

**RECEIVED**

1:31 pm, Apr 02, 2008

Alameda County  
Environmental Health

March 30, 2007

**MONITORING AND OZONE SPARGE  
WELL INSTALLATION  
AND  
GROUNDWATER MONITORING REPORT  
1st Quarter, 2007**

807 75th Avenue  
Oakland, California

AEI Project No. 262157  
ACHCS # RO0000508

Prepared For

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

Prepared By

**AEI Consultants**  
2500 Camino Diablo Blvd., Suite 100  
Walnut Creek, CA 94597  
(925) 944-2899

**AEI**



March 30, 2007

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

**Subject: Quarterly Groundwater Monitoring Report  
First Quarter, 2007**  
807 75th Avenue  
Oakland, California  
AEI Project No. 262157  
ACHCS # RO0000508

Dear Mr. Kanady:

AEI Consultants (AEI) has prepared this report to document the methods and results of the installation of additional groundwater monitoring wells, ozone sparge wells, and the first quarter, 2007 groundwater monitoring event at the above referenced site (Figure 1: Site Location Map). This groundwater investigation and remediation effort has been performed in accordance with the requirements of the Alameda County Health Care Services Agency (ACHCSA). The purpose of this activity is to further delineate the limits of groundwater impact in the deeper aquifer, install ozone sparging wells to be used to remediate the hydrocarbon impact in the soil and groundwater and to baseline for groundwater quality near the location of previously removed underground storage tanks (USTs) at the site prior to startup of the ozone remediation system.

### **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 75<sup>th</sup> 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 Termite.

On September 15, 1996, AEI removed three (3) 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 on Figure 2. Soil and groundwater samples 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 in the soil samples at concentrations up to 4,300 mg/kg, 13 mg/kg, and 25 mg/kg, respectively. The results of this sampling are summarized in *Underground Storage Tank Removal Final Report*, dated October 10, 1996 <sup>(1)</sup> and Table 1.

In October 1997, soil and groundwater samples were collected from six (6) soil borings (BH-1 through BH-6). The results of this investigation are summarized in *Phase II Soil and Groundwater Investigation*, dated March 17, 1997<sup>(2)</sup> and Tables 1 and 2

In June 1999, four (4) 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 3. The locations of these monitoring wells are shown on Figures 2 and 3. Historical groundwater sample analytical and historical groundwater elevation data are presented in Tables 2 and 3. The results of this investigation are summarized in *Groundwater Monitoring Well Installation Report*, dated September 16, 1999.<sup>(3)</sup>

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 to the sanitary sewer system under an East Bay Municipal Utility District permit. Onsite activities and analytical results are summarized in *Over-Excavation and Tank Removal*, November 13, 2003<sup>(4)</sup> and Table 1.

On October 9 and 10, 2003, AEI drilled seven temporary Geoprobe® boreholes (SB-7 through SB-13) to depths ranging from 15 to 20 feet bgs to further delineate the lateral extent of contamination in the Shallow aquifer. 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. The results of chemical analyses of soil samples collected and analyzed during this investigation and earlier investigations appear to have effectively defined the limits of impacted soil in the vadose zone. A significant amount of impacted soil appears remain in the immediate vicinity of boring SB-14. The results of soil analyses are summarized on Table 1.

The analysis of the water sample from the second aquifer (Soil Boring SB-14, 28 feet bgs) reported TPH-g, TPH-d, MTBE and benzene at concentrations of 2,300 µg/L, 72,000 µg/L, 45 µg/L and 120 µg/L, respectively. Light non-aqueous phase liquid was observed on the sampler and in the water sample. The results of this investigation are summarized in *Soil And Groundwater Investigation Report*, dated November 13, 2003.<sup>(5)</sup> The results analyses of groundwater from the soil boring are summarized on Table 2.

In a letter dated September 19, 2005, the ACHCSA requested that a workplan be prepared determine the lateral and vertical extent of hydrocarbons in the second aquifer. An updated map

showing all previous sampling locations, cross sections, site conceptual model, delineation of any preferential pathways that may exist, and a well survey of all wells within a 1/2 mile radius of the subject site. The workplan<sup>(6)</sup> was prepared and approved by the ACHCSA dated August 11, 2006.

On February 15 and February 16, 2006, AEI advanced five soil borings (MW-6 through MW-10) on the site, and completed the borings as groundwater monitoring wells. Shallow Zone well MW-6 and Deeper Zone wells MW-7 through MW-10, were drilled with nominal 8-inch diameter hollow stem augers and completed as 2-inch groundwater monitoring wells. The details of the well completions are summarized in Table 3.

These and existing wells were sampled on March 13, 2006. Maximum concentrations of TPH-g, TPH-d, and TPH-mo reported from the Shallow Zone were 3,200 µg/L (MW-1), 2,400 µg/L (MW-2), and 320 µg/L (MW-1), respectively. The maximum concentration of benzene reported was 1,400 µg/L in MW-1.

Maximum concentrations of TPH-g, TPH-d, and TPH-mo reported from the Deeper Zone were 1,100 µg/L, 14,000 µg/L, and 4,100 µg/L, respectively in MW-9 with the notation of light immiscible hydrocarbons present in the sample. The maximum concentration of benzene reported was 85 µg/L in MW-9. The results of this investigation are summarized in *Deeper Aquifer Soil and Groundwater Investigation Report*, April 28, 2006.<sup>(7)</sup>

In a letter dated May 25, 2006, the ACHCSA requested a workplan for installation and pilot testing of the ozone sparging system recommended by AEI. The *Well and Ozone Micro-Sparge System Installation Work Plan*<sup>(8)</sup> was approved by the ACHCSA in a letter dated August 11, 2006.

## **Geology and Hydrology**

The site is located at an elevation approximately 11 feet above mean sea level (msl). The site is essentially flat; however, the general topography of the area slopes gently to the west. The surface sediments at the site are mapped as Holocene natural levee and basin deposits (Qhl and Qhb, OF 97-97, E.J. Helley and R.W. Graymer).<sup>(8,9)</sup> The Natural Levee Deposits (Holocene) are described as “Loose, moderately to well-sorted sandy or clayey silt grading to sandy or silty clay. The Basin Deposits (Holocene) are described as “Very fine silty clay to clay deposits occupying flat-floored basins at the distal edge of alluvial fans adjacent to the bay mud (Qhbm)”. The presence of gravels in several of the onsite soil borings indicate that stream channel deposits are also present.

Based on the soil borings advanced by AEI, the near surface sediments beneath the site can be divided into several water bearing zones that are separated by clay layers. Sediments immediately below the surface consist of black to gray brown to olive brown silty clay to depths ranging from 7.5 to 10 feet bgs. No groundwater was encountered during drilling of this interval.

The surface clay is underlain by variable and somewhat discontinuous silty sand and clayey silt, which make up the Shallow Zone. The Shallow Zone extends from the base of the surface clay to depths ranging from 18 to 21 feet bgs. This zone has low to medium permeability. Groundwater is typically seen in the first permeable silt or sand encountered during drilling of this interval. Once encountered, groundwater level typically stabilizes at a depth of 5 feet bgs or less, indicating the zone has very low transmissivity and may be at least a semi-confined aquifer.

The Shallow Zone is underlain by several feet of moderately dry light olive brown to yellowish brown clay, except in MW-7, drilled through the former tank hold, in which the clay exhibited significant discoloration (dark greenish gray clay).

At depths ranging from 18 ft (MW-9) to 21 feet (MW-8) bgs second (intermediate) discontinuous water bearing zone (Intermediate Zone) is present. The Intermediate Zone consists of discontinuous gravel, clayey gravel, and silty sand, clayey sand, and clayey silt which are interbedded with clay layers. Permeability in the Intermediate Zone ranges from high (gravel) to poor (clayey silt). The Intermediate Zone is separated from the Deeper Zone by a layer of brown silty clay that ranges in thickness of 2 to 7 feet.

A third water bearing zone (Deeper Zone) was encountered at a depth of approximately 27 to 28 feet bgs. The lower permeable zone is made up of clayey silt, clayey sand, clean sand and sandy gravel.

#### **Activities During The 4<sup>th</sup> Quarter 2006**

On December 18, 2006 AEI installed groundwater monitoring wells MW-11 and MW-12. Ozone Sparge wells OZ-1 through OZ-8 were installed on December 19 through 21, 2007 were drilled under permits issued by the Alameda County Department of Public Works. A copy of the drilling permit is attached as Appendix A.

Groundwater monitoring wells MW-11 and MW-12 were installed to a depth of 35 feet bgs with 2-inch diameter, schedule 40 PVC. Both wells were completed with 10 feet of 2-inch diameter, 0.010-inch factory slotted casing. Well MW-11 was located west of MW-9 adjacent to soil boring SB-8. The purpose of this well was to delineate the western extent of the groundwater in the deeper zone. Well MW-12 was located slightly east of soil boring SB-14 to further delineate the eastern extent of the groundwater in the deeper zone.

Ozone Sparge well OZ-1 was completed as a single point injection well in the Shallow and Intermediate Zones with the top of the injection point located at 16.5 feet bgs and sand pack interval of 9.5 feet to 19 feet bgs. Sparge wells OZ-2 through OZ-9 were completed as dual point ozone injection wells. Wells OZ-3 through OZ-8 were completed with the top of the lower sparge point at approximately 32.5 feet bgs in the Deeper Zone with a filter pack interval of 30 to 35 feet and the top of the shallow point at approximately 13.5 feet bgs with a filter pack interval of 12 to 16 feet bgs in the Shallow Zone. The top of the shallow injection point in well

OZ-2 was placed in the Intermediate Zone below the backfill at a depth of approximately 18 feet bgs with a filter pack interval of 16 to 21 feet bgs.

The lead auger became detached and was left on bottom around the deeper sparge point when installing well OZ-6. On January 19, 2007, injection well OZ-9 was installed with a sparge point in the deeper zone and a sparge point at 18.5 feet bgs in Intermediate Zone Sand. This will allow maximum injection of ozone into the areas of soil and groundwater under the building between the former excavation and well MW-4. The construction details for monitoring wells MW-11 and MW-12 are included in Table 3. The construction details for sparge wells OZ-1 through OZ-9 are included in Table 3a. Copies of the boring and completion logs are included in Appendix B.

The soil borings for the groundwater monitoring wells MW-11 and MW-12 were sampled at a approximately five foot intervals. The soil borings for the ozone sparge wells OZ-2 through OZ-8 were sampled at a approximately five foot intervals below 10 to 15 feet bgs depending on how close the well was to previously drilled shallow soil borings. Borehole logging, and sample collection were performed under the direct supervision of an AEI California Professional Geologist.

A portion of each sample was placed in a 1-quart zipper locking plastic bag and field screened using a Mini-Rae photo ionization detector (PID). The results of the field screening were noted on the boring logs and

Selected samples from each soil boring were retained for possible chemical analysis. The ends of the sample sleeves were sealed with Teflon tape and end caps, labeled with a unique identifier, entered onto chain of custody, and placed in a cooler on water ice. Samples were transported on ice under appropriate chain of custody protocol to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification #1644).

Groundwater monitoring wells MW-11 and MW-12 were developed by surging, bailing, and purging on December 27, 2006 to stabilize the sand pack and remove accumulated fines from the casing and sand pack.

On January 16, 2007, each new groundwater well and ozone sparge point were surveyed relative to each other and mean sea level by Morrow Surveying, a California licensed land surveyor, with accuracy appropriate for GeoTracker uploads.

### **Summary of Activities**

AEI conducted quarterly groundwater sampling and monitoring all five (5) Shallow Zone monitoring wells (MW-1 through MW-4 and MW-6) and the six (6) Deeper Zone wells (MW-7 through MW-12) on January 2, 2007.

Prior to measuring the depth to water, the well caps were removed and the water levels in each well were 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 then measured with an electric water level indicator. The wells were then purged using a battery-powered submersible pump. Approximately three (3) well volumes were removed from each well. During purging activities, the groundwater parameters: temperature, pH, specific conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP) were measured. A visual evaluation of turbidity was made and noted. Groundwater parameters measured in the field are reported on the field sampling forms included in Appendix B.

Following recovery of water levels to 90% of the original level, water samples were collected from each well. Groundwater samples 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 filled so that no headspace or air bubbles were visible within the sample containers. 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 all wells were analyzed for TPH-g, benzene, toluene, ethyl benzene, xylenes (BTEX), MTBE by SW8021B/8015Cm, and TPH-d (as diesel) and TPH-mo (as motor oil) by SW8015C. Groundwater samples from wells MW-1 through MW-4 and MW-9 through MW-12 were analyzed for oxygenated volatile organics plus 1,2-dibromoethane (EDB) and 1,2-dichloroethane (1,2-DCA).

## **Field Results**

Groundwater elevations in the Shallow Zone wells ranged from 4.17 (MW-4) to 6.44 (MW-6) feet above mean sea level (amsl). These elevations are on average 0.30 feet higher than at the time of the previous quarterly monitoring event. The groundwater hydraulic gradient in the Shallow Zone is 0.002 ft/ft to the west northwest.

Groundwater elevations in the Deeper Zone wells ranged from 3.43 (MW-12) to 5.97 (MW-8) feet amsl. These elevations are an average of 0.45 feet lower than at the time of the previous quarterly monitoring event. The groundwater hydraulic gradient in the Deeper Zone is 0.033 ft/ft to the south.

Current and historical Groundwater elevation data are summarized in Table 4 and 4a. The groundwater elevation contours and the groundwater flow direction are shown in Figures 4 and 5. Refer to Appendix C for the Groundwater Monitoring Well Field Sampling Forms.

## Soil Analyses

TPH-g and TPH-d were reported in soil samples analyzed at concentrations of up to 200 mg/kg, 240 mg/kg, respectively (Intermediate Zone - OZ-6-26). Maximum BTEX concentrations reported were 0.63 mg/Kg, 0.15 mg/kg, 0.42 mg/kg, and 1.4 mg/kg, respectively (OZ-6 and OZ-8). No MTBE was reported in soil samples at reporting limits of 0.50 mg/kg (OZ-5-16, OZ-6-26), 0.25 mg/kg (OZ-6-11), and 0.05 mg/kg (all other samples).

## Groundwater Quality

TPH-g and benzene concentrations in Shallow Zone monitoring well MW-1 decreased from 3,500 µg/L to 410 µg/L and from 1,700 µg/L to 1,50 µg/L, respectively. TPH-d and TPH-mo concentrations in MW-1 decreased from 550 µg/L to 240 µg/L and from 270 µg/L to ND<250 µg/L, respectively. Analysis by method 8260B reported t-butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), and MTBE at concentrations of 9.7 µg/L, 4.6 µg/L, and 0.97 µg/L, respectively. Tert-amyl methyl ether (TAME), 1,2-dibromoethane (EDB), Diisopropyl ether (DIPE), and ethyl tert-butyl ether (ETBE) were reported as non-detectable.

The TPH-g concentration in monitoring well MW-2 increased from 2,400 µg/L to 3,800 µg/L while benzene decreased from 12 µg/L to 11 µg/L. TPH-d increased from 860 µg/L to 2,100 µg/L. TPH-mo remained below the reporting limit of 250 µg/L. TAME, TBA, EDB, 1,2-DCA, DIPE, and ETBE were reported as non-detectable.

TPH-g and benzene concentrations in monitoring well MW-3 decreased from 510 µg/L to 380 µg/L and from 49 µg/L to 33 µg/L, respectively. TPH-d and TPH-mo decreased from 300 µg/L to 180 µg/L and 310 µg/L to ND<250 µg/L, respectively. Analysis by method 8260B reported MTBE at a concentration of 0.55 µg/L. TAME, TBA, EDB, 1,2-DCA, DIPE, ETBE, and MTBE were reported as non-detectable.

TPH-g and benzene concentrations in monitoring well MW-4 decreased from 260 µg/L to 160 µg/L and from 63 µg/L to 27 µg/L, respectively. TPH-d and TPH-mo decreased from 170 µg/L to 78 µg/L and from 360 µg/L to ND<250 µg/L, respectively. Analysis by method 8260B reported MTBE at a concentration of 1.0 µg/L. TAME, TBA, EDB, 1,2-DCA, DIPE, ETBE, and MTBE were reported as non-detectable at a reporting limit of 0.5 µg/L.

The TPH-d concentration in MW-6 increased from 59 µg/L to 120 µg/L. TPH-g, TPH-mo, MTBE (8021B) and BTEX were all reported as not detected at standard detection limits.

The TPH-d concentration in Deeper Zone monitoring well MW-7 decreased from 150 µg/L to 99 µg/L. TPH-g, TPH-mo, MTBE (8021B) and BTEX continue to be reported as not detected at standard detection limits.



The TPH-d concentration in Deeper Zone monitoring well MW-8 increased from 65 µg/L to 70 µg/L. TPH-g, TPH-mo, MTBE and BTEX continue to be reported as not detected at standard detection limits.

TPH-g concentrations in Deeper Zone monitoring well MW-9 decreased from 130 µg/L to 88 µg/L, while benzene decreased from 20 µg/L to 5.1 µg/L, respectively. Benzene concentration decreased from 20 µg/L to 5.1 µg/L. TPH-d and TPH-mo concentrations in MW-9 increased from 1,400 µg/L to 4,300 µg/L and from 460 µg/L to 1,000 µg/L, respectively. Analysis by method 8260B reported 1,2-DCA and MTBE at concentrations of 0.62 µg/L and 1.6 µg/L. TAME, TBA, EDB, DIPE, ETBE, and MTBE were reported as non-detectable at a reporting limit of 0.5 µg/L

TPH-g and benzene concentrations in monitoring well MW-10 remained at ND<50 µg/L and ND<0.5 µg/L, respectively. TPH-d increased from 280 µg/L to 480 µg/L, while TPH-mo decreased from 460 to ND<250 µg/L. Analysis by method 8260B reported MTBE at a concentration of 1.1 µg/L. TAME, TBA, EDB, 1,2-DCA, DIPE, and ETBE were reported as non-detectable.

TPH-g, TPH-d, and TPH-mo concentrations in new Deeper Zone monitoring well MW-11 were reported as 160 µg/L, 2,700 µg/L, and ND<250 µg/L, respectively. BTEX was reported at ND<0.5 µg/L, ND<0.5 µg/L, ND<0.5 µg/L, and 1.7 µg/L, respectively. Analysis by method 8260B reported 1,2-DCA at a concentration of 2.9 µg/L. TAME, TBA, EDB, DIPE, ETBE, and MTBE were reported as non-detectable.

TPH-g, TPH-d, and TPH-mo concentrations in new Deeper Zone monitoring well MW-11 were reported as 53 µg/L, 130 µg/L, and ND<250 µg/L, respectively. BTEX was reported at 1.4 µg/L, ND<0.5 µg/L, ND<0.5 µg/L, and 0.95 µg/L, respectively. Analysis by method 8260B reported TAME, TBA, EDB, 1,2-DCA, DIPE, ETBE, and MTBE as non-detectable.

A summary of groundwater analytical data is presented in Table 2, Table 5 and on Figure 5. Contaminant isopleths are presented in Figures 6 through 12. Laboratory results and chain of custody documents are included in Appendix E.

## Summary

During the 4<sup>th</sup> quarter 2006, two additional deeper zone groundwater monitoring wells (MW-11 and MW-12) and nine (9) ozone sparge wells were installed on site. Groundwater contaminant concentrations reported are reasonably consistent with previous findings.

Significant concentrations of TPH-g and TPH-d were reported in soil samples from the Intermediate Zone collected from sparge well OZ-6. This combined with the relative persistence of hydrocarbons in shallow well MW-4 suggest that a significant hydrocarbon source is present between the former tank pit and well MW-4.

The ozone remediation is has been installed and under going testing. A system startup report will be prepared upon completion of system testing. The next quarterly monitoring event is tentatively scheduled in late April 2007.

### Report Limitations and Signatures

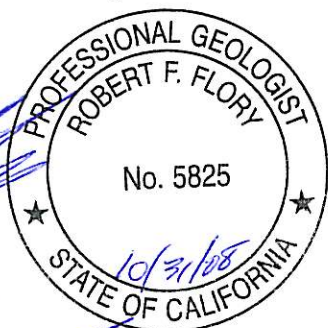
This report presents a summary of work completed by AEI Consultants, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, 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 geologic, environmental engineering and construction fields that existed at the time and location of the work.


Please contact Robert F. Flory at (925) 944-2899 extension 122, if you have any questions regarding the findings of this report.

Sincerely,  
**AEI Consultants**

  
Robert F. Flory, P.G.  
Senior Geologist



  
Ricky Bradford  
Senior Staff Engineer

  
Peter McIntyre, P.G.  
Senior Project Manager

## Referenced Documents

1. *Underground Storage Tank Removal Final Report*, October 10, 1996, prepared by AEI Consultants.
2. *Phase II Soil and Groundwater Investigation Report*, March 17, 1997, prepared by AEI Consultants.
3. *Groundwater Monitoring Well Installation and Sampling Report*, September 16, 1999, prepared by AEI Consultants.
4. *Over-Excavation And Tank Removal*, November 13, 2003, prepared by AEI Consultants.
5. *Soil and Groundwater Investigation Report*, November 13, 2003, prepared by AEI Consultants
6. *Work Plan for Characterization of Second Aquifer*, December 15, 2005, prepared by AEI Consultants.
7. *Deeper Aquifer Soil and Groundwater Investigation Report*, April 28, 2006, prepared by AEI Consultants.
8. *Well and Ozone Micro-Sparge System Installation Work Plan*, July 31, 2006, prepared by AEI Consultants.
9. *Quaternary geology of Alameda County, and parts of Contra Costa, Santa Clara, San Mateo, San Francisco, Stanislaus, and San Joaquin Counties, California*, Open File Report 97-97, E.J. Helley and R.W. Graymer, 1997, USGS
10. *Geologic Map and Map Database of the Oakland metropolitan Area, Alameda, Contra Costa and San Francisco Counties, California*, Miscellaneous Field Studies 2342i, 2000, by R.W. Graymer, USGS

## Figures

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Tank Excavation and Borings Sample Locations
Figure 4	Shallow Zone Groundwater Elevations (01/02/07)
Figure 5	Deeper Zone Gradient (01/02/07)
Figure 6	Analytical Results (01/02/07)
Figure 7	Shallow Zone TPH-g Isopleths (01/02/07)
Figure 8	Deeper Zone TPH-g Isopleths (01/02/07)
Figure 9	Shallow Zone TPH-d Isopleths (01/02/07)
Figure 10	Deeper Zone TPH-d Isopleths (01/02/07)
Figure 11	Shallow Zone Benzene Isopleths (01/02/07)
Figure 12	Deeper Zone Benzene Isopleths (01/02/07)

## Tables

Table 1	Soil Sample Analytical Data
Table 2	Historical Groundwater Sample Analytical Data
Table 3	Monitoring Well Construction Details
Table 3a	Ozone Injection Well Construction Details
Table 4	Historical Groundwater Elevation Data
Table 4a	Historical Groundwater Elevation and Flow Direction Summary
Table 5	Fuel Oxygenate Analytical Data

<b>Appendix A</b>	Drilling Permit
<b>Appendix B</b>	Boring / Well Logs
<b>Appendix C</b>	Groundwater Monitoring Well Field Sampling Forms
<b>Appendix D</b>	Soil Analyses With Chain of Custody Documentation
<b>Appendix E</b>	Groundwater Analyses With Chain of Custody Documentation

## Distribution:

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

(2 copies)

