AEI CONSULTANTS
Environmental & Civil Engineering

2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597
Phone: (925) 283-6000 Fax: (925) 944-2895

September 8, 2003

RO507

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

Subject: **Quarterly Groundwater Monitoring Report**
807 75th Street
Oakland, CA 94621
AEI Project No. 3190

Dear Mr. Chan:

Enclosed is the most recent quarterly monitoring report for the above referenced site.

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

Sincerely,

Jeff Rosenberg
Staff Engineer

September 8, 2003

GROUNDWATER MONITORING REPORT
14th Episode, 2003

807 75th Avenue
Oakland, California

Project No. 3190

Prepared For

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

Prepared By

AEI Consultants
2500 Camino Diablo Blvd., Suite 200
Walnut Creek, CA 94597
(925) 283-6000

AEI

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Environmental & Civil Engineering

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Phone: (925) 283-6000 Fax: (925) 944-2895

September 8, 2003

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

Subject: **Quarterly Groundwater Monitoring Report**
14th Episode, 2003
807 75th Avenue
Oakland, California
Project No. 3190

Dear Kanady:

AEI Consultants (AEI) has prepared this report to document the results of the fourteenth episode of groundwater monitoring and 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 previous locations of underground storage tanks (USTs) at the site. This report presents the findings of the fourteenth sampling episode of groundwater monitoring and sampling conducted on September 2, 2003.

Site Description and Background

The site is located in an industrial area of the City of Oakland, on the northern corner of the intersection of 75th Avenue and Snell Street, just east of San Leandro Street. The property is approximately 10,000 square feet in size and currently developed with two buildings, occupied by Omega.

On September 15, 1996, AEI removed three gasoline USTs from the subject property. The tanks consisted of one 8,000-gallon UST, one 1,000-gallon UST, and one 500-gallon UST. The former locations of the tanks are shown in Figure 2. A total of five soil samples and one groundwater sample collected during the tank removal activities revealed that a release had occurred from the tank system. Total petroleum hydrocarbons as gasoline (TPH-g), benzene, and methyl tertiary butyl ether (MTBE) were detected up to 4,300 mg/kg, 13 mg/kg, and 25 mg/kg, respectively in soil samples. The excavation was not backfilled. Soil removed from the excavation was stockpiled on the northern portion of the property. In 1999 soil samples collected from the stockpiled soil contained non-detectable to minor concentrations of TPH-g. Mr. Barney Chan of the ACHCSA approved the stockpiled soil for reuse in the excavation.

In October 1997, soil and groundwater samples were collected from six soil borings (BH-1 through BH-6). In June 1999, four groundwater monitoring wells (MW-1 through MW-4) were also installed by AEI.

Under the direction of ACHCSA, additional soil was removed from the excavation in March 2000. The excavation was extended to 29 by 48 feet in size and 8 feet deep at the east end of the excavation and 11.5 at the west end. During the excavation activities, an additional 500 gallon UST was discovered at the eastern end of the excavation. This tank was removed under the direction of Oakland Fire Services Agency (OFSA). A total of six additional soil samples were collected from the sidewalls and bottom of the excavation.

The resulting excavation was then backfilled with pea gravel to bridge the water table, with the remainder of the excavation being filled with the previously aerated soil and later with imported fill. The newly excavated soil was stockpiled on the northern portion of the property. A total of 7,400 gallons of hydrocarbon impacted groundwater were pumped from the excavation, treated on-site, and discharged under an East Bay Municipal Utility District permit to the sanitary sewer system.

Monitoring well locations are shown on Figure 2. Historical water table elevation data are presented in Appendix A, Table 1. Historical groundwater sample analytical data are presented in Table 2 of Appendix A.

Summary of Activities

AEI conducted a quarterly groundwater monitoring investigation on four monitoring wells (MW-1, MW-2, MW-3 and MW-4) and the one temporary extraction well (TW-5) on July 14, 2003. Well locations are shown in Figure 2. First, the depths to groundwater (from the top of the well casings) for each well were measured with an electric water level indicator. The wells were then purged using a battery powered submersible pump. Approximately three well volumes were removed from each well. Temperature, pH, specific conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured and the turbidity was visually noted during the purging of the wells.

Once the groundwater parameters stabilized, and following recovery of water levels, water samples were collected from each well. Sample water was poured from polyethylene bailers into 40-milliliter (ml) Volatile Organic Analysis (VOA) vials and 1-liter amber bottles, which were subsequently capped so neither head space or air bubbles were visible within the vials. Samples were shipped on ice under proper chain of custody protocol to McCampbell Analytical, Inc. of Pacheco, California (Department of Health Services Certification #1644).

Groundwater samples from the five wells were analyzed for TPH-g (EPA Method 8015C), TPH as diesel (TPH-d) (EPA method 8015C), benzene, toluene, ethyl benzene, xylenes (BTEX), and MTBE (EPA Method 8021B).

Field Results

Hydrocarbon odor was detected in wells MW-1, MW-2, MW-3 and TW-5. Groundwater levels for this sampling episode ranged from -.16 to -.03 feet above mean sea level (amsl). These elevations are an average of .29 feet lower than the previous episode. Groundwater flow direction was estimated to be to the south south-east with a hydraulic gradient of 0.0017 ft/ft. The hydraulic gradient is an order of magnitude smaller than the previous episode of 0.016 ft/ft. The temporary extraction well, TW-5, is not included in calculating the groundwater direction flow or the hydraulic gradient due to variation in well construction.

Groundwater elevation data are summarized in Table 1 (Appendix A). 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

TPH-g decreased in concentration in well MW-2, (from 2,400 micrograms per liter [µg/L] to 1,900 µg/L) in MW-4, (from 850 µg/L to 780 µg/L) and in TW-5, (from 160 µg/L to 100 µg/L). TPH-d concentrations increased in all wells. Well TW-5 remains highest in heavier range hydrocarbons (TPH-d) and showed an increase in concentration from 2,300 µg/L to 16,000 µg/L. MTBE has not been detected above laboratory reporting limits in any of the wells sampled since the beginning of this investigation. Benzene concentrations increased in well MW-1, from 87 µg/L to 420 µg/L, and in MW-3 from 60 µg/L to 130 µg/L. Increases in benzene concentrations, although substantially lower than during similar time periods, are likely due to seasonal trending, as seen in Figure 4. In well TW-5, benzene levels decreased from 18 µg/L to 1.2 µg/L. In wells MW-2 and MW-4 benzene levels remained relatively constant.

