

January 30, 2003

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

120 508

Alameda County
FEB 04 2003
Environmental Health

Subject: Groundwater Investigation
807 75th Street
Oakland, CA 94621
AEI Project No. 3190

Dear Mr. Gholami:

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,

Brandi K. Reese

Brandi Kiel Reese
Staff Geologist

Alameda County
FEB 04 2003
Environmental Health

January 31, 2003

**GROUNDWATER MONITORING AND SAMPLING
REPORT**

807 75TH Avenue
Oakland, California

Project No. 3190

Prepared For

Omega Termite Control
807 75th Avenue
Oakland, CA 95621

Prepared By

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(925) 283-6000

AEI

January 31, 2003

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

RE: Quarterly Groundwater Monitoring and Sampling Report
Twelfth Sampling Episode-January 2003
807 75th Avenue
Oakland, California
Project No. 3190

Dear Mr. Kanady:

AEI Consultants (AEI) has prepared this report to document the results of the twelfth 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 twelfth sampling episode of groundwater monitoring and sampling conducted on January 10, 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 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 as gasoline. 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 EBMUD permit to the sanitary sewer system.

Sample collection points, borehole locations, and monitoring wells are shown on Figure 3. Historical soil and groundwater sample analytical data are presented in Table 1 and Table 2, respectively. Historical water table elevation data are presented in Table 3.

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 January 10, 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 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) 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 (State Certification #1644).

Groundwater samples from the five wells were analyzed for TPH-g (EPA Method 5030/8015), TPH-d (EPA method 3550/8015), benzene, toluene, ethyl benzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE) (EPA Method 8020/602), and for total petroleum as oil and grease (EPA method 5520).

Field Results

Both hydrocarbon odor and sheen were observed in well MW-1. Hydrocarbon odor was also detected in MW-3 and TW-5. Groundwater levels for this sampling episode ranged from 0.77 to 0.89 feet above mean sea level (amsl). These elevations are an average of 0.90 feet higher than the previous episode. Groundwater flow direction was estimated to be to the east-northeast with a hydraulic gradient of 0.006 ft/ft. These measurements differed greatly from the previous episode (southward flow direction with a hydraulic gradient of 0.002 ft/ft.).

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

Groundwater Quality

Concentrations of TPH-g and BTEX decreased significantly in MW-1 and TW-5, compared to the previous analytical results. Wells MW-3 and MW-4 showed an increase in TPH-g and BTEX, but decreased in TPH-d. Although a marked decrease in heavier range hydrocarbons (TPH-d) was noted in well TW-5 (1,300 µg/l), the concentration was significantly higher than the other three wells (ranging from 85 µg/L to 910 µg/L). MTBE was not detected above laboratory reporting limits in any of the wells sampled during this investigation. Oil and grease were not detected in any of the wells sampled during this investigation.

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

Conclusions

Concentrations of TPH-g and BTEX in MW-1 have fluctuated greatly while TPH-g concentrations in wells MW-2, MW-3, MW-3, TW-5 have fluctuated mildly since monitoring was initiated in 1999. BTEX concentrations have shown a decreasing trend in all monitoring wells, with the exception of MW-4 where BTEX concentrations have shown a general increase since monitoring was initiated. Yearly spikes in concentration levels of TPH-g and benzene in monitoring well MW-1 can be seen on Figure 4.

During the last monitoring episode, concentrations of TPH-d in wells MW-1, MW-2, MW-3 and MW-4 were significantly lower than the concentrations of TPH-d present over the last two years in TW-5. These data once again indicate that the release from the former waste-oil tank, located nearby TW-5, may be confined to a small area.

In a letter dated June 28, 2002, the ACHCSA requested additional information in order to progress toward case closure. AEI recently submitted a site characterization workplan, 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 April 2003. Analyses for TPH-d will continue during the next monitoring and sampling episode. Due to the non-detect results of total oil and grease in all wells sampled during this investigation, this chemical parameter will not be analyzed during the next episode.

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.

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 either of the undersigned with any questions regarding the findings outlined in this report.