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

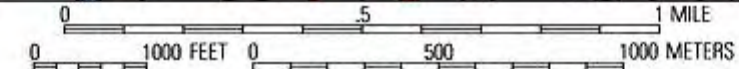
electronic

GeoTracker

## **FIGURES**

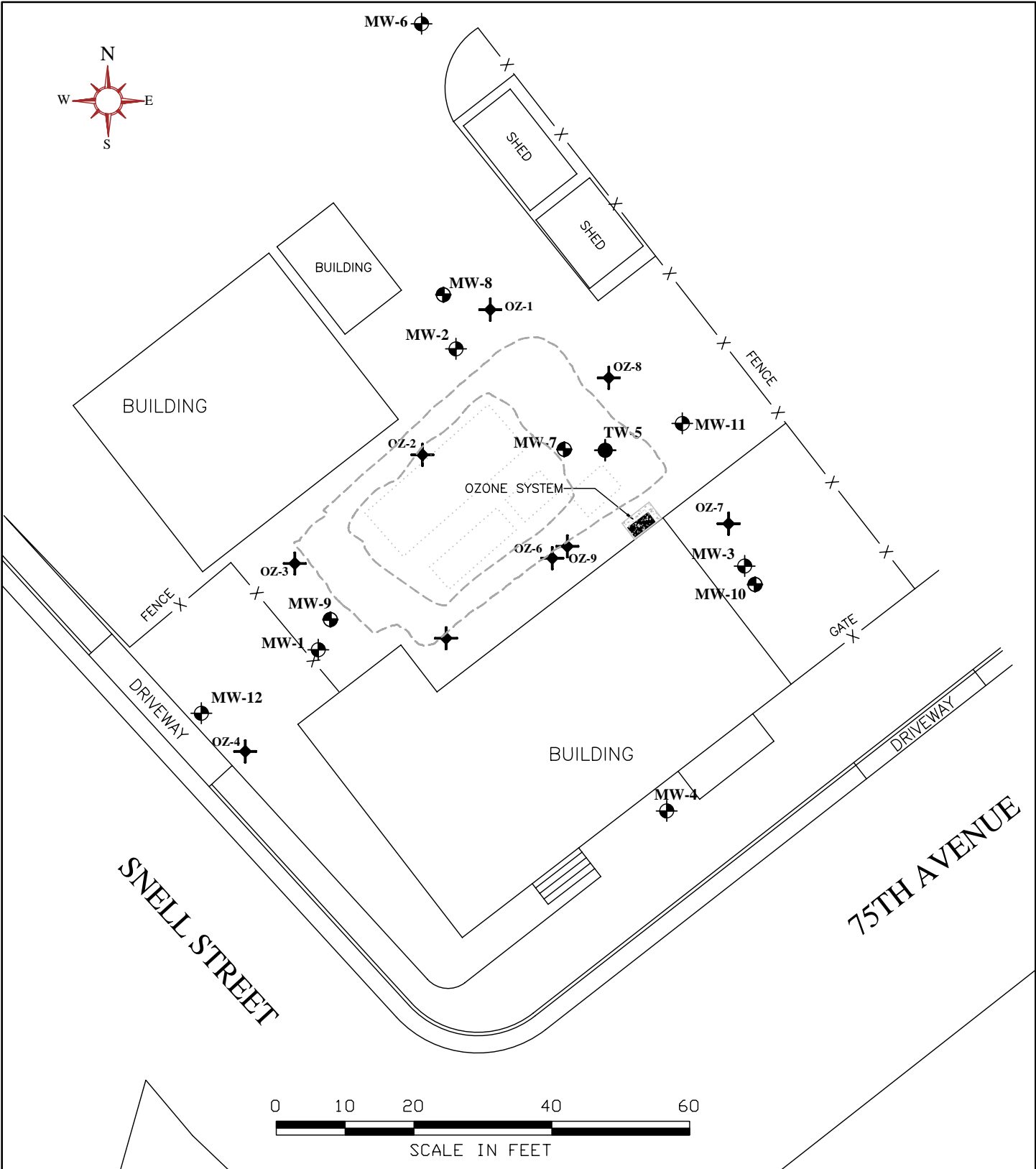


TN  $\star$  MN  
15°



Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

<b>AEI CONSULTANTS</b> 2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA	
<b>SITE LOCATION MAP</b>	
807 75 <sup>th</sup> AVENUE OAKLAND, CALIFORNIA	<b>FIGURE 1</b> AEI PROJECT No. 262157



**LEGEND**

- ◆ MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- ✦ DESTROYED BACKFILL WELL
- ✦ OZONE SPARGE POINT

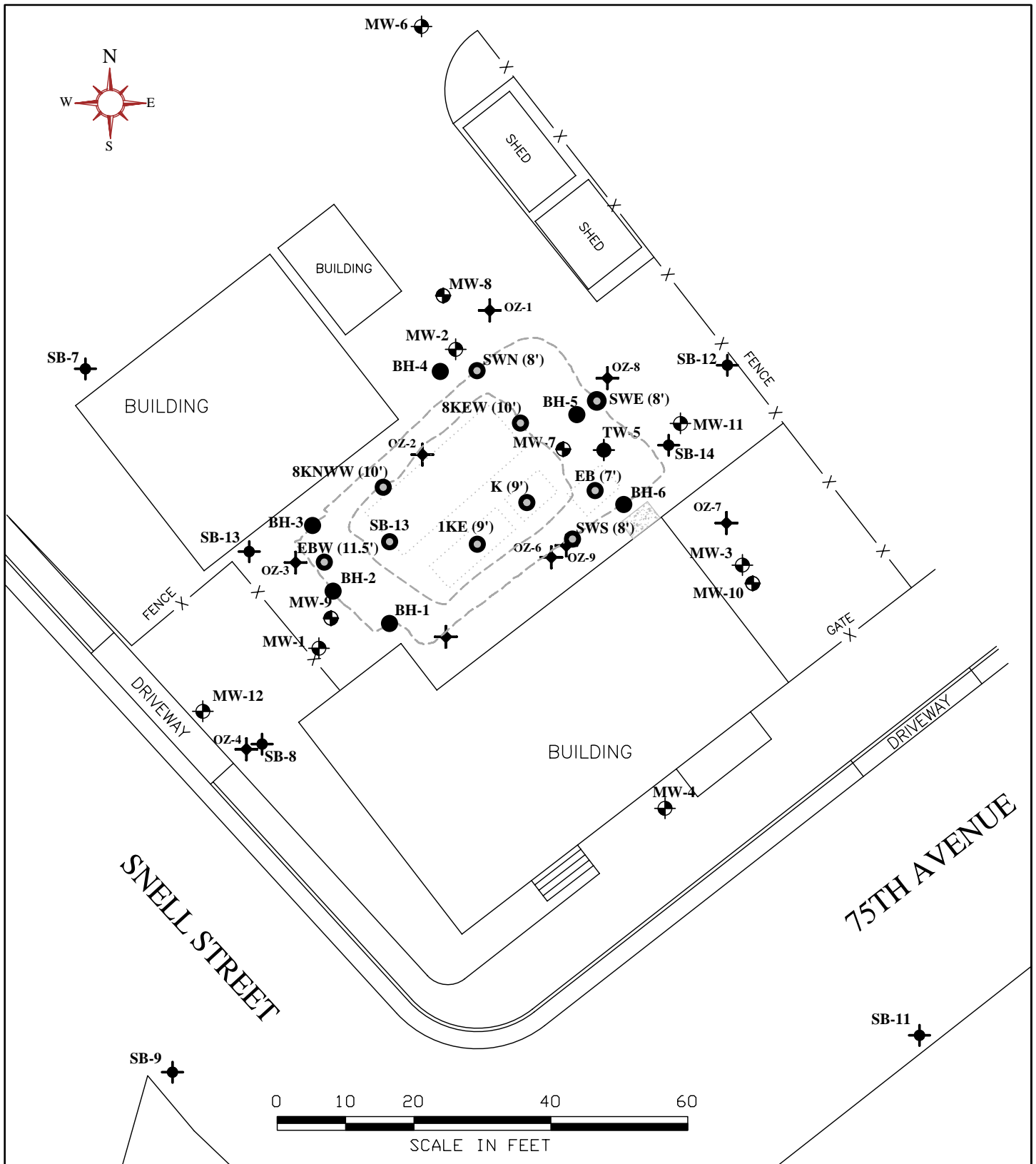
DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

**AEI CONSULTANTS**  
 2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK

**SITE PLAN**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 2**  
 PROJECT NO. 262157



**LEGEND**

- ◆ MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- ◆ DESTROYED BACKFILL WELL
- ◆ OZONE SPARGE POINT
- ◆ SOIL BORINGS (2003)
- SOIL BORINGS (1997)
- SOIL SAMPLES TANK EXCAVATION (1996 & 2000)

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

**AEI CONSULTANTS**

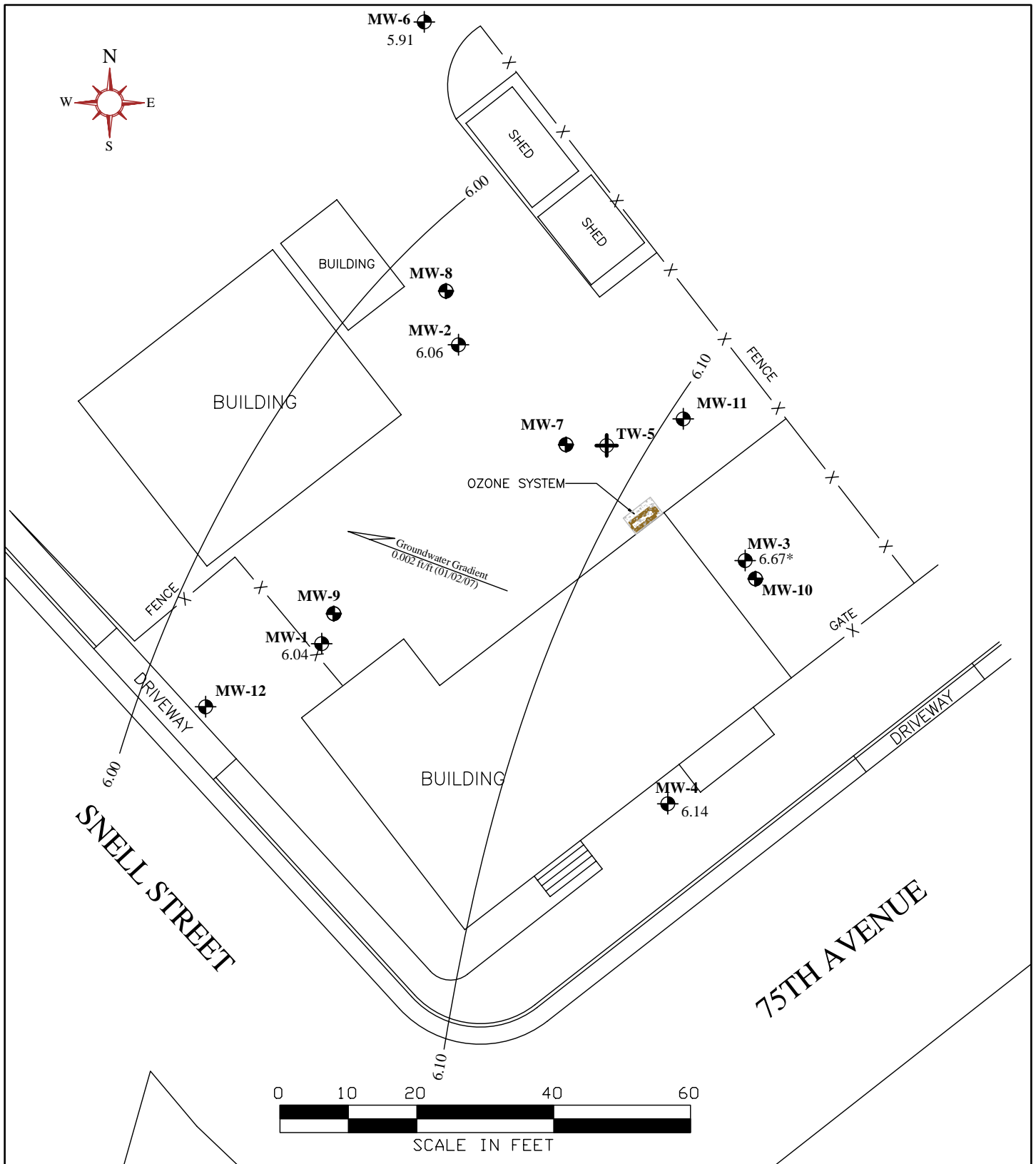
2500 CAMINO DIABLO, WALNUT CREEK

Excavation Samples and Soil boring locations

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 3**  
 PROJECT NO. 262157





**LEGEND**

- ⊕ MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- ⊕ DESTROYED WELL

6.03 Groundwater Elevation  
 7.03\* Groundwater Elevation not used in contouring

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

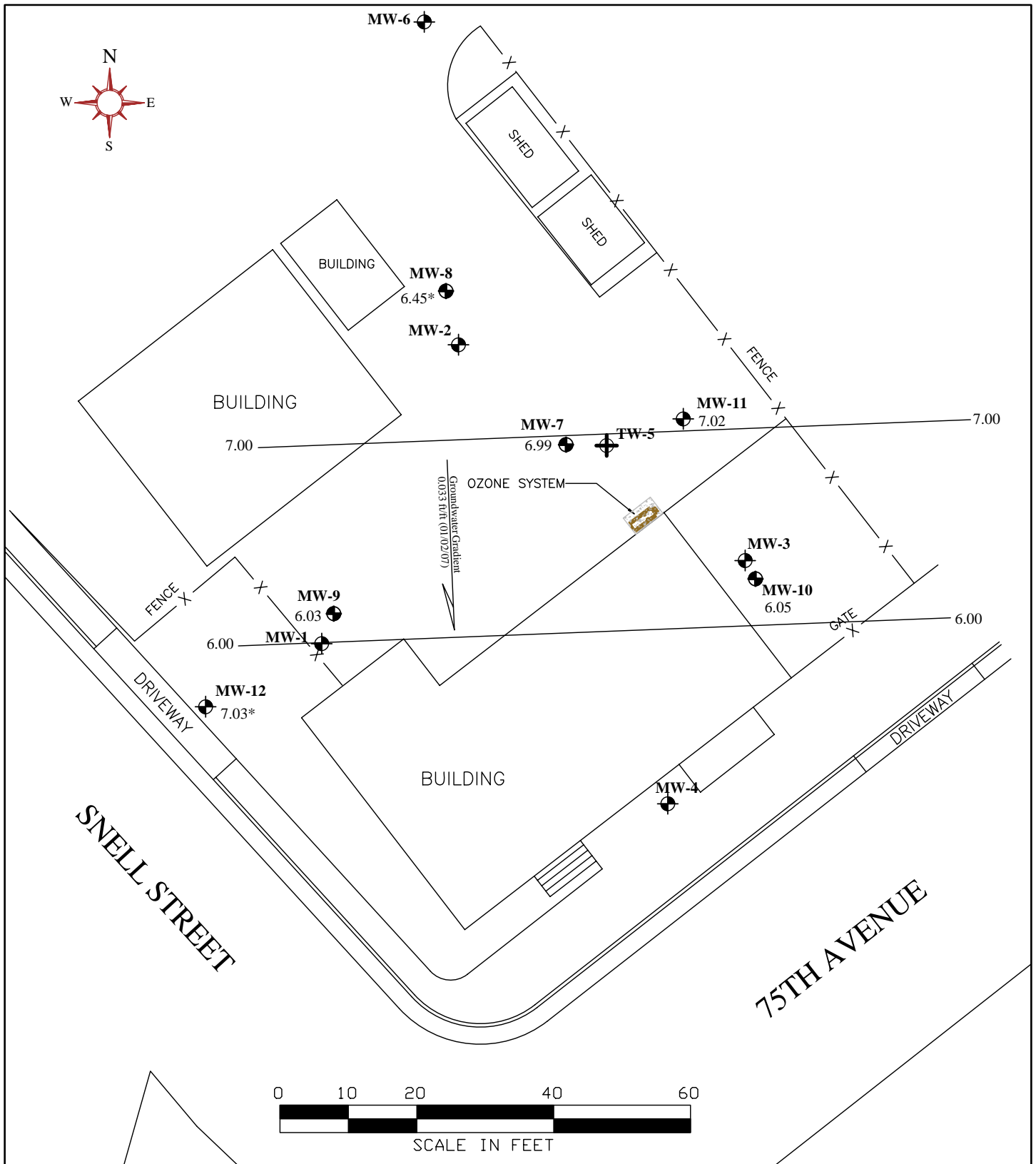
**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK

**SHALLOW ZONE GROUNDWATER ELEVATIONS (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 4**  
 PROJECT NO. 262157



**LEGEND**

- ⊕ MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- ⊕ DESTROYED WELL

6.03 Groundwater Elevation  
 7.03\* Groundwater Elevation not used in contouring

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

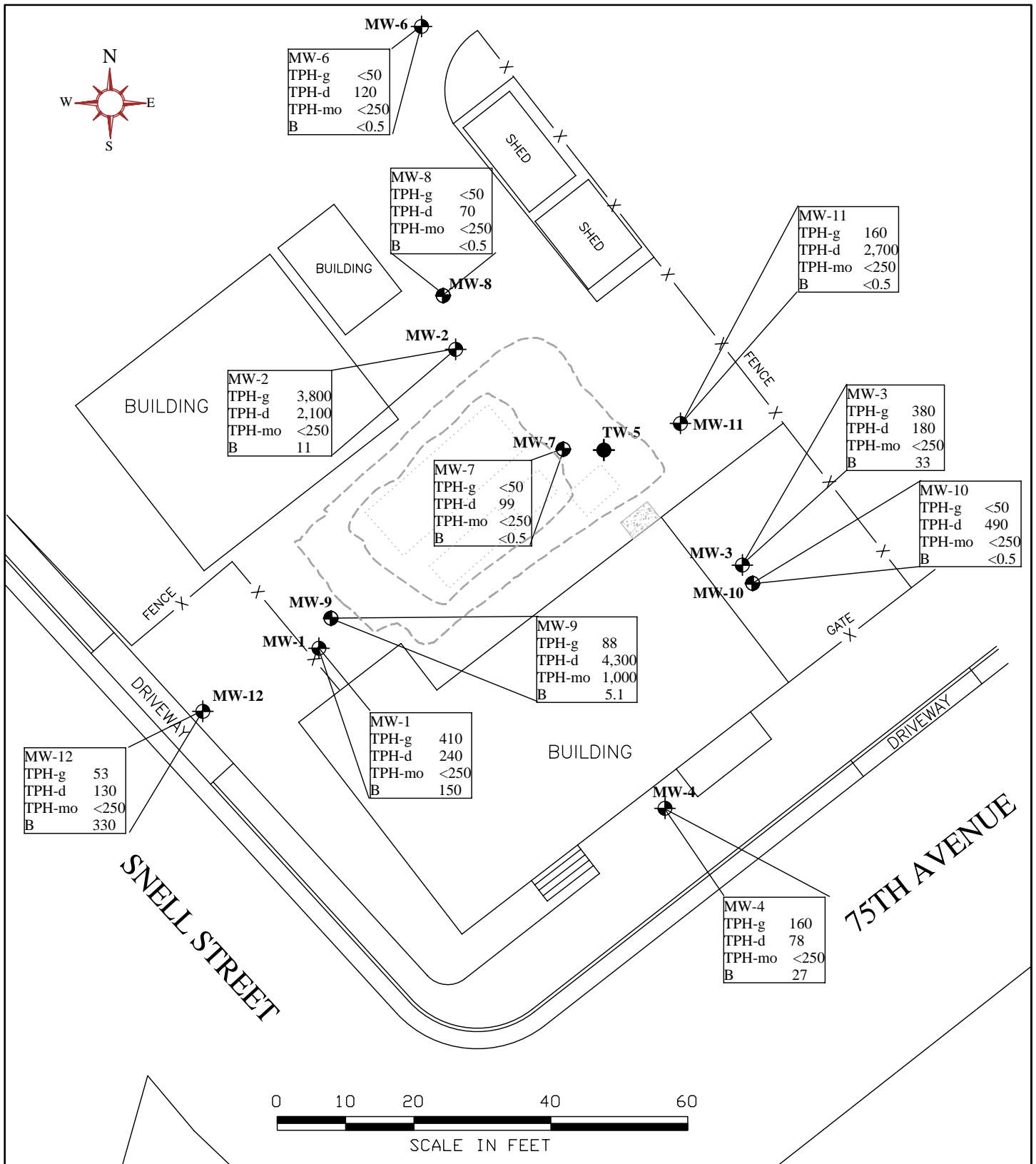
**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK

**Deeper Zone Gradient (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 5**  
 PROJECT NO. 262157



**LEGEND**

- ⊕ MONITORING WELL (SHALLOW)
- ⊙ MONITORING WELL (DEEP)
- ⊕ DESTROYED BACKFILL WELL

TPH-g Total petroleum hydrocarbons as gasoline  
 TPH-d Total petroleum hydrocarbons as diesel  
 TPH-mo Total petroleum hydrocarbons as motor oil  
 B Benzene  
 Units - micrograms per liter (ug/L)

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

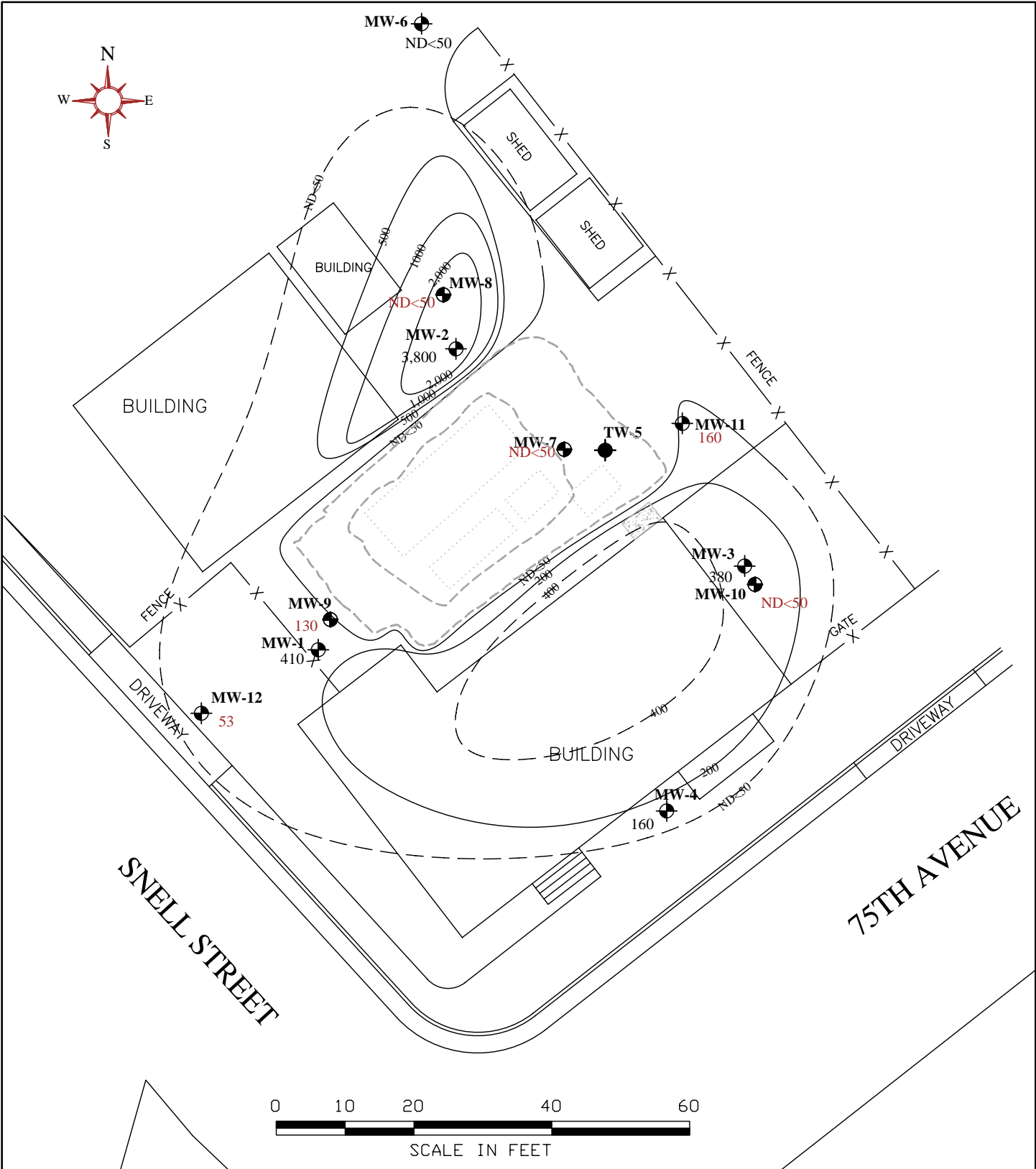
**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK





**ANALYTICAL RESULTS (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 6**  
 PROJECT NO. 262157



**LEGEND**

-  MONITORING WELL (SHALLOW) 3,800 TPH-g Concentration (Shallow Zone)
-  MONITORING WELL (DEEP) 130 TPH-g Concentration (Deeper Zone)
-  DESTROYED BACKFILL WELL
-  TPH-g Isopleth (Shallow Zone)

