromethane	ND	ND	ND	ND<5.0	NA	0.5
Vinyl Chloride	ND	ND	ND	ND<5.0	NA	0.5

### Surrogate Recoveries (%)

%SS1:	87	88	87	87	
%SS2:	93	93	93	87	
%SS3:	105	101	101	100	

### 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.



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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #261829; Foothill Square	Date Sampled: 05/27/11
	Client Contact: Jeremy Smith	Date Received: 05/27/11
	Client P.O.: #WC083076	Date Extracted: 06/02/11-06/04/11
		Date Analyzed: 06/02/11-06/04/11

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1105909

Lab ID	1105909-005A	1105909-006A	1105909-007A	Reporting Limit for DF = 1	
Client ID	AMW-9	FHS MW-10	FHS MW-11	S	W
Matrix	W	W	W		
DF	2.5	1	3.3		

Compound	Concentration			µg/kg	µg/L
Bromodichloromethane	ND<1.2	ND	ND<1.7	NA	0.5
Bromoform	ND<1.2	ND	ND<1.7	NA	0.5
Bromomethane	ND<1.2	ND	ND<1.7	NA	0.5
Carbon Tetrachloride	ND<1.2	ND	ND<1.7	NA	0.5
Chlorobenzene	ND<1.2	ND	ND<1.7	NA	0.5
Chloroethane	ND<1.2	ND	ND<1.7	NA	0.5
Chloroform	ND<1.2	ND	ND<1.7	NA	0.5
Chloromethane	ND<1.2	ND	ND<1.7	NA	0.5
Dibromochloromethane	ND<1.2	ND	ND<1.7	NA	0.5
1,2-Dibromoethane (EDB)	ND<1.2	ND	ND<1.7	NA	0.5
1,2-Dichlorobenzene	ND<1.2	ND	ND<1.7	NA	0.5
1,3-Dichlorobenzene	ND<1.2	ND	ND<1.7	NA	0.5
1,4-Dichlorobenzene	ND<1.2	ND	ND<1.7	NA	0.5
Dichlorodifluoromethane	ND<1.2	ND	ND<1.7	NA	0.5
1,1-Dichloroethane	ND<1.2	ND	ND<1.7	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<1.2	ND	ND<1.7	NA	0.5
1,1-Dichloroethene	ND<1.2	ND	ND<1.7	NA	0.5
cis-1,2-Dichloroethene	ND<1.2	ND	ND<1.7	NA	0.5
trans-1,2-Dichloroethene	ND<1.2	ND	ND<1.7	NA	0.5
1,2-Dichloropropane	ND<1.2	ND	ND<1.7	NA	0.5
cis-1,3-Dichloropropene	ND<1.2	ND	ND<1.7	NA	0.5
trans-1,3-Dichloropropene	ND<1.2	ND	ND<1.7	NA	0.5
Freon 113	ND<25	ND	ND<33	NA	10
Methylene chloride	ND<1.2	ND	ND<1.7	NA	0.5
1,1,1,2-Tetrachloroethane	ND<1.2	ND	ND<1.7	NA	0.5
1,1,1,2,2-Tetrachloroethane	ND<1.2	ND	ND<1.7	NA	0.5
Tetrachloroethene	53	ND	63	NA	0.5
1,1,1-Trichloroethane	ND<1.2	ND	ND<1.7	NA	0.5
1,1,2-Trichloroethane	ND<1.2	ND	ND<1.7	NA	0.5
Trichloroethene	ND<1.2	ND	1.9	NA	0.5
Trichlorofluoromethane	ND<1.2	ND	ND<1.7	NA	0.5
Vinyl Chloride	ND<1.2	ND	ND<1.7	NA	0.5

### Surrogate Recoveries (%)

%SS1:	88	86	87
%SS2:	88	93	87
%SS3:	97	101	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: 58688

WorkOrder: 1105909

EPA Method: SW8260B		Extraction: SW5030B							Spiked Sample ID: 1105877-006B			
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<1.7	10	103	105	2.22	104	103	0.693	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND<1.7	10	88.9	92.4	3.43	104	104	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND<1.7	10	108	99.3	8.20	105	106	1.37	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND<1.7	10	99.3	103	4.03	96.5	93.5	3.22	70 - 130	30	70 - 130	30
Trichloroethene	ND<1.7	10	105	108	2.77	102	103	0.320	70 - 130	30	70 - 130	30
%SS1:	101	25	85	85	0	94	93	1.22	70 - 130	30	70 - 130	30
%SS2:	99	25	98	97	0.514	98	98	0	70 - 130	30	70 - 130	30
%SS3:	100	2.5	102	94	8.27	95	92	3.28	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 58688 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105909-001A	05/27/11 6:45 AM	06/02/11	06/02/11 10:53 PM	1105909-002A	05/27/11 8:35 AM	06/02/11	06/02/11 11:32 PM
1105909-003A	05/27/11 9:05 AM	06/03/11	06/03/11 12:12 AM				

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

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

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

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

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

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 58690

WorkOrder: 1105909

EPA Method: SW8260B		Extraction: SW5030B							Spiked Sample ID: 1105880-001A			
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	92.8	99.9	7.44	92.2	98.7	6.77	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	91.3	95.6	4.58	84.4	90.4	6.94	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	85.4	90.8	6.14	86.4	90	4.10	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	92.3	99.6	7.60	83.9	86.1	2.51	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	93.3	100	6.89	89.3	94.2	5.26	70 - 130	30	70 - 130	30
%SS1:	93	25	90	92	1.52	91	88	2.90	70 - 130	30	70 - 130	30
%SS2:	95	25	99	98	1.06	99	101	1.59	70 - 130	30	70 - 130	30
%SS3:	86	2.5	92	93	1.32	86	87	2.04	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 58690 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1105909-004A	05/27/11 10:20 AM	06/04/11	06/04/11 12:45 AM	1105909-005A	05/27/11 9:40 AM	06/03/11	06/03/11 5:00 PM
1105909-006A	05/27/11 8:05 AM	06/03/11	06/03/11 2:10 AM	1105909-007A	05/27/11 7:30 AM	06/03/11	06/03/11 5:39 PM

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

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

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

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

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

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.