Sincerely,
AEI Consultants

Brandi Reese

Brandi Kiel Reese
Staff Geologist

J. P. Derhake

J. P. Derhake, PE
Principal

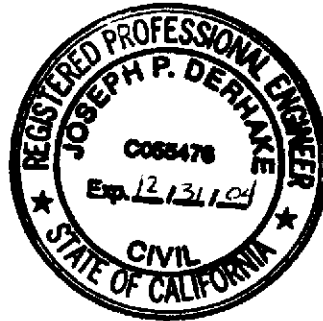
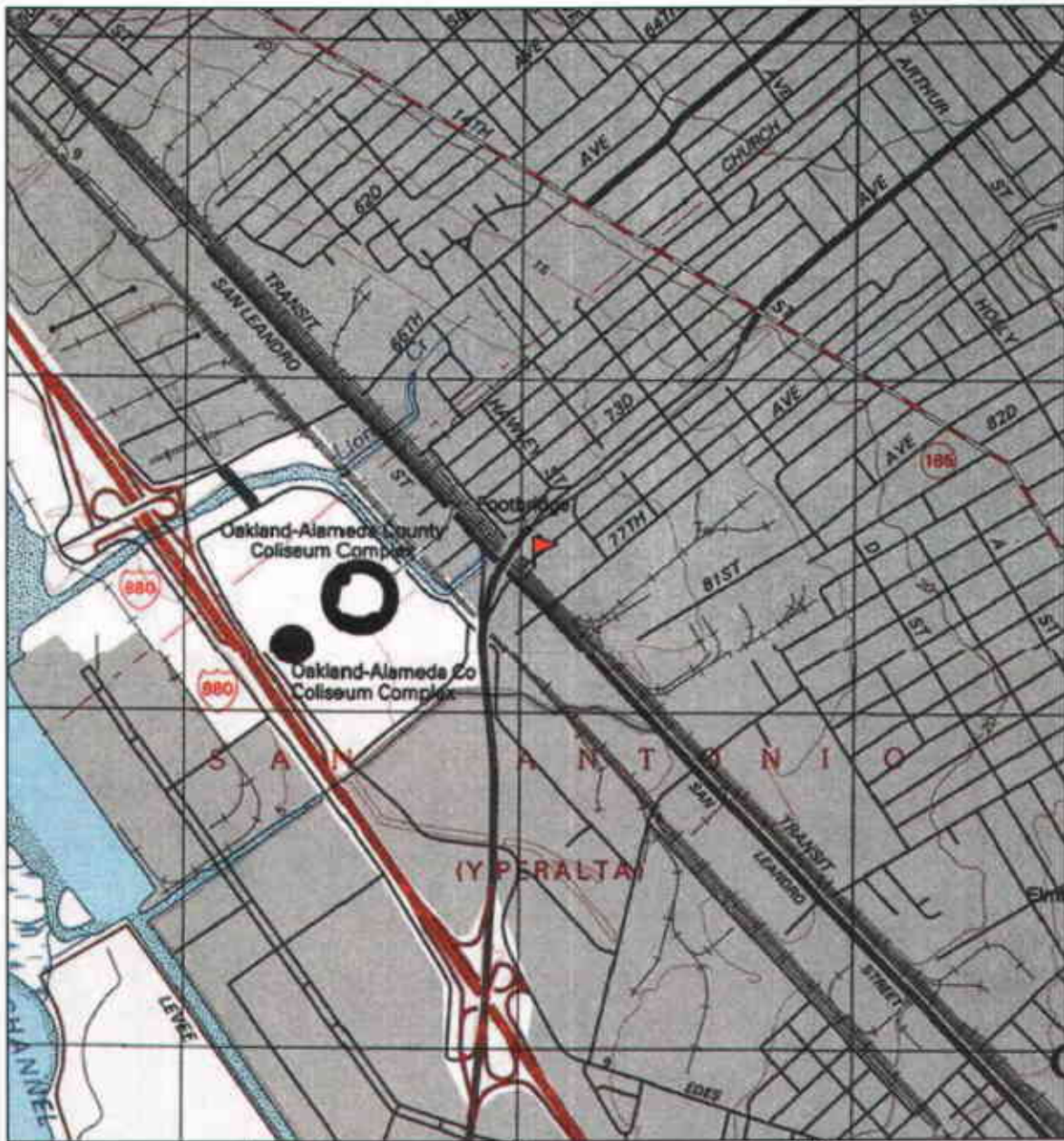


Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Water Table Contour Map
Figure 4	Concentrations Graph
Table 1	Groundwater Elevations
Table 2	Groundwater Sample Analytical Results
Appendix A	Groundwater Monitoring Well Field Sampling Forms
Appendix B	Laboratory Reports With Chain of Custody Documentation

Omega Termite Control
Project No. 3190
January 31, 2003
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cc: Mr. Barney Chan
ACHCSA
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