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

Conclusions

Concentrations of TPH-g and Benzene have shown seasonal fluctuations in all wells as groundwater levels rise and fall. This variance can be seen on Figure 4.

During this monitoring period, concentrations of TPH-d in wells MW-1, MW-2, MW-3 and MW-4 were significantly lower than the concentrations of TPH-d in TW-5. This has been the case over the last two years of monitoring.

AEI submitted a site characterization workplan dated January 27, 2003, which addresses the agency's technical comments, and works toward an effective remedial action plan for the subject property.

Groundwater monitoring and sampling of the five wells will continue, with the next episode scheduled for October 2003.

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.
6. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-November 3, 2000.
7. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-February 7, 2001.
8. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-July 2, 2001.
9. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-February 20, 2002.
10. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-June 21, 2002.
11. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-October 14, 2002.
12. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-January 31, 2003.
13. Quarterly Groundwater Monitoring and Sampling Report, prepared by AEI-March 19, 2003.

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 that existed at the time and location of the work.

Please contact Peter McIntyre or myself with any questions regarding the findings outlined in this report.

Sincerely,
AEI Consultants

Jeff Rosenberg
Staff Engineer

Technical Review By:

L. M. Sawyer #4450
Lorraine M. Sawyer, RG

Figures

Figure 1	Site Location Map
Figure 2	Site Plan – Hydrocarbon Concentrations
Figure 3	Water Table Contour Map
Figure 4	Concentrations Graph

