AEI CONSULTANTS
3210 Old Tunnel Road, Suite B, Lafayette, CA 94549-4157
Phone: (925) 283-6000 Fax: (925) 283-6121

6419

ENVIRONMENTAL PROTECTION
00 FEB -5 AM 9:00

January 29, 2001

Mr. Barney Chan
ACHCSA
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Quarterly Groundwater and Sampling Report**
1450 Fruitvale Avenue
Oakland, CA 94601
AEI Project No. 3581

Dear Mr. Chan:

Enclosed is a copy of the Quarterly Groundwater Monitoring and Sampling Report performed for the First Quarter 2001.

Please call Mr. Peter McIntyre or myself at (925) 283-6000 if you have any questions.

Sincerely,

Orion Alcalay
Environmental Scientist

January 29, 2001

QUARTERLY GROUNDWATER MONITORING REPORT

First Quarter 2001

1450 Fruitvale Avenue
Oakland, CA 94601

Project No. 3581

Prepared For

Jay-Phares Corporation
10700 Foothill Boulevard, Suite 200
Oakland, CA 94605

Prepared By

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(800) 801-3224

AEI

January 29, 2001

Mr. Ken Phares
Jay-Phares Corporation
10700 Foothill Boulevard, Suite 200
Oakland, CA 94605

RE: Quarterly Groundwater Monitoring and Sampling Report
First Quarter 2001
1450 Fruitvale Avenue
Oakland, California 94601
Project No. 3581

Dear Mr. Phares:

AEI Consultants (AEI) has prepared this report on your behalf in response to your request for a groundwater investigation at the above referenced site (Figure 1: Site Location Map). The investigation was initiated by the property owner in accordance with the requirements of the Alameda County Health Care Services Agency (ACHCSA). The purpose of this activity is to monitor groundwater quality in the vicinity of previous underground storage tanks. This report presents the findings of the second episode of groundwater monitoring and sampling that was conducted on January 19, 2001.

Site Description and Background

The property is located on the eastern corner of Fruitvale Avenue and Farnam Street in a residential and commercial area of the city of Oakland. The property is approximately 11,000 square feet in size and is developed with a three-story building that occupies two-thirds of the parcel. The western corner of the parcel is improved with an asphalt parking lot. The property is currently vacant.

Glenfos, Inc performed an environmental site assessment (ESA) on the property in July 1998. The ESA indicated that the property was developed as a gas station in 1950 by Atlantic Richfield Oil Company (currently known as ARCO) and operated until at least 1983. There were four underground storage tanks located in the southwest corner, and the fuel dispenser island was located on the northeast corner of the current parking lot. The gas station was demolished and the existing warehouse was constructed after 1983.

This ESA included the advancement of eight (8) shallow soil borings to between 15 and 30 feet below ground surface (bgs), and the collection of soil and groundwater samples (refer to Figure 2 for boring locations). Soil sample analysis indicated that Total Petroleum Hydrocarbons (TPH) as gasoline and benzene were present along the former product piping at 190 mg/kg and 0.34 mg/kg, respectively. Groundwater sample analysis

revealed impacted groundwater beneath the area of the former dispensers with TPH as gasoline up to 20,000 µg/L and benzene up to 1,000 µg/L. A geophysical survey was also performed on the property as part of the ESA, and based on the results of the survey, Glenfos concluded that, "the USTs may still be present."

On May 27, 1999, AEI was contracted to excavate the locations of the suspected USTs and remove them if necessary. Three excavations were opened on the site. No underground storage tanks or any remaining product piping were encountered during the excavation activities. No significant concentrations of petroleum hydrocarbons were detected in the confirmation soil samples analyzed. The excavations were subsequently backfilled with the excavated soil.

Please refer to the *Subsurface Investigation* report issued by AEI on June 11, 1999 for the results of the excavation and sampling activities as well as an appended copy of the *Glenfos* report.

