AEI CONSULTANTS
Environmental & Civil Engineering Services

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

November 3, 2000

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

Subject: **Quarterly Groundwater Monitoring Report**
807 75th Avenue
Oakland, CA
AEI Project No. 3190

Dear Mr. Chan:

Enclosed is the report outlining the findings of the quarterly groundwater monitoring for the third quarter 2000 at the above referenced address.

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

Sincerely,

Orion Alcalay
Environmental Scientist

November 3, 2000

807 75th Street

QUARTERLY GROUNDWATER MONITORING REPORT

Third Quarter, November 2000

807 75th Street
Oakland, California

Project No. 3190

Prepared For

Mr. Allan Kanady
Omega Termite Control
Oakland, California

Prepared By

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

AEI

November 3, 2000

Mr. Allan Kanady
Omega Termite Control
807 75th Avenue
Oakland, CA 95621

RE: Quarterly Groundwater Monitoring and Sampling Report
Third Quarter 2000
807 75th Avenue
Oakland, California
Project No. 3190

Dear Mr. Kanady:

AEI Consultants (AEI) has prepared this report to document the results of the fourth episode of groundwater sampling at the above referenced site (Figure 1: Site Location Map). This groundwater investigation has been performed 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 the previous locations of the underground storage tanks at the site. This report presents the findings of the Fifth Episode of groundwater monitoring and sampling conducted on October 10, 2000.

Site Description and Background

The property is located on the northern corner of Snell Street and 75th Avenue in the City of Oakland. The site currently supports the operation of Omega Termite Control (Figure 1: Site Location Map).

On September 15, 1996, three gasoline underground storage tanks (USTs) were removed from the property by AEI. The tanks consisted of one 500-gallon, one 1,000-gallon and one 8,000-gallon tank. The former locations of the USTs are shown in Figure 2.

Soil samples were collected from beneath the 500-gallon and 1,000-gallon gasoline tanks and from the three sidewalls of the 8,000-gallon tank excavation. Concentrations of total petroleum hydrocarbons (TPH) as gasoline were present in the soil beneath the 500-gallon UST at concentrations of 4,300 mg/kg. Minor concentrations (41 mg/kg) of TPH as gasoline were present beneath the 1,000-gallon tank. The three sidewall samples collected from the 8,000-gallon tank excavation indicated concentrations of TPH as gasoline above 100 mg/kg present in the western and northwestern samples.

Groundwater was encountered during the excavation of the 8,000-gallon tank. A groundwater grab sample collected from the excavation indicated significant concentrations of petroleum hydrocarbon contaminants (Ref. # 1).

AEI issued a workplan, dated January 10, 1997, to the Alameda County Health Care Services Agency (ACHCSA). The workplan was designed to define the extent and magnitude of petroleum hydrocarbon contamination in the vicinity of the former tanks. Six soil borings were advanced on January 31, 1997. This investigation indicated groundwater was impacted with up to 27,000 µg/L of TPH as gasoline and 5,000 µg/L of benzene. Significant concentrations of TPH as gasoline were also detected in the soil up to ten feet bgs from the excavation (Ref. # 2).

In response to a request by the ACHCSA for further investigation at the site, AEI submitted a workplan to the ACHCSA on May 21, 1999, for the installation and subsequent sampling of four groundwater monitoring wells at the site (Ref. # 3). This workplan was approved by Barney Chan of the ACHCSA and, in June, 1999, the four wells were installed (Ref. # 4).

On March 16, 2000, the former UST excavation was expanded to remove soil contaminated with gasoline. Prior to the removal of the soil, the water that was in the excavation was pumped into a Baker tank and stored on-site. The excavation was expanded in all directions. The contaminated soil was stockpiled on the north portion of the property and covered with visqueen. During the over-excavation activities a 500-gallon UST was discovered on the east corner of the excavation. The tank was removed and additional contaminated soil was removed from the area of the former tank.

As requested by the ACHCSA, AEI installed a PVC pipe measuring four inches in diameter by ten feet long in the area of the former UST to act as a temporary extraction well (TW-5).

The analytical results of the current and prior groundwater sampling episodes are included in Table 2. This report describes the results of the subsequent groundwater monitoring event which took place on October 10, 2000.