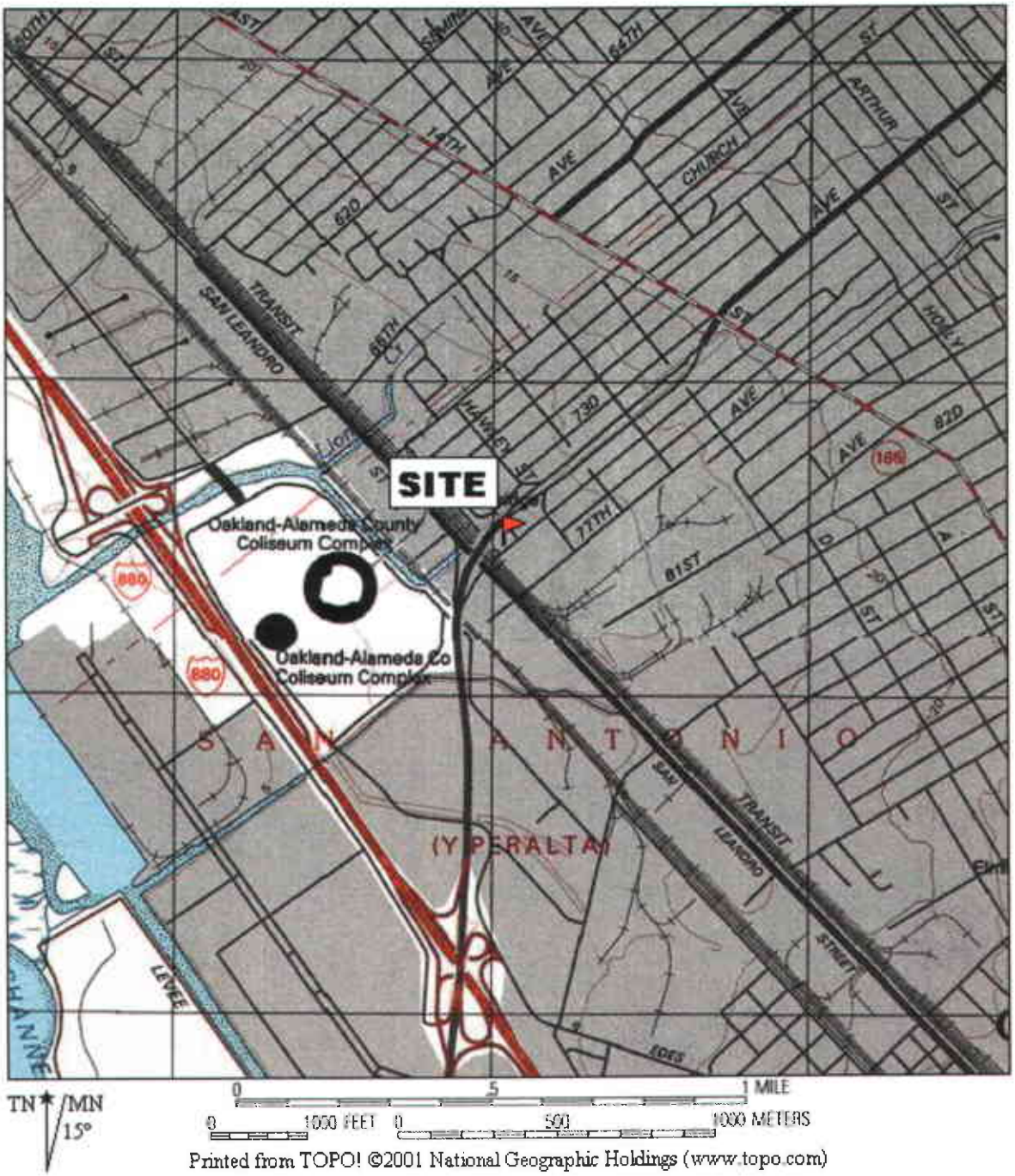
Appendix A

Table 1	Groundwater Elevations
Table 2	Groundwater Sample Analytical Results

Appendix B Groundwater Monitoring Well Field Sampling Forms

Appendix C Laboratory Reports With Chain of Custody Documentation

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



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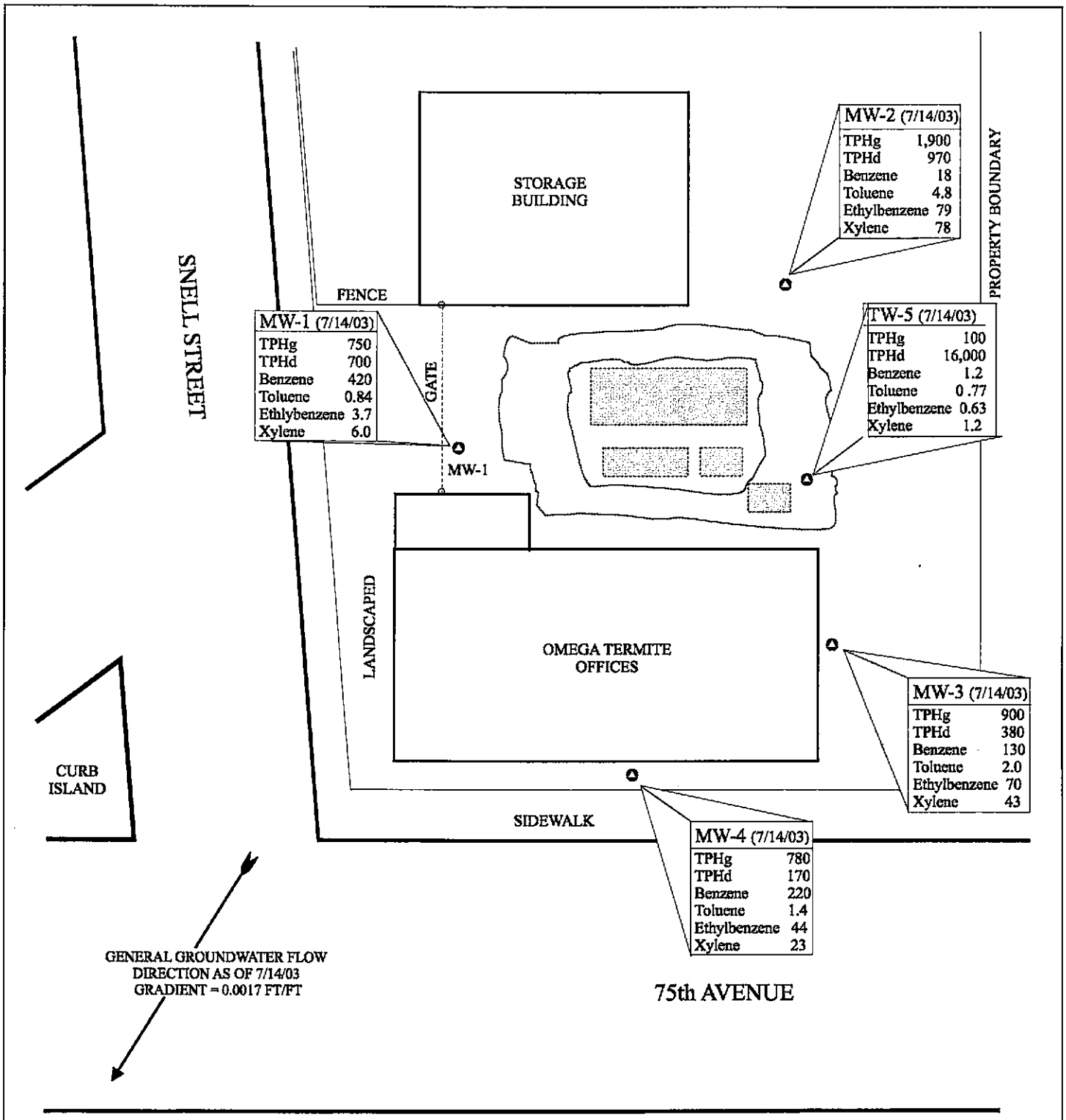
AEI CONSULTANTS 2500 CAMINO DIABLO, STE 200, WALNUT CREEK, CA	
SITE LOCATION MAP	
807 75th AVENUE OAKLAND, CALIFORNIA	**FIGURE 1** PROJECT NO. 3190



LEGEND

N

SCALE: 1in = 20 ft

0' 10' 20'