On July 21, 1999, AEI reviewed building records at the Oakland Building Department (OBD) for information regarding the former locations of the USTs and product dispensers. According to a site plan of the former gasoline station, four USTs were located on the southern corner of the lot, just outside of the building, oriented perpendicular to Farnam Street. The dispensers were located on the northern corner of the property, beneath the canopy.

At the request of the Alameda County Health Care Services Agency (ACHCSA), AEI performed an additional subsurface investigation at the site in August 1999. This investigation revealed TPH as gasoline present in the soil up to 210 mg/kg, with no significant concentrations of benzene or MTBE. Groundwater samples analyzed during this investigation contained TPH as gasoline at 690 µg/L and benzene at 72 µg/L. Soil sample analytical results indicate that although the release occurred along the product piping or from the dispensers, no significant concentrations of petroleum hydrocarbons have been detected around the former tank hold.

Based on the results of the August 1999 investigation and the groundwater samples analyzed by Glenfos, the ACHCSA requested the installation of a minimum of three groundwater monitoring wells to confirm the groundwater flow direction beneath the site and to assess the stability of the dissolved hydrocarbon plume. A workplan, dated July 17, 2000, was prepared by AEI and the scope of work was agreed upon by the ACHCSA.

On September 25, 2000, three soil borings were advanced and converted to groundwater monitoring wells. The three newly installed wells were developed no sooner than 24 hours after setting of the grout. Groundwater samples were collected and analyzed from the newly installed wells on October 16, 2000.

The analytical results of the previous groundwater sampling episode are included in Table 2. This report describes the results of the subsequent groundwater monitoring event which took place on January 19, 2001.

Summary of Activities

AEI measured the depth to groundwater in the three wells on January 19, 2001. Prior to sampling, the depth from the top of the well casings was measured with an electric water level indicator. The wells were purged and sampled using disposable Teflon bailers. Temperature, pH, and specific conductivity were measured during the purging of the wells. AEI removed at least 3 well volumes. Once the temperature, pH, and specific conductivity stabilized, a water sample was collected. The well locations are shown in Figure 2.

Water was poured from the bailers into 40 ml VOA vials and capped so that there was no head space or visible air bubbles within the sample containers. Samples were shipped on ice under proper chain of custody protocol to McCampbell Analytical, Inc. of Pacheco, California (State Certification #1644).

Groundwater samples were submitted for chemical analysis for Total Petroleum Hydrocarbons (TPH) as gasoline (EPA Method 5030/8015), MTBE (EPA Method 8020/602), and benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8020/602).

Field Results

A strong hydrocarbon odor was detected during the sampling of all the three wells. No sheen or free product was encountered during monitoring activities Groundwater levels for the current monitoring episode ranged from 31.65 to 33.08 feet above Mean Sea Level (MSL). The groundwater elevations were an average of 7.21 feet higher than the previous monitoring episode. The direction of the groundwater flow at the time of measurement was towards the ~~northwest~~ east. The latest estimated groundwater gradient is approximately 0.043 foot per foot.

Groundwater elevation data is summarized in Table 1. The groundwater elevation contours and the groundwater flow direction are shown in Figure 2. Refer to Appendix B for the Groundwater Monitoring Well Field Sampling Forms.

Groundwater Quality

Concentrations of petroleum hydrocarbons have increased significantly in all three wells since the last sampling episode. Monitoring well MW-3 yielded the highest levels of petroleum hydrocarbons in the groundwater. TPH as gasoline (TPH-g) was detected up to 27,000 µg/L. Concentrations of BTEX were detected up to 3,400 µg/L, 110 µg/L, 2,200 µg/L and 2,700µg/L, respectively. No concentrations of MTBE were detected above laboratory detection limits in any of the wells. Please refer to Figure 3 for hydrocarbon concentrations in the three wells.

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

Recommendations

Based on the presence of elevated levels of petroleum hydrocarbons in the groundwater, quarterly groundwater monitoring and sampling of the wells will continue at the site. The next monitoring and sampling episode is scheduled for April 2001, as per the requirements of the ACHCSA.