Summary of Activities

AEI measured the depth to groundwater and collected water samples from the four wells (MW-1 through MW-4) and the temporary extraction well (TW-5) on October 10, 2000. The well locations are shown in Figure 2. The depth from the top of the well casings was measured prior to sampling with an electric water level indicator. The wells were purged and sampled using clean disposable Teflon bailers.

Temperature, pH,conductivity and Dissolved Oxygen were measured during the purging of the wells. AEI removed at least 3 well volumes. Once these parameters stabilized, a water sample was collected.

Water was poured from the bailers into 40 ml VOA vials and 500 ml plastic bottles 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 from the five wells were submitted for chemical analysis for Total Petroleum Hydrocarbons (TPH) as gasoline (EPA Method 5030/8015), methyl tertiary butyl ether (MTBE) (EPA Method 8020/602), benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Method 8020/602). Additionally, the sample from TW-5 was analyzed for TPH as diesel and TPH as motor oil (EPA Method 8015/3550).

Field Results

No sheen or free product was encountered during monitoring activities. Hydrocarbon odor was detected in monitoring well MW-2. Groundwater levels for the current monitoring episode ranged from 0.57 to 0.73 feet below Mean Sea Level (MSL). These groundwater elevations were an average of 0.22 foot higher than the previous monitoring episode. **The direction of the groundwater flow at the time of measurement was towards the south. The latest calculated groundwater gradient is .0036 foot per foot.**

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

Groundwater Quality

Since the previous monitoring episode, concentrations of TPH as gasoline and benzene have decreased in monitoring wells MW-1 through MW-4. However, elevated concentrations of TPH-g and benzene still exist up to 1,100 ug/L and 260 ug/L, respectively in these four wells. Concentrations of MTBE were below detectable laboratory limits in all the wells. TPH as gasoline and as diesel was detected at 5,800 ug/L and 2,900 ug/L in the temporary extraction well (TW-5) which is located in the excavation area of the former UST. In addition, benzene was detected at 650 ug/L in TW-5.

Dissolved oxygen content was monitored for the first time during this episode of sampling. The concentration of dissolved oxygen in the wells, generally between 0.10 and 0.35 mg/L, may be indicative of natural bio-degradation of hydrocarbons in the shallow groundwater. Although no comparative data is available at this time for dissolved oxygen at the site, limited dissolved oxygen may be limiting the natural degredation of hydrocarbons.

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

Recommendations

Quarterly groundwater monitoring and sampling of the wells will continue as required by the ACHCSA. The next monitoring and sampling episode is scheduled for January, 2001. All well will be monitored for dissolved oxygen during subsequent episodes and the groundwater in well TW-5 will continue to be analyzed for TPH as gasoline, TPH as diesel, BTEX, MTBE, and TPH as motor oil.

References

1. Underground Storage Tank Removal Final Report, prepared by AEI – October 10, 1996
2. Phase II Soil and Groundwater Investigation Report, prepared by AEI – March 17, 1997
3. Workplan, prepared by AEI – May 21, 1999
4. Soil Boring and Groundwater Monitoring Well Installation Report, prepared by AEI-September 16, 1999
5. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-July 28, 2000.

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.

Please contact the undersigned or Peter McIntyre for questions regarding the findings outlined in this report.

