

August 23, 2004

GROUNDWATER MONITORING REPORT
Third Quarter, 2004

807 75th Avenue
Oakland, California

Project No. 3190

Prepared For

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

Prepared By

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August 23, 2004

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

**Subject: Quarterly Groundwater Monitoring Report
Third Quarter 2004**
807 75th Avenue
Oakland, California
Project No. 3190

Dear Mr. Kanady:

AEI Consultants (AEI) has prepared this report to document the results of the third quarter 2004 groundwater monitoring event 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 near the previous location of underground storage tanks (USTs) at the site.

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. 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. The construction details for the groundwater monitoring wells on site are

summarized in Table 1. Monitoring well locations are shown on Figure 2. Historical groundwater elevation and historical groundwater sample analytical data are presented in Tables 2 and 3.

Under the direction of the 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). 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.

AEI carried out a site characterization on October 9 and 10, 2003, to address ACHCSA's requests for additional delineation of the vertical and lateral extents of impacted soil and groundwater. Seven temporary Geoprobe® boreholes (SB-7 through SB-13) were advanced to depths ranging from 15 to 20 feet bgs. One borehole, SB-14 was advanced to a depth of 30 feet bgs to determine if the second aquifer at the site had been impacted. Soil samples were collected in the vadose zone above the first aquifer and from the aquitard between the first and second aquifers. Groundwater samples were collected from both aquifers. The analysis of water samples from the second aquifer found that hydrocarbons had impacted that aquifer.

Summary of Activities

AEI conducted quarterly groundwater monitoring of four monitoring wells (MW-1, MW-2, MW-3 and MW-4) and the one temporary backfill extraction well (TW-5) on July 15, 2004. Prior to measuring depth to water measurements, the caps were removed from the top of all wells and the water level allowed to equilibrate with atmospheric pressure for at least 15 minutes. The depth to groundwater (from the top of the well casings) for each well was 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 waters were collected using new disposable bailers and placed into 40-milliliter (ml) Volatile Organic Analysis (VOA) vials and 1-liter amber bottles. The VOAs were capped so that no headspace or air bubbles were visible within the vials. Samples were transported in a cooler on ice under appropriate 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, benzene, toluene, ethyl benzene, xylenes (BTEX), and MTBE by SW8021B/8015Cm. The groundwater samples were also analyzed for TPH-d (as diesel) and TPH-mo (as motor oil) by SW8015C.

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 -0.50 to -0.68 feet relative to mean sea level (msl). These elevations are an average of 0.48 feet higher than at the time of the previous quarterly monitoring event. Groundwater flow direction was estimated to be to the south with a hydraulic gradient of 0.017 ft/ft. The hydraulic gradient is an increase over the previous quarters gradient of 0.014ft/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 and its location on the backfilled tank excavation.

Groundwater elevation data are summarized in Table 2. The groundwater elevation contours and the groundwater flow direction are shown in Figure 4. Refer to Appendix A for the Groundwater Monitoring Well Field Sampling Forms.

Groundwater Quality

TPH-g concentration decreased in wells all five wells. TPH-d concentrations decreased in wells MW-1 through MW-4, but increased in well MW-5. MTBE has not been detected above laboratory reporting limits in any of the wells sampled since the September 19, 2001 monitoring event. Benzene concentrations decreased in all wells. TPH-mo increased over last quarter in well MW-1 from ND<250 to 260 µg/L. TPH-mo increased slightly in TW-5 from 1,100 µg/L to 1,600 µg/L. No detectable levels of TPH-mo were found in monitoring wells MW-2 through MW-4.

A summary of groundwater analytical data is presented in Table 3. Laboratory results and chain of custody documents are included in Appendix B.

Conclusions

Concentrations of TPH-g and benzene have shown seasonal fluctuations in all wells as groundwater levels rise and fall.

Groundwater monitoring and sampling of the five wells will continue, with the next episode scheduled for October 2004.

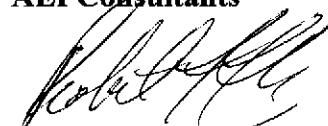
Report Limitations and Signatures

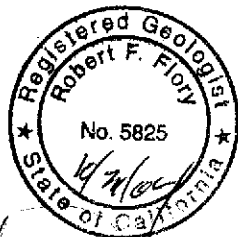
This report presents a summary of work completed by AEI Consultants, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, 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 me if you have any questions regarding the findings outlined in this report.

Sincerely,
AEI Consultants


Robert F. Flory, RG
Project Manager




Peter J. McIntyre
Program Manager

cc: Mr. Amir Gholami
ACHCSA
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

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. Groundwater Monitoring Report, 13th Episode 2003, prepared by AEI-March 19, 2003.
14. Groundwater Monitoring Report, 14th Episode 2003, prepared by AEI-September 8, 2003.
15. Groundwater Monitoring Report, Fourth Quarter 2003, prepared by AEI-October 24, 2003.
16. Groundwater Monitoring Report, First Quarter 2004, prepared by AEI-January 29, 2004.
17. Groundwater Monitoring Reprt, Second Quarter 2004, prepared by AEI-May 24, 2004.
18. Groundwater Monitoring Reprt, Second Quarter 2004, prepared by AEI-August 23, 2004.