References

1. Phase I Environmental Site Assessment - July 1998, prepared by Glenfos, Inc.
2. Subsurface Investigation Report – June 11, 1999, prepared by AEI.
3. Subsurface Investigation Report – August 1999, prepared by AEI.
4. Workplan – July 17, 2000
5. Monitoring Well Installation and Sampling Report - November 22, 2000, prepared by AEI.

Report Limitations and Signatures

This report presents a summary of work completed by AEI Consultants including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, but it cannot be assumed that they are entirely representative of all areas not sampled. All conclusions and recommendations are based on these analyses, observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

These services were performed in accordance with generally accepted practices in the environmental engineering and construction field which existed at the time and location of the work.

Sincerely,
AEI Consultants

Orion Alcalay
Environmental Scientist

J. P. Derhake, PE, CAC
Senior Author

Figures

Figure 1	Site Location Map
Figure 2	Well Location Map/Groundwater Gradient Map
Figure 3	Petroleum Hydrocarbon Concentrations per Well.

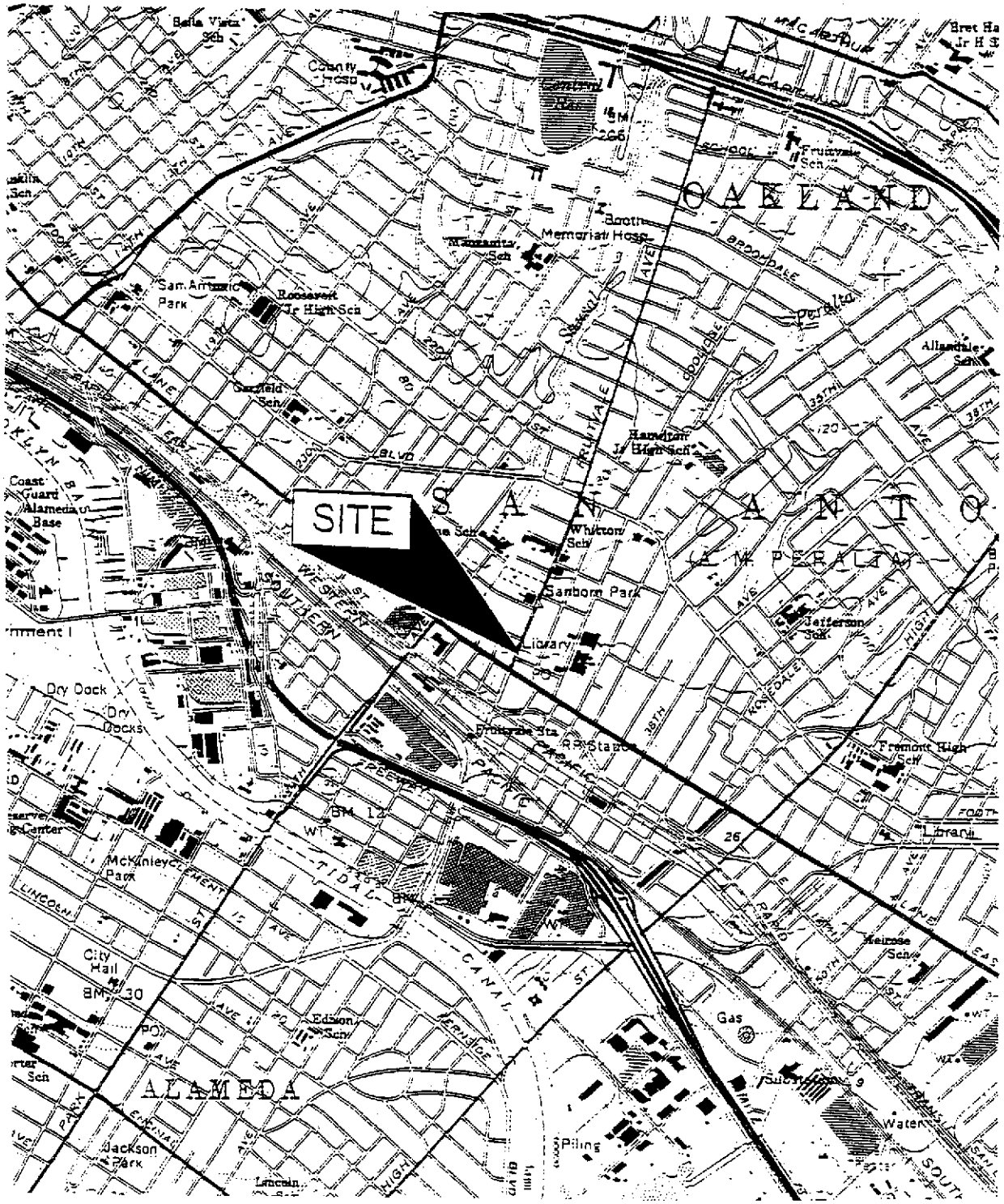
Tables

Table 1	Groundwater Levels
Table 2	Groundwater Sample Analytical Data

Appendices

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

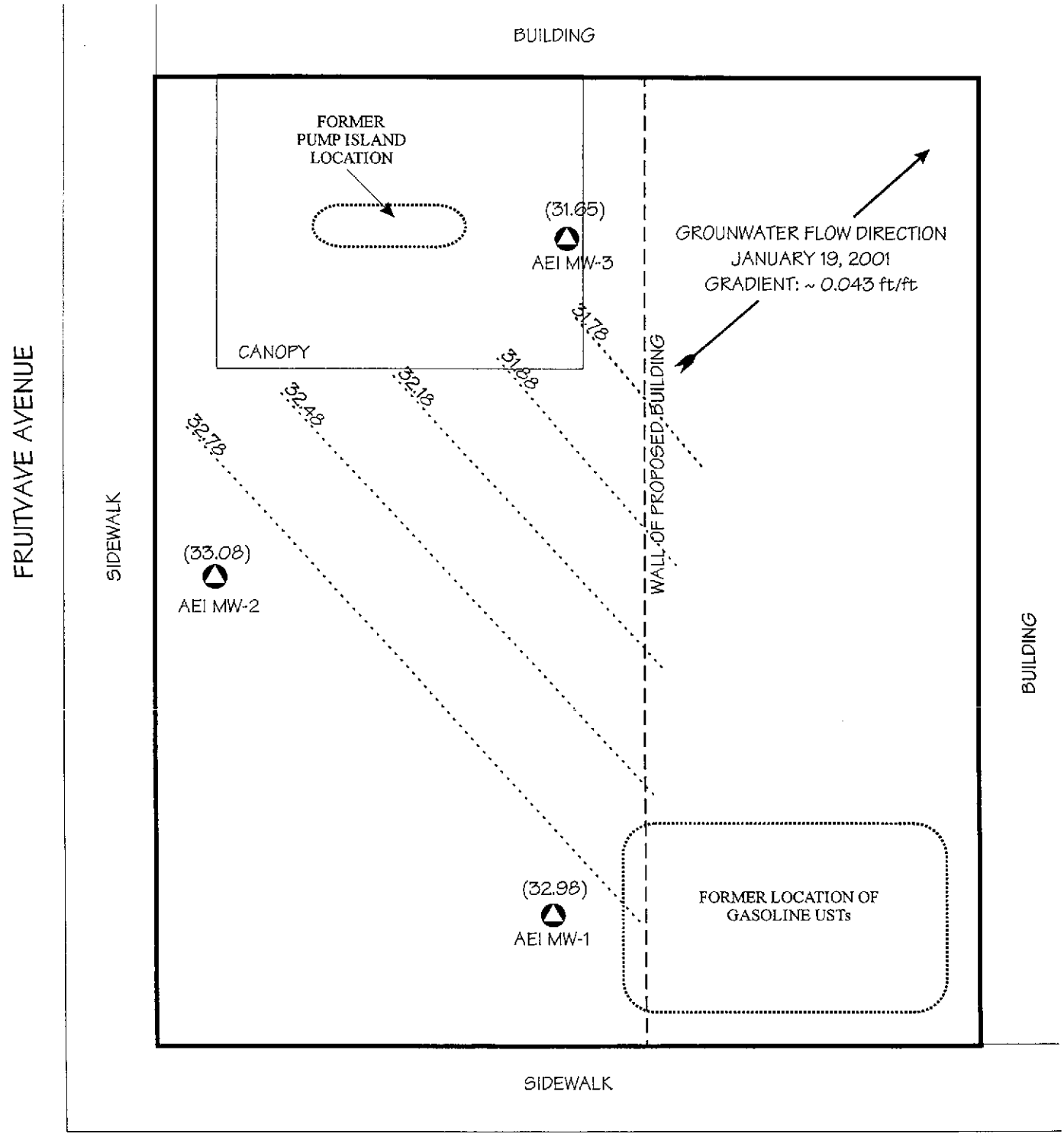
cc: Mr. Barney Chan, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577