Sincerely,
AEI Consultants

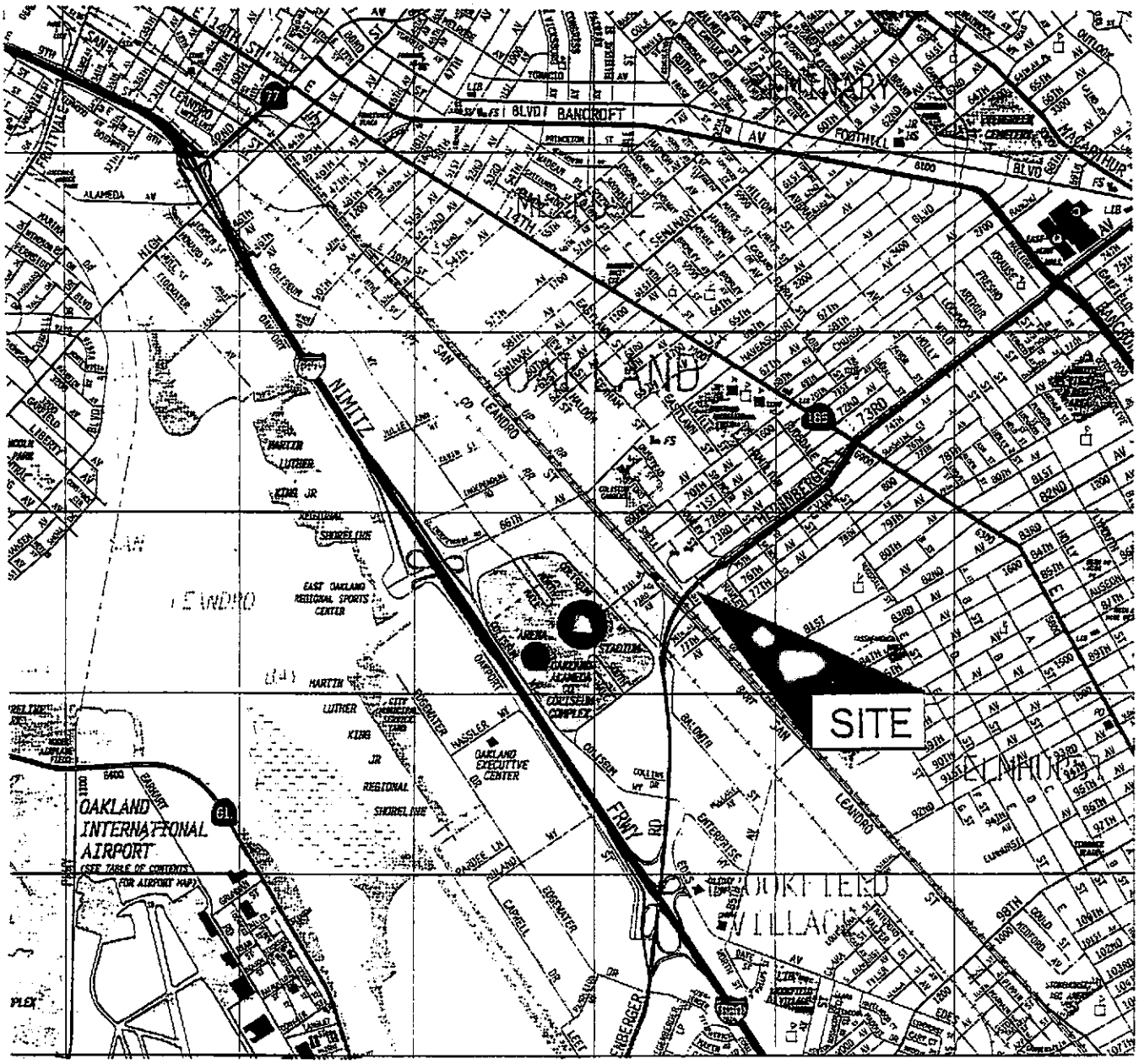
Orion Alcalay
Environmental Scientist

J. P. Derhake, PE
Principal

REGISTERED PROFESSIONAL ENGINEER
JOSEPH P. DERHAKE
C055478
Exp. 06/30/01
CIVIL
STATE OF CALIFORNIA

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Groundwater Contour Map
Table 1	Groundwater Elevations
Table 2	Groundwater Sample Analytical Results
Appendix A	Groundwater Monitoring Well Field Sampling Forms
Appendix B	Current Laboratory Analyses With Chain of Custody Documentation

cc: Mr. Barney Chan, ACHCSA, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502