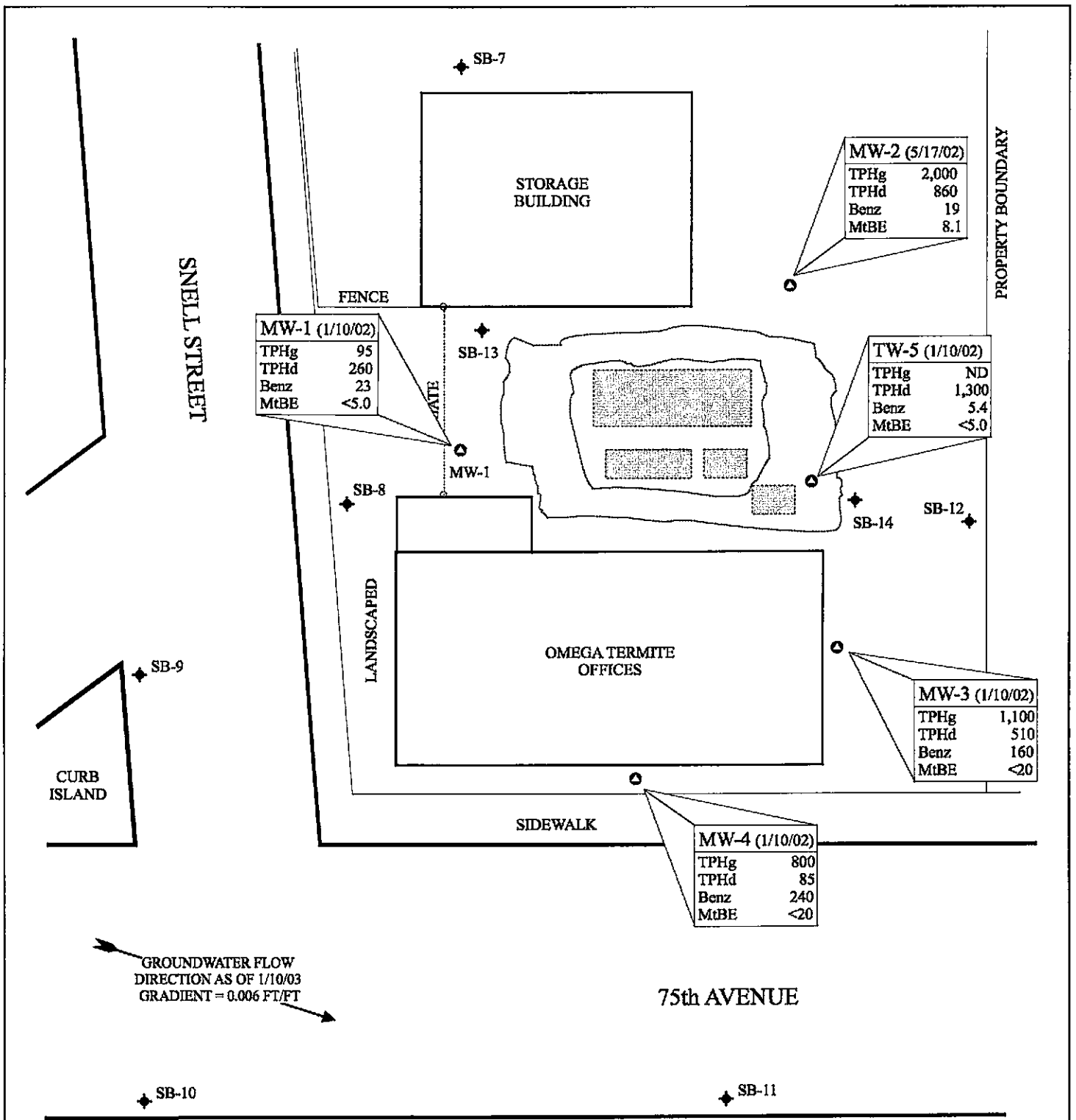


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AEI CONSULTANTS	
SITE LOCATION MAP	
807 75 th STREET OAKLAND, CALIFORNIA	FIGURE 1 PROJECT NO. 3190



MW-1 (1/10/02)

TPHg	95
TPHd	260
Benz	23
MtBE	<5.0

MW-2 (5/17/02)

TPHg	2,000
TPHd	860
Benz	19
MtBE	8.1

TW-5 (1/10/02)

TPHg	ND
TPHd	1,300
Benz	5.4
MtBE	<5.0


MW-3 (1/10/02)