Figures

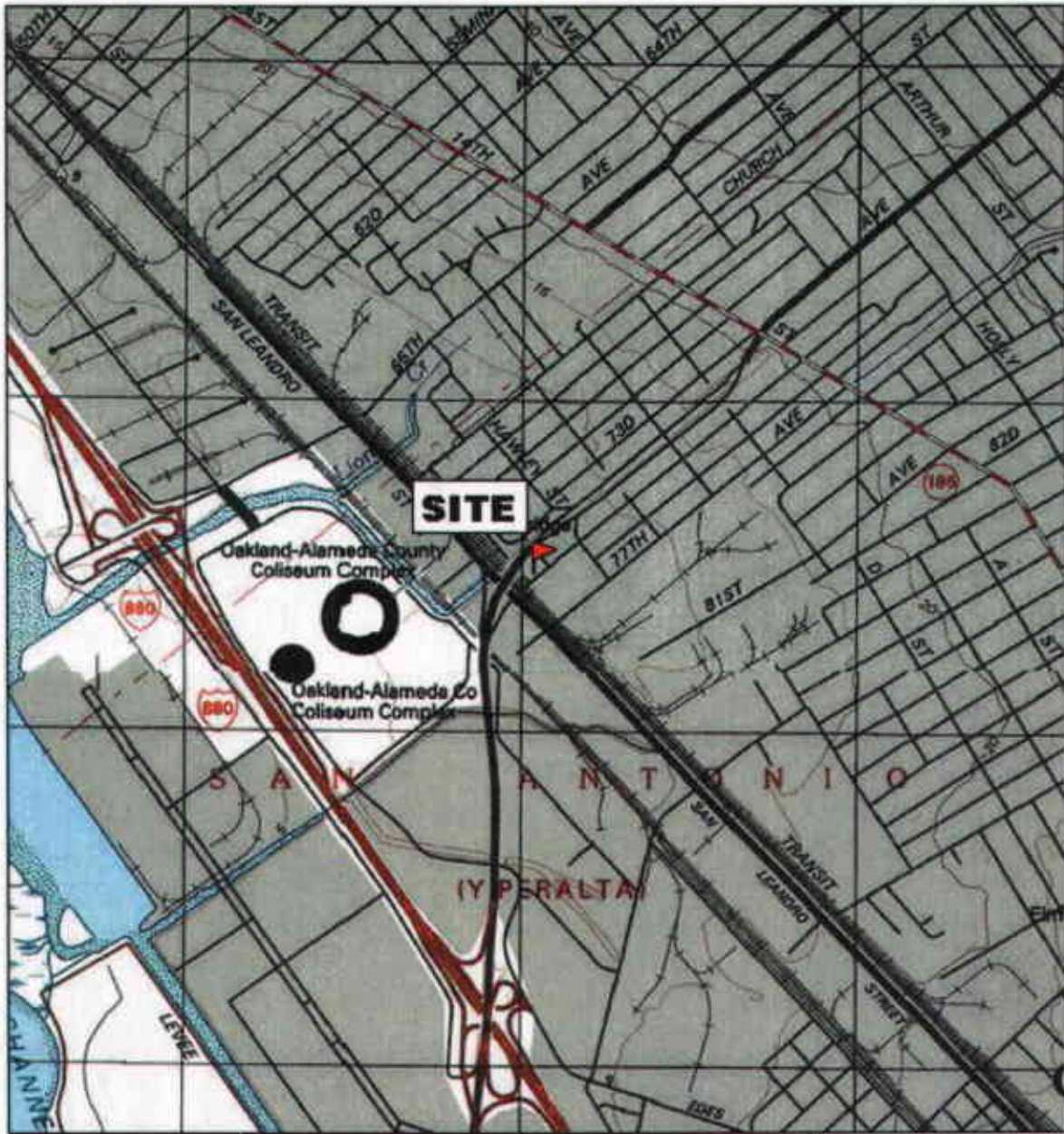
Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	Groundwater Analytical Data
Figure 4	Groundwater Gradient

Tables

Table 1	Well Construction Details
Table 2	Historical Groundwater Elevations
Table 3	Historical Groundwater Analytical Results