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

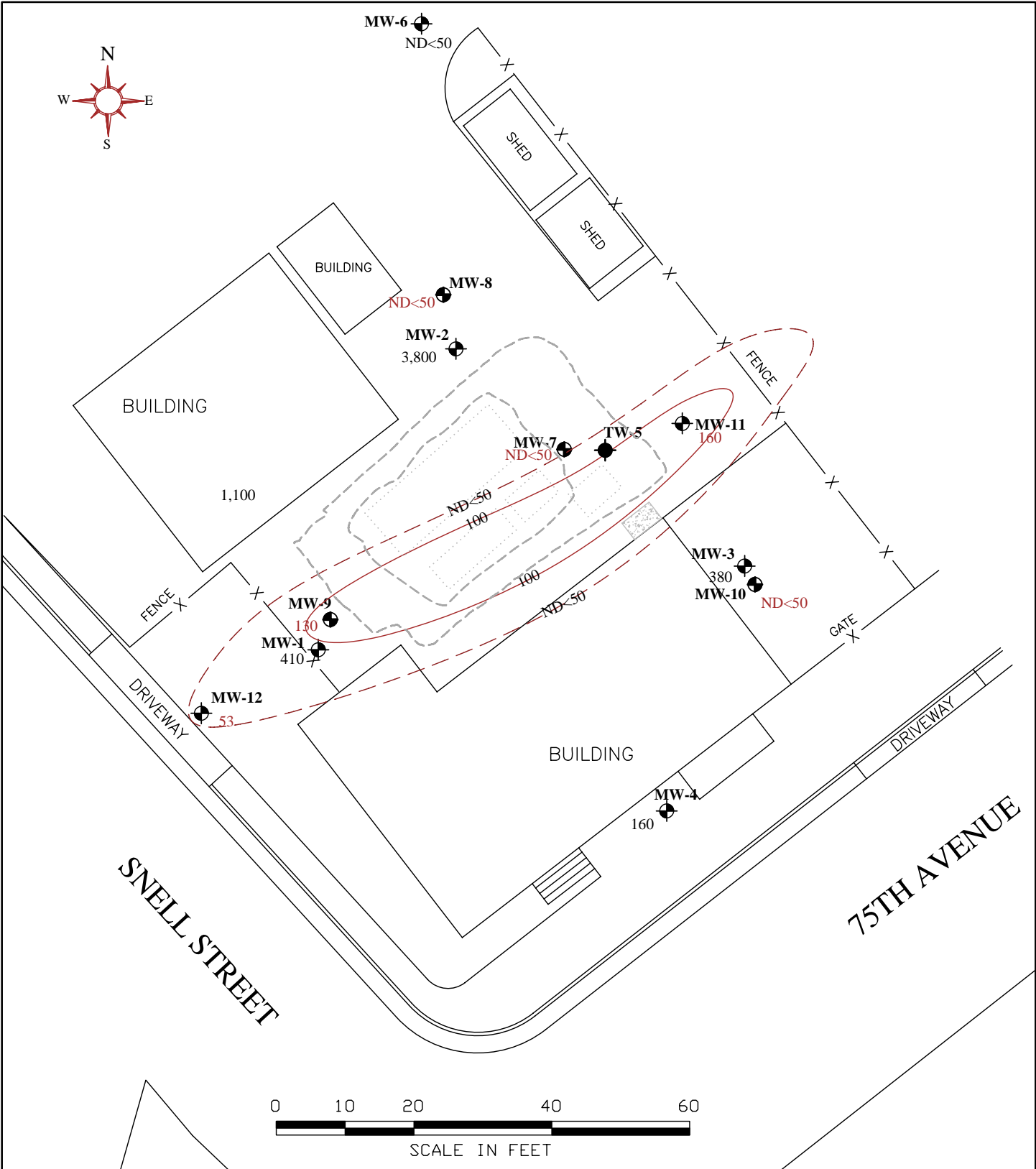
**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK

**Shallow Zone TPH-g Isopleths (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 7**  
 PROJECT NO. 262157



**LEGEND**

- MONITORING WELL (SHALLOW) 3,800 TPH-g Concentration (Shallow Zone)
- MONITORING WELL (DEEP) 130 TPH-g Concentration (Deeper Zone)
- DESTROYED BACKFILL WELL
- TPH-g Isopleth (Deeper Zone)

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

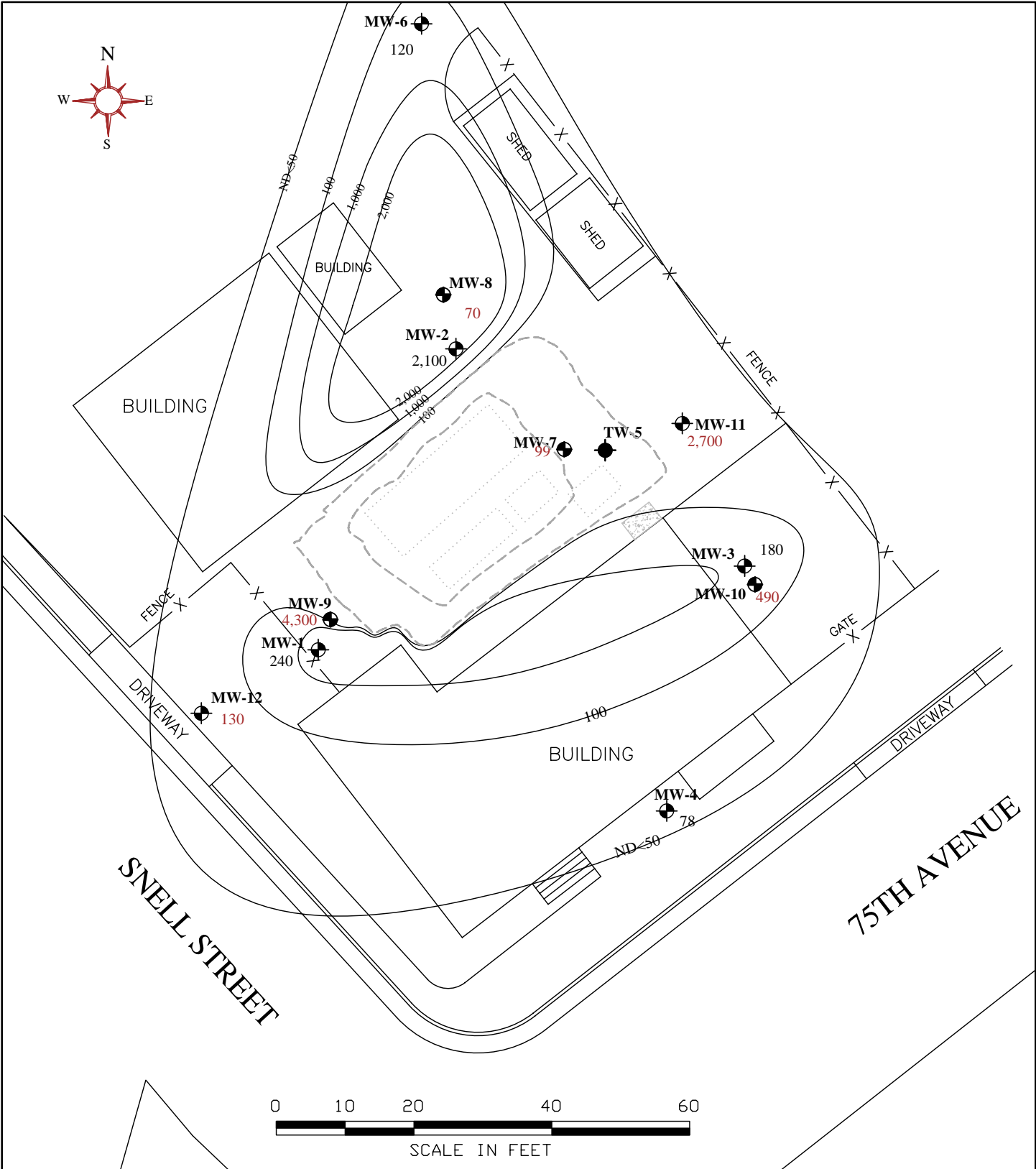
**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK

**Deeper Zone TPH-g Isopleths (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 8**  
 PROJECT NO. 262157



**LEGEND**

- ◆ MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- ⊕ DESTROYED BACKFILL WELL
- 3,800 TPH-d Concentration (Shallow Zone)
- 4,300 TPH-d Concentration (Deeper Zone)
- TPH-d Isopleth (Shallow Zone)

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

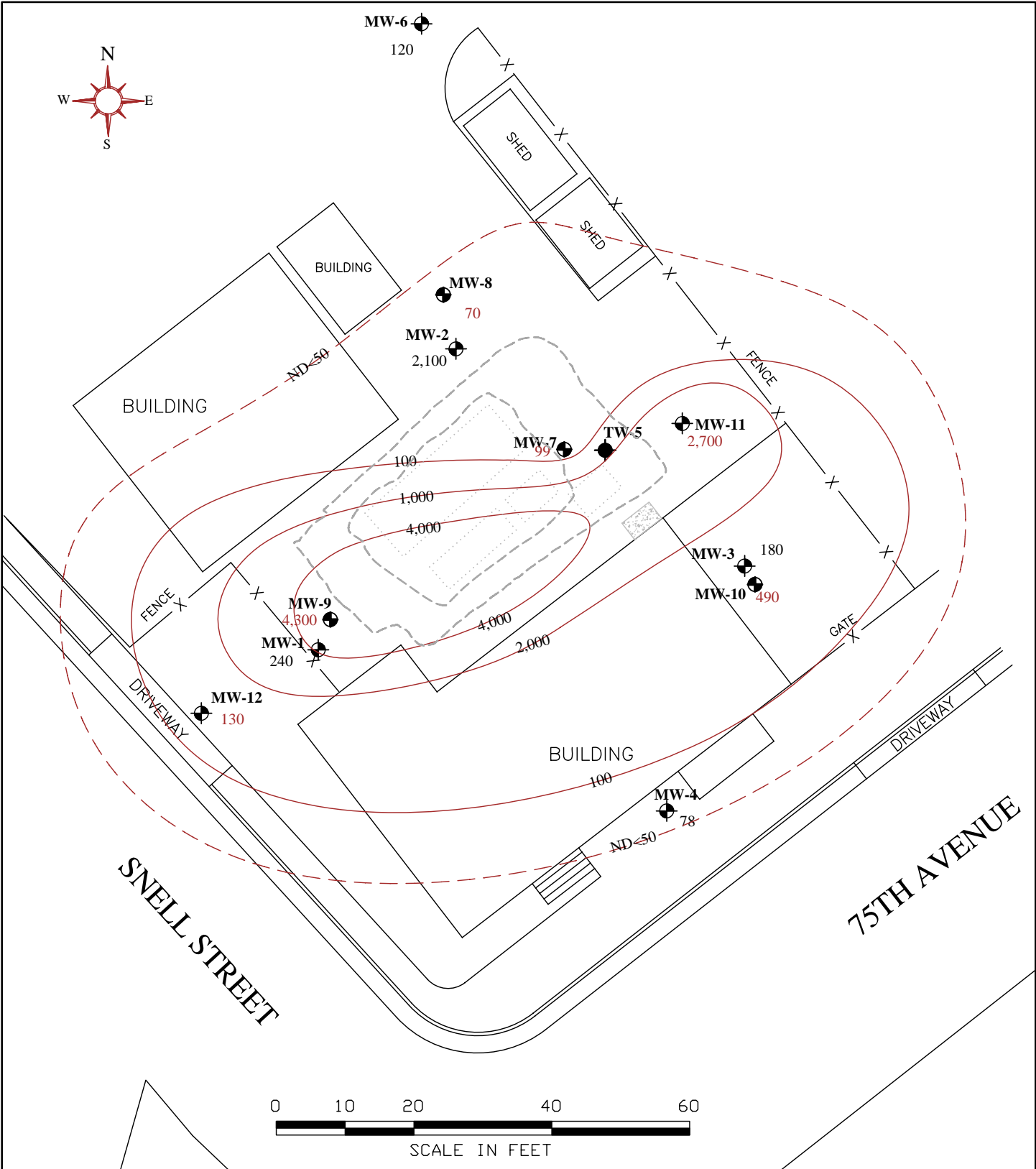
**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK

**Shallow Zone TPH-d Isopleths (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 9**  
 PROJECT NO. 262157



**LEGEND**

- MONITORING WELL (SHALLOW)
  - MONITORING WELL (DEEP)
  - DESTROYED BACKFILL WELL
- 3,800 TPH-d Concentration (Shallow Zone)  
 4,300 TPH-d Concentration (Deeper Zone)  
 TPH-d Isopleth (Deeper Zone)

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

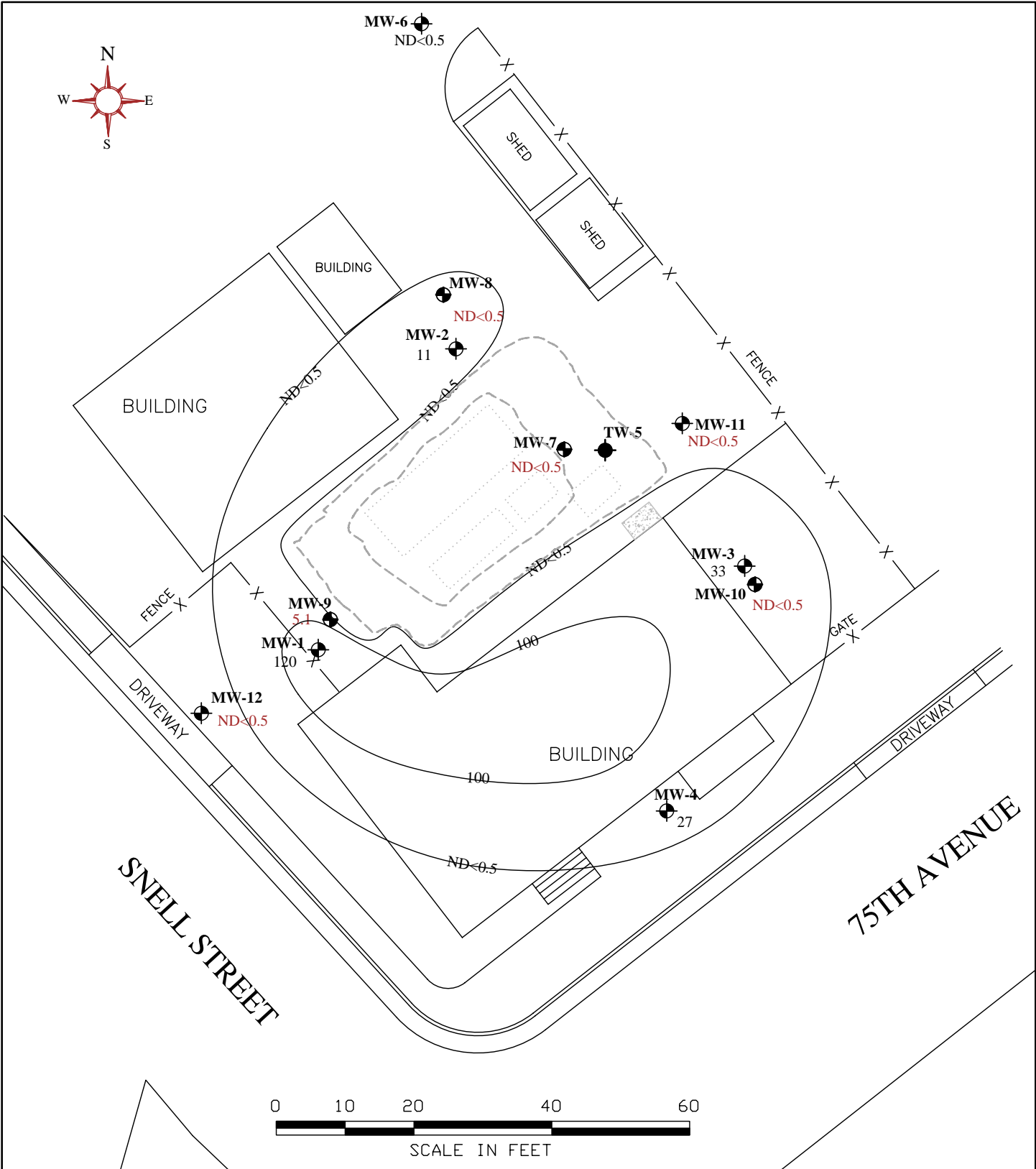
**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK

**Deeper Zone TPH-d Isopleths (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 10**  
 PROJECT NO. 262157



**LEGEND**

- ◆ MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- ⊕ DESTROYED BACKFILL WELL
- 130 Benzene Concentration (Shallow Zone)
- 5.1 Benzene Concentration (Deeper Zone)
- Benzene Isopleth (Deeper Zone)

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

**AEI CONSULTANTS**

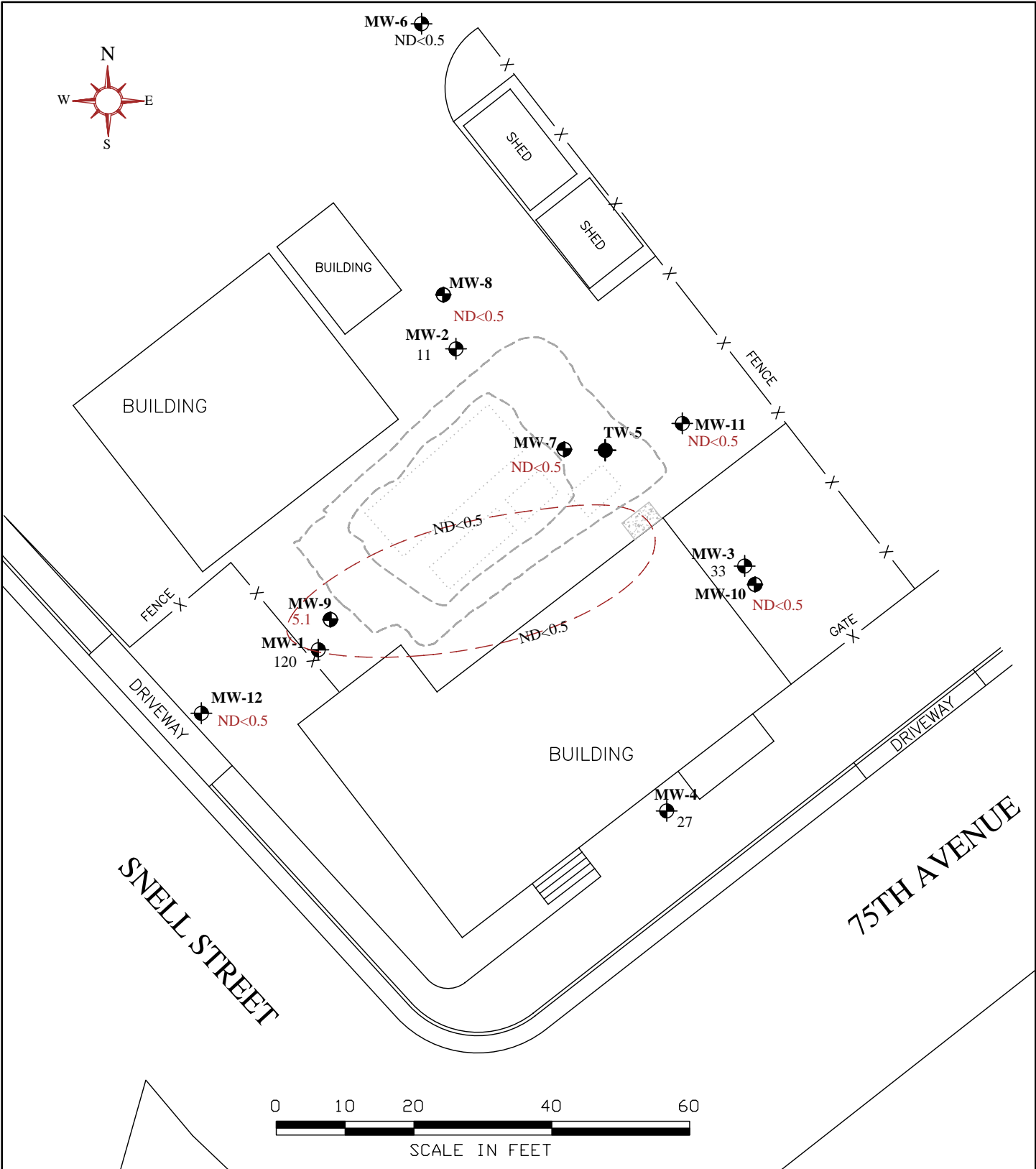
2500 CAMINO DIABLO, WALNUT CREEK

**Shallow Zone Benzene Isopleths (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 11**  
 PROJECT NO. 262157





**LEGEND**

- ◆ MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- ⊕ DESTROYED BACKFILL WELL
- 130 Benzene Concentration (Shallow Zone)
- 5.1 Benzene Concentration (Deeper Zone)
- Benzene Isopleth (Deeper Zone)

DRAFTED BY R. BRADFORD 12-01-06  
 REVISED BY RFF 3-8-07

**AEI CONSULTANTS**

2500 CAMINO DIABLO, WALNUT CREEK

**Deeper Zone Benzene Isopleths (01/02/07)**

OMEGA TERMITE  
 807 75th AVENUE  
 OAKLAND, CALIFORNIA

**FIGURE 12**  
 PROJECT NO. 262157

## **TABLES**

**Table 1 Soil Sample Analytical Data  
Omega Termite, 807 - 75th Street, Oakland, CA**

Sample ID	Date	TPHg	TPHd	TPHmo	MTBE	Benzene	Toluene	Ethyl- benzene	Xylenes	
		Method 8015			Method 8021B					
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MW-12-14	12/18/06	ND<1.0	ND<1.0	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW-12-24	12/18/06	ND<1.0	ND<1.0	---	ND<0.05	0.094	ND<0.005	ND<0.005	ND<0.005	
MW-11-26	12/18/06	29	61	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW-11-31	12/18/06	ND<1.0	ND<1.0	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
OZ-1-12	12/21/06	ND<1.0	ND<1.0	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
OZ-2-17.5	12/19/06	6.3	1.9	---	ND<0.05	0.19	ND<0.005	0.046	0.011	
OZ-2-34	12/19/06	ND<1.0	ND<1.0	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
OZ-3-21	12/19/06	ND<1.0	3.4	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
OZ-4-31	12/18/06	ND<1.0	ND<1.0	---	ND<0.05	0.015	ND<0.005	ND<0.005	ND<0.005	
OZ-5-16	12/21/06	34	22	---	ND<0.50	0.63	0.13	0.42	1.4	
OZ-5-31	12/21/06	1.3	4.0	---	ND<0.05	0.047	ND<0.005	0.011	0.041	
OZ-6-11	12/21/06	31	22	---	ND<0.25	0.18	0.14	ND<0.025	0.064	
OZ-6-21	12/21/06	17	22	---	ND<0.05	0.10	ND<0.005	ND<0.005	0.034	
OZ-6-26	12/21/06	200	240	---	ND<0.50	ND<0.050	ND<0.050	0.067	0.17	
OZ-7-29	12/20/06	12	5.9	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
OZ-8-11	12/20/06	9.4	2.0	---	ND<0.05	0.012	0.047	0.040	0.026	
OZ-8-31	12/20/06	28	19	---	ND<0.10	0.016	0.15	0.32	0.17	
MW6-10.5	02/15/06	ND<1.0	1.1	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW7-21.5	02/16/06	350	1,500	ND<50	ND<2.0	ND<0.2	ND<0.2	0.23	0.71	
MW7-31	02/16/06	4	6.4	ND<5.0	ND<0.05	ND<0.005	0.0091	0.0092	0.0083	
MW7-32	02/16/06	15	73	ND<5.0	ND<0.05	0.006	0.026	0.018	0.023	
MW8-27	02/15/06	ND<1.0	ND<1.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW9-29	02/16/06	ND<1.0	ND<1.0	ND<5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
MW10-25	02/15/06	69	290	ND<5.0	ND<0.05	ND<0.005	ND<0.005	0.046	0.12	
SB7-10	10/09/03	ND<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB8-15	10/09/03	ND<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB9-15	10/09/03	ND<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB10-15	10/09/03	ND<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB11-15	10/09/03	ND<1.0	ND<1.0	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB12-15	10/10/03	ND<1.0	ND<1.0	ND <5.0	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005	
SB13-14	10/10/03	ND<1.0	--	--	ND<0.05	0.049	ND<0.005	0.014	0.019	
SB14-4.5	10/10/03	360	130	ND <5.0	ND<2.5	1.4	1.5	8	37	
SB14-9.5	10/10/03	800	240	8.2	ND<2.0	2.9	3.5	16	71	
SB14-28.0	10/10/03	37	45	ND <5.0	ND<0.05	ND<0.005	ND<0.005	0.015	0.11	