TPHg	1,100
TPHd	510
Benz	160
MtBE	<20

MW-4 (1/10/02)

TPHg	800
TPHd	85
Benz	240
MtBE	<20

LEGEND



○ EXISTING MONITORING WELL LOCATIONS AND THEIR RESPECTIVE CONCENTRATIONS

◆ PROPOSED TEMPORARY BORING LOCATIONS

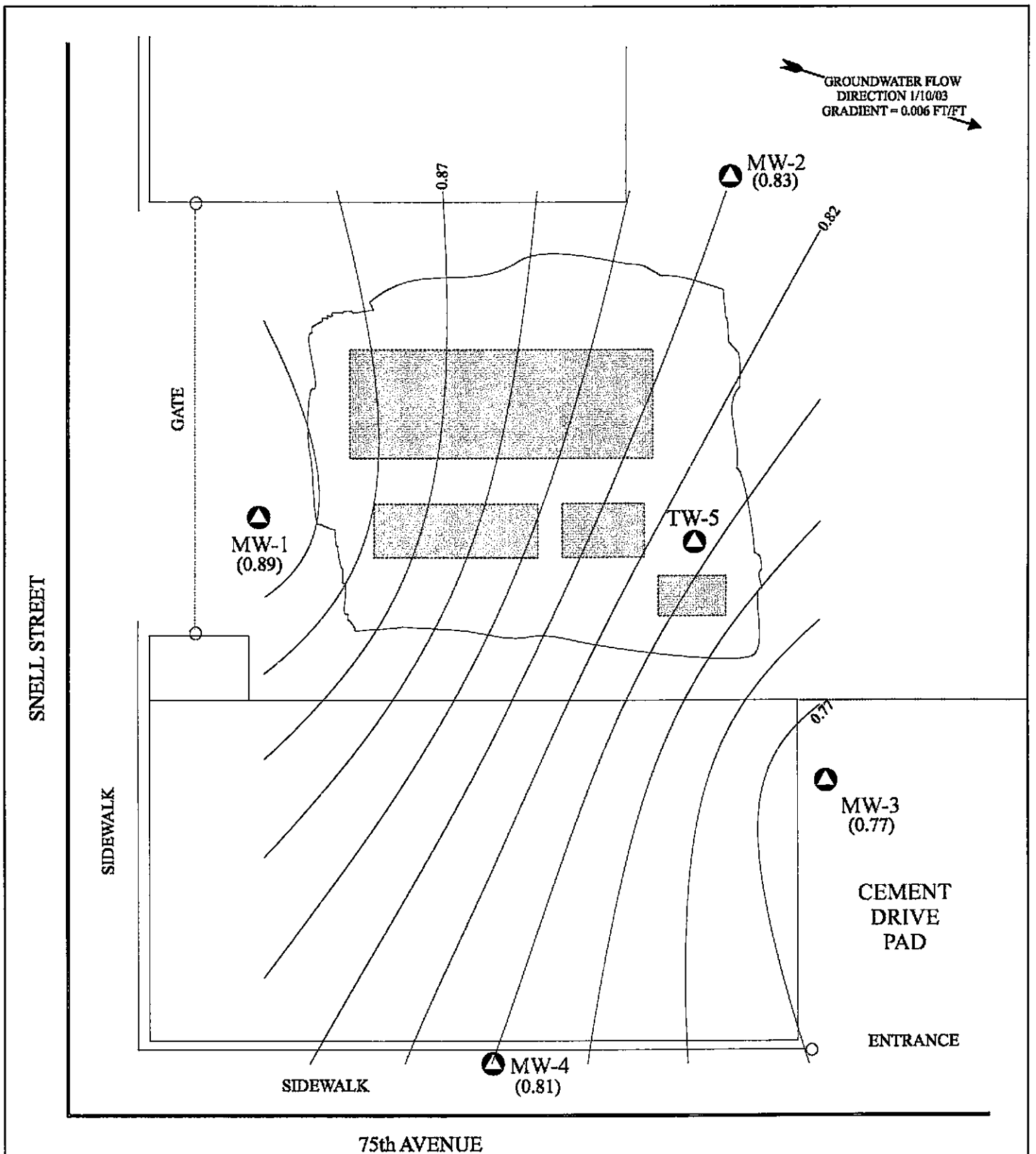
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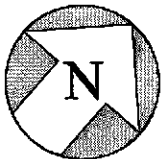
AEI CONSULTANTS
3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA

HYDROCARBON CONCENTRATIONS

807 75th AVENUE OAKLAND, CALIFORNIA	FIGURE 2 AEI PROJECT No. 5896
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LEGEND



0.8
Groundwater contours measured
in feet above mean sea level (msl)
Contour Interval = 0.0125 (feet)

0 10



SCALE: 1 IN = 10 FT

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

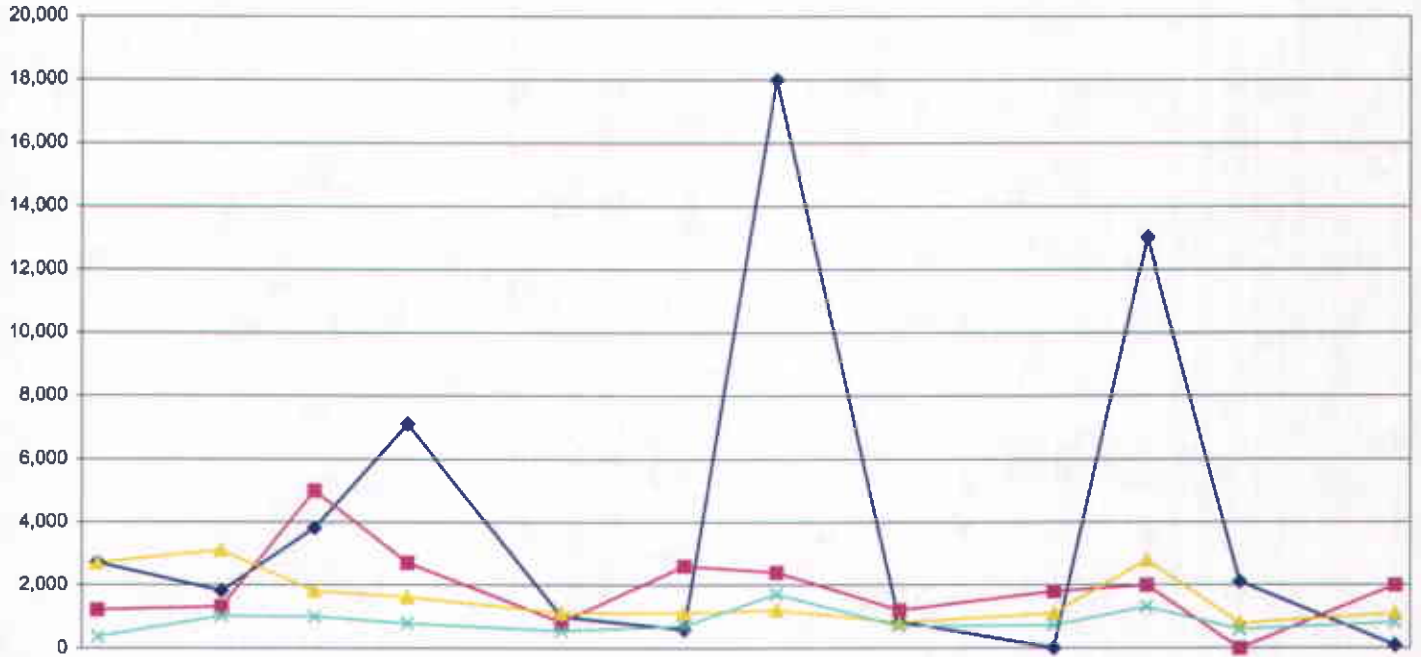
WATER TABLE CONTOURS

01/10/03

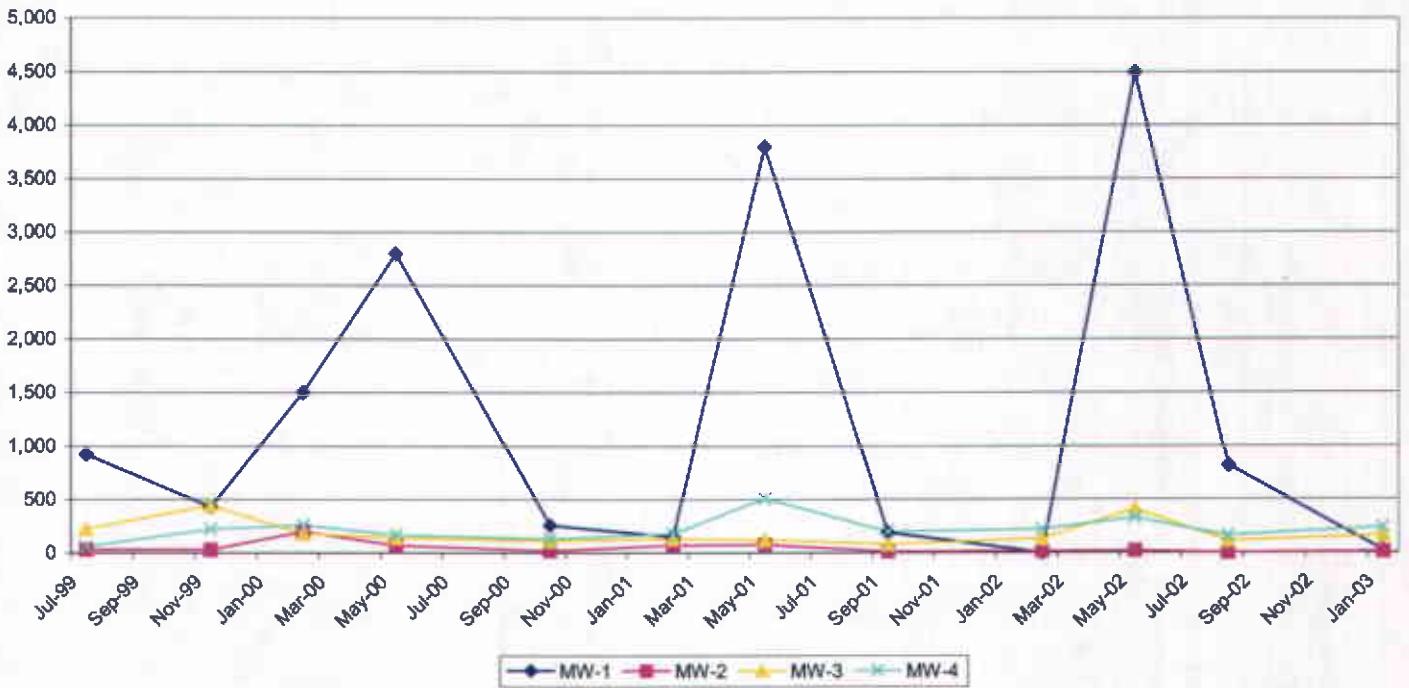
807 75th AVENUE
OAKLAND, CALIFORNIA

FIGURE 3
AEI Project # 3190

TPH-g CONCENTRATIONS



BENZENE CONCENTRATIONS



AEI CONSULTANTS 3210 OLD TUNNEL ROAD, SUITE B, LAFAYETTE, CA	
CONCENTRATIONS OVER TIME 01/10/03	
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
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
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	0.77
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
TW-5	09/19/01	10.00	6.59	3.41
	05/17/02	10.00	6.56	3.44
	08/20/02	10.00	6.62	3.38
	01/10/03	10.00	4.66	5.34

Table 1
Groundwater Elevations

Episode	Date	Water Table Elevation Change (ft)	Hydraulic Gradient	Flow Direction
1	07/30/99	-		
2	11/09/99	0.18	0.006	S-SW
3	02/23/00	2.83	0.008	S
4	05/26/00	-2.66	0.003	SW
5	10/10/00	-0.22	0.004	S
6	02/07/01	0.54	0.008	S
7	05/25/01	-0.09	0.006	S
8	09/19/01	-0.33	0.004	S
9	02/06/02	0.43	0.005	SE
10	05/17/02	-0.20	0.003	SW
11	08/20/02	-0.09	0.002	S
12	01/10/03	0.90	0.006	E-NE

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	-	<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
	MW-2	07/30/99	1,200	-	-	ND<10	29	2.5	51
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	9	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	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	
MW-3	07/30/99	2,700	-	-	ND<10	220	15	130	230
	11/09/99	3,100	-	-	15	440	9	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	-	<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
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	-	<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
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	-	<5.0/<5.0*	1.6	1.1	1	nd<0.5
	08/20/02	240	21,000	ND<5.0	ND<5.0	8.0	1.2	1	0.54
	01/10/03	ND	1,300	ND<5.0	ND	5.4	0.58	ND	1.10
RL		50	50	5.0	5.0	0.5	0.5	0.5	0.5