Appendix A Groundwater Monitoring Well Field Sampling Forms

Appendix B Laboratory Reports With Chain of Custody Documentation

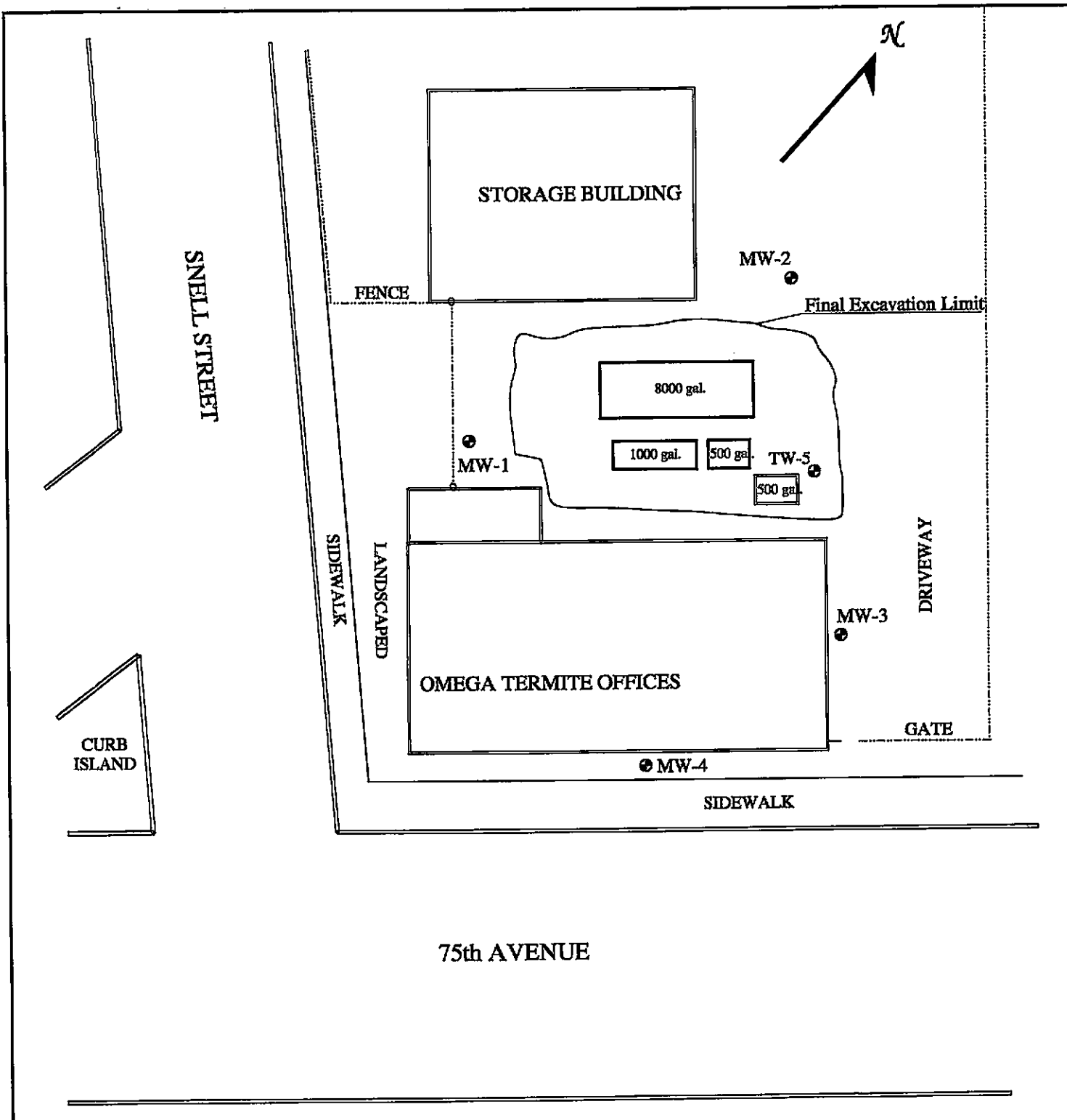


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AEI CONSULTANTS 2500 CAMINO DIABLO, STE 200, WALNUT CREEK, CA	
SITE LOCATION MAP	
807 75 th AVENUE OAKLAND, CALIFORNIA	FIGURE 1 PROJECT No. 3190