**Table 1 Soil Sample Analytical Data  
Omega Termite, 807 - 75th Street, Oakland, CA**

Sample ID	Date	TPHg	TPHd	TPHmo	MTBE	Benzene	Toluene	Ethyl- benzene	Xylenes
		Method 8015			Method 8021B				
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SWS (8')	03/20/00	290	---	---	ND<0.5	0.84	2	6.3	1.3
SWN (8')	03/20/00	1.8	---	---	ND<0.05	ND<0.005	ND<0.005	0.007	0.008
SWE (8')	03/20/00	1800	---	---	ND<5.0	12	65	32	160
EB (7')	03/20/00	560	220	100	ND<1.0	0.59	4.9	7.3	40
EBW (11.5')	03/20/00	280	---	---	ND<0.21	2.7	6.6	5.2	23
MW-1 10'	06/25/99	<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-1 15'	06/25/99	3.4	---	---	ND<0.05	0.092	0.022	0.054	0.14
MW-2 10'	06/25/99	420	---	---	<2	ND<0.1	2.7	4.8	8.2
MW-2 15'	06/25/99	<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-3 10'	06/25/99	14	---	---	ND<0.05	0.3	0.091	0.29	0.28
MW-3 15'	06/25/99	<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
MW-4 10'	06/25/99	3.6	---	---	ND<0.05	0.71	ND<0.005	0.19	ND<0.005
MW-4 15'	06/25/99	<1.0	---	---	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
BH-1 10'	01/31/97	4.1	---	---	ND<5.0	0.078	0.009	0.11	0.17
BH-2 10'	01/31/97	23	---	---	0.13	0.46	0.05	0.089	0.061
BH-3 10'	01/31/97	280	---	---	1.8	3.2	3	3.8	12
BH-4 10'	01/31/97	4.6	---	---	ND<5.0	0.03	0.025	0.36	0.46
BH-5 10'	01/31/97	800	---	---	5	4.3	23	15	65
BH-6 10'	01/31/97	110	---	---	0.53	3	0.25	0.95	0.53
8KEW (10')	09/15/96	64	---	---	0.16	1.8	1.2	1.4	2.9
8KWW (10')	09/15/96	2600	---	---	25	2.8	15	37	120
8KNWW (10')	09/15/96	360	---	---	2.5	2.5	0.83	8.5	2.4
1KE (9')	09/15/96	41	---	---	ND<0.1	0.077	0.99	0.86	4.7
K (9')	09/15/96	4300	---	---	ND<10	13	83	71	310
TPHg	Soil Analyses								
TPHd	Total petroleum hydrocarbons as diesel								
TPHmo	Total petroleum hydrocarbons as motor oil								
MTBE	methyl tert-butyl ether								
---	Sample not analyzed by this method								

**Table 2: Historical Groundwater Sample Analytical Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Sample ID	Sample Date	Depth to Water	TPH-g	TPH-d	TPH-mo	MTBE	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			EPA Method 8015			8260B	EPA Method 8021B				
			(µg/L)	(µg/L)	(µg/L)		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<b>MW-1</b>	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
	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<5,000	---	ND<15	820	4.5	6.4	9.6
	01/10/03	4.11	95	260	ND<5,000	---	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	930	460.0	---	ND<5.0	62	0.83	2.2	2.7
	01/13/04	4.53	510	440	ND<250	---	ND<5.0	190	1.7	11	18.0
	04/15/04	5.14	740	490	ND<250	---	ND<10	240	ND<0.5	5.0	9.6
	07/15/04	5.42	250	420	260	---	ND<5.0	78	ND<0.5	5.0	4.4
	10/18/04	5.42	170	510	290	---	ND<5.0	33	0.75	1.7	3.5
	01/25/05	4.47	240	390	ND<250	---	ND<5.0	86	0.82	1.3	3.0
	04/19/05	4.66	5,100	460	ND<250	---	ND<50	2,100	5.2	13	84
	07/18/05	4.91	3,300	700	350	---	ND<45	1,500	2.8	13	24
	10/18/05	5.24	560	550	330	---	ND<5.0	190	ND<0.5	3.0	8.6
	01/11/06	4.08	240	270	ND<250	---	ND<5.0	93	ND<0.5	1.3	3.4
	03/13/06	3.76	840	260	ND<250	0.89	ND<5.0	330	1.3	5.1	17
	06/15/06	4.79	3,200	640	320	---	ND<25	1,400	3.1	10	71
	09/21/06	5.38	3,500	550	270	---	ND<25	1,700	ND<2.5	14	23
	<b>01/02/07</b>	<b>4.64</b>	<b>410</b>	<b>240</b>	<b>ND&lt;250</b>	---	<b>ND&lt;5.0</b>	<b>150</b>	<b>0.55</b>	<b>1.0</b>	<b>7</b>
<b>MW-2</b>	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	19	1.1	0.75	88
	01/10/03	5.12	2,000	910	ND<5000	---	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	1,300	ND<250	---	ND<10	14	5.9	87	78
	01/13/04	5.72	2,900	960	ND<250	---	ND<50	26	13	190	150
	04/15/04	6.02	2,700	1,100	ND<250	---	ND<15	28	11	120	100
	07/15/04	5.27	2,300	1,000	ND<250	---	ND<10	8.8	3.8	96	84
10/18/04	5.27	2,400	910	ND<250	---	ND<10	8.6	8.9	68	72	

**Table 2: Historical Groundwater Sample Analytical Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Sample ID	Sample Date	Depth to Water	TPH-g	TPH-d	TPH-mo	MTBE	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			EPA Method 8015			8260B	EPA Method 8021B				
			(µg/L)	(µg/L)	(µg/L)		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<b>MW-2 continued</b>	01/25/05	5.41	3,500	1,200	ND<250	---	ND<50	21	11	170	120
	04/19/05	5.61	3,400	1,700	ND<250	---	ND<15	15	7.4	150	94
	07/18/05	5.84	3,400	1,400	ND<250	---	ND<5.0	11	9.7	100	89
	10/18/05	6.17	3,000	2,000	270	---	ND<5.0	8.4	6.7	88	86
	01/11/06	5.11	3,400	1,700	ND<250	---	ND<90	18	9.4	170	87
	03/13/06	5.24	3,400	1,200	ND<250	0.76	ND<50	20	9.4	110	80
	06/15/06	6.23	2,200	2,400	270	---	ND<10	8.4	ND<1.0	81	72
	09/20/06	6.63	2,400	860	ND<250	---	ND<50	12	13	46	65
	<b>01/02/07</b>	<b>6.09</b>	<b>3,800</b>	<b>2,100</b>	<b>ND&lt;250</b>	<b>---</b>	<b>ND&lt;25</b>	<b>11</b>	<b>7.6</b>	<b>110</b>	<b>120</b>
<b>MW-3</b>	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	---	2.0	ND<50	410	23	160	210
	08/20/02	4.97	780	270	ND<5000	---	ND<10	110	2.8	63	41
	01/10/03	3.59	1,100	510	ND<5000	---	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	ND<250	---	ND<10	50	2.3	37	18
	01/13/04	4.15	1,500	400	ND<250	---	ND<30	200	6.2	120	88
	04/15/04	4.73	1,100	280	ND<250	---	ND<15	130	3.7	75	53
	07/15/04	5.03	610	240	ND<250	---	ND<5.0	73	2.1	51	29
	10/18/04	5.03	370	270	ND<250	---	ND<5.0	45	1.2	47	28
	01/25/05	4.13	840	300	ND<250	---	ND<5.0	85	2.4	68	45
	04/19/05	4.23	1,100	380	ND<250	---	ND<5.0	140	4.0	95	59
	07/18/05	4.66	740	290	ND<250	---	ND<5.0	98	2.0	70	35
	10/18/05	4.82	420	220	ND<250	---	ND<5.0	38	1.1	35	16
01/11/06	3.73	740	260	ND<250	---	ND<5.0	75	2.5	60	32	
03/13/06	3.76	1,300	380	ND<250	1.1	ND<17	90	2.5	87	72	
06/15/06	4.38	670	300	ND<250	---	ND<5.0	76	1.3	60	40	
09/20/09	4.84	510	300	310	---	ND<17	49	ND<1.7	50	36	
<b>01/02/07</b>	<b>4.73</b>	<b>380</b>	<b>180</b>	<b>ND&lt;250</b>	<b>---</b>	<b>ND&lt;5.0</b>	<b>33</b>	<b>1.3</b>	<b>32</b>	<b>17</b>	
<b>MW-4</b>	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

**Table 2: Historical Groundwater Sample Analytical Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Sample ID	Sample Date	Depth to Water	TPH-g	TPH-d	TPH-mo	MTBE	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			EPA Method 8015			8260B	EPA Method 8021B				
			(µg/L)	(µg/L)	(µg/L)		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<b>MW-4 continued</b>	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	ND<10	330	5.6	61	51
	08/20/02	5.02	580	120	ND<5,000	---	ND<5.0	160	1.7	34	13
	01/10/03	3.78	800	85	ND<5,000	---	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	ND<250	---	ND<5.0	120	0.95	31	8.2
	01/13/04	4.07	120	69	ND<250	---	ND<10	30	0.52	8.1	4.7
	04/15/04	4.70	660	120	ND<250	---	ND<25	200	2.2	39	24
	07/15/04	5.09	500	92	ND<250	---	ND<5.0	130	1.3	35	15
	10/18/04	5.09	350	18	ND<250	---	ND<5.0	76	0.68	22	4.9
	01/25/05	4.02	580	110	ND<250	---	ND<5.0	140	1.2	37	20
	04/19/05	4.17	790	130	ND<250	---	ND<5.0	200	1.7	51	28
	07/18/05	4.49	490	140	ND<250	---	ND<5.0	140	0.99	36	11
	10/18/05	4.83	320	84	ND<250	---	ND<5.0	72	0.59	20	4.4
	01/11/06	3.58	310	98	ND<250	---	ND<5.0	88	0.65	26	9.0
	03/13/06	3.58	490	77	ND<250	1.9	ND<5.0	92	0.88	31	15
	06/15/06	4.37	460	86	ND<250	---	ND<25	93	ND<0.5	29	9.2
	09/20/06	4.86	260	170	360	---	ND<10	63	ND<0.5	23	4.7
<b>01/02/07</b>	<b>4.17</b>	<b>160</b>	<b>78</b>	<b>ND&lt;250</b>	<b>---</b>	<b>ND&lt;5.0</b>	<b>27</b>	<b>ND&lt;0.5</b>	<b>10</b>	<b>2.0</b>	
<b>TW-5</b>	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 <sup>1</sup>	1,100,000 <sup>1</sup>	---	530	29	2.7	14	240
	02/06/02	---	280	55,000	18,000 <sup>1</sup>	---	ND<5.0	2.3	0.74	ND<0.5	0.70
	05/17/02	6.56	480	41,000	---	ND<5.0	ND<5.0	1.6	1.1	0.8	ND<0.5
	08/20/02	6.62	240	21,000	ND<5,000	---	ND<5.0	8.0	1.2	1.1	0.54
	01/10/03	4.66	ND<50	1,300	ND<5,000	---	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	10,000	4,600	---	ND<5.0	1.6	1.6	ND<0.5	1.2
	01/13/04	4.83	110	2,100	1,400	---	ND<5.0	8.4	1.2	ND<0.5	3.9
	04/15/04	5.64	170	2,200	1,100	---	ND<5.0	2.5	1.2	ND<0.5	5.1
	07/15/04	5.89	81	3,000	1,600	---	ND<5.0	5	1.3	0.85	4.1
	10/18/04	5.89	230	3,700	1,600	---	ND<5.0	0.54	3.4	ND<0.5	0.93
	01/25/05	5.13	63	750	640	---	ND<5.0	ND<0.5	0.78	ND<0.5	1.3
	04/19/05	5.27	ND<50	1,100	660	---	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	07/18/05	5.76	ND<50	770	490	---	ND<5.0	ND<0.5	0.88	ND<0.5	ND<0.5
	10/18/05	6.04	78	1,600	1,100	---	ND<5.0	ND<0.5	1.6	ND<0.5	ND<0.5
	01/11/06	4.72	ND<50	680	550	ND<0.5	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
03/13/06	4.51	ND<50	180	260	ND<0.5	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
06/15/06	Not sampled, well damaged - will be destroyed										
<b>01/02/07</b>	<b>Well Destroyed 12/20/06</b>										

**Table 2: Historical Groundwater Sample Analytical Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Sample ID	Sample Date	Depth to Water	TPH-g	TPH-d	TPH-mo	MTBE	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes
			EPA Method 8015			8260B	EPA Method 8021B				
			(µg/L)	(µg/L)	(µg/L)		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<b>MW-6</b>	03/13/06	5.69	87	160	310	ND<0.5	ND<5.0	ND<0.5	0.83	1.3	0.80
	06/15/09	6.50	ND<50	110	ND<250	---	ND<5.0	ND<0.5	ND<0.5	1.0	0.58
	09/20/06	6.84	ND<50	59	ND<250	---	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	<b>01/02/07</b>	<b>6.44</b>	<b>ND&lt;50</b>	<b>120</b>	<b>ND&lt;250</b>	<b>---</b>	<b>ND&lt;5.0</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>
<b>MW-7</b>	03/13/06	3.36	460	3,500	360	ND<0.5	ND<5.0	2.5	1.0	ND<0.5	3.3
	06/15/09	3.95	ND<50	520	ND<250	--	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	09/20/06	4.77	ND<50	150	ND<250	--	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	<b>01/02/07</b>	<b>4.17</b>	<b>ND&lt;50</b>	<b>99</b>	<b>ND&lt;250</b>	<b>--</b>	<b>ND&lt;5.0</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>
<b>MW-8</b>	03/13/06	4.64	280	130	ND<250	ND<0.5	ND<5.0	ND<0.5	2.0	ND<0.5	1.3
	06/15/09	5.21	ND<50	140	ND<250	--	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	09/20/06	6.03	ND<50	65	ND<250	--	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	<b>01/02/07</b>	<b>5.97</b>	<b>ND&lt;50</b>	<b>70</b>	<b>ND&lt;250</b>	<b>--</b>	<b>ND&lt;5.0</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>
<b>MW-9</b>	03/13/06	4.32	1,100	14,000 <sup>1</sup>	4,100	2.4	ND<5.0	85	1.8	0.64	100
	06/15/09	5.35	460	2,100	710	--	ND<5.0	170	0.73	1.3	8.3
	09/21/06	5.81	130	1,400	460	--	ND<5.0	20	1.2	ND<0.5	2.6
	<b>01/02/06</b>	<b>5.19</b>	<b>88</b>	<b>4,300</b>	<b>1,000</b>	<b>--</b>	<b>ND&lt;5.0</b>	<b>5.1</b>	<b>1.2</b>	<b>ND&lt;0.5</b>	<b>2.6</b>
<b>MW-10</b>	03/13/06	3.28	ND<50	220	ND<250	2.7	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	06/15/09	4.38	ND<50	300	ND<250	--	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	09/21/06	4.79	ND<50	280	460	--	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	<b>01/02/07</b>	<b>4.26</b>	<b>ND&lt;50</b>	<b>490</b>	<b>ND&lt;250</b>	<b>--</b>	<b>ND&lt;5.0</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>
<b>MW-11</b>	<b>01/02/07</b>	<b>3.94</b>	<b>160</b>	<b>2,700</b>	<b>ND&lt;250</b>	<b>--</b>	<b>ND&lt;5.0</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>1.7</b>
<b>MW-12</b>	<b>01/02/07</b>	<b>3.43</b>	<b>53</b>	<b>130</b>	<b>ND&lt;250</b>	<b>--</b>	<b>1.4</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>0.95</b>
SB7-W-15	10/09/03	---	ND <50	--	--	--	ND <5.0	ND <0.5	ND <0.5	ND <0.5	ND <0.5
SB8-W-20	10/09/03	---	1,700.0	--	--	--	8.3	940	2.7	0.58	2.2
SB9-W-20	10/09/03	---	ND <50	--	--	--	ND <5.0	ND <0.5	ND <0.5	ND <0.5	ND <0.5
SB10-W-15	10/09/03	---	ND <50	--	--	--	ND <5.0	ND <0.5	ND <0.5	ND <0.5	ND <0.5
SB11-W-15	10/09/03	---	ND <50	--	--	--	ND <5.0	ND <0.5	ND <0.5	ND <0.5	ND <0.5
SB12-W-15	10/09/03	---	ND <50	150	320	320	ND <5.0	ND <0.5	ND <0.5	ND <0.5	ND <0.5
SB13-W-20	10/10/03	---	891	--	--	--	ND <5.0	27	0.53	2.4	6.2
SB14-W-30	10/10/03	---	2,300 <sup>1</sup>	72,000 <sup>1</sup>	ND <57	ND <57	45	120	7.8	35	100
GW	09/15/96	---	4,800.0	--	--	--	<130	4,100	3,500	21,000	6,400
BH-1	01/31/97	---	13,000	--	--	--	<60	770	67	530	1,800
BH-4	01/31/97	---	25,000	--	--	--	<50	1,300	110	1,200	2,400
BH-6	01/31/97	---	27,000	--	--	--	230	5,000	410	1,100	2,400

TPH-g = total petroleum hydrocarbons as gasoline  
 TPH-d = total petroleum hydrocarbons as diesel  
 TPH-mo = total petroleum hydrocarbons as motor oil  
 MTBE = methyl tert-butyl ether

1 = light non-aqueous phase liquid  
 µg/L = micrograms per liter (parts per billion)  
 ----- not sampled  
 ND = not detected



**Table 3: Monitoring Well Construction Details**  
**Omega Termite, 807 75th Ave., Oakland, CA**

Well ID	Date Installed	Box Elevation (feet)	Top of Casing (feet)	Water Depth (1/02/07)	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	11.28	10.68	4.64	PVC	20	20	8 1/4	2	20.0-5.0	0.020	20.0-3.5	#3 sand	3.5-2.5	2.5-0.5
MW-2	06/25/99	12.55	12.15	6.09	PVC	20	20	8 1/4	2	20.0-5.0	0.020	20.0-3.5	#3 sand	3.5-2.5	2.5-0.5
MW-3	06/25/99	10.67	10.40	4.73	PVC	20	20	8 1/4	2	20.0-5.0	0.020	20.0-3.5	#3 sand	3.5-2.5	2.5-0.5
MW-4	06/25/99	10.56	10.31	4.17	PVC	20	20	8 1/4	2	20.0-5.0	0.020	20.0-3.5	#3 sand	3.5-2.5	2.5-0.5
TW-5	March 2000	11.69	11.58	Destroyed 12/20/06		10	10	NA	4	10.0-5.0	1/4" drilled	NA	NA	NA	2.0-0.5
MW-6	02/15/06	12.74	12.35	6.44	PVC	14	14	8 1/4	2	14.0-5.0	0.010	14.0-4.5	# 2/12	4.5-3.5	3.5-0.5
MW-7	02/16/06	11.64	11.16	4.17	PVC	33	33	8 1/4	2	33.0-26.0	0.010	33.0-25.0	# 2/12	25.0-23.0	23.0-0.5
MW-8	02/15/06	12.57	12.42	58.97	PVC	31	31	8 1/4	2	31.0-26.0	0.010	31.0-25.0	# 2/12	25.0-23.0	23.0-0.5
MW-9	02/16/06	11.41	11.22	5.19	PVC	30	30	8 1/4	2	30.0-25.0	0.010	30.0-24.0	# 2/12	24.0-22.0	22.0-0.5
MW-10	02/15/06	10.60	10.31	4.26	PVC	30	30	8 1/4	2	30.0-25.0	0.010	30.0-24.0	# 2/12	24.0-22.0	22.0-0.5
MW-11	12/18/06	11.14	10.96	3.94	PVC	35	35	8 1/4	2	35.0-25.0	0.010	35.0-23.0	# 2/12	23.0-21.0	21.0-0.5
MW-12	12/18/06	11.19	10.46	3.43	PVC	35	35	8 1/4	2	35.0-25.0	0.010	35.0-23.0	# 2/12	23.0-21.0	21.0-0.5

**Table:3a Ozone Injection Well Construction Details  
Omega Termite, 807 75th Ave., Oakland, CA**

Well ID	Date Installed	Injection Point	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)
OZ-1	12/21/06	Single point Shallow	PVC	19.5	19.5	8 1/4	1	19.5-18.0	micropore	19.5-9.0	#2/16	16.0-2.0	2.0-1.0
OZ-2	12/19/06	Shallow Point Deep Point	PVC	35	19.5 34	10 1/2	1 1	19.5-18.0 34.0-32.5	micropore micropore	19.5-16.0 35.0-30.0	#2/16 #2/16	16.0-2.0 30.0-19.5	2.0-1.0
OZ-3	12/19/06	Shallow Point Deep Point	PVC	35	15 34	10 1/2	1 1	15.0-13.5 34.0-32.5	micropore micropore	16.0-12.0 35.0-30.0	#2/16 #2/16	12.0-2.0 30.0-16.0	3.0-1.0
OZ-4	12/19/06	Shallow Point Deep Point	PVC	35	15 34	10 1/2	1 1	15.0-13.5 34.0-32.5	micropore micropore	16.0-12.0 35.0-30.0	#2/16 #2/16	12.0-2.0 30.0-16.0	2.0-1.0
OZ-5	12/21/06	Shallow Point Deep Point	PVC	35	15 34	10 1/2	1 1	15.0-13.5 34.0-32.5	micropore micropore	16.0-12.0 35.0-30.0	#2/16 #2/16	12.0-2.0 30.0-16.0	2.0-1.0
OZ-6	12/21/06	Shallow Point Deep Point	PVC	35	15 34	10 1/2	1 1	15.0-13.5 34.0-32.5	micropore micropore	16.0-12.0 35.0-30.0	#2/16 #2/16	12.0-2.0 30.0-16.0	2.0-1.0
OZ-7	12/20/06	Shallow Point Deep Point	PVC	35	15 34	10 1/2	1 1	15.0-13.5 34.0-32.5	micropore micropore	16.0-12.0 35.0-30.0	#2/16 #2/16	12.0-2.0 30.0-16.0	2.0-1.0
OZ-8	12/20/06	Shallow Point Deep Point	PVC	35	15 34	10 1/2	1 1	15.0-13.5 34.0-32.5	micropore micropore	16.0-12.0 35.0-30.0	#2/16 #2/16	12.0-2.0 30.0-16.0	2.0-1.0
OZ-9	01/19/07	Shallow Point Deep Point	PVC	35	20 34	8 1/4	1 1	21.0-19.5 34.0-32.5	micropore micropore	22.0-18.0 35.0-30.0	#2/16 #2/16	18.0-2.0 30.0-22.0	2.0-1.0

**Table 4: Historical Groundwater Elevation Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Well ID	Date	Well Elevation * (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)
MW-1	07/30/99	10.68	5.82	4.86	----
	11/09/99	10.68	5.70	4.98	0.12
	02/23/00	10.68	2.84	7.84	2.86
	05/26/00	10.68	5.50	5.18	-2.66
	10/10/00	10.68	5.70	4.98	-0.20
	02/07/01	10.68	5.25	5.43	0.45
	05/25/01	10.68	5.25	5.43	0.00
	09/19/01	10.68	5.51	5.17	-0.26
	02/06/02	10.68	NM	NM	NM
	05/17/02	10.68	5.30	5.38	----
	08/20/02	10.68	5.39	5.29	-0.09
	01/10/03	10.68	4.11	6.57	1.28
	04/14/03	10.68	4.85	5.83	-0.74
	07/14/03	10.68	5.08	5.60	-0.23
	10/14/03	10.68	5.63	5.05	-0.55
	01/13/04	10.68	4.53	6.15	1.10
	04/15/04	10.68	5.14	5.54	-0.61
	07/15/04	10.68	5.42	5.26	-0.28
	10/18/04	10.68	5.24	5.44	0.18
	01/25/05	10.68	4.47	6.21	0.77
	04/19/05	10.68	4.66	6.02	-0.19
	07/18/05	10.68	4.91	5.77	-0.25
	10/18/05	10.68	5.24	5.44	-0.33
	11/03/05	10.68	5.31	5.37	-0.07
	01/11/06	10.68	4.08	6.60	1.23
	03/13/06	10.68	3.76	6.92	0.32
	06/15/06	10.68	4.79	5.89	-1.03
08/02/06	10.68	5.14	5.54	-0.35	
09/20/06	10.68	5.38	5.30	-0.24	
<b>01/02/07</b>	<b>10.68</b>	<b>4.64</b>	<b>6.04</b>	<b>0.74</b>	
MW-2	07/30/99	12.15	6.64	5.51	----
	11/09/99	12.15	6.42	5.73	0.22
	02/23/00	12.15	3.31	8.84	3.11
	05/26/00	12.15	6.34	5.81	-3.03
	10/10/00	12.15	6.52	5.63	-0.18
	02/07/01	12.15	5.90	6.25	0.62
	05/25/01	12.15	6.08	6.07	-0.18
	09/19/01	12.15	6.53	5.62	-0.45
	02/06/02	12.15	5.72	6.43	0.81
	05/17/02	12.15	6.17	5.98	-0.45
	08/20/02	12.15	NM	NM	NM
	01/10/03	12.15	5.12	7.03	----
	04/14/03	12.15	4.98	7.17	0.14
	07/14/03	12.15	5.99	6.16	-1.01
	10/14/03	12.15	6.43	5.72	-0.44
	01/13/04	12.15	5.42	6.73	1.01