N

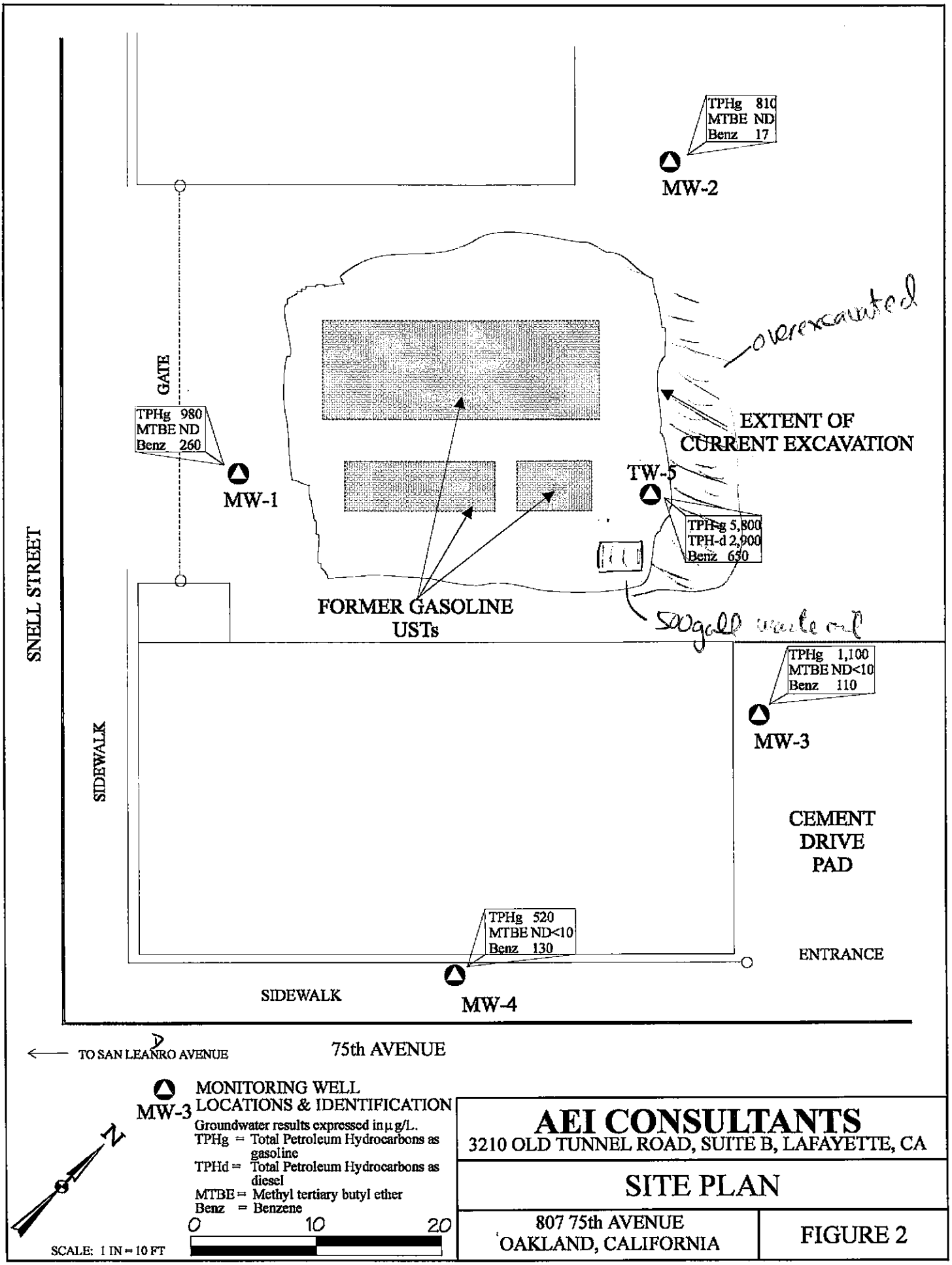
SOURCE:
THOMAS GUIDE 1997
SCALE: 1 in = 2,400 ft.

AEI CONSULTANTS
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SITE LOCATION MAP