N

FROM:
USGS OAKLAND EAST QUADRANGLE
1959 PHOTOREVISED 1980

AEI CONSULTANTS 3210 OLD TUNNEL RD, SUITE B, LAFAYETTE, CA	
SITE LOCATION MAP	
1450 FRUITVALE AVENUE OAKLAND, CALIFORNIA	FIGURE 1



KEY

- WELL LOCATIONS INSTALLED BY AEI
- 26.9 GROUNDWATER ELEVATION CONTOUR (FEET) 1/19/01

SCALE: 1" = 10'

N

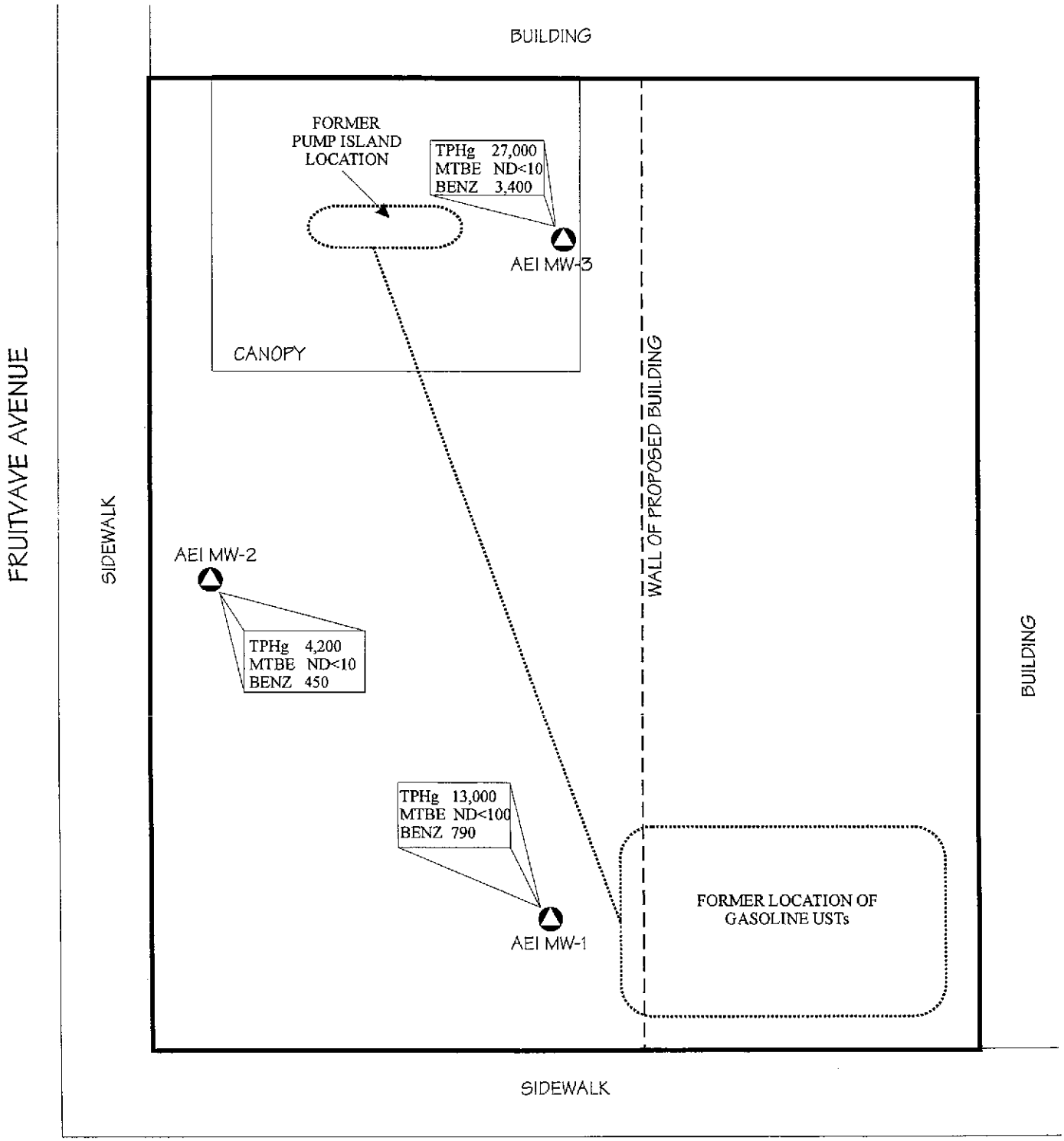
AEI CONSULTANTS

3210 OLD TUNNEL RD, SUITE B, LAFAYETTE, CA

WELL LOCATIONS WITH GROUNDWATER GRADIENT MAP

1450 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

FIGURE 2



KEY

▲ WELL LOCATIONS INSTALLED BY AEI

TPHg = Total Petroleum Hydrocarbons as gasoline
MTBE = Methyl Tertiary Butyl Ether
Benz = Benzene
All samples measured in ug/L
(micrograms per Liter)

SCALE: 1" = 10'

N

AEI CONSULTANTS

3210 OLD TUNNEL RD, SUITE B, LAFAYETTE, CA

WELL LOCATIONS WITH
GROUNDWATER SAMPLE ANALYTICAL

1450 FRUITVALE AVENUE
OAKLAND, CALIFORNIA

FIGURE 3

Table 1
Groundwater Elevations

Well ID	Date	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
MW-1	10/16/00	42.13	17.72 > 8.5'	24.41