RL = reporting limit
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

APPENDIX A

WELL FIELD SAMPLING FORMS

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-1

Project Name:	Omega Termite	Date of Sampling:	1/10/2003
Job Number:	3190	Name of Sampler:	SM & PM
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)	4.11		
Water Elevation (feet above msl)	0.89		
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)	7.6		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	sheen visible, slightly turbid		
Free Product Present?	Yes / No	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size				2 - 40ml VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	2	16.86	7.3	292	6.01	-8.6	strong HC odor
	4	16.24	7.23	476	3.81	10.7	gray/brown
	6	16.53	7.14	203	2.72	25.7	clear
	8	16.83	7.21	291	2.32	36	

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

Well box replaced

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Omega Termite	Date of Sampling:	1/10/2003
Job Number:	3190	Name of Sampler:	SM & PM
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)	5.12		
Water Elevation (feet above msl)	0.83		
Well Volumes Purged	3		
Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	7.1		
Actual Volume Purged (gallons)	7.5		
Appearance of Purge Water	clear		
Free Product Present?	Yes / No	Thickness (ft):	

GROUNDWATER SAMPLES

Number of Samples/Container Size				2 - 40ml VOAs			
Time	Vol Removed (gal)	Temperature (deg C)	pH	Conductivity (μ sec/cm)	DO (mg/L)	ORP (meV)	Comments
	2	18.95	6.67	1137	1.08	-65.2	strong HC odor
	4	18.27	6.75	1186	0.48	-66.1	
	6	19.13	6.71	1148	0.12	-68	
	8	19.36	6.71	1134	0.1	-69.4	

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

Strong hydrocarbon odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Omega Termite	Date of Sampling:	1/10/2003
Job Number:	3190	Name of Sampler:	SM & PM
Project Address:	807 75th Avenue Oakland		

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2
Wellhead Condition	▼
Elevation of Top of Casing (feet above msl)	4.66
Depth of Well	20.00
Depth to Water (from top of casing)	3.89
Water Elevation (feet above msl)	0.77
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)	7.7
Actual Volume Purged (gallons)	8.0
Appearance of Purge Water	clear
Free Product Present?	Yes / No 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
	2	17.44	6.55	1350	1.08	199.6	
	4	17.45	6.64	1625	0.55	178.3	
	6	18.32	6.68	1597	0.82	22.1	
	8	18.44	6.69	1608	0.28	-7.5	

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

Slight hydrocarbon odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Omega Termite	Date of Sampling:	1/10/2003
Job Number:	3190	Name of Sampler:	SM & PM
Project Address:	807 75th Avenue Oakland		

MONITORING WELL DATA			
Well Casing Diameter (2"/4"/6")	2		
Wellhead Condition	OK <input type="button" value="v"/>		
Elevation of Top of Casing (feet above msl)	4.59		
Depth of Well	20.00		
Depth to Water (from top of casing)	3.78		
Water Elevation (feet above msl)	0.81		
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	clear		
Free Product Present?	Yes / No	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
	2	18.51	6.65	1626	1.75	314	
	4	17.81	6.67	1601	0.79	393.4	
	6	18.65	6.67	1613	0.94	296.4	
	8	18.66	6.65	1619	0.62	280.4	

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

Faint hydrocarbon odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: TW-5

Project Name:	Omega Termite	Date of Sampling:	1/10/2003
Job Number:	3190	Name of Sampler:	SM & PM
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)	4.66		
Depth of Well	10.00		
Depth to Water (from top of casing)	4.66		
Water Elevation (feet above msl)	0.00		
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)	10.4		
Actual Volume Purged (gallons)	10.5		
Appearance of Purge Water	clear		
Free Product Present?	Yes / No	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
	2	16.04	6.85	883	0.28	-2.7	
	4	16.02	6.82	899	0.1	-4.6	
	6	16.01	6.76	910	0.06	2.2	
	8	16.02	6.77	913	0.06	4.4	
	10	16.02	6.78	912	0.06	5.1	

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

Slight hydrocarbon odor
Well box replaced

APPENDIX B

**LABORATORY ANALYTICAL AND
CHAIN OF CUSTODY DOCUMENTATION**



McC Campbell 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 Rd., Ste. B
Lafayette, CA 94549-4157

Client Project ID: #3190; Omega
Client Contact: Peter McIntyre
Client P.O.:

Date Sampled: 01/10/03
Date Received: 01/10/03
Date Extracted: 01/10/03
Date Analyzed: 01/13/03

Petroleum Oil & Grease with Silica Gel Clean-Up*

Analytical methods: SM5520B/F

Work Order: 0301131

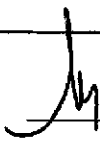
Lab ID	Client ID	Matrix	POG	DF	% SS
0301131-001C	MW-1	W	ND	1	N/A
0301131-002C	MW-2	W	ND	1	N/A
0301131-003C	MW-3	W	ND	1	N/A
0301131-004C	MW-4	W	ND	1	N/A
0301131-005C	TW-5	W	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	5.0	mg/L
	S	NA	NA

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

DF = dilution factor (may be raised to dilute target analyte or matrix interference)

h) a lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment.