807 75th STREET
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 3190



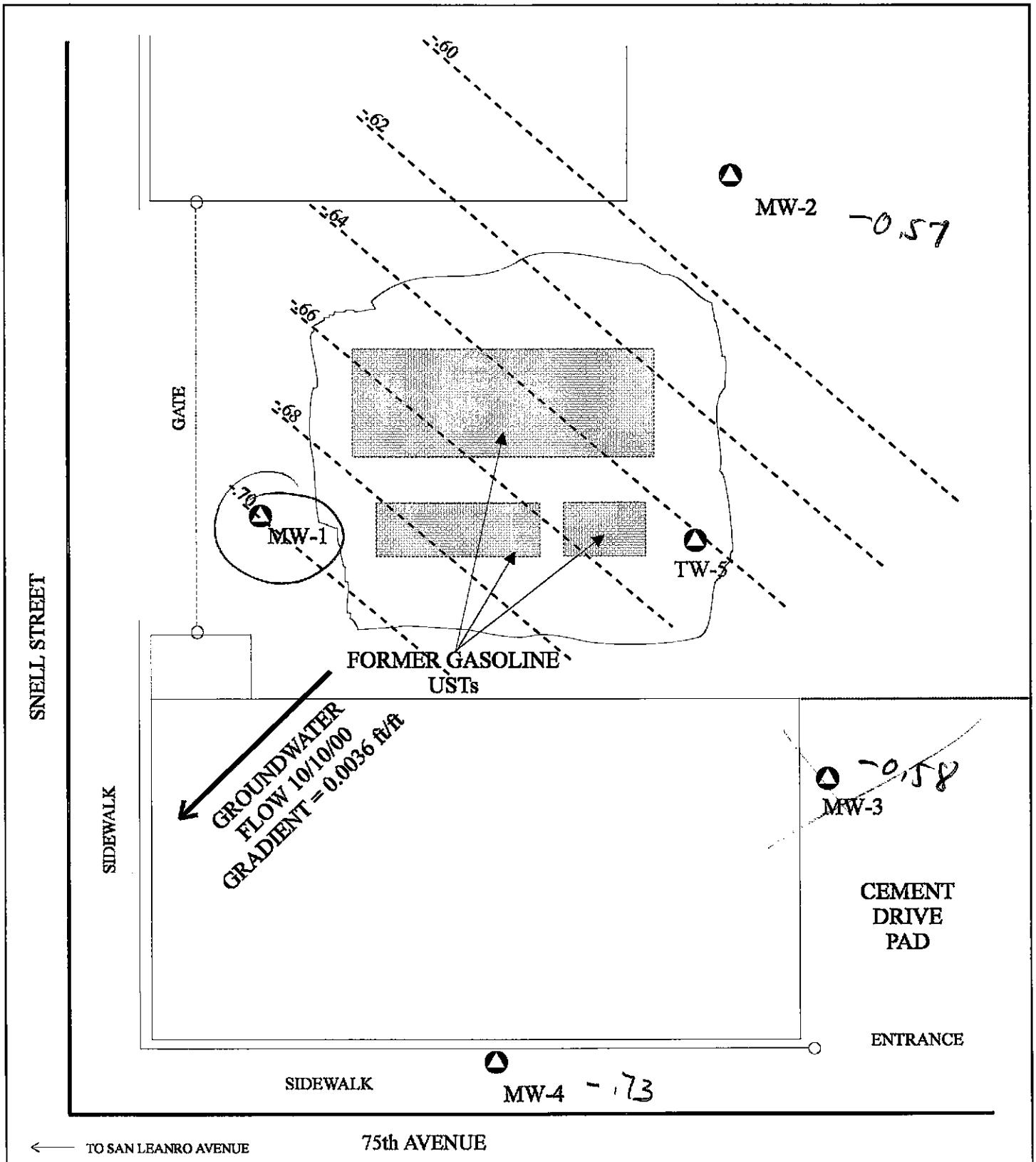
AEI CONSULTANTS

3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

SITE PLAN

807 75th AVENUE
OAKLAND, CALIFORNIA

FIGURE 2



AEI CONSULTANTS
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

GROUNDWATER CONTOUR MAP

807 75th 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	7/30/99	5.00	5.82	-0.82
	11/9/99	5.00	5.70	-0.70
	2/23/00	5.00	2.84	2.16
	5/26/00	5.00	5.50	-0.50
	10/10/00	**5.00**	**5.70**	**-0.70**
MW-2	7/30/99	5.95	6.64	-0.69
	11/9/99	5.95	6.42	-0.47
	2/23/00	5.95	3.31	2.64
	5/26/00	5.95	6.34	-0.39
	10/10/00	**5.95**	**6.52**	**-0.57**
MW-3	7/30/99	4.66	5.35	-0.69
	11/9/99	4.66	5.11	-0.45
	2/23/00	4.66	2.37	2.29
	5/26/00	4.66	4.98	-0.32
	10/10/00	**4.66**	**5.24**	**-0.58**
MW-4	7/30/99	4.59	5.45	-0.86
	11/9/99	4.59	5.31	-0.72
	2/23/00	4.59	2.72	1.87
	5/26/00	4.59	5.07	-0.48
	10/10/00	**4.59**	**5.32**	**-0.73**