LEGEND

0' 10' 20'
 SCALE: 1in = 20 ft

● MONITORING WELL LOCATIONS

Base Drafted: R. Flory 1/23/04

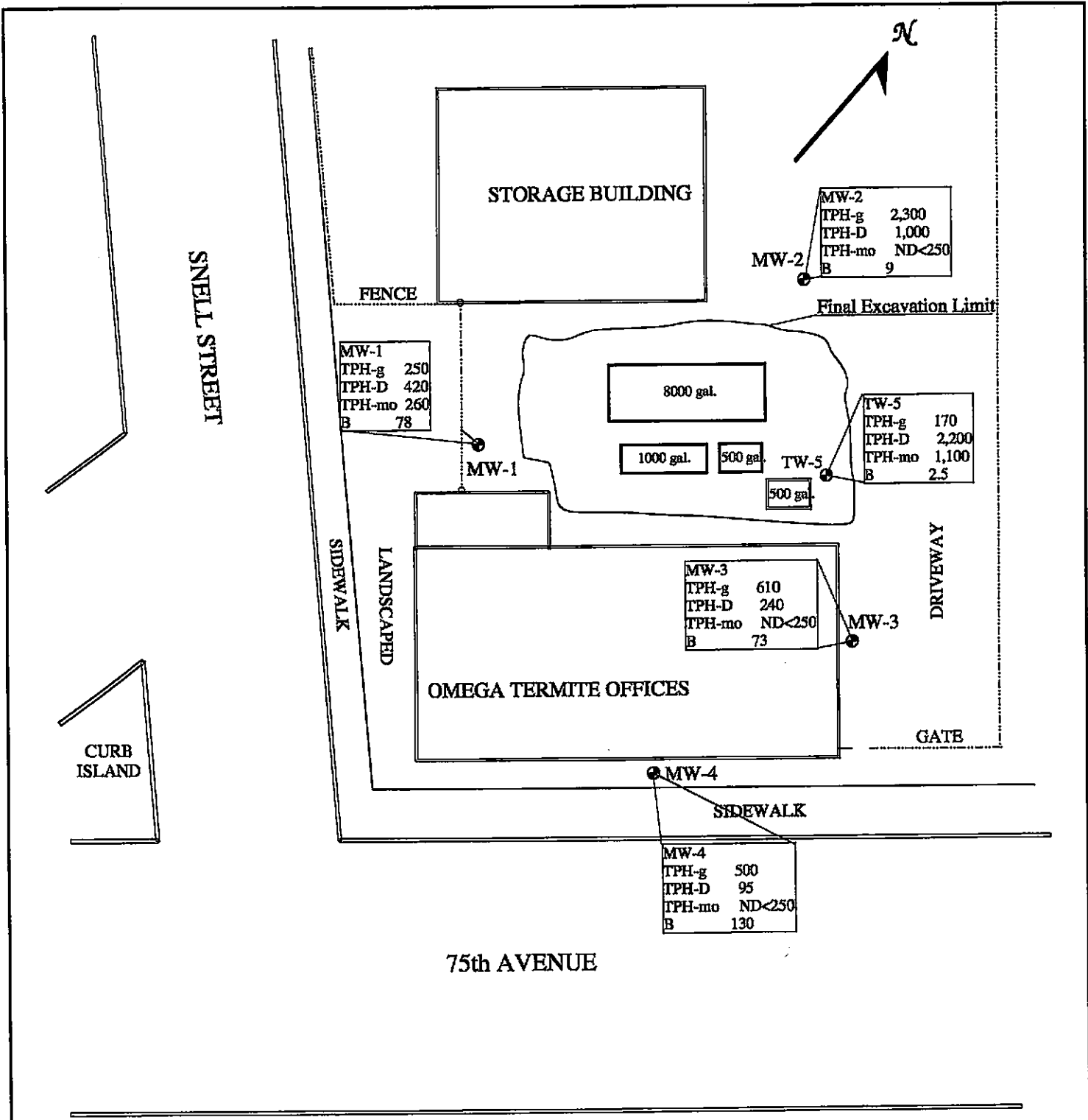
AEI CONSULTANTS

2500 CAMINO DIABLO, STE. 100, WALNUT CREEK, CA

SITE MAP

807 75th AVENUE
 OAKLAND, CALIFORNIA

FIGURE
 2
 Project No. 3190



LEGEND

0' 10' 20'
 SCALE: 1in = 20 ft

● MONITORING WELL LOCATIONS with concentrations in ug/L on 7/15/04

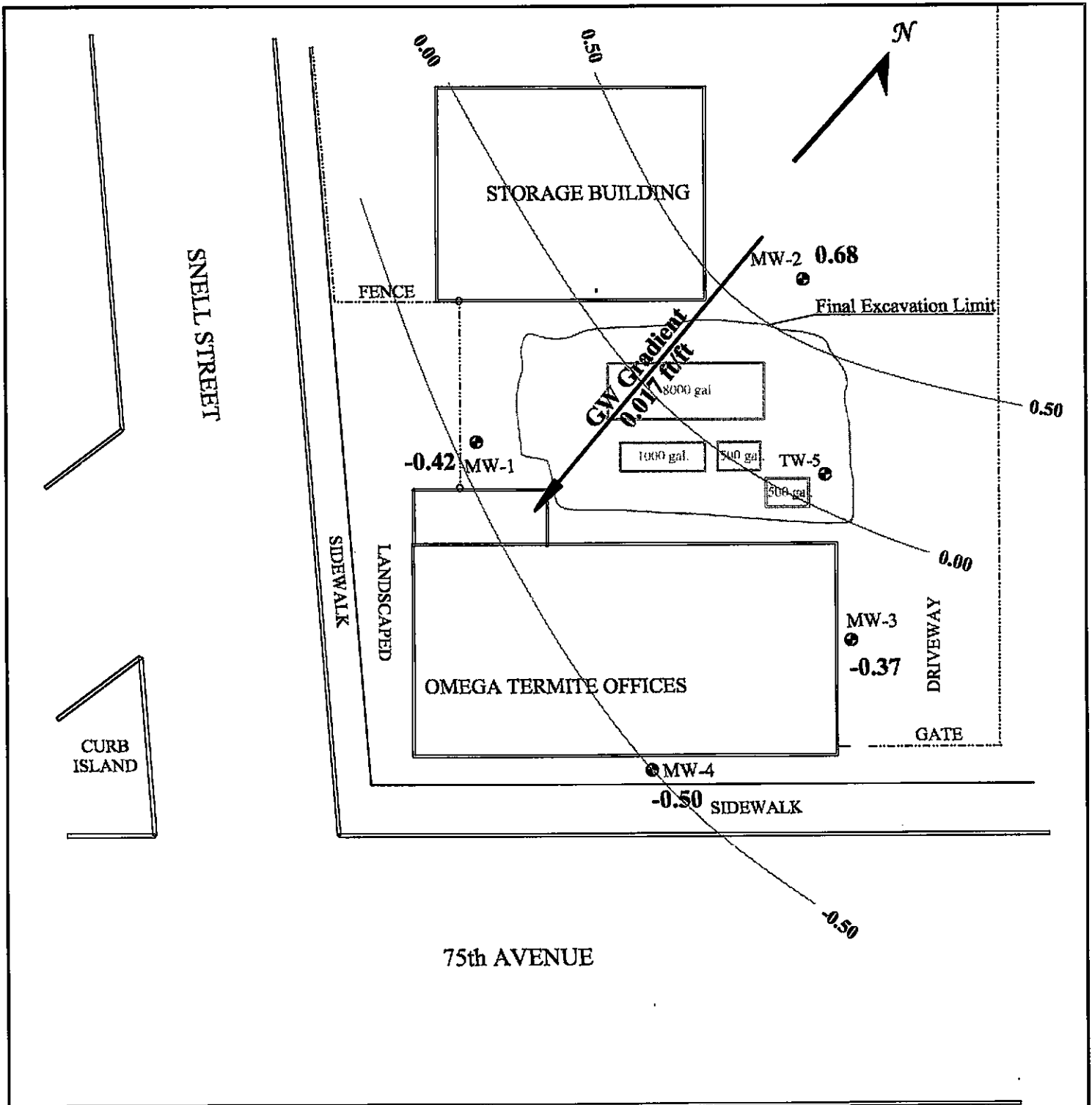
TPH-g - Total Petroleum Hydrocarbons as gasoline
 TPH-d - Total Petroleum Hydrocarbons as diesel
 TPH-mo - Total Petroleum Hydrocarbons as motor oil
 B - benzene

AEI CONSULTANTS
 2500 CAMINO DIABLO, STE. 100, WALNUT CREEK, CA

Groundwater Analytical Data

807 75th AVENUE OAKLAND, CALIFORNIA	FIGURE 3 Project No. 3190
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Base Drafted: R Flory 1/23/04



LEGEND

Base Drafted: R Flory 1/23/04

0' 10' 20'

SCALE: 1 in = 20 ft

● MONITORING WELL LOCATIONS with GW elevations/Casing elevations

-0.50

GW Contours feet MSL

AEI CONSULTANTS
 2500 CAMINO DIABLO, STE. 100, WALNUT CREEK, CA

Groundwater Gradient - 7/15/04

807 75th AVENUE
 OAKLAND, CALIFORNIA