	1/19/01	**42.13**	**9.15**	**32.98**
MW-2	10/16/00	42.08	14.98 > 6'	27.10
	1/19/01	**42.08**	**9.00**	**33.08**
MW-3	10/16/00	42.55	17.98 > 7'	24.57
	1/19/01	**42.55**	**10.90**	**31.65**

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

Table 2
Groundwater Sample Analytical Data-October 2000

Well/Sample ID	Date Collected	Consultant/ Lab	TPHg µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L
MW-1	10/16/00	AEI/MAI	4,500	ND<20	560	14	53	62
	1/19/01	**AEI/MAI**	**13,000**	**ND<100**	**790**	**46**	**1,100**	**210**
MW-2	10/16/00	AEI/MAI	4,600	ND<300	380	3.8	95	33
	1/19/01	**AEI/MAI**	**4,200**	**ND<10**	**450**	**4.7**	**120**	**50**
MW-3	10/16/00	AEI/MAI	12,000	ND<10	570	32	680	1,200
	1/19/01	**AEI/MAI**	**27,000**	**ND<200**	**3,400**	**110**	**2,200**	**2,700**
MRL			50.0	5.0	0.5	0.5	0.5	0.5

MRL = Maximum Reporting Limit
µg/L micrograms per liter
AEI AEI Consultants
MAI McCampbell Analytical, Inc.
TPHg total petroleum hydrocarbons as gasoline
MTBE methyl tertiary butyl ether
ND not detected