Notes:

All well elevations are measured from the top of casing not from the ground surface.

ft msl = feet above mean sea level

Table 2:
Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	TPH as gasoline µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	TPH as diesel µg/L	TPH as motor oil µg/L
MW-1	7/30/99	2,700	<10	920	5.5	18	130	-	-
	11/9/99	1,800	<20	430	1.5	26	60	-	-
	2/23/00	3,800	<10	1,500	56	78	35	-	-
	5/26/00	7,100	<10	2,800	70	220	81	-	-
	10/10/00	**980**	**<5.0**	**260**	**2.9**	**10**	**11**	-	-
MW-2	7/30/99	1,200	<10	29	2.5	51	100	-	-
	11/9/99	1,300	<30	26	1.1	55	32	-	-
	2/23/00	5,000	<10	200	18	390	440	-	-
	5/26/00	2,700	<10	69	13	83	68	-	-
	10/10/00	**810**	**<10**	**17**	**4.7**	**42**	**46**	-	-
MW-3	7/30/99	2,700	<10	220	15	130	230	-	-
	11/9/99	3,100	15	440	9	150	96	-	-
	2/23/00	1,800	<15	180	11	82	79	-	-
	5/26/00	1,600	6.4	140	10	69	63	-	-
	10/10/00	**1,100**	**ND<10**	**110**	**4.4**	**63**	**51**	-	-
MW-4	7/30/99	340	<10	57	2.2	8.5	6.8	-	-
	11/9/99	1,000	<10	220	ND	17	7.1	-	-
	2/23/00	980	ND	260	7	33	27	-	-
	5/26/00	760	5.7	170	4.8	22	13	-	-
	10/10/00	**520**	**ND<10**	**130**	**2.3**	**22**	**10**	-	-
TW-5	**10/10/00**	**5,800**	**ND<50**	**650**	**60**	**190**	**230**	**2,900**	**<250**
MDL		50	5.0	0.5	0.5	0.5	0.5	50	250

MDL = Method Detection Limit

ND = Not detected above the Method Detection Limit (unless otherwise noted)

µg/L = micrograms per liter (ppb)

mg/L = milligrams per liter (ppm)

APPENDIX A

WELL FIELD SAMPLING FORMS

AEI CONSULTANTS - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name: Omega	Date of Sampling: 10/10/00
Job Number: 3190	Name of Sampler: DR
Project Address: 807 75th Ave, Oakland	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	Cement / Good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	5.00
Depth of Well	20
Depth to Water	5.70
Water Elevation	-0.70
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	6.90
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	10
Appearance of Purge Water	Greyish

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg F)	PH	Cond (mS)	Dissolved Oxygen (DO) mg/L	Redox (volts)	Comments
8:34	2	66.0	6.70	1.36	0.16	277	
8:42	5	65.7	6.69	1.36	0.14	272	
8:47	7	65.4	6.68	1.36	0.14	266	
8:55	10	65.2	6.68	1.35	0.14	262	

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: Omega	Date of Sampling: 10/10/00
Job Number: 3190	Name of Sampler: DR
Project Address: 807 75th Ave, Oakland	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	Cement / Good
Well Cap & Lock – OK/Replace	OK
Elevation of Top of Casing	5.95
Depth of Well	20
Depth to Water	6.52
Water Elevation	-0.57
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	6.5
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	12
Appearance of Purge Water	Greyish

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAS

Time	Vol Remvd (gal)	Temp (deg F)	PH	Cond (mS)	Dissolved Oxygen (DO) mg/L	Redox (Volts)	Comments
9:07	2	69.2	6.72	.923	0.34	-	
9:16	5	68.5	6.71	.924	0.26	-	
9:23	7	67.7	6.71	.871	0.23	-	
9:33	8	67.5	6.76	.875	0.23	313	
9:39	10	67.0	6.72	.854	0.23	313	
9:50	12	66.8	6.70	.853	0.23	313	