FIGURE 4
 Project No. 3190

Table 1 Well Construction Details, Omega Termite, 807 75th Ave., Oakland, CA

Well ID	Date Installed	Top of Casing (feet)	Water Depth 10/14/03	Casing Material	Total Depth (feet)	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material (feet)	Bentonite Seal (feet)	Grout Seal (feet)
MW-1	06/25/99	5.00	5.03	PVC	20	20	8 1/4	2	20.0-5.0	0.02	5.0-4.5	#3 sand	4.5-3.5	3.5-0.5
MW-2	06/25/99	5.95	6.43	PVC	20	20	8 1/4	2	20.0-5.0	0.02	5.0-4.5	#3 sand	4.5-3.5	3.5-0.5
MW-3	06/25/99	4.66	5.16	PVC	20	20	8 1/4	2	20.0-5.0	0.02	5.0-4.5	#3 sand	4.5-3.5	3.5-0.5
MW-4	06/25/99	4.59	5.25	PVC	20	20	8 1/4	2	20.0-5.0	0.02	5.0-4.5	#3 sand	4.5-3.5	3.5-0.5
TW-5	Mar. 2000	NS	6.08	PVC	10	10	NA	4	10.0-5.0	drilled	NA	NA	NA	2.0

Table 2 - Groundwater Elevations, Omega Termite, 807 75th Ave., Oakland, CA

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
	10/14/03	5.00	5.63	-0.63
	01/13/04	5.00	4.53	0.47
	04/15/04	5.00	5.14	-0.14
	07/15/04	5.00	5.42	-0.42
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
	10/14/03	5.95	6.43	-0.48
	01/13/04	5.95	5.42	0.53
	04/15/04	5.95	6.02	-0.07
	07/15/04	5.95	5.27	0.68