▲ MONITORING WELL LOCATIONS WITH CONCENTRATIONS IN µg/L

TPHg - Total Petroleum Hydrocarbons as gasoline

TPHd - Total Petroleum Hydrocarbons as diesel

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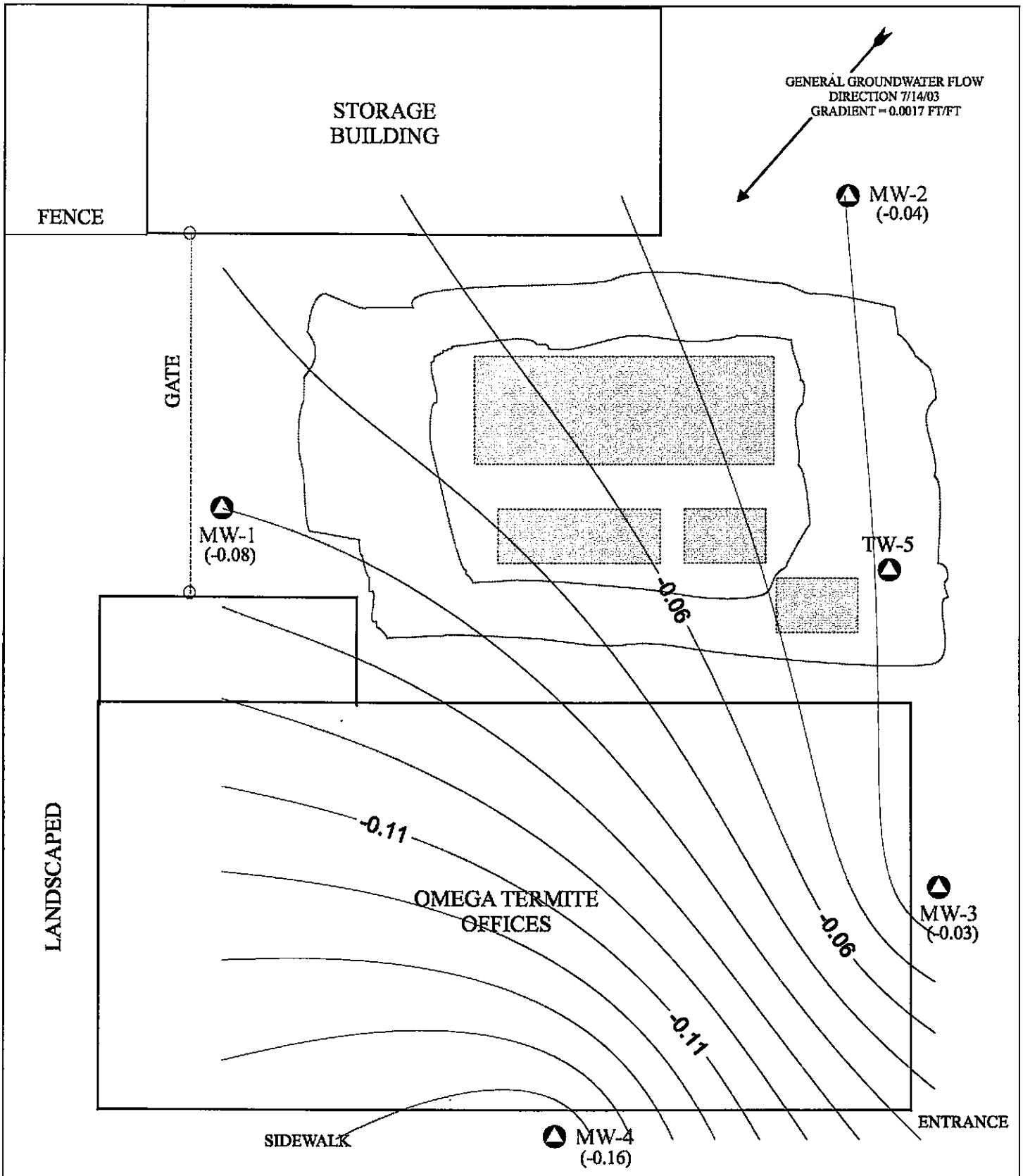
HYDROCARBON CONCENTRATIONS

807 75th AVENUE
OAKLAND, CALIFORNIA

FIGURE 2
AEI PROJECT No. 3190



N

0.8 Groundwater contours measured in feet above mean sea level (msl)
Countour Interval = 0.01 (feet)
Drawn in Surfer V. 7.0
Well TW-5 not used in calculating groundwater contours