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

Slight Odor

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name: Omega	Date of Sampling: 10/10/00
Job Number: 3190	Name of Sampler: DR
Project Address: 807 75th Ave., Oakland	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	Cement / Good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	4.66
Depth of Well	20
Depth to Water	5.24
Water Elevation	-0.58
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	7.08
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	10
Appearance of Purge Water	Clear

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg F)	PH	Cond (mS)	Dissolved Oxygen (DO) mg/L	Redox (Volts)	Comments
10:11	2	67.1	6.70	1.78	0.24	306	
10:19	5	67.8	6.64	1.79	0.22	299	
10:27	7	67.2	6.65	1.78	0.22	283	
10:36	10	67.0	6.66	1.75	0.23	276	

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-4

Project Name: Omega	Date of Sampling: 10/10/00
Job Number: 3190	Name of Sampler: DR
Project Address: 807 75th Ave., Oakland	

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	Cement / Good
Well Cap & Lock -- OK/Replace	OK
Elevation of Top of Casing	4.59
Depth of Well	20
Depth to Water	5.32
Water Elevation	-0.73
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	7.05
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	10
Appearance of Purge Water	Clear

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg F)	PH	Cond (mS)	Dissolved Oxygen (DO) mg/L	Redox (Volts)	Comments
10:55	2	68.4	6.28	1.59	0.32	251	
11:06	5	67.4	6.69	1.64	0.19	259	
11:15	7	66.9	6.63	1.66	0.19	266	
11:26	10	66.5	6.64	1.72	0.21	269	

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

No hydrocarbon odor or sheen observed

TD - Total Depth of Well
DTW - Depth To Water

AEI CONSULTANTS – GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: TW-5

Project Name: Omega	Date of Sampling: 10/10/00
Job Number: 3190	Name of Sampler: DR
Project Address: 807 75th Ave., Oakland	

MONITORING WELL DATA

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

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 VOAs

Time	Vol Remvd (gal)	Temp (deg F)	PH	Cond (mS)	Dissolved Oxygen (DO) mg/L	Redox (Volts)	Comments
11:39	5	71.0	6.97	1.41	0.11	266	
11:47	10	71.1	6.97	1.12	0.11	249	
11:55	15	71.1	6.96	1.13	0.10	234	
12:07	20	71.1	6.96	1.12	0.09	224	
12:16	25	71.1	6.96	1.11	0.09	217	

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

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.	Client Project ID: #3190; Omega Termite	Date Sampled: 10/10/00
3210 Old Tunnel Road, Suite B		Date Received: 10/10/00
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 10/10-10/11/00
	Client P.O:	Date Analyzed: 10/10-10/11/00

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	Ethylbenzene	Xylenes	% Recovery Surrogate
50044	MW-1	W	980,a	ND	260	2.9	10	11	107
50045	MW-2	W	810,a	ND	17	4.7	42	46	106
50046	MW-3	W	1100,a	ND<10	110	4.4	63	51	106
50047	MW-4	W	520,a	ND<10	130	2.3	22	10	106
50048	TW-5	W	5800,a	ND<50	650	60	190	230	103
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

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

All Environmental, Inc.	Client Project ID: #3190; Omega Termite	Date Sampled: 10/10/00
3210 Old Tunnel Road, Suite B		Date Received: 10/10/00
Lafayette, CA 94549-4157	Client Contact: Peter McIntyre	Date Extracted: 10/10/00
	Client P.O:	Date Analyzed: 10/11/00

Diesel Range (C10-C23) and Oil-Range (C18+) Extractable Hydrocarbons as Diesel and Motor Oil*

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	TPH(mo)+	% Recovery Surrogate
50048	TW-5	W	2900,b	ND	108
				--	
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	250 ug/L	
		S	1.0 mg/kg	5.0 mg/kg	

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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