**Table 4: Historical Groundwater Elevation Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Well ID	Date	Well Elevation * (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)
MW-2 continued	04/15/04	12.15	6.02	6.13	-0.60
	07/15/04	12.15	5.27	6.88	0.75
	10/18/04	12.15	6.12	6.03	-0.85
	04/19/05	12.15	5.61	6.54	0.51
	07/18/05	12.15	5.84	6.31	-0.23
	10/19/05	12.15	6.17	5.98	-0.33
	11/03/05	12.15	6.21	5.94	-0.04
	01/11/06	12.15	5.11	7.04	1.10
	03/13/06	12.15	5.24	6.91	-0.13
	06/15/06	12.15	6.23	5.92	-0.99
	09/20/06	12.15	6.63	5.52	-0.40
	<b>01/02/06</b>	<b>12.15</b>	<b>6.09</b>	<b>6.06</b>	<b>0.54</b>
	MW-3	07/30/99	10.40	5.35	5.05
11/09/99		10.40	5.11	5.29	0.24
02/23/00		10.40	2.37	8.03	2.74
05/26/00		10.40	4.98	5.42	-2.61
10/10/00		10.40	5.24	5.16	-0.26
02/07/01		10.40	4.73	5.67	0.51
05/25/01		10.40	4.73	5.67	0.00
09/19/01		10.40	5.07	5.33	-0.34
02/06/02		10.40	4.69	5.71	0.38
05/17/02		10.40	4.80	5.60	-0.11
08/20/02		10.40	4.97	5.43	-0.17
01/10/03		10.40	3.59	6.81	1.38
04/14/03		10.40	5.40	5.00	-1.81
07/14/03		10.40	4.69	5.71	0.71
10/14/03		10.40	5.16	5.24	-0.47
01/13/04		10.40	4.15	6.25	1.01
04/15/04		10.40	4.73	5.67	-0.58
07/15/04		10.40	5.03	5.37	-0.30
10/18/04		10.40	4.85	5.55	0.18
01/25/05		10.40	4.13	6.27	0.72
04/19/05		10.40	4.23	6.17	-0.10
07/18/05		10.40	4.56	5.84	-0.33
10/18/05		10.40	4.82	5.58	-0.26
11/03/05		10.40	4.87	5.53	-0.05
01/11/06		10.40	3.62	6.78	1.25
03/13/06		10.40	3.47	6.93	0.15
06/15/06		10.40	4.38	6.02	-0.91
08/02/06	10.40	4.69	5.71	-0.31	
09/20/06	10.40	4.84	5.56	-0.15	
<b>01/02/07</b>	<b>10.40</b>	<b>3.73</b>	<b>6.67</b>	<b>1.11</b>	
MW-4	07/30/99	10.31	5.45	4.86	----
	11/09/99	10.31	5.31	5.00	0.14
	02/23/00	10.31	2.72	7.59	2.59

**Table 4: Historical Groundwater Elevation Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Well ID	Date	Well Elevation * (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)	
<b>MW-4 continued</b>	05/26/00	10.31	5.07	5.24	-2.35	
	10/10/00	10.31	5.32	4.99	-0.25	
	02/07/01	10.31	4.73	5.58	0.59	
	05/25/01	10.31	4.90	5.41	-0.17	
	09/19/01	10.31	5.16	5.15	-0.26	
	02/06/02	10.31	4.65	5.66	0.51	
	05/17/02	10.31	4.90	5.41	-0.25	
	08/20/02	10.31	5.02	5.29	-0.12	
	01/10/03	10.31	3.78	6.53	1.24	
	04/14/03	10.31	4.11	6.20	-0.33	
	07/14/03	10.31	4.75	5.56	-0.64	
	10/14/03	10.31	5.28	5.03	-0.53	
	01/13/04	10.31	4.07	6.24	1.21	
	04/15/04	10.31	4.70	5.61	-0.63	
	07/15/04	10.31	5.09	5.22	-0.39	
	10/18/04	10.31	4.86	5.45	0.23	
	01/25/05	10.31	4.02	6.29	0.84	
	04/19/05	10.31	4.17	6.14	-0.15	
	07/18/05	10.31	4.49	5.82	-0.32	
	10/18/05	10.31	4.83	5.48	-0.34	
	11/03/05	10.31	4.88	5.43	-0.05	
	01/11/06	10.31	3.58	6.73	1.30	
	03/13/06	10.31	3.28	7.03	0.30	
	06/15/06	10.31	4.37	5.94	-1.09	
	09/20/06	10.31	4.86	5.45	-0.49	
	<b>01/02/07</b>		<b>10.31</b>	<b>4.17</b>	<b>6.14</b>	<b>0.69</b>
	<b>TW-5</b>	09/19/01	----	6.59	----	----
		05/17/02	----	6.56	----	0.03
08/20/02		----	6.62	----	-0.06	
01/10/03		----	4.66	----	1.96	
04/14/03		----	5.30	----	-0.64	
07/14/03		----	5.84	----	-0.54	
07/14/03		----	5.84	----	0.00	
10/14/03		----	6.08	----	-0.24	
01/13/04		----	4.83	----	1.25	
04/15/04		----	5.64	----	-0.81	
07/15/04		----	5.89	----	-0.25	
10/18/04		----	5.95	----	-0.06	
01/25/05		----	5.13	----	0.82	
04/19/05		----	5.27	----	-0.14	
07/18/05		----	5.76	----	-0.49	
10/18/05		----	6.04	----	-0.28	
11/03/05		----	6.09	----	-0.05	
01/11/06		----	4.72	----	1.37	
03/13/06		----	4.51	----	0.21	
04/26/06		----	5.02	----	-0.51	
<b>01/02/07</b>		<b>Well Destroyed 12/20/06</b>				

**Table 4: Historical Groundwater Elevation Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Well ID	Date	Well Elevation * (ft amsl)	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Elevation Change (ft)
MW-6	03/13/06	12.35	5.69	6.66	----
	06/15/06	12.35	6.50	5.85	-0.81
	09/20/06	12.35	6.84	5.51	-0.34
	<b>01/02/07</b>	<b>12.35</b>	<b>6.44</b>	<b>5.91</b>	<b>0.40</b>
MW-7	03/13/06	11.16	3.36	7.80	----
	06/15/06	11.16	3.95	7.21	-0.59
	09/20/06	11.16	4.77	6.39	-0.82
	<b>01/02/07</b>	<b>11.16</b>	<b>4.17</b>	<b>6.99</b>	0.60
MW-8	03/13/06	12.42	4.64	7.78	----
	06/15/06	12.42	5.21	7.21	-0.57
	09/20/06	12.42	6.03	6.39	-0.82
	<b>01/02/07</b>	<b>12.42</b>	<b>5.97</b>	<b>6.45</b>	<b>0.06</b>
MW-9	03/13/06	11.22	4.32	6.90	----
	06/15/06	11.22	5.35	5.87	-1.03
	08/02/06	11.22	5.70	5.52	-0.35
	09/20/06	11.22	5.81	5.41	-0.11
	<b>01/02/07</b>	<b>11.22</b>	<b>5.19</b>	<b>6.03</b>	<b>0.62</b>
MW-10	03/13/06	10.31	3.28	7.03	----
	06/15/06	10.31	4.34	5.97	-1.06
	08/02/06	10.31	4.66	5.65	-0.32
	09/20/06	10.31	4.79	5.52	-0.13
	<b>01/02/07</b>	<b>10.31</b>	<b>4.26</b>	<b>6.05</b>	<b>0.53</b>
MW-11	<b>01/02/07</b>	<b>10.96</b>	<b>3.94</b>	<b>7.02</b>	----
MW-12	<b>01/02/07</b>	<b>10.46</b>	<b>3.43</b>	<b>7.03</b>	----

\* Original wells surveyed 12/9/02 by Morrow Surveying, resurveyed on 3/02/06, 1/16/07 by Morrow Surveying

Depth to water measured from the top of well casing

NM - not monitored

ft amsl = feet above mean sea level

**Table 4a: Historical Groundwater Elevation and Flow Direction Summary  
Omega Termite, 807 75th Ave., Oakland, CA**

Episode #	Date	Average Elevation (ft)	Elevation Change (ft)	Flow Direction / Gradient
1	07/30/99	5.07	-	
2	11/09/99	5.25	0.18	0.0056 / SW
3	02/23/00	8.08	2.83	0.008 / S
4	05/26/00	5.41	-2.66	0.003 / SW
5	10/10/00	5.19	-0.22	0.0036 / S
6	02/07/01	5.73	0.54	0.008 / S
7	05/25/01	5.65	-0.09	0.006 / S
8	09/19/01	5.32	-0.33	0.004 / S
9	02/06/02	5.93	0.62	0.005 / SE
10	05/17/02	5.59	-0.34	0.003 / SW
11	08/20/02	5.34	-0.26	0.002 / S
12	01/10/03	6.74	1.40	0.006 / E-NE
13	04/14/03	6.05	-0.69	0.016 / E-NE
14	07/14/03	5.76	-0.29	.0017 / S-SE
15	10/14/03	5.26	-0.50	0.003 / SE
16	01/13/04	6.34	1.08	0.001 / W
17	04/15/04	5.74	-0.60	0.001 / W
18	07/15/04	5.68	-0.05	0.001 / W
19	10/18/04	5.62	-0.07	0.002 / N
20	01/25/05	6.33	0.71	0.002 / N
21	04/19/05	6.16	-0.17	0.001 / N
22	07/18/05	5.85	-0.31	0.0004 / S
23	10/18/05	5.61	-0.24	0.0017 / SW
24	01/11/06	6.79	1.18	0.0047 / N
25	3/13/06	6.57	-0.21	Shallow Zone .0004 / NW
	3/13/06	7.38	----	Deeper zone 0.036 / S
26	6/15/06	5.92	-0.65	Shallow Zone .0004 / NW
	6/15/06	6.40	-0.98	Deeper zone 0.06 / S
27	9/20/06	5.52	-0.41	Shallow Zone .0004 / NW
	9/20/06	5.93	-0.47	Deeper zone 0.06 / S
<b>28</b>	<b>1/2/07</b>	<b>6.02</b>	<b>0.50</b>	<b>Shallow Zone .0004 / NW</b>
	<b>1/2/07</b>	<b>6.38</b>	<b>0.45</b>	<b>Deeper Zone 0.06 / S</b>

Average water table elevation calculated using Microsoft Excel

Shallow Zone Wells: MW-1, MW-2, MW-3, MW-4, MW-6

Deeper Zone Wells: MW-7, MW-8, MW-9, MW-10

**Table 5: Fuel Oxygenate Analytical Data  
Omega Termite, 807 75th Ave., Oakland, CA**

Well Number	Date	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	MTBE (µg/L)
MW-1	01/02/07	<0.5	9.7	<0.5	4.6	<0.5	<0.5	0.97
MW-2	01/02/07	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MW-3	01/02/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.55
MW-4	01/02/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.0
MW-9	01/02/07	<0.5	<0.5	<0.5	0.62	<0.5	<0.5	1.6
MW-10	01/02/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1
MW-11	01/02/07	<0.5	<0.5	<0.5	2.9	<0.5	<0.5	<0.5
MW-12	01/02/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

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

TAME tert-Amyl methyl ether

TBA t-Butyl alcohol

EDB 1,2-Dibromoethane

1,2-DCA 1,2-Dichloroethane

DIPE Diisopropyl ether

ETBE Ethyl ter-butyl ether

MTBE Methyl-t-butyl ether



## **APPENDIX A**

### **Drilling Permit**

# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 12/05/2006 By jamesy**

**Permit Numbers: W2006-1016 to W2006-1018**  
**Permits Valid from 12/18/2006 to 12/21/2006**

**Application Id:** 1165258224938  
**Site Location:** 807 75th Ave.

**City of Project Site:**Oakland

**Project Start Date:** Oakland, CA  
12/18/2006

**Completion Date:**12/21/2006

**Applicant:** AEI Consultants - Robert Flory  
2500 Camino Diablo, Walnut Creek, CA 94597

**Phone:** 925-944-2899

**Property Owner:** Allen Kanaday  
807 75th Ave., Oakland, CA 95621

**Phone:** 510-562-1333

**Client:** \*\* same as Property Owner \*\*

	<b>Total Due:</b>	\$800.00
<b>Receipt Number: WR2006-0536</b>	<b>Total Amount Paid:</b>	\$800.00
<b>Payer Name : Robert F. Flory</b>	<b>Paid By: VISA</b>	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Remediation Well Construction-Injection - 9 Wells  
Driller: HEW Drilling - Lic #: 384167 - Method: hstem

**Work Total: \$200.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2006-1016	12/05/2006	03/18/2007	OZ-1	10.50 in.	1.00 in.	10.00 ft	35.00 ft
W2006-1016	12/05/2006	03/18/2007	OZ-2	10.50 in.	1.00 in.	10.00 ft	35.00 ft
W2006-1016	12/05/2006	03/18/2007	OZ-3	10.50 in.	1.00 in.	10.00 ft	35.00 ft
W2006-1016	12/05/2006	03/18/2007	OZ-4	10.50 in.	1.00 in.	10.00 ft	35.00 ft
W2006-1016	12/05/2006	03/18/2007	OZ-5	10.50 in.	1.00 in.	10.00 ft	35.00 ft
W2006-1016	12/05/2006	03/18/2007	OZ-6	10.50 in.	1.00 in.	10.00 ft	35.00 ft
W2006-1016	12/05/2006	03/18/2007	OZ-7	10.50 in.	1.00 in.	10.00 ft	35.00 ft
W2006-1016	12/05/2006	03/18/2007	OZ-8	10.50 in.	1.00 in.	10.00 ft	35.00 ft
W2006-1016	12/05/2006	03/18/2007	OZ-9	8.25 in.	1.00 in.	10.00 ft	16.00 ft

**Specific Work Permit Conditions**

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
  
2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no

## Alameda County Public Works Agency - Water Resources Well Permit

case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Minimum seal depth (Neat Cement Seal) is 2 feet below ground surface (BGS).

6. Minimum surface seal thickness is two inches of cement grout placed by tremie

7. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

---

Well Construction-Monitoring-Monitoring - 2 Wells

Driller: HEW Drilling - Lic #: 384167 - Method: hstem

**Work Total: \$600.00**

### Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2006-1017	12/05/2006	03/18/2007	MW-11	8.50 in.	2.00 in.	15.00 ft	35.00 ft
W2006-1018	12/05/2006	03/18/2007	MW-12	8.50 in.	2.00 in.	15.00 ft	35.00 ft

### Specific Work Permit Conditions

1. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

## **Alameda County Public Works Agency - Water Resources Well Permit**

4. Applicant shall contact James Yoo for an inspection time at 510-670-6633 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
  5. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
  6. Minimum surface seal thickness is two inches of cement grout placed by tremie
  7. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.
  8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
-

# PROGRAMS AND SERVICES

## Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at:

399 Elmhurst Street

Hayward, CA 94544

For Driving Directions or General Info, Please Contact 510-670-5480 or [wells@acpwa.org](mailto:wells@acpwa.org)

For Drilling Permit information and process contact [James Yoo](mailto:James.Yoo@acpwa.org) at

Phone: 510-670-6633

FAX: 510-782-1939

Email: [Jamesy@acpwa.org](mailto:Jamesy@acpwa.org)

Alameda County Public Works is the administering agency of [General Ordinance Code, Chapter 6.88](#) . The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by [California Water Code](#). The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

**Drilling Permit Jurisdictions in Alameda County:** There are four jurisdictions in Alameda County.

### Location: Agency with Jurisdiction Contact Number

Berkeley City of Berkeley Ph: 510-981-7460

Fax: 510-540-5672

Fremont, Newark, Union City Alameda County Water District Ph: 510-668-4460

Fax: 510-651-1760

Pleasanton, Dublin, Livermore, Sunol [Zone 7 Water Agency](#) Ph: 925-454-5000

Fax: 510-454-5728

**The Alameda County Public Works Agency, Water Resources** has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of **Oakland, Alameda, Piedmont, Emeryville, Albany, San Leandro, San Lorenzo, Castro Valley, and Hayward** . The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

**Permits** are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed [permit application \(30 Kb\)\\*](#) , along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

### Fees

**Beginning April 11, 2005** , the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells (\*Horizontal hillside dewatering and dewatering for construction period only), shall cost \$300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost \$200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: **Treasurer, County of Alameda**

### Permit Fees are exempt to State & Federal Projects

Applicants shall submit a letter from the agency requesting the fee exemption.

**Scheduling Work/Inspections:**

Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **James Yoo at 510-670-6633** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when Inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

**Request for Permit Extension:**

Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at [wells@acpwa.org](mailto:wells@acpwa.org). There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

**Cancel a Drilling Permit:**

Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at [wells@acpwa.org](mailto:wells@acpwa.org). If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

**Refunds/Service Charge:**

A service charge of \$25.00 dollars for the first check returned and \$35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of \$50.00 (fifty Dollars).

To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed \$500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is \$1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors. The forms to request for refunds under \$500.00 (Five Hundred Dollars) are available at this office or any County Offices. If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

**Enforcement**

Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars (\$500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such

violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

**Enforcement actions will be determined by this office on a case-by-case basis**

Drilling without a permit shall be the cost of the permit(s) and a fine of \$500.00 (Five Hundred Dollars).

**Well Completion Reports** (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies.

See our website ([www.acgov.org/pwa/wells/index.shtml](http://www.acgov.org/pwa/wells/index.shtml)) for links to additional forms.

## **APPENDIX B**

### **Boring / Well Logs**



Project: Omega Termit  
 Project Location: 807 75th Avenue, Oakland, Ca  
 Project Number: 115483

# Key to Log of Boring

Sheet 1 of 1

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
-------------	-------------	---------------	---------------------------------	-------------	-------------	----------------------	------------------	----------	-------------------------

1 2 3 4 5 6 7 8 9 10

### COLUMN DESCRIPTIONS

- 1 **Depth, feet:** Depth in feet below the ground surface.
- 2 **Sample Type:** Type of soil sample collected at the depth interval shown.
- 3 **Sample Number:** Sample identification number.
- 4 **Sampling Resistance, blows/foot:** Number of blows to advance driven sampler 12 inches (or distance shown) beyond first 6-inch seating interval using the hammer identified on the boring log.
- 5 **USCS Symbol:** USCS symbol of the subsurface material.
- 6 **Graphic Log:** Graphic depiction of the subsurface material encountered.
- 7 **MATERIAL DESCRIPTION:** Description of material encountered. May include consistency, moisture, color, and other descriptive text.
- 8 **PID Reading, ppm:** The reading from a photo-ionization detector, in parts per million.
- 9 **Well Log:** Graphical representation of well installed upon completion of drilling and sampling.
- 10 **REMARKS AND OTHER TESTS:** Comments and observations regarding drilling or sampling made by driller or field personnel.

### FIELD AND LABORATORY TEST ABBREVIATIONS

- CHEM:** Chemical tests to assess corrosivity
- COMP:** Compaction test
- CONS:** One-dimensional consolidation test
- LL:** Liquid Limit, percent
- PI:** Plasticity Index, percent
- SA:** Sieve analysis (percent passing No. 200 Sieve)
- UC:** Unconfined compressive strength test, Qu, in ksf
- WA:** Wash sieve (percent passing No. 200 Sieve)

### TYPICAL MATERIAL GRAPHIC SYMBOLS

- Well graded SAND (SW)
- Silty SAND (SM)
- Clayey SAND (SC)
- SILT, SILT w/SAND, SANDY SILT (ML)
- Lean CLAY, CLAY w/SAND, SANDY CLAY (CL)

### TYPICAL SAMPLER GRAPHIC SYMBOLS

- 2.5-inch-OD Modified California with brass liners
- Grab Sample

### OTHER GRAPHIC SYMBOLS

- Water level (at time of drilling, ATD)
- Water level (after waiting a given time)
- Minor change in material properties within a stratum
- Inferred or gradational contact between strata
- Queried contact between strata

### GENERAL NOTES

- 1. Soil classifications are based on the Unified Soil Classification System.