0' 5' 10'
SCALE: 1 IN = 10 FT

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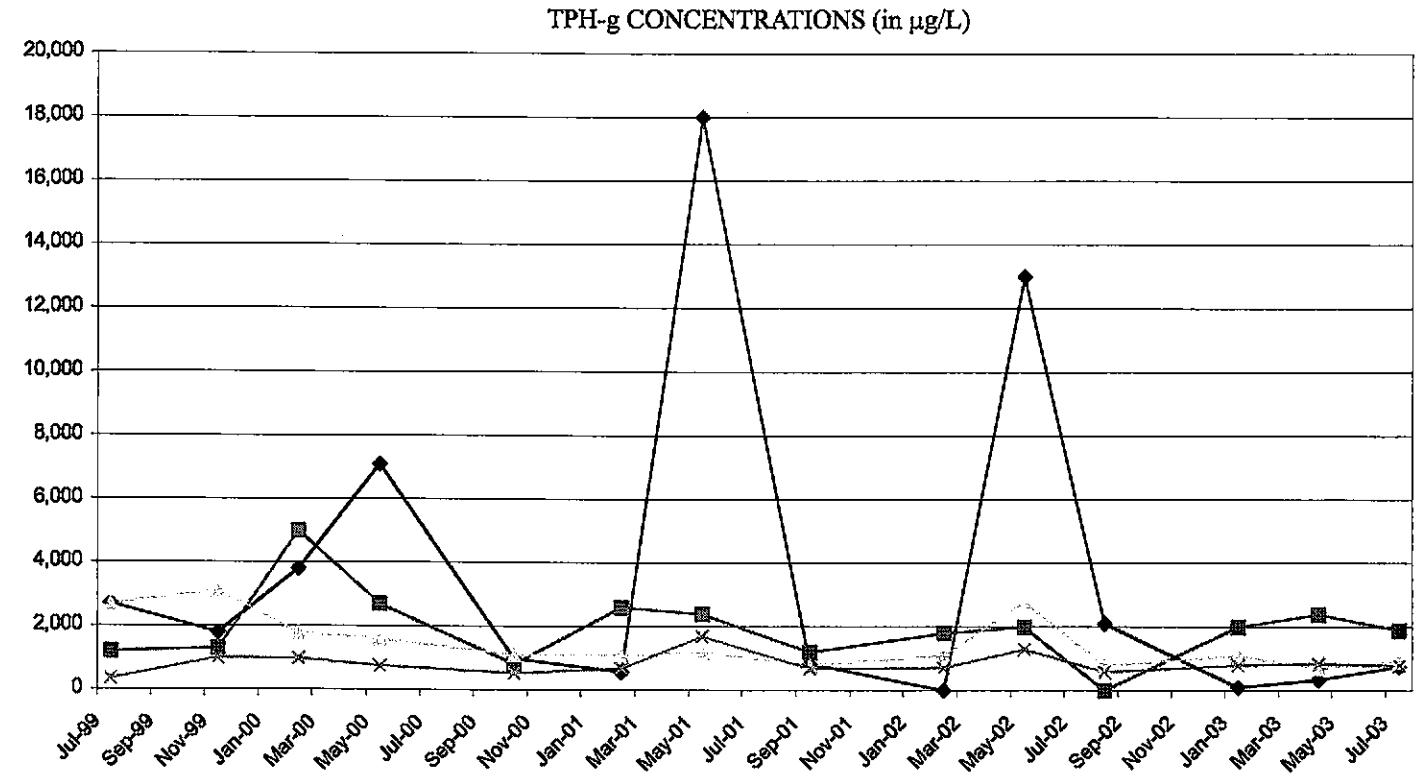
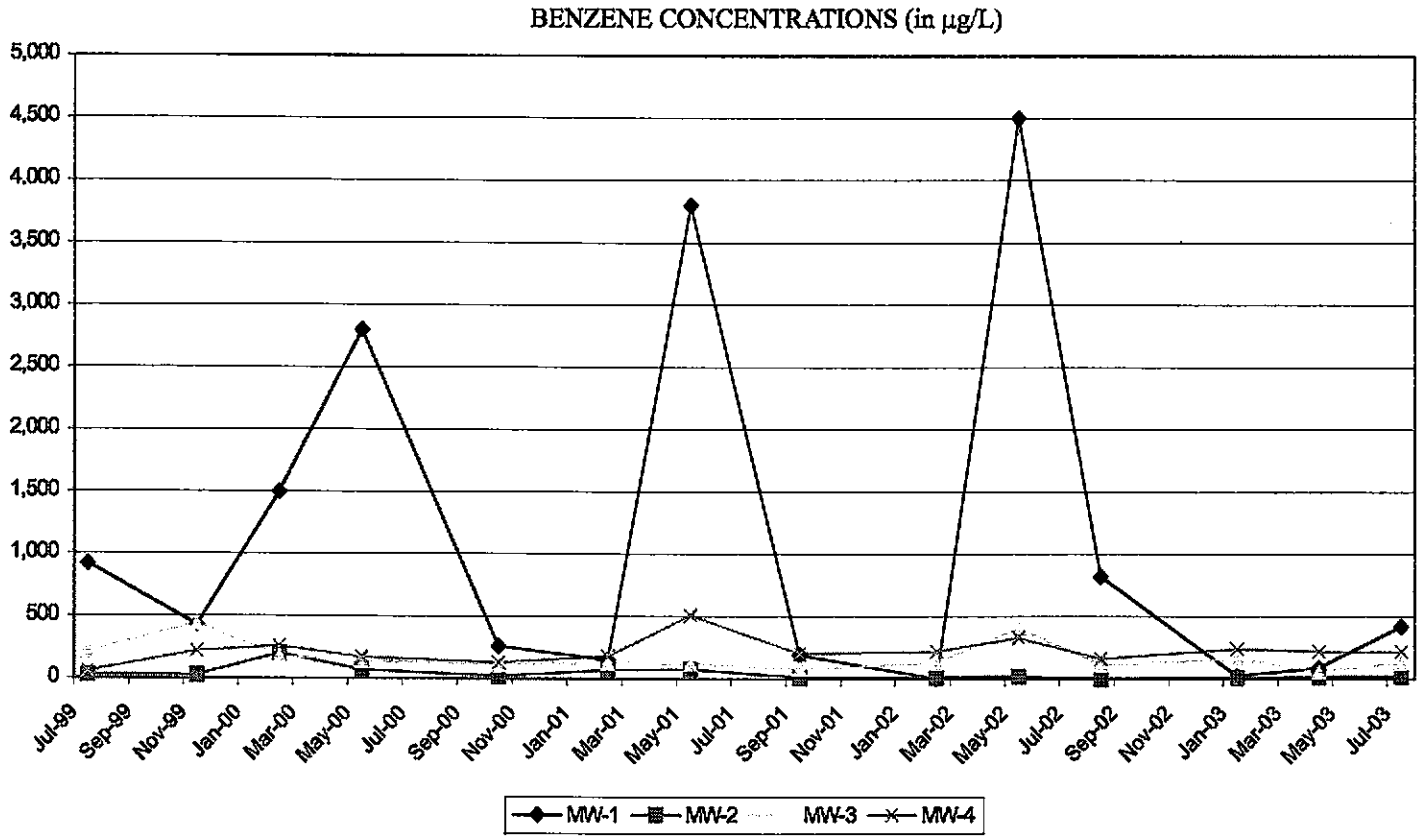
WATER TABLE CONTOURS