APPENDIX A

WELL FIELD SAMPLING FORMS

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name: Jay Phares	Date of Sampling: 01/19/01
Job Number: 3581	Name of Sampler: OA
Project Address: 1450 Fruitvale Avenue	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	Cement, good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	42.13
Depth of Well	28.00
Depth to Water	9.15
Water Elevation	32.98
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	9.0
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	9.0
Appearance of Purge Water	Clear, Hydrocarbon Odor

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 VOAs

Time	Vol Remvd (gal)	Temp (deg c)	pH	Cond (mS)	Comments
9:54	2	18.0	6.90	800	
9:56	4	18.3	6.93	650	
9:59	6	17.7	7.00	659	
10:01	8	18.4	6.97	744	

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

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name: Jay Phares	Date of Sampling: 01/19/01
Job Number: 3581	Name of Sampler: OA
Project Address: 1450 Fruitvale Avenue	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	Cement, good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	42.08
Depth of Well	28.00
Depth to Water	9.00
Water Elevation	33.08
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	8.85
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	9
Appearance of Purge Water	Clear, Hydrocarbon Odor

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments
9:30	2	18.5	6.80	1131	
9:33	4	19.0	6.75	1102	
9:35	6	19.6	6.71	1178	
9:37	8	19.5	6.77	1158	

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

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
Monitoring Well Number: MW-3	
Project Name: Jay Phares	Date of Sampling: 01/19/01
Job Number: 3581	Name of Sampler: OA
Project Address: 1450 Fruitvale Avenue	
MONITORING WELL DATA	
Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	Cement, good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	42.55
Depth of Well	28.00
Depth to Water	10.9
Water Elevation	31.65
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	8.1
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	8
Appearance of Purge Water	Clear, Hydrocarbon Odor
GROUNDWATER SAMPLES	
Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg C)	PH	Cond (mS)	Comments
9:17	2	17.1	6.70	1216	
9:19	4	17.7	6.67	1152	
9:22	6	18.7	6.62	1153	
9:25	8	19.0	6.66	1136	

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

TD - Total Depth of Well
DTW - Depth To Water

APPENDIX B

LABORATORY ANALYTICAL AND CHAIN OF CUSTODY DOCUMENTATION

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

All Environmental, Inc. 3210 Old Tunnel Road, Suite B Lafayette, CA 94549-4157	Client Project ID: #3581; Jay Phares	Date Sampled: 01/19/2001
		Date Received: 01/19/2001
	Client Contact: Orion Alcalay	Date Extracted: 01/19-01/24/2001
	Client P.O:	Date Analyzed: 01/19-01/24/2001

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	% Recovery Surrogate
58316	MW-1	W	13,000,a	ND<100	790	46	1100	210	98
58317	MW-2	W	4200,a	ND<10	450	4.7	120	50	109
58318	MW-3	W	27,000,a	ND<200	3400	110	2200	2700	108
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

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

* cluttered chromatogram; sample peak coelutes with surrogate peak

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

2908 Tank 519.002

McCAMPBELL ANALYTICAL INC.

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

CHAIN OF CUSTODY RECORD

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

Report To: Orion Alcalay	Bill To:
Company: All Environmental	
3210 Old Tunnel Road, Suite B	
Lafayette, CA 94549-4157	
Tele: (925) 283-6000	Fax: (925) 283-6121
Project #: 3531	Project Name: Jay Phipps
Project Location: 1450 - Fruitvale, Oakland	
Sampler Signature:	

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
(1) MW-1		1-19		2		X					X				X																58316
(2) MW-2		1-19		2																											58317
(3) MW-3		1/9		2																											58318

Relinquished By:	Date: 1-19-01	Time: 12:40	Received By:
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks:

VOAS | O&G | METALS | OTHER

HEAD SPACE ABSENT ___ PRESERVATION APPROPRIATE ___ CONTAINERS ___