Table 2 - Groundwater Elevations, Omega Termite, 807 75th Ave., Oakland, CA

Well ID	Date	Well Elevation (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)
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
	10/14/03	4.66	5.16	-0.50
	01/13/04	4.66	4.15	0.51
	04/15/04	4.66	4.73	-0.07
07/15/04	4.66	5.03	-0.37	
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
	10/14/03	4.59	5.28	-0.69
	01/13/04	4.59	4.07	0.52
	04/15/04	4.59	4.70	-0.11
07/15/04	4.59	5.09	-0.50	

Table 2 - Groundwater Elevations, Omega Termite, 807 75th Ave., Oakland, CA

Well ID	Date	Well Elevation (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)
TW-5	09/19/01	ns	6.59	na
	05/17/02	ns	6.56	0.03
	08/20/02	ns	6.62	-0.06
	01/10/03	ns	4.66	1.96
	04/14/03	ns	5.30	-0.64
	07/14/03	ns	5.84	-0.54
	07/14/03	ns	5.84	0.00
	10/14/03	ns	6.08	-0.24
	01/13/04	ns	4.83	1.25
	04/15/04	ns	5.64	-0.81
	07/15/04	ns	5.89	-0.25

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

Table 1 - Groundwater Elevations, 807 75th Ave., Oakland, CA

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
15	10/14/03	-0.58	-0.50	.003 / SE
16	01/13/04	0.51	1.08	.001 / W
17	04/15/04	-0.08	-0.59	.001 / W
18	07/15/04	-0.15	-0.08	.001 / W

Table 3 Historical Groundwater Analyses, Omega Termite, 807 75th Ave., Oakland, CA

Sample ID	Sample Collection Date	Water depth	TPH-g µg/L	TPH-d µg/L	TPHmo µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethyl benzene µg/L	Xylenes µg/L
MW-1	07/30/99	5.82	2,700	---	---	ND<10	920	5.5	18	130
	11/09/99	5.70	1,800	---	---	ND<20	430	1.5	26	60
	02/23/00	2.84	3,800	---	---	ND<10	1,500	56	78	35
	05/26/00	5.50	7,100	---	---	ND<10	2,800	70	220	81
	10/10/00	5.70	980	---	---	ND<5.0	260	2.9	10	11
	02/07/01	5.25	570	---	---	ND<5.0	150	1.8	4.9	9.3
	05/25/01	5.25	18,000	---	---	ND<100	3,800	350	550	620
	09/19/01	5.51	840	---	---	ND<5.0	190	4.0	4.6	5.3
	02/06/02	NS	---	---	---	---	---	---	---	---
	05/17/02	5.30	13,000	920	---	ND<5.0	4,500	29	50	58
	08/20/02	5.39	2,100	740	ND<5000 ²	ND<15	820	4.5	6.4	9.6
	01/10/03	4.11	95	260	ND<5000 ²	ND<5.0	23	0.66	3.9	6.5
	04/14/03	4.85	340	310	---	ND<5.0	87	1.3	4.3	5.6
	07/14/03	5.08	750	700	---	ND<10	420	0.84	3.7	6.0
	10/14/03	5.63	200	990 ³	460.0	ND<5.0	62	0.83	2.2	2.7
	01/13/04	4.53	510 ⁴	440 ⁶	ND<250	ND<5.0	190	1.7	11	18.0
	04/15/04	5.14	740 ⁴	490 ⁶	ND<250	ND<10	240	ND<0.5	5.0	9.6
07/15/04	5.42	250⁴	420	260	ND<5.0	78	ND<0.5	5.0	4.4	
MW-2	07/30/99	6.64	1,200	---	---	ND<10	29	2.5	51	100
	11/09/99	6.42	1,300	---	---	ND<30	26	1.1	55	32
	02/23/00	3.31	5,000	---	---	ND<10	200	18	390	440
	05/26/00	6.34	2,700	---	---	ND<10	69	13	83	68
	10/10/00	6.52	810	---	---	ND<10	17	4.7	42	46
	02/07/01	5.90	2,600	---	---	ND<10	70	15	80	100
	05/25/01	6.08	2,400	---	---	ND<5.0	75	16	85	100
	09/19/01	6.53	1,200	---	---	ND<5.0	10	8.5	46	55
	02/06/02	5.72	1,800	---	---	ND<50	14	11	58	59
	05/17/02	6.17	2,000	860	---	8.1 ¹	19	1.1	0.75	88
	08/20/02	NS	NS	NS	NS	NS	NS	NS	NS	NS
	01/10/03	5.12	2,000	910	ND<5000 ²	ND<50	11	11	96	100
	04/14/03	4.98	2,400	800	-	ND<10	16	10	100	73
	07/14/03	5.99	1,900	970	-	ND<15	18	4.8	79	78
	10/14/03	6.43	1,600 ^{5,6}	1,300	ND<250	ND<10	14	5.9	87	78
	01/13/04	5.72	2,900 ⁴	960 ^{5,6}	ND<250	ND<50	26	13	190	150
	04/15/04	6.02	2,700 ⁴	1,100 ^{5,6}	ND<250	ND<15	28	11	120	100
07/15/04	5.27	2,300⁴	1,000^{5,6}	ND<250	ND<10	9	4	96	84	