807 75th AVENUE
OAKLAND, CALIFORNIA

FIGURE 3
AEI Project # 3190





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CONCENTRATIONS OVER TIME

807 75th AVENUE
OAKLAND, CALIFORNIA

FIGURE 4
AEI Project # 3190

Table 1
Groundwater Elevations

Well ID	Date	Well Elevation (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MW-1	07/30/99	5.00	5.82	-0.82
	11/09/99	5.00	5.70	-0.70
	02/23/00	5.00	2.84	2.16
	05/26/00	5.00	5.50	-0.50
	10/10/00	5.00	5.70	-0.70
	02/07/01	5.00	5.25	-0.25
	05/25/01	5.00	5.25	-0.25
	09/19/01	5.00	5.51	-0.51
	02/06/02	NS	NS	NS
	05/17/02	5.00	5.30	-0.30
	08/20/02	5.00	5.39	-0.39
	01/10/03	5.00	4.11	0.89
	04/14/03	5.00	4.85	0.15
	07/14/03	5.00	5.08	-0.08
MW-2	07/30/99	5.95	6.64	-0.69
	11/09/99	5.95	6.42	-0.47
	02/23/00	5.95	3.31	2.64
	05/26/00	5.95	6.34	-0.39
	10/10/00	5.95	6.52	-0.57
	02/07/01	5.95	5.90	0.05
	05/25/01	5.95	6.08	-0.13
	09/19/01	5.95	6.53	-0.58
	02/06/02	5.95	5.72	0.23
	05/17/02	5.95	6.17	-0.22
	08/20/02	5.95	NS	NS
	01/10/03	5.95	5.12	0.83
	04/14/03	5.95	4.98	0.97
	07/14/03	5.95	5.99	-0.04
MW-3	07/30/99	4.66	5.35	-0.69
	11/09/99	4.66	5.11	-0.45
	02/23/00	4.66	2.37	2.29
	05/26/00	4.66	4.98	-0.32
	10/10/00	4.66	5.24	-0.58
	02/07/01	4.66	4.73	-0.07
	05/25/01	4.66	4.73	-0.07
	09/19/01	4.66	5.07	-0.41
	02/06/02	4.66	4.69	-0.03
	05/17/02	4.66	4.80	-0.14
	08/20/02	4.66	4.97	-0.31
	01/10/03	4.66	3.59	1.07
	04/14/03	4.66	5.40	-0.74
	07/14/03	4.66	4.69	-0.03
MW-4	07/30/99	4.59	5.45	-0.86
	11/09/99	4.59	5.31	-0.72
	02/23/00	4.59	2.72	1.87
	05/26/00	4.59	5.07	-0.48
	10/10/00	4.59	5.32	-0.73
	02/07/01	4.59	4.73	-0.14
	05/25/01	4.59	4.90	-0.31
	09/19/01	4.59	5.16	-0.57
	02/06/02	4.59	4.65	-0.06
	05/17/02	4.59	4.90	-0.31
	08/20/02	4.59	5.02	-0.43
	01/10/03	4.59	3.78	0.81
	04/14/03	4.59	4.11	0.48
	07/14/03	4.59	4.75	-0.16
TW-5	09/19/01	ns	6.59	na
	05/17/02	ns	6.56	na
	08/20/02	ns	6.62	na
	01/10/03	ns	4.66	na
	04/14/03	ns	5.30	na
	07/14/03	ns	5.84	na

Depth to water measured from the top of well casing
ft amsl = feet above mean sea level
ns - TW-5 Not surveyed
na - not available

Episode	Date	Average Water Table Elevation (ft amsl)	Water Table Elevation Change (ft)	Hydraulic Gradient/ Flow Direction (ft/ft)
1	07/30/99	-0.77	-	
2	11/09/99	-0.59	0.18	0.0056 / SW
3	02/23/00	2.24	2.83	0.008 / S
4	05/26/00	-0.42	-2.66	0.003 / SW
5	10/10/00	-0.65	-0.22	0.0036 / S
6	02/07/01	-0.10	0.54	0.008 / S
7	05/25/01	-0.19	-0.09	0.006 / S
8	09/19/01	-0.52	-0.33	0.004 / S
9	02/06/02	0.05	0.56	0.005 / SE
10	05/17/02	-0.24	-0.29	0.003 / SW
11	08/20/02	-0.38	-0.13	0.002 / S
12	01/10/03	0.90	1.28	0.006 / E-NE
13	04/14/03	0.22	-0.69	0.016 / E-NE
14	07/14/03	-0.08	-0.29	.0017 / S-SE

*TW-5 not included in calculations

Table 2
Groundwater Sample Analytical Results

Sample ID	Sample Collection Date	TPH-g µg/L	TPH-d µg/L	TOG mg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L
MW-1	07/30/99	2,700	-	-	ND<10	920	5.5	18	130
	11/09/99	1,800	-	-	ND<20	430	1.5	26	60
	02/23/00	3,800	-	-	ND<10	1,500	56	78	35
	05/26/00	7,100	-	-	ND<10	2,800	70	220	81
	10/10/00	980	-	-	ND<5.0	260	2.9	10	11
	02/07/01	570	-	-	ND<5.0	150	1.8	4.9	9.3
	05/25/01	18,000	-	-	ND<100	3,800	350	550	620
	09/19/01	840	-	-	ND<5.0	190	4.0	4.6	5.3
	02/06/02	-	-	-	-	-	-	-	-
	05/17/02	13,000	920	-	ND<50/<5.0*	4,500	29	50	58
	08/20/02	2,100	740	ND<5.0	ND<15	820	4.5	6.4	9.6
	01/10/03	95	260	ND<5.0	ND<5.0	23	0.66	3.9	6.5
	04/14/03	340	310		ND<5.0	87	1.3	4.3	5.6
	07/14/03	**750**	**700**	-	**ND<10**	**420**	**0.84**	**3.7**	**6.0**
MW-2	07/30/99	1,200	-	-	ND<10	29	2.5	51	100
	11/09/99	1,300	-	-	ND<30	26	1.1	55	32
	02/23/00	5,000	-	-	ND<10	200	18	390	440
	05/26/00	2,700	-	-	ND<10	69	13	83	68
	10/10/00	810	-	-	ND<10	17	4.7	42	46
	02/07/01	2,600	-	-	ND<10	70	15	80	100
	05/25/01	2,400	-	-	ND<5.0	75	16	85	100
	09/19/01	1,200	-	-	ND<5.0	10	8.5	46	55
	02/06/02	1,800	-	-	ND<50	14	11	58	59
	05/17/02	2,000	860	-	ND<20/8.1*	19	1.1	0.75	88
	08/20/02	NS	NS	NS	NS	NS	NS	NS	NS
	01/10/03	2,000	910	ND<5.0	ND<50	11	11	96	100
	04/14/03	2,400	800	-	ND<10	16	10	100	73
	07/14/03	**1,900**	**970**	-	**ND<15**	**18**	**4.8**	**79**	**78**
MW-3	07/30/99	2,700	-	-	ND<10	220	15	130	230
	11/09/99	3,100	-	-	15	440	8.8	150	96
	02/23/00	1,800	-	-	ND<15	180	11	82	79
	05/26/00	1,600	-	-	6.4	140	10	69	63
	10/10/00	1,100	-	-	ND<10	110	4.4	63	51
	02/07/01	1,100	-	-	ND<10	130	5.1	68	65
	05/25/01	1,200	-	-	ND<6.0	120	5.4	69	64
	09/19/01	800	-	-	<5.0	78	3.5	52	37
	02/06/02	1,100	-	-	ND<10	130	4.7	77	71
	05/17/02	2,800	810	-	ND<50/2.0*	410	23	160	210
	08/20/02	780	270	ND<5.0	ND<10	110	2.8	63	41
	01/10/03	1,100	510	ND<5.0	ND<20	160	3.4	98	84
	04/14/03	690	230	-	ND<5.0	60	2.3	44	34
	07/14/03	**900**	**380**	-	**ND<5.0**	**130**	**2.0**	**70**	**43**
MW-4	07/30/99	340	-	-	ND<10	57	2.2	8.5	6.8
	11/09/99	1,000	-	-	ND<10	220	<0.5	17	7.1
	02/23/00	980	-	-	ND<5.0	260	7	33	27
	05/26/00	760	-	-	5.7	170	4.8	22	13
	10/10/00	520	-	-	ND<10	130	2.3	22	10
	02/07/01	680	-	-	ND<8.0	180	3.7	29	21
	05/25/01	1,700	-	-	ND<10	510	9.6	44	46
	09/19/01	680	-	-	ND<10	200	2.6	33	12
	02/06/02	710	-	-	ND<15	220	2.8	40	21
	05/17/02	1,300	190	-	ND<5.0/3.3*	330	5.6	61	51
	08/20/02	580	120	ND<5.0	ND<5.0	160	1.7	34	13
	01/10/03	800	85	ND<5.0	ND<20	240	2.5	46	28
	04/14/03	850	120	-	ND<10	220	2.7	47	26
	07/14/03	**780**	**170**	-	**ND<20**	**220**	**1.4**	**44**	**23**
TW-5	10/10/00	5,800	2,900	ND<250	ND<50	650	60	190	230
	02/07/01	720	650	450	ND<5.0	6.0	4.5	3.2	4.5
	05/25/01	370	420	ND	ND<5.0	13.0	4.1	1.6	1.3
	09/19/01	15,000	2,700,000	1,100,000	530	29	2.7	14	240
	02/06/02	280	55,000	18,000	ND<5.0	2.3	0.74	ND<0.5	0.70
	05/17/02	480	41,000	-	ND<5.0/<5.0*	1.6	1.1	0.8	ND<0.5
	08/20/02	240	21,000	ND<5.0	ND<5.0	8.0	1.2	1.1	0.54
	01/10/03	ND<50	1,300	ND<5.0	ND<5.0	5.4	0.58	ND<0.5	1.10
	4/14/2003	160	2,300	-	ND<5.0	18	5.7	5.9	16
	7/14/2003	**100**	**16,000**	-	**ND<5.0**	**1.2**	**0.77**	**0.63**	**1.2**