 Edward Hamilton, Lab Director



QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0301131

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 5610		Spiked Sample ID: 0301129-002A				
Compound	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(gas)	ND	60	114	111	2.36	97.5	98.1	0.588	80	120
MTBE	ND	10	89.8	91.4	1.87	87.3	97	10.5	80	120
Benzene	ND	10	96.3	95.4	0.979	99.9	110	9.75	80	120
Toluene	ND	10	91.1	90.1	1.09	101	112	10.1	80	120
Ethylbenzene	ND	10	97.2	96.7	0.527	97.6	105	7.50	80	120
Xylenes	ND	30	93.3	93.3	0	99.7	110	9.86	80	120
%SS:	102	100	96.9	95.9	1.06	95.6	101	5.57	80	120

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.

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.

% 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.



McC Campbell Analytical Inc.

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

QC SUMMARY REPORT FOR SW8015C

Matrix: W

WorkOrder: 0301131

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 5613		Spiked Sample ID: N/A			
Compound	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	90.9	90.5	0.451	70	130
%SS:	N/A	100	N/A	N/A	N/A	89.9	89.3	0.706	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.

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.

% 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.



QC SUMMARY REPORT FOR SM5520B/F

Matrix: W

WorkOrder: 0301131

EPA Method: SM5520B/F		Extraction: PRHEM-SGT_			BatchID: 5488		Spiked Sample ID: N/A			
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
POG	N/A	200	N/A	N/A	N/A	92.1	91	1.11	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.
 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.
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$; $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) * 2$.
 * 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.

Telephone: (925) 798-1620

Fax: (925) 798-1622

TURN AROUND TIME

RUSH 24 HOUR 48 HOUR 5 DAY

Report To: ~~XXXXXXXXXXXXXXXXXX~~ Bill To: ~~XXXXXXXXXXXXXXXXXX~~

Company: All Environmental Peter McIntyre

3210 Old Tunnel Road, Suite B

Lafayette, CA 94549-4157

Tele: (925) 283-6000

Fax: (925) 283-6121

Project #: 3190

Project Name: Omega

Project Location: 75th Avenue, Oakland

Sampler Signature:

Analysis Request											Other		Comments			
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																

X MW-1
 X MW-2
 X MW-3
 X MW-4
 X TW-5

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sedge	Other	Ice	HCl	HNO ₃	Other			
MW-1		1/10/03	PM	4	Vials 25ml	X					X	X			X	X	X
MW-2		↓	↓	4	"	X					X	X			X	X	X
MW-3		↓	↓	4	"	X					X	X			X	X	X
MW-4		↓	↓	4	"	X					X	X			X	X	X
TW-5		↓	↓	4	"	X					X	X			X	X	X

Relinquished By: *[Signature]* Date: 1/10 Time: 6:00 Received By: *[Signature]*

Relinquished By: Date: Time: Received By:

Relinquished By: Date: Time: Received By:

Remarks:

ICBP: GOOD CONDITION AVOIDED CONTAINERS PRESERVED IN LAB

HEAD SPACE ABSENT DISCONTAMINATED IN LAB PRESERVED IN LAB

McCampbell Analytical Inc.

CHAIN-OF-CUSTODY RECORD



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

WorkOrder: 0301131

Client:

All Environmental, Inc.
 3210 Old Tunnel Rd., Ste. B
 Lafayette, CA 94549-4157

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

Date Received: 1/10/03

Date Printed: 1/10/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					SM5520B/F	SW8015C	8021B/8015				
0301131-001	MW-1	Water	1/10/03	<input type="checkbox"/>	C	B	A				
0301131-002	MW-2	Water	1/10/03	<input type="checkbox"/>	C	B	A				
0301131-003	MW-3	Water	1/10/03	<input type="checkbox"/>	C	B	A				
0301131-004	MW-4	Water	1/10/03	<input type="checkbox"/>	C	B	A				
0301131-005	TW-5	Water	1/10/03	<input type="checkbox"/>	C	B	A				

Prepared by: Elisa Venegas

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.