QC REPORT

Date: 10/11/00 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 47830				Instrument: GC-12			
Surrogate1	0.000	94.0	92.0	100.00	94	92	2.2
Xylenes	0.000	305.0	323.0	300.00	102	108	5.7
Ethyl Benzene	0.000	104.0	106.0	100.00	104	106	1.9
Toluene	0.000	108.0	102.0	100.00	108	102	5.7
Benzene	0.000	103.0	101.0	100.00	103	101	2.0
MTBE	0.000	107.0	108.0	100.00	107	108	0.9
GAS	0.000	783.5	907.9	1000.00	78	91	14.7
SampleID: 101000				Instrument: GC-2 A			
Surrogate1	0.000	101.0	99.0	100.00	101	99	2.0
TPH (diesel)	0.000	305.0	299.0	300.00	102	100	2.0
SampleID: 101100				Instrument: IR-1			
TRPH	0.000	25.2	24.6	23.70	106	104	2.4

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

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

RPD means Relative Percent Deviation

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

QC REPORT

Date: 10/10/00 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 47054				Instrument: GC-3			
Surrogate1	0.000	101.0	101.0	100.00	101	101	0.0
Xylenes	0.000	278.0	285.0	300.00	93	95	2.5
Ethyl Benzene	0.000	94.0	96.0	100.00	94	96	2.1
Toluene	0.000	98.0	99.0	100.00	98	99	1.0
Benzene	0.000	99.0	103.0	100.00	99	103	4.0
MTBE	0.000	111.0	103.0	100.00	111	103	7.5
GAS	0.000	826.4	825.9	1000.00	83	83	0.1
SampleID: 101000				Instrument: GC-2 A			
Surrogate1	0.000	103.0	104.0	100.00	103	104	1.0
TPH (diesel)	0.000	340.0	341.0	300.00	113	114	0.3
SampleID: 101000				Instrument: IR-1			
Surrogate1	0.000	87.3	88.5	100.00	87	89	1.4
TRPH	0.000	24.1	23.4	23.70	102	99	2.9

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

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

RPD means Relative Percent Deviation

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

22405

CHAIN OF CUSTODY

PAGE 1 OF 1

TAT: RUSH / 24 hr / 48 hr / (5 day) / other

Zak 27

AEI PROJECT MANAGER PETER
PROJECT NAME OMEGA TERMITE
PROJECT NUMBER 3190
TOTAL # OF CONTAINERS 12
RCVD. GOOD CONDITION/COLD [X] Y [ ] N

SAMPLE ID	DATE	TIME	MATRIX	TPH(g), BTEX, MTBE SOIL: EPA 8260/8015m, 8020 WATER: EPA 5030/8015m, 602	TPH(d) SOIL: EPA 8015m WATER: EPA 3510/8015m	BTEX, MTBE SOIL: EPA 8020 WATER: EPA 602	TOTAL OIL & GREASE SOIL: EPA 413.1 or STD 5520 D/F&F WATER: STD. 5520 B&F	VOLATILE HALOCARBONS SOIL: EPA 8010 WATER: EPA 601	VOC's SOIL: EPA 8240 WATER: EPA 624	SEMI-VOLATILE ORGANICS SOIL: EPA 8270/3550 WATER: EPA 625/3510	TOTAL LEAD (TTLC) SOIL: 7420 (ICP) WATER: 239.2 (AA)	LUFT 5 METALS SOIL: EPA 7130, 7190, 7420, 7950 WATER:	MOTOR OIL	HOLD	# OF CONTAINERS
MW-1	10/10		W	X											2
MW-2	"		W	X											2
MW-3	"		W	X											2
MW-4	"		W	X											2
TW-5	"		W	X	X								X		4

50044 (+)
50045 (+)
50046 (+)
50047 (+)
50048 (+)

ICE/0°

COMMENTS / INSTRUCTIONS

ANALYTICAL LABORATORY
ADDRESS
PHONE ( ) FAX ( )

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
SIGNATURE	SIGNATURE	SIGNATURE	SIGNATURE
Dusty Roy	Lesleigh Aldermann	Lesleigh Aldermann	ELISA VENEGAS
PRINTED NAME	PRINTED NAME	PRINTED NAME	PRINTED NAME
AEI	AEI Consultants	AEI	MAI
COMPANY	COMPANY	COMPANY	COMPANY
DATE 10/10/00 TIME 4:07 pm	DATE 10/10/00 TIME 4:07 pm	DATE 10/10 TIME 5:00	DATE 10/10 TIME 5:05

10/10/2000 16:55 FAX 9252836121 AEI Consultants 002