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

- = not sampled

ND = not detected

*MTBE concentrations by analytical method 8260B

TPH-g = total petroleum hydrocarbons as gasoline

TPH-d = total petroleum hydrocarbons as diesel

TOG = total oil & grease

Well TW-5 is listed as TR-5 in lab data (4/14/03)

Please see Appendix B: Laboratory Analytical Data for further detailed lab information including reporting limits and dilution factors

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Omega Termite	Date of Sampling:	7/14/2003
Job Number:	3190	Name of Sampler:	AN
Project Address:	807 75th Avenue Oakland		

MONITORING WELL DATA			
Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	5.00		
Depth of Well	20.00		
Depth to Water (from top of casing)	5.08		
Water Elevation (feet above msl)	-0.08		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**7.2**		
Actual Volume Purged (gallons)	7.0		
Appearance of Purge Water	Dark, clear at 2 gallons.		
Free Product Present?	No	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 - 40ml VOAs, 1 L Amber

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	18.29	6.77	864	0.66	-66.7	
	3	18.88	6.79	853	0.58	-66.4	
	5	18.41	6.74	914	0.48	-66.1	
	7	18.00	6.70	965	0.33	-69.6	

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

Hydrocarbon odor present.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Omega Termite	Date of Sampling:	7/14/2003
Job Number:	3190	Name of Sampler:	AN
Project Address:	807 75th Avenue Oakland		

MONITORING WELL DATA			
Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	5.95		
Depth of Well	20.00		
Depth to Water (from top of casing)	5.99		
Water Elevation (feet above msl)	-0.04		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**6.7**		
Actual Volume Purged (gallons)	7.0		
Appearance of Purge Water	Gray, clear at 1 gallon.		
Free Product Present?	No	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size: 2 - 40ml VOAs, 1 L Amber

Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	19.69	6.75	1188	0.97	-67.3	
	3	20.28	6.72	1161	0.53	-60.1	
	5	20.15	6.70	1168	0.45	-59.1	
	7	19.74	6.69	1224	0.46	-68.9	

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

Strong Hydrocarbon odor present.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Omega Termite	Date of Sampling:	7/14/2003
Job Number:	3190	Name of Sampler:	AN
Project Address:	807 75th Avenue Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	4.66		
Depth of Well	20.00		
Depth to Water (from top of casing)	4.69		
Water Elevation (feet above msl)	-0.03		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**7.3**		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	Slightly turbid		
Free Product Present?	No	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size				2 - 40ml VOAs, 1 L Amber			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	2	18.96	6.71	1580	0.71	-39.3	
	4	20.01	6.69	1595	0.85	88.1	
	6	19.33	6.66	1640	0.49	23.2	
	8	18.80	6.67	1640	0.26	-21.9	

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

Slight Hydrocarbon odor present.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Omega Termite	Date of Sampling:	7/14/2003
Job Number:	3190	Name of Sampler:	AN
Project Address:	807 75th Avenue Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	4.59		
Depth of Well	20.00		
Depth to Water (from top of casing)	4.75		
Water Elevation (feet above msl)	-0.16		
Well Volumes Purged	3		
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**7.3**		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	Slightly turbid		
Free Product Present?	No	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 - 40ml VOAs, 1 L Amber					
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	2	18.76	6.72	1642	0.85	437.9	
	4	19.98	6.71	1574	1.80	503.8	
	6	19.47	6.67	1689	1.02	500.3	
	8	18.90	6.68	1639	0.47	472.3	

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

None.