Table 3 Historical Groundwater Analyses, Omega Termite, 807 75th Ave., Oakland, CA

Sample ID	Sample Collection Date	Water depth	TPH-g µg/L	TPH-d µg/L	TPHmo µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethyl benzene µg/L	Xylenes µg/L
MW-3	07/30/99	5.35	2,700	---	---	ND<10	220	15	130	230
	11/09/99	5.11	3,100	---	---	15	440	8.8	150	96
	02/23/00	2.37	1,800	---	---	ND<15	180	11	82	79
	05/26/00	4.98	1,600	---	---	6.4	140	10	69	63
	10/10/00	5.24	1,100	---	---	ND<10	110	4.4	63	51
	02/07/01	4.73	1,100	---	---	ND<10	130	5.1	68	65
	05/25/01	4.73	1,200	---	---	ND<6.0	120	5.4	69	64
	09/19/01	5.07	800	---	---	<5.0	78	3.5	52	37
	02/06/02	4.69	1,100	---	---	ND<10	130	4.7	77	71
	05/17/02	4.80	2,800	810	---	ND<50/2.0 ¹	410	23	160	210
	08/20/02	4.97	780	270	ND<5000 ²	ND<10	110	2.8	63	41
	01/10/03	3.59	1,100	510	ND<5000 ²	ND<20	160	3.4	98	84
	04/14/03	5.40	690	230	-	ND<5.0	60	2.3	44	34
	07/14/03	4.69	900	380	-	ND<5.0	130	2.0	70	43
	10/14/03	5.16	500	200 ^{5,6}	ND<250	ND<10	50	2.3	37	18
	01/13/04	4.15	1500 ⁴	400 ⁶	ND<250	ND<30	200	6.2	120	88
	04/15/04	4.73	1,100 ⁴	280 ⁶	ND<250	ND<15	130	3.7	75	53
04/15/04	5.03	610⁴	240^{5,6}	ND<250	ND<5.0	73	2.1	51	29	
MW-4	07/30/99	5.45	340	---	---	ND<10	57	2.2	8.5	6.8
	11/09/99	5.31	1,000	---	---	ND<10	220	<0.5	17	7.1
	02/23/00	2.72	980	---	---	ND<5.0	260	7	33	27
	05/26/00	5.07	760	---	---	5.7	170	4.8	22	13
	10/10/00	5.32	520	---	---	ND<10	130	2.3	22	10
	02/07/01	4.73	680	---	---	ND<8.0	180	3.7	29	21
	05/25/01	4.90	1,700	---	---	ND<10	510	9.6	44	46
	09/19/01	5.16	680	---	---	ND<10	200	2.6	33	12
	02/06/02	4.65	710	---	---	ND<15	220	2.8	40	21
	05/17/02	4.90	1,300	190	---	3.3 ¹	330	5.6	61	51
	08/20/02	5.02	580	120	ND<5000 ²	ND<5.0	160	1.7	34	13
	01/10/03	3.78	800	85	ND<5000 ²	ND<20	240	2.5	46	28
	04/14/03	4.11	850	120	---	ND<10	220	2.7	47	26
	07/14/03	4.75	780	170	---	ND<20	220	1.4	44	23
	10/14/03	5.25	420	110 ^{5,6}	ND<250	ND<5.0	120	0.95	31	8.2
	01/13/04	4.07	120 ⁴	69 ⁶	ND<250	ND<10	30	0.52	8.1	4.7
	04/15/04	4.70	660 ⁴	120 ⁶	ND<250	ND<25	200	2.2	39	24
07/15/04	5.09	500⁴	92^{5,6}	ND<250	ND<5.0	130	1.3	35	15	

Table 3 Historical Groundwater Analyses, Omega Termite, 807 75th Ave., Oakland, CA

Sample ID	Sample Collection Date	Water depth	TPH-g µg/L	TPH-d µg/L	TPHmo µg/L	MTBE µg/L	Benzene µg/L	Toluene µg/L	Ethyl benzene µg/L	Xylenes µg/L
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<250	ND<5.0	13.0	4.1	1.6	1.3
	09/19/01	6.59	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	6.56	480	41,000	---	ND<5.0/<5.0 ¹	1.6	1.1	0.8	ND<0.5
	08/20/02	6.62	240	21,000	ND<5000 ²	ND<5.0	8.0	1.2	1.1	0.54
	01/10/03	4.66	ND<50	1,300	ND<5000 ²	ND<5.0	5.4	0.58	ND<0.5	1.10
	4/14/2003	5.30	160	2,300	---	ND<5.0	18	5.7	5.9	16
	7/14/2003	5.84	100	16,000	---	ND<5.0	1.2	0.77	0.63	1.2
	10/14/03	6.08	120 ⁷	10,000 ⁷	4,600	ND<5.0	1.6	1.6	ND<0.5	1.2
	01/13/04	4.83	110 ⁴	2,100	1,400	ND<5.0	8.4	1.2	ND<0.5	3.9
	04/15/04	5.64	170 ⁴	2,200	1,100	ND<5.0	2.5	1.2	ND<0.5	5.1
	07/15/04	5.89	81 ⁴	3,000	1,600	ND<5.0	5	1.3	0.85	4.1