X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIN\New Well Logs\MW-11\_12 and OZ1\_8 logs.bgs [Auger well 36.ft].pjl

**Project: Omega Termit**  
**Project Location: 807 75th Ave. Oakland, CA**  
**Project Number: 262157**

**Log of Boring MW-11**  
 Sheet 1 of 1

Date(s) Drilled <b>December 18, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>8 1/4 inch</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF. R\BIB\New Well Logs\MW-11\_12 and OZ1\_8 logs.bgs [Auger well 36.ft].ipj

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL-ML		Sandy Gravel (FILL) gray N5/ - yellowish brown 10YR 5/5, clayey loose dry			
0.1				CL		Silty Clay, very dark grayish brown 10YR 3/2, hard, dry - slightly moist	0.1		Auger return sample
0.1				CL		Silty Clay, black N 2.5/, hard - stiff, very slightly moist	0.1		Auger return sample
0.2				CL		Sandy Clay, dark gray 5Y 3/1 - dark olive gray 5Y 3/2, stiff, moist			
10				SC		Clayey Sand, olive gray 5Y 3/2, firm, moist			
10	MW-11-10			SC/SM		Clayey silt - Clayey Sand, yellowish brown 10YR 5/8 - olive gray 5Y 4/4 mottling, firm, moist, very slight hydrocarbon odor	0.2		Auger return sample
15				CL-ML		Silty Clay, yellowish brown 10YR 5/6 - 5/8 with dark gray - olive gray 5Y 4/1 - 4/2 spiderweb pattern, firm, moist	?		
15	MW-11-15			CL-ML		Silty Clay, 2.5Y 5/3 - 5Y 5/w with spiderweb pattern of 5Y 5/2, stiff, moist	0.1		
20				CL-ML		Clayey Silt - Silty Clay, olive gray - olive 5Y 4/2- 5/4, with some dark greenish gray - greenish gray 5GY 4/1-5/1 mottling, firm moist with streaks Clayey Silty Sand	?		
20	MW-11-20		11/11/12	SM		Sand, dark greenish gray - greenish gray 5GY 4/1-5/1, very fine grained - silt grade, moderately firm, wet	2.5		
20				CL-ML		Silty Clay - Clayey Silt, olive gray - olive 5Y 4/2- 5/4, with some dark greenish gray - greenish gray 5GY 4/1-5/1 mottling, firm, moist	?		
25				SM		Clayey Silt - Silty Clay, dark greenish gray 5GY 4/1 with some olive gray 5Y 4/2 mottling, firm - moderately firm, moist	?		
25	MW-11-25		5/6/10				48.5		
30				ML		Clayey Silt, Strong brown 7.5YR 5/6, moderately firm, slightly plastic, moist	0.0		
30	MW-11-29		6/9/10						
30				SM-ML		Sand Silt - Silty Sand, strong brown 7.5YR 5/8, moderately firm, wet, no hydrocarbon odor	0		
30	MW-11-31		3/8/12						
35				GP		Gravelly Sand, brown 10YR 4/3, fine - coarse grained, firm - moderately firm, wet			
35	MW-11-33		7/8/11	CL		Silty Clay, strong brown 7.5YR 4/6, stiff, moist	0.1		
35						Bottom of Boring at 35 feet bgs			



**Project: Omega Termit**  
**Project Location: 807 75th Ave. Oakland, CA**  
**Project Number: 262157**

**Log of Boring MW-12**  
 Sheet 1 of 1

Date(s) Drilled <b>December 18, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>8 1/4 inch</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_1\_8 logs.bgs [Auger well 36c.rpt]

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL-ML		Silty Clay - Clayey Silt, yellow brown 10YR 6/6 gravelly, stiff - firm, slightly moist			
0.1				CL		Silty Clay, black, stiff, slightly moist	0.1		Auger return sample
5				CL		Silty Clay, 2.5Y 5/3 - 5Y 5/w with spiderweb pattern of 5Y 5/2, stiff, moist	0.1		Auger return sample
7.5	MW-12-7.5		5/6/9				0.3		
10							0.1		Auger return sample
12.5	MW-12-14			SP		Sand, 10YR 4/3, clean - slightly clayey, very fine grained, local streaks gravelly, well graded, moderately firm, wet			
14.5				CL		Silty Clay, 2.5Y 5/3 - 5Y 5/w with spiderweb pattern of 5Y 5/2, stiff, moist	0.2		
19	MW-12-19		4/10/16	CL-ML		Gravelly Clay - Clayey Silt, light olive brown 2.5Y 4/4 - yellowish brown 10YR 5/4, moderately firm - moderately soft, moist	0.8		
22				CL		Silty Clay, yellowish brown 10YR 5/4, moderately stiff, moist			
24	MW-12-24		7/19/11	SM		Silty Sand, dark yellow brown 10YR 3/4, very fine grained, with some clay, moderately soft, wet	0.5		
25				CL		Sandy Silty Clay, 10YR 5/6, stiff, moist			
29	MW-12-29		8/17/20	SC/SM		Clayey Silt, locally Clayey Sand, olive brown 2.5Y 5/4 - yellow brown 10YR 5/6, moderately soft - firm, wet.	0.2		
32				SP		Sand, 10YR 5/4, clayey, moderately soft - moderately firm, wet, no hydrocarbon odor with some streaks Sandy Silt			
33	MW-12-33		6/7/18				0.1		
35						Bottom of Boring at 35 feet bgs			



**Project: Omega Termit**  
**Project Location: 807 75th Avenue, Oakland, Ca**  
**Project Number: 115483**

**Log of Boring OZ-1**  
 Sheet 1 of 1

Date(s) Drilled <b>February 15, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>8 1/4 inch</b>	Total Depth of Borehole <b>20 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>Gregg Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal</b>	
Borehole Backfill <b>Well Completion</b>	Location	

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				GC/GM		Crushed Gravel clay mix, gray - dark gray 2.5Y 5/1 - 4/1, firm dry, FILL			
				CL		Silty Clay, dark gray - grayish brown 2.5Y 4/1 - 5/2, stiff, slightly moist			
5		OZ-1-5	8/9/15	CL		becoming very dark gray - dark grayish brown	0.3		1" blank riser Bentonite chip
10		OZ-1-10	6/5/16	SC/SM		Silty Sandy Gravel, dark gray - greenish gray N 2.5/ - 10Y 4/1, firm, wet, moist, strong hydrocarbon odor a/a becoming moist	450		
				ML		Clayey Silt, olive brown 2.5Y 4/4, stiff, moist	9.1		TOC ft #2/16 Monterey sand
15		OZ-1-15	6/7/9	CL		Silty Clay, light olive brown 2.5Y 5/4, stiff, slightly moist			
		OZ-1-18	6/6/10	CL		Silty Clay, light olive brown 2.5Y 5/4, stiff, slightly moist	4.5		1" x 18" microporous diffuser
20						Bottom of Boring at 20 feet bgs			
25									
30									
35									

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_1\_8 logs.bgs [Auger well 36:ip]



**Project: Omega Termit**  
**Project Location: 807 75th Ave. Oakland, CA**  
**Project Number: 262157**

**Log of Boring OZ-2**  
 Sheet 1 of 1

Date(s) Drilled <b>December 18, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>10 1/2 inch</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_1\_8 logs.bgs [Auger well 36:ip]

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL-ML		Silty sandy Clay, brown 10YR 4/4. locally gravelly, soft - moderately stiff, slightly moist. Auger return sample			
0.1				GC		Clayey Gravel, very dark brown - dark gray 10YR 3/2 - 4/1, (FILL) Auger sample	0.1		
0.2									1" riser
0.3									1" blank riser
0.4									1" riser
0.5									3/8" bentonite chip
10				GP		Gravel, dark gray 10YR, pea gravel (FILL) Auger sample	0.1		
11									# 2/12 "Monterey Sand"
12				CL		Silty Clay, olive brown 2.5Y 4/4, soft wet muck	0.6		
13				CL		Sandy Silty Clay, olive brown 2.5Y 4/4, soft, moist			1" microporous diffuser
14				ML		Silty Clay, brownish yellow 10YR 6/6 - light yellowish brown 10YR 6/4 with some dark green gray 5GY 4/1 streaks moderately stiff, moist.			
15				CL		Silty Clay, 2.5Y 5/6 with spotty yellowish brown 10YR 6/4, firm, moist	66		
16				CL		Silty Clay, olive 5Y 4/4 with 5GY 4/1 mottling, moderately stiff, moist.			3/8" bentonite chip
17				CL		Sandy Clay, brownish yellow 10YR 6/8 - olive 5Y 4/4 with 5GY 4/1 mottling, stiff, moist			
18				GC		Sandy Gravel, olive brown 5Y 4/4, hard, moist			
19				CL-ML		Silty Clay - Clayey Silt, brownish yellow 10YR 6/8 - light yellowish brown 2.5Y 6/4 with some greenish gray 10GY 6/1 mottling, moderately soft, slightly plastic, moist			
20				SM		Silty Sand, 10YR 4/4, silty, moderately soft - soft, wet, no hydrocarbon odor.	0.1		
21				ML		Gravelly Silt, yellowish brown 10YR 5/4, moderately firm, wet.	0.2		
22				ML		Clayey Silt, brown - yellowish brown 10YR 5/3 - 5/4, moderately firm, wet			# 2/12 "Monterey Sand"
23				ML		Gravelly Silt, light olive brown 2.5Y 5/3, firm, wet, no hydrocarbon odor			1" microporous diffuser
24				SM		Silty Sand, light olive brown 2.5Y 5/3 - 5/6 - olive brown 2.5Y 4/4, firm, wet	0.1		
35						Bottom of Boring at 35 feet bgs			



**Project: Omega Termit**  
**Project Location: 807 75th Ave. Oakland, CA**  
**Project Number: 262157**

**Log of Boring OZ-3**  
 Sheet 1 of 1

Date(s) Drilled <b>December 18, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>10 1/2 inch</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location <b>Twin to boring SB-13</b>	

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL-ML		Silty sandy Clay, brown 10YR 4/4. locally gravelly, soft - moderately stiff, slightly moist. Auger return sample	0		1" riser 1" blank riser 1" riser
5				CL		Silty Clay, dark gray, hard, slightly moist. Auger return sample	0		
				CL		Silty Clay, black N 2.5/, hard, slightly moist. Auger return sample	0		
				CL		Silty Clay, dark yellowish brown 10YR 4/4, stiff, moist Auger return sample	0		3/8" bentonite chip
10		OZ-3-10	7/9/12	CL		Silty Clay, olive 5Y 4/4 - brown 2.5Y 5/2 - dark yellowish brown 10YR 4/4, stiff, moist.	3.4		# 2/12 "Monterey Sand"
				CL		Silty Clay, yellowish brown - brownish yellow 10YR 5/6-6/8 with grayish green 10GY 5/1 mottling silty, very stiff, moist	18.0		1" microporous diffuser
15		OZ-3-16	5/5/11	ML		Clayey Silt, yellowish brown 10YR 5/4-5/6, moderately stiff, moist.	3.5		
				ML		Clayey Silt, yellowish brown 10YR 5/6, moderately stiff, moist.	17.5		3/8" bentonite chip
				ML		Clayey Silt, yellowish brown 10YR 5/6, moderately stiff, moist.	0.9		
20		OZ-3-21	4/6/13	SW-SC		Sand - Clayey Sand, brown - yellowish brown 10YR 5/3-5/6, firm, wet	0.7		
				CL		Sandy Clay, yellowish brown 10YR 5/6, stiff, moist.	70.2		
				CL		Silty Clay, yellowish brown 10YR 5/6, stiff moist	?		
25		OZ-3-26	3/5/8	CL		Sandy Silty Clay, yellowish brown 10YR 5/6 - with 5Y 6/3pale olive vertical channels, moderately soft, slightly plastic, moist	0.1		
				SM		Silty Sand, 10YR 4/4, very fine grained, clayey, moderately soft - soft, wet, no hydrocarbon odor.	?		
		OZ-3-28	3/4/11	SC		Clayey Sand, olive yellow 2.5Y 6/6 with some 5Y 6/3 - 6/2 mottling, moderately firm, wet.	0.1		
30		OZ-3-31	8/11/14	SC		Clayey Sand, light olive 2.5Y 5/4 - yellowish brown 10YR 5/6, moderately soft - soft, wet, no hydrocarbon odor	5.0		# 2/12 "Monterey Sand"
				SC		Clayey Sand, light olive 2.5Y 5/4 - yellowish brown 10YR 5/6, moderately soft - soft, wet, no hydrocarbon odor	0.2		1" microporous diffuser
35						Bottom of Boring at 35 feet bgs			

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_1\_8 logs.bgs [Auger well 36.rpt]



**Project: Omega Termit**  
**Project Location: 807 75th Ave. Oakland, CA**  
**Project Number: 262157**

**Log of Boring OZ-4**  
 Sheet 1 of 1

Date(s) Drilled <b>December 18, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location <b>Twin to boring SB-8</b>	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_1\_8 logs.bgs [Auger well 36c.rpt]

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL-ML		Silty Clay - Clayey Silt, yellow brown 10YR 6/6 gravelly, stiff - firm, slightly moist, Auger return sample	0		
5				CL		Silty Clay, light olive brown 2.5Y 5/4, stiff, moist Auger return sample	0		1" riser 1" blank riser 1" riser
10				CL		Silty Clay, light olive brown - olive brown, 2.5Y 5/4 - 4/4 to yellowish brown 10YR 5/8 mottling, stiff, moist Auger return sample	0		3/8" bentonite chip
15				CL-ML		Silty Clay - Clayey Silt, light yellowish brown 2.5Y 6/4 - 10YR 6/4 with some olive - pale olive 5Y 6/4-4/4 mottling, stiff - firm, moist Auger return sample	0		# 2/12 "Monterey Sand"
15				CL		Sandy Clay, 10YR 5/4-6/6, silty, very stiff, moist	0		1" microporous diffuser
20	OZ-4-16	5/5/11		SC-CL		Clayey Silty Sand, with some becoming Sandy Silty Clay, 2.5Y 6/6 to 10YR 6/6 with some greenish gray 5GY 6/1 streaks and mottling, moderately firm, moist - wet	0.1		3/8" bentonite chip
25	OZ-4-25	5/7/15		SM		Silty Sand, dark yellow brown 10YR 3/4, very fine grained, with some clay, moderately soft, wet	0.3		# 2/12 "Monterey Sand"
30	OZ-4-28	2/3/10		SM		Silty Sand, 10YR 4/4, very fine grained, clayey, moderately soft - soft, wet, no hydrocarbon odor.	0		1" microporous diffuser
30	OZ-4-31	8/11/14		SM		Silty Sand, 10YR 4/4, very fine grained, clayey, moderately soft - soft, wet, no hydrocarbon odor with some streaks very Sandy Silty Clay, moderately firm	0		# 2/12 "Monterey Sand"
35	OZ-4-33	10/28/33		SP		Sand, light olive gray 5Y 6/2 with some yellowish red 5YR 4/6 mottling, moderately friable - friable, wet, no hydrocarbon odor	0		1" microporous diffuser
35				GW		Sandy Gravel, light brownish gray - grayish brown 10YR 5/2 - 6/2, firm, wet			
						Bottom of Boring at 35 feet bgs			



**Project: Omega Termit**  
**Project Location: 807 75th Avenue, Oakland, Ca**  
**Project Number: 115483**

**Log of Boring OZ-5**  
 Sheet 1 of 1

Date(s) Drilled <b>December 20, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>10 1/2 inch</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_1\_8 logs.bgs [Auger well 36.ft].ipf

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL		Silty Clay, very dark grayish brown 120YR 3/2, soft, wet becoming black downward			
5				CL		Silty Clay, black N 2.5/, very stiff, moist			
9.0							9.0		1" blank riser
									1" blank riser
									3/8" bentonite chips
10				SC		Clayey Sand, yellowish brown 10YR 5/8, coarse grained, firm, wet			
	OZ-5-11		5/8/11	SC		Clayey Sand, light olive brown 2.5Y 5/4, firm, wet	67		TOC ft
				CL		Silty Clay, olive brown - olive yellow 5Y 5/4 - 6/8 olive 5Y 4/3, with some greenish gray 5GY 5/1 horiz. streaks and vert. channels, firm, wet			# 2/16 Monterey Sand
15				CL		Silty Clay, dark olive - olive 5Y 3/2 - 5/4 with some yellowish brown 10YR 5/8, firm, moist			1" x 18" microporous diffuser
	OZ-5-16		5/8/11				25		
							10		
									3/8" bentonite chips
20				SC		Clayey Sand, olive brown 2.5Y 4/4, firm, wet			
	OZ-5-21.0		5/12/12				4.4		
25				SW		Clayey Gravelly Sand, dark yellowish brown 10YR 4/4, hard, wet			
	OZ-5-26		6/7/12	ML		Clayey Silt, yellowish brown 10YR 5/4 with some light olive brown 2.5Y 5/4-5/6 with greenish gray 10Y 6/1 mottling and streaks, moderately firm, moist	0.4		
30				SM		Silty Sand, light yellowish brown 10YR 6/4 - light olive brown 2.5Y 5/4, mottled, moderately firm, wet			
	OZ-5-31		7/11/15	SC		Clayey Sand, yellowish brown - strong brown 10YR 5/8 - 7.5YR 5/8 with abundant greenish gray 5G 5/1 streaks & mottling, firm, wet	44.0		# 2/16 Monterey Sand
				CL		Silty Clay, dark yellowish brown 10YR 4/6 - 3/6, stiff - slightly plastic, moist			1" x 18" microporous diffuser
	OZ-5-34		7/13/14				0		
35						Bottom of Boring at 35 feet bgs			





**Project: Omega Termit**  
**Project Location: 807 75th Avenue, Oakland, Ca**  
**Project Number: 115483**

**Log of Boring OZ-6**  
 Sheet 1 of 1

Date(s) Drilled <b>December 20, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>10 1/2 inch</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_1\_8 logs.bgs [Auger well 36.ft].ipf

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL		Silty Clay, very dark grayish brown 120YR 3/2, stiff, slightly moist becoming black downward			
5				CL		Silty Clay, black N 2.5/, very stiff, moist	0.0		1" blank riser
10		OZ-6-11	6/9/17	GC		Clayey Sandy Gravel, greenish gray 5G 5/1, hard, wet, strong hydrocarbon odor	276		3/8" bentonite chips
15		OZ-6-16	5/9/12	ML CL		Clayey Silt, greenish gray 5G 5/1, firm, moist, slight hydrocarbon odor Silty Clay, yellowish brown 10YR 5/6 with greenish gray 5G 5/1, stiff moist, slight hydrocarbon odor with streaks Silty Clay, with yellowish brown 10YR 5/8 mottling, stiff, moist	25.6		1" x 18" microporous diffuser
20		OZ-6-21.0	5/13/11	SW		Silty Sand, dark bluish gray 10B 4/1 - dark greenish gray 5G 4/1, coarse, firm, wet, strong hydrocarbon odor	310		3/8" bentonite chips
25		OZ-6-26	6/8/10	SP		Sand, dark bluish gray 10B 4/1 - dark greenish gray 5G 4/1, coarse, firm, wet, hydrocarbon odor with some interbedded Silty Clay, stiff, moist	169		
30		OZ-6-31	6/10/14	SC ML		Clayey Sand, yellowish brown - strong brown 10YR 5/8 - 7.5YR 5/8 with abundant greenish gray 5G 5/1 streaks & mottling, firm, wet	1.0		Lead auger and bit left at bottom of well - @ 29 bgs to 35 feet bgs.
32		OZ-6-34	7/11/12	GP		Clayey Sand, dark yellowish brown 10YR 3/6 - 4/3, firm, wet			# 2/16 Monterey Sand
34				CL		Clayey Silt, strong brown 5Y 5/8 - yellowish brown - dark yellowish brown 10YR 5/8 - 4/6	1.7		1" x 18" microporous diffuser
35				CL		Sandy Gravel, yellowish brown - dark yellowish brown 10YR 5/8 - 4/4, hard, wet			

Bottom of Boring at 35 feet bgs



**Project: Omega Termit**  
**Project Location: 807 75th Avenue, Oakland, Ca**  
**Project Number: 115483**

**Log of Boring OZ-7**  
 Sheet 1 of 1

Date(s) Drilled <b>December 20, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>10 1/2 inch</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location <b>Twin to wells MW-3 and MW-10</b>	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_7 logs.bgs [Auger well 36:ip]

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL		Concrete			
				CL		Crushed Gravel clay mix, gray - dark gray 2.5Y 5/1 - 4/1, firm dry, FILL			
				CL		Silty Clay, very dark grayish brown 120YR 3/2, stiff, slightly moist becoming black downward			
				CL		Silty Clay, black N 2.4/, very stiff, slightly moist			1" blank riser
5				CL		Silty Clay, dark gray - dark olive gray 5Y 3/1- 5Y 3/2, stiff, moist	0.1		1" blank riser
				CL		Silty Clay, dark gray - dark olive gray 5Y 3/1- 5Y 3/2, stiff, moist	13.0		
				CL-ML		Silty Clay - Clayey Silt, olive brown - dark grayishbrown 2.5Y 4/3 - 4/2, increasing clay downward, foderately firm - stiff, moist, very slight hydrocarbon odor	0.1		3/8" Bentonite chips
10				CL		Silty Clay, olive brown 5Y 4/4, firm, moist - very moist, very slight hydrocarbon odor	6.9		
				CL		Silty Clay, olive brown 5Y 4/4, firm, moist - very moist, very slight hydrocarbon odor	8.1		# 2/12 Monterey sand
15				CL		Silty Clay, light olive brown 2.5Y 5/4, stiff, moist			1" X 18" microporous diffuser
				SC-CL		Sandy Clay - Clayey Sand, dark greenish gray 10G 4/4, firm - moderately firm, moist - wet, very slight hydrocarbon odor			3/8" Bentonite chips
20	OZ-7-20		5/6/9	SC-CL		Sandy Clay - Clayey Sand, dark greenish gray 10G 4/4, firm - moderately firm, moist - wet, very slight hydrocarbon odor	5.0		
25	OZ-7-25		5/8/8	SP		Clayey Sand - Sandy Clay, dark greenish gray 10G 4/4 - dark olive gray 5Y 3/2, fine grained, firm, poorly graded, wet, no odor	26.5		
	OZ-7-29		6/9/13	CL		Silty Clay, dark olive gray 5Y 5/2, stiff with streaks Clayey Sand, coarse, firm, slightly moist, slight hydrocarbon odor	0.3		1" blank riser
30	OZ-7-30		10/13/20	ML		Clayey Silt, light olive brown 2.5Y 5/6 with grayish brown 2,5Y 5/2 mottling, firm, moist			
	OZ-7-30		10/13/20	SC		Clayey Sand, strong brown 10YR 5/8, gravelly, firm - hard, wet	0.1		# 2/12 Monterey Sand
	OZ-7-30		10/13/20	ML		Clayey Silt, strong brown 5Y 5/8 -yellowish brown - dark yellowish brown 10YR 5/8 - 4/6, firm, wet			
	OZ-7-34		9/10/132	GP		Sandy Gravel, yellowish brown - dark yellowish brown 10YR 5/8 - 4/4, hard, wet	0.1		1" X 18" microporous diffuser
35				CL		Sandy Clay, yellowish brown, stiff, moist			
						Bottom of Boring at 35 feet bgs			



**Project: Omega Termit**  
**Project Location: 807 75th Avenue, Oakland, Ca**  
**Project Number: 115483**

**Log of Boring OZ-8**  
 Sheet 1 of 1

Date(s) Drilled <b>December 20, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>10 1/2 inch</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>ModCal, Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location <b>Twin to wells MW-2 and MW-8</b>	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_8 logs.bgs [Auger well 36:ip]

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				GW-GC		Sandy Clayey Gravel (crushed) gray N 5/ - brown 10YR 4/4, loose - hard, dry			
				CL		Silty Clay, very dark grayish brown 10YR 3/2, stiff, slightly moist becoming black downward Silty Clay, black N 2.5/, very stiff, moist			1' blank riser
5							0.2		1' blank riser
				CL		Sandy Clay, very dark gray - dark olive gray 5Y 3/1 - 3/2, firm, moist			3/8" bentonite chip
10		OZ-8-11	6/9/17	SC-CL		Clayey Sand - Sandy Gravelly Clay, gray 10Y 5/1 - greenish gray 5GY 5/1, firm - stiff, wet - moist, slight hydrocarbon odor	16.2		# 2/12 Monterey Sand
				SC		Clayey Sand, greenish gray - grayish green 5G 5/1 - 5/2, moderately firm, moist - wet, hydrocarbon odor	172		1" x 18" microporous diffuser
15		OZ-8-16	5/9/12	CL		Silty Clay, greenish gray - grayish green 5G 5/1 - 5/2 with streaks and mottling yellowish brown 10YR 5/8, stiff, moist, hydrocarbon odor with streaks Silty Clay, with yellowish brown 10YR 5/8 mottling, stiff, moist	10		3/8" bentonite chip
		OZ-3_18		SW		Sand, dark olive gray 5Y 3/2 - very dark greenish gray 5G 3/1, coarse, locally clayey, gravelly, firm - hard, wet			
20		OZ-8-21.0	5/13/11				4.4		
				SP		Clayey Sand, brown 5YR 4/2 - 4/4 occasionally olive yellow 2.5Y 6/8 mottling, firm, moist - wet	9.0		
25		OZ-8-26	6/8/10	CL		Silty Clay, brownish yellow - yellowish brown 10YR 6/8 - 5/8, stiff, moist	0.4		
				CL		Sandy Clay, brownish yellow - yellowish brown 10YR 6/8 - 5/8, stiff, moist			
30		OZ-8-31	6/10/14	SC		Clayey Sand, dark yellowish brown - brownish yellow 10YR 3/6 - 4/3, firm, wet	44.0		
				SP		Sand, dark olive brown 2.5Y 3/3, firm, wet			# 2/12 Monterey Sand
				SC		Clayey Sand, dark yellowish brown 10YR 3/6 - 4/6, firm, wet			1" x 18" microporous diffuser
		OZ-8-34	7/13/142	SC		Silty Clay, brown - dark yellowish brown 10YR 4/3 - 3/6, stiff - slightly plastic, moist	0.2		
35						Bottom of Boring at 35 feet bgs			



**Project: Omega Termit**  
**Project Location: 807 75th Avenue, Oakland, Ca**  
**Project Number: 115483**

**Log of Boring OZ-9**  
 Sheet 1 of 1

Date(s) Drilled <b>December 20, 2006</b>	Logged By <b>Robert F. Flory</b>	Checked By <b>Adrian Angel</b>
Drilling Method <b>Hollow Stem Auger</b>	Drill Bit Size/Type <b>8 1/4 inch Hollowstem</b>	Total Depth of Borehole <b>35 feet bgs</b>
Drill Rig Type <b>CME 75</b>	Drilling Contractor <b>HEW Drilling</b>	Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) <b>Grab</b>	
Borehole Backfill <b>Well Completion</b>	Location <b>6 feet from OZ-6</b>	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\262157 Ozone Sparging (Omega) RFF\_R\BIB\New Well Logs\MW-11\_12 and OZ\_1\_8 logs.bgs [Auger well 36.ft].ipf

Depth, feet	Sample Type	Sample Number	Sampling Resistance, blows/foot	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
0				CL		Silty Clay, very dark grayish brown 120YR 3/2, stiff, slightly moist becoming black downward			
5		OZ-9-5		CL		Silty Clay, black N 2.5/, very stiff, moist	0.0		1" blank riser
10		OZ-9-11		GC		Clayey Sandy Gravel, greenish gray 5G 5/1, hard, wet, strong hydrocarbon odor			1" blank riser
15		OZ-9-15		ML		Clayey Silt, greenish gray 5G 5/1, firm, moist, slight hydrocarbon odor	250		3/8" bentonite chips
20		OZ-9-20.0		CL		Silty Clay, yellowish brown 10YR 5/6 with greenish gray 5G 5/1, stiff moist, slight hydrocarbon odor with streaks Silty Clay, with yellowish brown 10YR 5/8 mottling, stiff, moist	30		
25		OZ-9-25		SW		Silty Sand, dark bluish gray 10B 4/1 - dark greenish gray 5G 4/1, coarse, firm, wet, strong hydrocarbon odor	290		1" x 18" microporous diffuser
30		OZ-9-30.1		SP		Sand, dark bluish gray 10B 4/1 - dark greenish gray 5G 4/1, coarse, firm, wet, hydrocarbon odor with some interbedded Silty Clay, stiff, moist	150		# 2/16 Monterey Sand
35		OZ-9-34		SC		Clayey Sand, yellowish brown - greenish gray 5G 5/1 mottling, firm, wet	1.0		
				SC		Clayey Sand, yellowish brown - dark yellowish brown 10YR 3/6 - 4/3, gravelly in part, firm, wet			
				GP		Sandy Gravel, yellowish brown - dark yellowish brown 10YR 5/8 - 4/4, hard, wet			1" x 18" microporous diffuser
				CL		Silty Clay, yellowish brown, stiff, moist	2.0		
						Bottom of Boring at 35 feet bgs			



## **APPENDIX C**

### **Groundwater Monitoring Well Field Sampling Forms**

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-1**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	10.68		
Depth of Well	20.00		
Depth to Water (from top of casing)	4.64		
Water Elevation (feet above msl)	6.04		
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)	7.4		
Actual Volume Purged (gallons)	8.0		
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 (μS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	17.86	6.79	470	0.33	-91.0	
	4	17.56	6.76	495	0.54	-80.0	
	6	17.85	6.72	639	0.39	-68.1	
	8	17.96	6.70	668	0.31	-68.4	

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

Initially dark gray with strong hydrocarbon odor, clears at 1.0 gallon

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-2**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	12.15		
Depth of Well	20.00		
Depth to Water (from top of casing)	6.09		
Water Elevation (feet above msl)	6.06		
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)	<b>6.6</b>		
Actual Volume Purged (gallons)	7.0		
Appearance of Purge Water	Dark gray clears rapidly		
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
	1	18.96	6.78	992	0.59	-234.5	
	2	18.44	6.76	972	0.47	-181.1	
	4	18.73	6.70	1006	0.40	-98.8	
	6	19.11	6.73	999	0.28	-208.7	
	8	19.19	6.71	993	0.25	-221.4	

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

Initially dark gray, clears rapidly, strong hydrocarbon odor

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-3**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	10.40		
Depth of Well	20.00		
Depth to Water (from top of casing)	4.73		
Water Elevation (feet above msl)	5.67		
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)	7.5		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	Clear		
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
	1	18.17	6.66	1396	3.06	553.2	
	2	17.50	6.62	1371	2.52	549.0	
	4	17.31	6.61	1377	1.67	518.1	
	6	17.90	6.58	1403	1.19	496.0	
	8	18.28	6.61	1420	0.68	153.9	

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

Clear with no hydrocarbon odor.