AEI CONSULTANTS

GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: TW-5

Project Name:	Omega Termite	Date of Sampling:	7/14/2003
Job Number:	3190	Name of Sampler:	AN
Project Address:	807 75th Avenue Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	4		
Wellhead Condition	OK		
Elevation of Top of Casing (feet above msl)	not surveyed		
Depth of Well	10.00		
Depth to Water (from top of casing)	5.84		
Water Elevation (feet above msl)	na		
Well Volumes Purged	3		
Caculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	**8.1**		
Actual Volume Purged (gallons)	9.0		
Appearance of Purge Water	Dark Gray, clear at 2.5 gallons.		
Free Product Present?	No	Thickness (ft):	NA

GROUNDWATER SAMPLES

Number of Samples/Container Size				2 - 40ml VOAs, 1 L Amber			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (µ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	1	21.89	6.77	1129	0.30	-67.6	
	3	21.86	6.75	1124	0.26	-69.6	
	5	21.86	6.75	1120	0.28	-71.3	
	7	21.87	6.74	1118	0.24	-73.3	
	9	21.89	6.74	1118	0.17	-75.8	

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

Strong Hydrocarbon odor present.

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. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #3190; OMEGA	Date Sampled: 07/14/03
		Date Received: 07/14/03
	Client Contact: Brandi Kiel-Reese	Date Reported: 07/21/03
	Client P.O.:	Date Completed: 07/21/03

WorkOrder: 0307214

July 21, 2003

Dear Brandi:

Enclosed are:

1). the results of **5** analyzed samples from your **#3190; OMEGA project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical Inc.
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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	Date Sampled: 07/14/03
2500 Camino Diablo, Ste. #200		Date Received: 07/14/03
Walnut Creek, CA 94597	Client Contact: Brandi Kiel-Reese	Date Extracted: 07/16/03-07/18/03
	Client P.O.:	Date Analyzed: 07/16/03-07/18/03

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0307214

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	750,a	ND<10	420	0.84	3.7	6.0	1	108
002A	MW-2	W	1900,a	ND<15	18	4.8	79	78	1	118
003A	MW-3	W	900,a	ND	130	2.0	70	43	1	103
004A	MW-4	W	780,a	ND<20	220	1.4	44	23	2	111
005A	TW-5	W	100,a	ND	1.2	0.77	0.63	1.2	1	99.1
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/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 (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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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	Date Sampled: 07/14/03
2500 Camino Diablo, Ste. #200		Date Received: 07/14/03
Walnut Creek, CA 94597	Client Contact: Brandi Kiel-Reese	Date Extracted: 07/14/03
	Client P.O.:	Date Analyzed: 07/15/03-07/16/03

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0307214

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0307214-001B	MW-1	W	700,a	1	102
0307214-002B	MW-2	W	970,d	1	103
0307214-003B	MW-3	W	380,d	1	102
0307214-004B	MW-4	W	170,d	1	102
0307214-005B	TW-5	W	16,000,a/m	1	101

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/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) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
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QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0307214

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 7803 Spiked Sample ID: 0307218-001A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	98.5	98.5	0	99.8	98.1	1.68	70	130
MTBE	ND	10	113	109	3.36	101	101	0	70	130
Benzene	ND	10	98.5	96.4	2.14	100	99.9	0.481	70	130
Toluene	ND	10	99.3	97.9	1.47	101	101	0	70	130
Ethylbenzene	ND	10	100	98.9	1.57	103	102	0.685	70	130
Xylenes	ND	30	100	100	0	103	103	0	70	130
%SS:	106	100	102	102	0	103	103	0	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

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 and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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.

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QC SUMMARY REPORT FOR SW8015C

Matrix: W WorkOrder: 0307214

EPA Method: SW8015C Extraction: SW3510C BatchID: 7800 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	N/A	7500	N/A	N/A	N/A	101	89.8	12.1	70	130
%SS:	N/A	100	N/A	N/A	N/A	116	118	1.77	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

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 and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with 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.

AEL

0307214

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☐ Yes ☒ No

Report To: Brandi K. Reese Bill To:
Company: AEI Consultants
2500 Camino Diablo, Suite 200 breese@
Walnut Creek 94597 E-Mail: aeiconsultants.com
Tele: ( )925-283-6000 Fax: ( )925-944-2895
Project #: 3190 Project Name: OMEGA
Project Location: OAKLAND
Sampler Signature: Moran Nieto

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED 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
+ MW-1		7/14	11:00	3	VL	X					X	X			X	X															
+ MW-2		"	"	"	"	"					"	"			"	"															
+ MW-3		"	"	"	"	"					"	"			"	"															
+ MW-4		"	"	"	"	"					"	"			"	"															
+ TW-5		"	"	"	"	"					"	"			"	"															

Relinquished By:	Date:	Time:	Received By:
Relinquished By: Moran Nieto	Date: 7/14	Time: 3:00	Received By: 7-14-03 3:00
Relinquished By:	Date:	Time:	Received By:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ____ PERSERVED IN LAB ____

PRESERVATION APPROPRIATE ✓ CONTAINERS ✓	VOAS ✓	O&G	METALS	OTHER

McCampbell Analytical Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0307214

Client:
All Environmental, Inc.
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597

TEL: (925) 283-6000
FAX: (925) 283-6121
ProjectNo: #3190; OMEGA
PO:

Date Received: 7/14/03
Date Printed: 7/14/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					SW8015C	W8021B/8015C					
0307214-001	MW-1	Water	7/14/03 11:00:00 AM	☐	B	A					
0307214-002	MW-2	Water	7/14/03 11:00:00 AM	☐	B	A					
0307214-003	MW-3	Water	7/14/03 11:00:00 AM	☐	B	A					
0307214-004	MW-4	Water	7/14/03 11:00:00 AM	☐	B	A					
0307214-005	TW-5	Water	7/14/03 11:00:00 AM	☐	B	A					

Prepared by: Michelle Miller

Comments:

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