- Notes
- mg/L micrograms per liter (parts per billion)
 - not sampled
 - ND not detected
 - TPH-g total petroleum hydrocarbons as gasoline
 - TPH-d total petroleum hydrocarbons as diesel
 - TPH-mo total petroleum hydrocarbons as motor oil
- 1 MTBE concentrations by methods 8021B/8260B
 - 2 analysis for total oil and grease by method 5520
 - 3 fuel oil
 - 4 unmodified or weakly modified gasoline is significant
 - 5 diesel range compounds are significant; no recognizable pattern
 - 6 gasoline range compounds are significant
 - 7 lighter than water immiscible sheen/product is present
 - 8 unmodified or weakly modified diesel is significant

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:	7/15/2004
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 <input type="button" value="▼"/>		
Elevation of Top of Casing (feet above msl)	5.00		
Depth of Well	20.00		
Depth to Water (from top of casing)	5.42		
Water Elevation (feet above msl)	-0.42		
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)	7.0		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	clears at 4.5 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 (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	18.45	9.77	1135	0.08	-222.6	
	4	18.85	9.84	1110	0.08	-225.1	
	6	19.12	9.75	1130	0.14	-227.3	
	8	18.58	9.71	1145	0.37	-229.3	

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

Initially dark and strong hydrocarbon odor.

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-2

Project Name:	Omega Termite	Date of Sampling:	7/15/2004
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)	5.27		
Water Elevation (feet above msl)	0.68		
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)	8.0		
Appearance of Purge Water	clears quickly		
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 (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	19.66	7.97	1138	0.08	-213.4	
	4	20.46	8.03	1153	0.07	-208.2	
	6	20.21	8.30	1147	0.06	-206.5	
	8	19.72	8.58	1111	0.06	-212.5	

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

Initially light grey and strong hydrocarbon odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-3

Project Name:	Omega Termite	Date of Sampling:	7/15/2004
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)	5.03		
Water Elevation (feet above msl)	-0.37		
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)	8.0		
Appearance of Purge Water	clears up at 3 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 (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	19.04	9.61	1468	0.61	-100.3	
	4	19.83	9.45	1477	0.62	-19.3	
	6	19.29	9.35	1475	0.65	-100.4	
	8	18.65	9.22	1445	0.49	-256.3	

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

Initially grey and strong hydrocarbon odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: MW-4

Project Name:	Omega Termite	Date of Sampling:	7/15/2004
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)	5.09		
Water Elevation (feet above msl)	-0.50		
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)	8.0		
Appearance of Purge Water	clears quickly		
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 (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	19.31	7.66	1515	0.78	-193.3	
	4	19.62	7.41	1487	0.74	-78.3	
	6	19.94	7.22	1476	0.75	-60.2	
	8	19.03	6.77	1483	0.80	-236.3	

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

No hydrocarbon odor

AEI CONSULTANTS
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

Monitoring Well Number: TW-5

Project Name:	Omega Termite	Date of Sampling:	7/15/2004
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)			
Depth of Well	10.00		
Depth to Water (from top of casing)	5.89		
Water Elevation (feet above msl)			
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)	8.5		
Actual Volume Purged (gallons)	10.0		
Appearance of Purge Water	clears quickly		
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 (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	21.82	9.17	1136	0.31	-228.9	
	4	21.98	9.10	1137	0.29	-250.7	
	6	22.01	9.08	1138	0.18	-259.3	
	8	22.04	8.81	1139	0.32	-268.8	
	10	22.04	9.14	1140	0.22	-275.3	

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

Initially dark grey and slight hydrocarbon odor

APPENDIX B

**LABORATORY ANALYTICAL AND
CHAIN OF CUSTODY DOCUMENTATION**



QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0407209

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 12360			Spiked Sample ID: 0407205-001A			
	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	96.9	96.1	0.839	95	93.6	1.51	70	130
MTBE	ND	10	104	104	0	109	115	4.63	70	130
Benzene	ND	10	111	113	1.49	111	113	2.19	70	130
Toluene	ND	10	110	110	0	111	98.3	11.9	70	130
Ethylbenzene	ND	10	115	116	1.13	116	110	4.75	70	130
Xylenes	ND	30	100	100	0	100	100	0	70	130
%SS:	84.6	10	107	110	2.45	106	110	3.68	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 applicable or 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.



QC SUMMARY REPORT FOR SW8015C

Matrix: W

WorkOrder: 0407209

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 12361		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	107	105	1.97	70	130
%SS:	N/A	2500	N/A	N/A	N/A	109	110	1.40	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.

 QA/QC Officer