**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-4**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	10.31		
Depth of Well	20.00		
Depth to Water (from top of casing)	4.17		
Water Elevation (feet above msl)	6.14		
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)	7.6		
Actual Volume Purged (gallons)	8.0		
Appearance of Purge Water	Clear		
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	18.44	6.73	1340	3.34	365.4	
	4	17.96	6.82	1279	3.51	385.9	
	6	18.36	6.71	1326	3.07	479.8	
	8	18.61	6.69	1360	2.77	493.6	

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

Initially light brown, clearing quickly, no hydrocarbon odor.

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-6**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	12.35		
Depth of Well	14.00		
Depth to Water (from top of casing)	6.44		
Water Elevation (feet above msl)	5.91		
Well Volumes Purged			
Calculated Gallons Purged: formula valid only for casing sizes of 2" (.16 gal/ft), 4" (.65 gal/ft), and 6" (1.44 gal/ft)	3.6		
Actual Volume Purged (gallons)	4.0		
Appearance of Purge Water	Initially brown, clear at 1.5 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
	1	18.03	6.75	975	1.59	61.3	
	2	18.08	6.73	942	0.87	63.8	
	4	18.39	6.74	923	0.56	53.4	

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

Initially brown, with no hydrocarbon odor, clear at 1.5 gallons

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-7**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	11.16		
Depth of Well	35.00		
Depth to Water (from top of casing)	4.17		
Water Elevation (feet above msl)	6.99		
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)	14.7		
Actual Volume Purged (gallons)	16.0		
Appearance of Purge Water	clear by 1.5 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	18.63	6.80	1877	1.64	56.1	
	4	18.69	6.71	1870	0.81	68.9	
	6	18.71	6.70	1862	0.60	83.4	
	8	18.73	6.70	1854	0.47	74.7	
	10	18.73	6.69	1844	0.36	66.1	
	12	18.74	6.69	1840	0.32	80.6	
	14	18.74	6.69	1838	0.32	80.1	
	16	18.74	6.69	1837	0.32	83.9	

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

Initially milky brown with slight hydrocarbon odor, clear at 1.5 gallons

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-8**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	12.42		
Depth of Well	35.00		
Depth to Water (from top of casing)	5.97		
Water Elevation (feet above msl)	6.45		
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)	<b>13.9</b>		
Actual Volume Purged (gallons)	15.0		
Appearance of Purge Water	Initially light brown, clear at 1 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
	1	18.80	6.80	2000	1.15	101.5	
	3	18.87	6.80	2001	0.97	119.9	
	5	18.92	6.81	1992	1.04	113.4	
	7	18.59	6.83	1966	1.16	94.8	
	9	18.62	6.82	1973	0.96	102.2	
	11	18.85	6.80	1999	0.48	95.0	
	13	18.86	6.80	2000	0.45	96.3	
	15	18.87	6.80	2000	0.47	95.4	

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

Initially light brown, no hydrocarbon odor, clear at 1 gallons

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-9**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	11.22		
Depth of Well	35.00		
Depth to Water (from top of casing)	5.19		
Water Elevation (feet above msl)	6.03		
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)	<b>14.3</b>		
Actual Volume Purged (gallons)	15.0		
Appearance of Purge Water	Initially brown, clear at 2.0 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
	1	18.56	6.96	1470	2.07	-43.3	
	3	18.47	6.99	1402	3.10	52.3	
	5	18.40	6.95	1383	2.78	68.3	
	7	18.15	6.62	1377	2.44	69.1	
	9	18.32	6.86	1394	1.72	55.0	
	11	18.42	6.83	1412	1.31	42.7	
	13	18.52	6.80	1449	1.09	26.4	
	15	18.59	6.81	1497	0.99	-5.2	

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

Initially brown with strong hydrocarbon odor, clear at 2.0 gallons

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-10**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	10.31		
Depth of Well	35.00		
Depth to Water (from top of casing)	4.26		
Water Elevation (feet above msl)	6.05		
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)	<b>14.7</b>		
Actual Volume Purged (gallons)	15.0		
Appearance of Purge Water	Initially milky brown, clear by 1.5 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 (μS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	18.66	6.58	1625	2.91	40.2	
	4	18.74	6.59	1613	2.93	28.9	
	6	18.67	6.62	1589	3.46	37.1	
	8	18.62	6.62	1584	3.42	33.1	
	10	18.59	6.62	1587	3.28	28.2	
	12	18.57	6.62	1585	3.23	24.2	
	14	18.57	6.62	1583	3.22	22.0	
	15	18.57	6.62	1582	3.16	17.6	

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

Initially milky brown with no hydrocarbon odor, clear by 1.5 gallon

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-11**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	10.31		
Depth of Well	35.00		
Depth to Water (from top of casing)	3.94		
Water Elevation (feet above msl)	6.37		
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)	15.2		
Actual Volume Purged (gallons)	16.0		
Appearance of Purge Water	Initially milky brown, clear by 4.5 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 (μS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	18.89	6.88	1805	0.73	28.4	
	4	18.95	6.84	1766	0.55	30.1	
	6	19.00	6.82	1741	0.44	27.2	
	8	19.05	6.79	1708	0.32	15.4	
	10	19.06	6.78	1699	0.27	17.8	
	12	19.08	6.78	1695	0.26	37.9	
	14	18.05	6.77	1690	0.25	44.6	
	16	19.05	6.77	1690	0.22	45.9	

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

Initially milky brown with no hydrocarbon odor, clear by 4.5 gallons

**AEI CONSULTANTS**  
GROUNDWATER MONITORING WELL FIELD SAMPLING FORM

**Monitoring Well Number: MW-12**

Project Name:	Omega Termite	Date of Sampling:	1/2/2007
Job Number:	262157	Name of Sampler:	Adrian Nieto
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)	10.31		
Depth of Well	35.00		
Depth to Water (from top of casing)	3.43		
Water Elevation (feet above msl)	6.88		
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)	<b>15.2</b>		
Actual Volume Purged (gallons)	16.0		
Appearance of Purge Water	Clear by 7.5 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 (µS/cm)	DO (mg/L)	ORP (meV)	Comments
	2	18.87	6.88	1521	2.06	84.9	
	4	19.14	6.90	1501	1.45	115.7	
	6	19.20	6.90	1491	1.20	116.7	
	8	19.19	6.88	1479	0.95	114.7	
	10	19.14	6.86	1462	0.72	109.0	
	12	19.13	6.84	1445	0.61	105.0	
	14	19.14	6.84	1438	0.53	96.6	
	16	19.14	6.83	1432	0.47	92.4	

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

Milky brown with no hydrocarbon odor, clear by 7.5 gallon



## **APPENDIX D**

### **Soil Analyses With Chain of Custody Documentation**



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #262157; Omega Termite	Date Sampled: 12/18/06
		Date Received: 12/20/06
	Client Contact: Robert Flory	Date Reported: 12/28/06
	Client P.O.:	Date Completed: 12/28/06

**WorkOrder: 0612442**

December 28, 2006

Dear Robert:

Enclosed are:

- 1). the results of **8** analyzed samples from your **#262157; Omega Termite 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. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0612442

ClientID: AEL

EDF

Fax

Email

HardCopy

ThirdParty

**Report to:**

Robert Flory  
 AEI Consultants  
 2500 Camino Diablo, Ste. #200  
 Walnut Creek, CA 94597

Email: rflory@aeiconsultants.com  
 TEL: (925) 283-600 FAX: (925) 283-612  
 ProjectNo: #262157; Omega Termite  
 PO:

**Bill to**

Denise Mockel  
 AEI Consultants  
 2500 Camino Diablo, Ste. #200  
 Walnut Creek, CA 94597

**Requested TAT: 5 days**

*Date Received: 12/20/2006*

*Date Printed: 12/20/2006*

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0612442-001	OZ-4-16	Soil	12/18/06 9:15:00	<input checked="" type="checkbox"/>	A		A										
0612442-002	OZ-4-26	Soil	12/18/06 9:35:00	<input checked="" type="checkbox"/>	A		A										
0612442-003	OZ-4-31	Soil	12/18/06 9:40:00	<input type="checkbox"/>	A	A	A										
0612442-004	OZ-4-33	Soil	12/18/06 9:55:00	<input checked="" type="checkbox"/>	A		A										
0612442-005	MW-12-7.5	Soil	12/18/06 11:00:00	<input checked="" type="checkbox"/>	A		A										
0612442-006	MW-12-14	Soil	12/18/06 11:10:00	<input type="checkbox"/>	A		A										
0612442-007	MW-12-19	Soil	12/18/06 11:20:00	<input checked="" type="checkbox"/>	A		A										
0612442-008	MW-12-24	Soil	12/18/06 11:30:00	<input type="checkbox"/>	A		A										
0612442-009	MW-12-29	Soil	12/18/06 11:40:00	<input checked="" type="checkbox"/>	A		A										
0612442-010	MW-11-21	Soil	12/18/06 2:15:00	<input checked="" type="checkbox"/>	A		A										
0612442-011	MW-11-26	Soil	12/18/06 2:25:00	<input type="checkbox"/>	A		A										
0612442-012	MW-11-29	Soil	12/18/06 2:35:00	<input checked="" type="checkbox"/>	A		A										
0612442-013	MW-11-31	Soil	12/18/06 2:45:00	<input type="checkbox"/>	A		A										
0612442-014	OZ-3-16	Soil	12/19/06 8:40:00	<input checked="" type="checkbox"/>	A		A										
0612442-015	OZ-3-21	Soil	12/19/06 8:50:00	<input type="checkbox"/>	A		A										

**Test Legend:**

1	G-MBTX S	2	PREDF REPORT	3	TPH(D) S	4		5	
6		7		8		9		10	
11		12							

**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.

**McC Campbell Analytical, Inc.**



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

**CHAIN-OF-CUSTODY RECORD**

**WorkOrder: 0612442**

**ClientID: AEL**

EDF

Fax

Email

HardCopy

ThirdParty

<b>Report to:</b> Robert Flory AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	<b>Email:</b> rflory@aeiconsultants.com TEL: (925) 283-600 FAX: (925) 283-612 ProjectNo: #262157; Omega Termite PO:	<b>Bill to:</b> Denise Mockel AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	<b>Requested TAT: 5 days</b>  <b>Date Received: 12/20/2006</b> <b>Date Printed: 12/20/2006</b>
---	--	--	---

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0612442-016	OZ-3-26	Soil	12/19/06 9:05:00	<input checked="" type="checkbox"/>	A		A										
0612442-017	OZ-3-31	Soil	12/19/06 9:31:00	<input type="checkbox"/>	A		A										
0612442-018	OZ-2-17.5	Soil	12/19/06 3:45:00	<input type="checkbox"/>	A		A										
0612442-019	OZ-2-24.5	Soil	12/19/06 4:00:00	<input checked="" type="checkbox"/>	A		A										
0612442-020	OZ-2-34	Soil	12/19/06 4:40:00	<input type="checkbox"/>	A		A										

**Test Legend:**

1	G-MBTX_S	2	PREDF REPORT	3	TPH(D)_S	4		5	
6		7		8		9		10	
11		12							

**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.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #262157; Omega Termite	Date Sampled: 12/18/06-12/19/06
		Date Received: 12/20/06
	Client Contact: Robert Flory	Date Extracted: 12/20/06
	Client P.O.:	Date Analyzed 12/22/06

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0612442

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
003A	OZ-4-31	S	ND	ND	0.015	ND	ND	ND	1	94
006A	MW-12-14	S	ND	ND	ND	ND	ND	ND	1	95
008A	MW-12-24	S	ND	ND	0.094	ND	ND	ND	1	95
011A	MW-11-26	S	29,g,m	ND	ND	ND	ND	ND	1	82
013A	MW-11-31	S	ND	ND	ND	ND	ND	ND	1	83
015A	OZ-3-21	S	ND	ND	ND	ND	ND	ND	1	82
018A	OZ-2-17.5	S	6.3,a	ND	0.19	ND	0.046	0.011	1	85
020A	OZ-2-34	S	ND	ND	ND	ND	ND	ND	1	87

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	1	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/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 McC Campbell 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 ~1 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; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #262157; Omega Termite	Date Sampled: 12/18/06-12/19/06
	Client Contact: Robert Flory	Date Received: 12/20/06
	Client P.O.:	Date Analyzed: 12/21/06-12/23/06
		Date Extracted: 12/20/06

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

Extraction method SW3550C

Analytical methods SW8015C

Work Order: 0612442

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0612442-003A	OZ-4-31	S	ND	1	101
0612442-006A	MW-12-14	S	ND	1	103
0612442-008A	MW-12-24	S	ND	1	102
0612442-011A	MW-11-26	S	61,k	1	103
0612442-013A	MW-11-31	S	ND	1	99
0612442-015A	OZ-3-21	S	3.4,a	1	102
0612442-018A	OZ-2-17.5	S	1.9,d	1	103
0612442-020A	OZ-2-34	S	ND	1	100

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

\* 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 McC Campbell 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 ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; o) results are reported on a dry weight basis.



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0612442

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 25328			Spiked Sample ID: 0612438-033A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	0.60	104	111	6.51	109	108	1.21	70 - 130	30	70 - 130	30
MTBE	ND	0.10	82.1	89.6	8.70	86.6	85.1	1.65	70 - 130	30	70 - 130	30
Benzene	ND	0.10	99.2	98.4	0.785	97.8	92.3	5.80	70 - 130	30	70 - 130	30
Toluene	ND	0.10	83	82.5	0.681	83.2	78.5	5.81	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	102	101	0.829	102	96.5	5.43	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	94.7	94.7	0	95.7	90	6.10	70 - 130	30	70 - 130	30
%SS:	108	0.10	106	100	5.58	102	99.1	2.94	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25328 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612442-003	12/18/06 9:40 AM	12/20/06	12/22/06 2:42 AM	0612442-006	12/18/06 11:10 AM	12/20/06	12/22/06 3:12 AM
0612442-008	12/18/06 11:30 AM	12/20/06	12/22/06 3:41 AM	0612442-011	12/18/06 2:25 PM	12/20/06	12/22/06 6:21 AM
0612442-013	12/18/06 2:45 PM	12/20/06	12/22/06 5:49 AM	0612442-015	12/19/06 8:50 AM	12/20/06	12/22/06 4:43 AM
0612442-018	12/19/06 3:45 PM	12/20/06	12/22/06 5:16 AM	0612442-020	12/19/06 4:40 PM	12/20/06	12/22/06 6:54 AM

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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



### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0612442

EPA Method SW8015C		Extraction SW3550C			BatchID: 25327			Spiked Sample ID: 0612438-033A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	ND	20	94	94.4	0.406	99.8	99.8	0	70 - 130	30	70 - 130	30
%SS:	100	50	99	98	0.659	103	102	0.615	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25327 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612442-003	12/18/06 9:40 AM	12/20/06	12/22/06 8:56 AM	0612442-006	12/18/06 11:10 AM	12/20/06	12/21/06 5:21 PM
0612442-008	12/18/06 11:30 AM	12/20/06	12/22/06 7:59 PM	0612442-011	12/18/06 2:25 PM	12/20/06	12/23/06 12:33 AM
0612442-013	12/18/06 2:45 PM	12/20/06	12/23/06 12:33 AM	0612442-015	12/19/06 8:50 AM	12/20/06	12/22/06 9:08 PM
0612442-018	12/19/06 3:45 PM	12/20/06	12/22/06 10:17 PM				

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.





### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0612442

EPA Method SW8015C	Extraction SW3550C					BatchID: 25330			Spiked Sample ID: 0612443-002a			
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	3.5	20	86.7	87.5	0.741	99.4	104	4.70	70 - 130	30	70 - 130	30
%SS:	106	50	98	98	0	95	97	1.31	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25330 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612442-020	12/19/06 4:40 PM	12/20/06	2/22/06 10:59 PM				

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #262157; Omega Termite	Date Sampled: 12/20/06
		Date Received: 12/22/06
	Client Contact: Robert Flory	Date Reported: 01/02/07
	Client P.O.:	Date Completed: 01/02/07

**WorkOrder: 0612543**

January 02, 2007

Dear Robert:

Enclosed are:

- 1). the results of **9** analyzed samples from your **#262157; Omega Termite 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. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

REV 06/25/43

12

<b>McCAMPBELL ANALYTICAL, INC.</b> 1538 Willow Pass Road Bay Point., CA 94565  Telephone: (925) 252-9262      Fax: (925) 252-9269	<b>CHAIN OF CUSTODY RECORD</b> <b>TURN AROUND TIME</b> <input type="checkbox"/> RUSH <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAY
Report To: Robert Flory      Bill To: Same	GeoTracker EDF <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Write On (DW) <input type="checkbox"/>

Company: AEI Consultants  
 2500 Camino Diablo, Suite 200  
 Walnut Creek, CA 94597      E-Mail: rflory@aeiconsultants.com  
 Tel: (925) 944-2899 Ext 122      Fax: (925) 944-2895  
 Project #: 262157      Project Name: Omega Termite  
 Project Location: 807 75<sup>th</sup> Avenue, Oakland, CA  
 Sampler Signature: *[Signature]*

Analysis Request										Other	Comments					
MBTEX (SW8021B) & TPH as Gas (SW8015Cm)	TPH as Diesel (SW8015Cm)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	HVOCs EPA 8260 (8010 list)	BTEX ONLY (EPA 602 / 8020)	Pesticides EPA 608 / 8080	PCBs EPA 608 / 8080	VOCs EPA 624 / 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	Halogenated VOCs (8260B - 8010 Target List)	
02-7-29	02-7	12/29/02	1055	1	2	X										
02-7-34	02-7		1120	1												
02-8-11	02-8		1405	1												
02-8-20			1435	1												labelled 8/21
02-8-26			1445	1												
02-8-31			1500	1												
02-6-11	02-6	12/21/02	0835	1												
02-6-16			0850	1												
02-6-21			0905	1												
02-6-26			0920	1												
02-5-16	02-5		1300	1												
02-5-21			1325	1												labelled 5/26
02-5-31			1330	1												

Relinquished By: <i>[Signature]</i>	Date: 12/22/02	Time: 12:35	Received By: <i>[Signature]</i>
Relinquished By: <i>[Signature]</i>	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/° 8.6°

VOAS	O&G	METALS	OTHER
GOOD CONDITION <input checked="" type="checkbox"/>			
HEAD SPACE ABSENT <input checked="" type="checkbox"/>			
DECHLORINATED IN LAB <input type="checkbox"/>	PRESERVED IN LAB <input checked="" type="checkbox"/>		

**McCAMPBELL ANALYTICAL, INC.**

1538 Willow Pass Road  
Bay Point., CA 94565

Telephone: (925) 252-9262

Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Report To: Robert Flory      Bill To: Same  
Company: AEI Consultants  
2500 Camino Diablo, Suite 200  
Walnut Creek, CA 94597      E-Mail: rflory@aeiconsultants.com  
Tel: (925) 944-2899 Ext 122      Fax: (925) 944-2895  
Project #: 262157      Project Name: Omega Termite  
Project Location: 807 75<sup>th</sup> Avenue, Oakland, CA  
Sampler Signature: *[Signature]*

**Analysis Request**

**Other**

**Comments**

- MBTEX (SW8021B) & TPH as Gas (SW8015Cm)
- TPH as Diesel (SW8015Cm)
- Total Petroleum Oil & Grease (5520 E&F/B&F)
- Total Petroleum Hydrocarbons (418.1)
- HVOCs EPA 8260 (8010 list)
- BTEX ONLY (EPA 602 / 8020)
- Pesticides EPA 608 / 8080
- PCBs EPA 608 / 8080
- VOCs EPA 624 / 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
- Halogenated VOCs (8260B - 8010 Target List)

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED								
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other					
02-1-12	02-1	12/21/05	1605	1	3/6	X						X							
02-1-17	↓	↓	1645	1		X						X							
02-1-7	↓	↓	1550	1		X						X							

Relinquished By: *[Signature]*      Date: 12/22/05      Time: 12:35  
Received By: *[Signature]*

Relinquished By: \_\_\_\_\_      Date: \_\_\_\_\_      Time: \_\_\_\_\_  
Received By: \_\_\_\_\_

Relinquished By: \_\_\_\_\_      Date: \_\_\_\_\_      Time: \_\_\_\_\_  
Received By: \_\_\_\_\_

ICE/t° \_\_\_\_\_      PRESERVATION \_\_\_\_\_  
GOOD CONDITION \_\_\_\_\_      APPROPRIATE \_\_\_\_\_  
HEAD SPACE ABSENT \_\_\_\_\_      CONTAINERS \_\_\_\_\_  
DECHLORINATED IN LAB \_\_\_\_\_      PERSERVED IN LAB \_\_\_\_\_

VOAS    O&G    METALS    OTHER

**McC Campbell Analytical, Inc.**



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

**CHAIN-OF-CUSTODY RECORD**

**WorkOrder: 0612543**

**ClientID: AEL**

EDF

Fax

Email

HardCopy

ThirdParty

**Report to:**

Robert Flory  
AEI Consultants  
2500 Camino Diablo, Ste. #200  
Walnut Creek, CA 94597

Email: rflory@aeiconsultants.com  
TEL: (925) 283-6000 FAX: (925) 283-6121  
ProjectNo: #262157; Omega Termite  
PO:

**Bill to:**

Denise Mockel  
AEI Consultants  
2500 Camino Diablo, Ste. #200  
Walnut Creek, CA 94597

**Requested TAT: 5 days**

*Date Received: 12/22/2006*

*Date Printed: 12/27/2006*

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12			
0612543-001	OZ-7-29	Soil	12/20/06 10:55:00	<input type="checkbox"/>	A	A													
0612543-003	OZ-8-11	Soil	12/20/06 2:05:00	<input type="checkbox"/>	A	A													
0612543-006	OZ-8-31	Soil	12/20/06 3:00:00	<input type="checkbox"/>	A	A													
0612543-007	OZ-6-11	Soil	12/21/06 8:35:00	<input type="checkbox"/>	A	A													
0612543-009	OZ-6-21	Soil	12/21/06 9:05:00	<input type="checkbox"/>	A	A													
0612543-010	OZ-6-26	Soil	12/21/06 9:20:00	<input type="checkbox"/>	A	A													
0612543-011	OZ-5-16	Soil	12/21/06 1:00:00	<input type="checkbox"/>	A	A													
0612543-013	OZ-5-31	Soil	12/21/06 1:30:00	<input type="checkbox"/>	A	A													
0612543-014	OZ-1-12	Soil	12/21/06 4:05:00	<input type="checkbox"/>	A	A													

**Test Legend:**

1	G-MBTX_S	2	TPH(D)_S	3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Melissa Valles**

**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.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #262157; Omega Termite	Date Sampled: 12/20/06-12/21/06
		Date Received: 12/22/06
	Client Contact: Robert Flory	Date Extracted: 12/22/06
	Client P.O.:	Date Analyzed 12/23/06-12/28/06

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0612543

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	OZ-7-29	S	12,g,m	ND	ND	ND	ND	ND	1	71
003A	OZ-8-11	S	9.4,a,m	ND	0.012	0.047	0.040	0.026	1	117
006A	OZ-8-31	S	28,a,m	ND<0.10	0.061	0.15	0.32	0.17	2	70
007A	OZ-6-11	S	31,a	ND<0.25	0.18	0.14	ND<0.025	0.064	5	107
009A	OZ-6-21	S	17,g,m	ND	0.10	ND	ND	0.034	1	73
010A	OZ-6-26	S	200,g,m	ND<0.50	ND<0.050	ND<0.050	0.067	0.17	10	113
011A	OZ-5-16	S	34,a	ND<0.50	0.63	0.13	0.42	1.4	10	97
013A	OZ-5-31	S	1.3,a	ND	0.047	ND	0.011	0.041	1	90
014A	OZ-1-12	S	ND	ND	ND	ND	ND	ND	1	89

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA	NA	NA	NA	NA	1	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	1	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/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 McC Campbell 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 ~1 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; n) TPH(g) value derived using a client specified carbon range; o) results are reported on a dry weight basis; p) see attached narrative.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #262157; Omega Termite	Date Sampled: 12/20/06-12/21/06
	Client Contact: Robert Flory	Date Received: 12/22/06
	Client P.O.:	Date Analyzed: 12/24/06-12/29/06
		Date Extracted: 12/22/06

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

Extraction method SW3550C

Analytical methods SW8015C

Work Order: 0612543

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0612543-001A	OZ-7-29	S	5.9,k	1	100
0612543-003A	OZ-8-11	S	2.0,k	1	100
0612543-006A	OZ-8-31	S	19,g,d,b	1	108
0612543-007A	OZ-6-11	S	22,k	1	113
0612543-009A	OZ-6-21	S	22,k	1	110
0612543-010A	OZ-6-26	S	240,k	1	112
0612543-011A	OZ-5-16	S	22,a,d	1	110
0612543-013A	OZ-5-31	S	4.0,a	1	110
0612543-014A	OZ-1-12	S	ND	1	111

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

\* 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 McC Campbell 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 ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; o) results are reported on a dry weight basis.



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder 0612543

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 25394			Spiked Sample ID: 0612537-003A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	0.60	114	113	1.20	112	110	1.60	70 - 130	30	70 - 130	30
MTBE	ND	0.10	96.9	93.8	3.18	87.3	98.7	12.2	70 - 130	30	70 - 130	30
Benzene	ND	0.10	91.7	96.4	4.98	97.7	103	4.84	70 - 130	30	70 - 130	30
Toluene	ND	0.10	82.8	87.2	5.20	87	92.9	6.53	70 - 130	30	70 - 130	30
Ethylbenzene	ND	0.10	91.3	95.9	4.91	96.3	99.3	3.06	70 - 130	30	70 - 130	30
Xylenes	ND	0.30	91	95	4.30	95	95.7	0.699	70 - 130	30	70 - 130	30
%SS:	86	0.10	76	81	6.37	89	85	4.60	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25394 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612543-001	12/20/06 10:55 AM	12/22/06	12/27/06 4:24 PM	0612543-003	12/20/06 2:05 PM	12/22/06	12/27/06 5:30 PM
0612543-006	12/20/06 3:00 PM	12/22/06	12/27/06 8:15 PM	0612543-007	12/21/06 8:35 AM	12/22/06	12/28/06 10:08 PM
0612543-009	12/21/06 9:05 AM	12/22/06	12/27/06 6:03 PM	0612543-010	12/21/06 9:20 AM	12/22/06	12/23/06 11:46 AM
0612543-011	12/21/06 1:00 PM	12/22/06	12/23/06 12:18 PM	0612543-013	12/21/06 1:30 PM	12/22/06	12/28/06 12:34 AM
0612543-014	12/21/06 4:05 PM	12/22/06	12/27/06 10:25 PM				

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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





### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0612543

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 25395			Spiked Sample ID: 0612537-003A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	ND	20	96.7	97.5	0.818	109	111	2.51	70 - 130	30	70 - 130	30
%SS:	101	50	100	101	1.40	112	110	1.45	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25395 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612543-001A	12/20/06 10:55 AM	12/22/06	12/24/06 10:19 AM	0612543-003A	12/20/06 2:05 PM	12/22/06	12/24/06 11:27 AM
0612543-006A	12/20/06 3:00 PM	12/22/06	12/29/06 4:34 AM	0612543-007A	12/21/06 8:35 AM	12/22/06	12/24/06 4:37 AM
0612543-009A	12/21/06 9:05 AM	12/22/06	12/24/06 5:46 AM	0612543-010A	12/21/06 9:20 AM	12/22/06	12/24/06 6:54 AM
0612543-011A	12/21/06 1:00 PM	12/22/06	12/24/06 8:02 AM	0612543-013A	12/21/06 1:30 PM	12/22/06	12/24/06 9:11 AM
0612543-014A	12/21/06 4:05 PM	12/22/06	12/24/06 10:19 AM				

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the 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.

**APPENDIX E**

**Groundwater Analyses  
With  
Chain of Custody Documentation**



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #115483; Omega Termite	Date Sampled: 01/02/07
		Date Received: 01/02/07
	Client Contact: Robert Flory	Date Reported: 01/10/07
	Client P.O.:	Date Completed: 01/10/07

**WorkOrder: 0701018**

January 10, 2007

Dear Robert:

Enclosed are:

- 1). the results of **11** analyzed samples from your **#115483; Omega Termite 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. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager

**McCAMPBELL ANALYTICAL, INC.**

1538 Willow Pass Road  
Bay Point, CA 94565

Telephone: (925) 252-9262

Fax: (925) 252-9269

AEL 0701018-~~00~~

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Report To: Robert Flory; Ricky Bradford Bill To: Same  
Company: AEI Consultants  
2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597  
E-Mail: rflory@aeiconsultants.com; rbradford@aeiconsultants.com  
Tel: (925) 944-2899, ext. 122 Fax: (925) 944-2895  
Project #: 115483 Project Name: Omega Termite  
Project Location: 807 75<sup>th</sup> Avenue  
Sampler Signature: *Adam New*

Analysis Request

Other Comments

TPH as gas w/ BTEX & MTBE (SW8021B/8015Cm)  
TPH as diesel (SW8015C)  
TPH as motor oil (SW8015C)  
Total Petroleum Oil & Grease (5520 E&F/B&F)  
Halogenated VOCs (SW8260B i.e., 8010 list)  
BTEX ONLY1 (SW8021B)  
PCBs EPA 608 / 8080  
Fuel Additives (SW8260B) inc, EDB, TCA  
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

+1  
+  
+  
+  
+1  
+  
+  
+  
+  
+  
+

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED								
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other					
MW-1		12/07	12:55	4	0/L	X						X	X						
MW-2			12:40			X						X	X						
MW-3			11:58			X						X	X						
MW-4			11:51			X						X	X						
TW-5			<del>11:58</del>			X						X	X						DAMAGED
MW-6			12:28			X						X	X						
MW-7			12:18			X						X	X						
MW-8			12:30			X						X	X						
MW-9			12:48			X						X	X						
MW-10			12:00			X						X	X						
MW-11			12:07			X						X	X						
MW-12			7:57			X						X	X						

Relinquished By: <i>Adam New</i>	Date: 12/07	Time: 7:10a	Received By: <i>[Signature]</i>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 12.6C  
GOOD CONDITION \_\_\_\_\_  
HEAD SPACE ABSENT \_\_\_\_\_  
DECHLORINATED IN LAB \_\_\_\_\_

PRESERVATION APPROPRIATE \_\_\_\_\_  
CONTAINERS \_\_\_\_\_  
PERSERVED IN LAB \_\_\_\_\_

VOAS \_\_\_\_\_ O&G \_\_\_\_\_ METALS \_\_\_\_\_ OTHER \_\_\_\_\_

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0701018

ClientID: AEL

EDF

Fax

Email

HardCopy

ThirdParty

**Report to:**

Robert Flory  
AEI Consultants  
2500 Camino Diablo, Ste. #200  
Walnut Creek, CA 94597

Email: rflory@aeiconsultants.com  
TEL: (925) 283-600 FAX: (925) 283-612  
ProjectNo: #115483; Omega Termite  
PO:

**Bill to**

Denise Mockel  
AEI Consultants  
2500 Camino Diablo, Ste. #200  
Walnut Creek, CA 94597  
dmockel@aeiconsultants.com

**Requested TAT: 5 days**

**Date Received: 01/02/2007**

**Date Printed: 01/02/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0701018-001	MW-1	Water	1/2/2007 12:55:00	<input type="checkbox"/>		A	A	B									
0701018-002	MW-2	Water	1/2/2007 12:40:00	<input type="checkbox"/>		A		B									
0701018-003	MW-3	Water	1/2/2007 11:50:00	<input type="checkbox"/>		A		B									
0701018-004	MW-4	Water	1/2/2007 11:51:00	<input type="checkbox"/>		A		B									
0701018-005	MW-6	Water	1/2/2007 12:28:00	<input type="checkbox"/>		A		B									
0701018-006	MW-7	Water	1/2/2007 12:14:00	<input type="checkbox"/>		A		B									
0701018-007	MW-8	Water	1/2/2007 12:31:00	<input type="checkbox"/>		A		B									
0701018-008	MW-9	Water	1/2/2007 12:48:00	<input type="checkbox"/>		A		B									
0701018-009	MW-10	Water	1/2/2007	<input type="checkbox"/>		A		B									
0701018-010	MW-11	Water	1/2/2007	<input type="checkbox"/>	B	A		C									
0701018-011	MW-12	Water	1/2/2007 7:57:00	<input type="checkbox"/>	B	A		C									

**Test Legend:**

1	5-OXYS+PBSCV_W	2	G-MBTEX_W	3	PREF REPORT	4	TPH(DMO)_W	5	
6		7		8		9		10	
11		12							

**Prepared by: Sheli Cryderman**

**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.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #115483; Omega Termite	Date Sampled: 01/02/07
	Client Contact: Robert Flory	Date Received: 01/02/07
	Client P.O.:	Date Extracted: 01/03/07
		Date Analyzed: 01/03/07

## Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0701018

Lab ID	0701018-010B	0701018-011B			Reporting Limit for DF =1
Client ID	MW-11	MW-12			
Matrix	W	W			
DF	1	1			

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND			NA	0.5
t-Butyl alcohol (TBA)	ND	ND			NA	5.0
1,2-Dibromoethane (EDB)	ND	ND			NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	2.9			NA	0.5
Diisopropyl ether (DIPE)	ND	ND			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND			NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND			NA	0.5

### Surrogate Recoveries (%)

%SS1:	98	98		
-------	----	----	--	--

### Comments

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #115483; Omega Termite	Date Sampled: 01/02/07
		Date Received: 01/02/07
	Client Contact: Robert Flory	Date Extracted: 01/05/07-01/07/07
	Client P.O.:	Date Analyzed 01/05/07-01/07/07

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0701018

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	410,a,i	ND	150	0.55	1.0	6.7	1	97
002A	MW-2	W	3800,a	ND<25	11	7.6	110	120	5	115
003A	MW-3	W	380,a	ND	33	1.3	32	17	1	104
004A	MW-4	W	160,a	ND	27	ND	10	2.0	1	93
005A	MW-6	W	ND,i	ND	ND	ND	ND	ND	1	93
006A	MW-7	W	ND	ND	ND	ND	ND	ND	1	92
007A	MW-8	W	ND	ND	ND	ND	ND	ND	1	98
008A	MW-9	W	88,a	ND	5.1	0.67	ND	ND	1	100
009A	MW-10	W	ND	ND	ND	ND	ND	ND	1	89
010A	MW-11	W	160,b	ND	ND	ND	ND	1.7	1	117
011A	MW-12	W	53,a	ND	1.4	ND	ND	0.95	1	108

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 mg/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 McC Campbell 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 ~1 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; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #115483; Omega Termite	Date Sampled: 01/02/07
	Client Contact: Robert Flory	Date Received: 01/02/07
	Client P.O.:	Date Analyzed: 01/06/07-01/09/07

### Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons as Diesel and Motor Oil\*

Extraction method: SW3510C

Analytical methods: SW8015C

Work Order: 0701018

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0701018-001B	MW-1	W	240,b,i	ND	1	112
0701018-002B	MW-2	W	2100,d,b	ND	1	113
0701018-003B	MW-3	W	180,d,b	ND	1	104
0701018-004B	MW-4	W	78,d	ND	1	116
0701018-005B	MW-6	W	120,b,i	ND	1	118
0701018-006B	MW-7	W	99,b,f	ND	1	103
0701018-007B	MW-8	W	70,b	ND	1	114
0701018-008B	MW-9	W	4300,a	1000	1	118
0701018-009B	MW-10	W	490,k	ND	1	113
0701018-010C	MW-11	W	2700,k	ND	1	112
0701018-011C	MW-12	W	130,b,f	ND	1	103

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

\* 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 McC Campbell 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 ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirits; p) see attached narrative.





### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0701018

EPA Method SW8015C		Extraction SW3510C				BatchID: 25501			Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	113	117	3.11	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	106	108	2.42	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25501 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0701018-001	1/02/07 12:55 PM	1/02/07	1/06/07 6:26 AM	0701018-002	1/02/07 12:40 PM	1/02/07	1/06/07 9:51 AM
0701018-003	1/02/07 11:50 AM	1/02/07	1/08/07 11:00 PM	0701018-004	1/02/07 11:51 AM	1/02/07	1/06/07 12:08 PM
0701018-005	1/02/07 12:28 PM	1/02/07	1/06/07 1:17 PM	0701018-006	1/02/07 12:14 PM	1/02/07	1/09/07 3:29 AM
0701018-007	1/02/07 12:31 PM	1/02/07	1/06/07 3:33 PM	0701018-008	1/02/07 12:48 PM	1/02/07	1/06/07 4:42 PM
0701018-009	1/02/07	1/02/07	1/06/07 5:50 PM	0701018-010	1/02/07	1/02/07	1/06/07 8:07 PM
0701018-011	1/02/07 7:57 AM	1/02/07	1/09/07 7:25 PM				

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0701018

EPA Method SW8260B		Extraction SW5030B				BatchID: 25513			Spiked Sample ID: 0701019-008A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	96	96.3	0.257	87	89.4	2.67	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	105	110	4.55	101	100	0.586	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND<5.0	10	103	104	1.31	97.6	102	4.09	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	112	111	1.42	102	106	3.44	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	112	112	0	100	103	3.17	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	102	104	1.88	92	95.6	3.83	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND<5.0	10	109	108	0.627	96.5	101	4.09	70 - 130	30	70 - 130	30
%SS1:	98	10	109	109	0	105	104	0.926	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25513 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0701018-010	1/02/07	1/03/07	1/03/07 7:06 PM	0701018-011	1/02/07 7:57 AM	1/03/07	1/03/07 7:53 PM

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0701018

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 25511			Spiked Sample ID: 0701017-002A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	60	83.4	104	22.0	95.3	93.2	2.20	70 - 130	30	70 - 130	30
MTBE	ND	10	89.6	88.6	1.15	87.3	83.3	4.68	70 - 130	30	70 - 130	30
Benzene	ND	10	93.7	89.4	4.67	93.9	88.1	6.38	70 - 130	30	70 - 130	30
Toluene	ND	10	88	82.8	6.05	89.7	82.3	8.65	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	92.9	88.5	4.87	94.2	88	6.75	70 - 130	30	70 - 130	30
Xylenes	ND	30	86	85	1.17	89.7	84.7	5.74	70 - 130	30	70 - 130	30
%SS:	90	10	98	97	0.971	107	96	10.9	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25511 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0701018-001	1/02/07 12:55 PM	1/06/07	1/06/07 5:14 AM	0701018-002	1/02/07 12:40 PM	1/07/07	1/07/07 2:32 AM
0701018-003	1/02/07 11:50 AM	1/06/07	1/06/07 6:19 AM	0701018-004	1/02/07 11:51 AM	1/06/07	1/06/07 11:07 AM
0701018-005	1/02/07 12:28 PM	1/06/07	1/06/07 6:51 AM	0701018-006	1/02/07 12:14 PM	1/06/07	1/06/07 7:23 AM
0701018-007	1/02/07 12:31 PM	1/06/07	1/06/07 8:27 AM	0701018-008	1/02/07 12:48 PM	1/06/07	1/06/07 6:24 PM
0701018-009	1/02/07	1/06/07	1/06/07 4:09 PM				

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0701018

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 25512			Spiked Sample ID: 0701018-011A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	60	93.4	91	2.63	93.7	99	5.50	70 - 130	30	70 - 130	30
MTBE	ND	10	77.3	79.9	3.26	79.3	82.3	3.62	70 - 130	30	70 - 130	30
Benzene	1.4	10	77.4	78.1	0.815	87.4	93.5	6.71	70 - 130	30	70 - 130	30
Toluene	ND	10	90	90.9	1.05	87	92.8	6.50	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	93.3	93.9	0.614	89.6	95.4	6.35	70 - 130	30	70 - 130	30
Xylenes	0.95	30	100	104	3.17	100	107	6.45	70 - 130	30	70 - 130	30
%SS:	108	10	93	91	2.32	91	94	2.79	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25512 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0701018-010	1/02/07	1/06/07	1/06/07 9:32 AM	0701018-011	1/02/07 7:57 AM	1/05/07	1/05/07 1:16 PM

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #115483; Omega Termite	Date Sampled: 01/02/07
		Date Received: 01/02/07
	Client Contact: Robert Flory	Date Reported: 01/18/07
	Client P.O.:	Date Completed: 01/18/07

**WorkOrder: 0701018**

January 18, 2007

Dear Robert:

Enclosed are:

- 1). the results of **6** analyzed samples from your **#115483; Omega Termite 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. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager



**McC Campbell Analytical, Inc.**



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

**CHAIN-OF-CUSTODY RECORD**

**WorkOrder: 0701018**

**ClientID: AEL**

EDF

Fax

Email

HardCopy

ThirdParty

**Report to:**

Robert Flory  
 AEI Consultants  
 2500 Camino Diablo, Ste. #200  
 Walnut Creek, CA 94597

Email: rflory@aeiconsultants.com  
 TEL: (925) 283-6000 FAX: (925) 283-6121  
 ProjectNo: #115483; Omega Termite  
 PO:

**Bill to:**

Denise Mockel  
 AEI Consultants  
 2500 Camino Diablo, Ste. #200  
 Walnut Creek, CA 94597

**Requested TAT: 5 days**

*Date Received:* 01/02/2007

*Date Add-On:* 01/11/2007

*Date Printed:* 01/11/2007

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12			
0701018-001	MW-1	Water	1/2/07 12:55:00 PM	<input type="checkbox"/>	C														
0701018-002	MW-2	Water	1/2/07 12:40:00 PM	<input type="checkbox"/>	C														
0701018-003	MW-3	Water	1/2/07 11:50:00 AM	<input type="checkbox"/>	C														
0701018-004	MW-4	Water	1/2/07 11:51:00 AM	<input type="checkbox"/>	C														
0701018-008	MW-9	Water	1/2/07 12:48:00 PM	<input type="checkbox"/>	C														
0701018-009	MW-10	Water	1/2/07	<input type="checkbox"/>	C														

**Test Legend:**

1	5-OXYS+PBSCV_W	2		3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Sheli Cryderman

**Comments:** 5-Oxys+Pb Scavs added 1/11/07 per fax 5 day

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.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #115483; Omega Termite	Date Sampled: 01/02/07
	Client Contact: Robert Flory	Date Received: 01/02/07
	Client P.O.:	Date Extracted: 01/12/07-01/13/07
		Date Analyzed: 01/12/07-01/13/07

### Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0701018

Lab ID	0701018-001C	0701018-002C	0701018-003C	0701018-004C	Reporting Limit for DF =1	
Client ID	MW-1	MW-2	MW-3	MW-4		
Matrix	W	W	W	W		
DF	1	2	1	1		

Compound	Concentration				ug/kg	ug/L
	tert-Amyl methyl ether (TAME)	ND	ND<1.0	ND	ND	NA
t-Butyl alcohol (TBA)	9.7	ND<10	ND	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND<1.0	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	4.6	ND<1.0	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND<1.0	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND<1.0	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	0.97	ND<1.0	0.55	1.0	NA	0.5

### Surrogate Recoveries (%)

%SS1:	99	101	94	96	
-------	----	-----	----	----	--

<b>Comments</b>	i	j			
-----------------	---	---	--	--	--

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.





# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants  2500 Camino Diablo, Ste. #200  Walnut Creek, CA 94597	Client Project ID: #115483; Omega Termite	Date Sampled: 01/02/07
	Client Contact: Robert Flory	Date Received: 01/02/07
	Client P.O.:	Date Extracted: 01/12/07-01/13/07
		Date Analyzed: 01/12/07-01/13/07

## Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0701018

Lab ID	0701018-008C	0701018-009C			Reporting Limit for DF =1
Client ID	MW-9	MW-10			
Matrix	W	W			
DF	1	1			

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND			NA	0.5
t-Butyl alcohol (TBA)	ND	ND			NA	5.0
1,2-Dibromoethane (EDB)	ND	ND			NA	0.5
1,2-Dichloroethane (1,2-DCA)	0.62	ND			NA	0.5
Diisopropyl ether (DIPE)	ND	ND			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND			NA	0.5
Methyl-t-butyl ether (MTBE)	1.6	1.1			NA	0.5

### Surrogate Recoveries (%)

%SS1:	96	96			
-------	----	----	--	--	--

### Comments

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

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0701018

EPA Method SW8260B	Extraction SW5030B			BatchID: 25671			Spiked Sample ID: 0701229-016B					
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	90.5	93.4	3.16	94.3	94.4	0.0988	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	101	110	9.27	96.1	104	8.12	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	99.8	103	3.43	112	108	3.16	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	111	114	2.57	115	114	0.695	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	105	107	1.50	109	108	0.770	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	96.9	101	4.23	103	101	1.55	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	98.5	102	3.11	105	106	0.142	70 - 130	30	70 - 130	30
%SS1:	104	10	109	111	1.49	111	109	2.12	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 25671 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0701018-001	1/02/07 12:55 PM	1/12/07	1/12/07 8:46 PM	0701018-002	1/02/07 12:40 PM	1/12/07	1/12/07 8:02 PM
0701018-003	1/02/07 11:50 AM	1/13/07	1/13/07 4:42 AM	0701018-004	1/02/07 11:51 AM	1/13/07	1/13/07 5:24 AM
0701018-008	1/02/07 12:48 PM	1/13/07	1/13/07 6:06 AM	0701018-009	1/02/07	1/13/07	1/13/07 6:48 AM

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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.