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Alameda County
Environmental Health

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July 25, 2007

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

Work Plan – Soil Vapor Investigation

1353 International Blvd.
Oakland, CA
AEI Project # 272297
SLIC Case RO0002476

Dear Mr. Wickham:

The following work plan has been prepared on behalf of Mr. Marc Foss of Foss Lampshade Studios, and outlines the scope of work planned at the above referenced property. AEI Consultants (AEI) has been retained by Mr. Foss to provide environmental engineering and consulting services associated with a release of chlorinated volatile organic compounds (CVOCs) at the site. This work plan is in response to the Alameda County Health Care Services Agency (ACHCSA) letter to Mr. Norman Foss dated February 7, 2007.

SITE DESCRIPTION AND BACKGROUND

The subject property currently supports the operation of a tropical fish and aquarium supply store, and there are no future plans to alter the tenant or use of the property. Formerly, the property operated as Style Center Cleaners, a dry cleaning facility for approximately 50 years until approximately 2001 (Figure 2: Site Plan). The floor of the building is wooden with a crawl space separating the floor from the ground. The property is surrounded by commercial properties bounded by International Boulevard to the north, a construction supply yard to the east followed by 14th Avenue, Foss Lampshade Studios to the south, and a commercial public storage and office building (located approximately 6 feet in elevation higher than the dry cleaner) to the west. Refer to Figure 2 for the extended site plan.

On August 26, 1996, Ms. Madhulla Logan of the ACHCSA requested that a soil and groundwater investigation be performed on the property. The investigation was requested to determine if the on-site dry cleaning facility was a source of solvent contamination found in the groundwater at the former General Tire site, located adjacent to the subject property.

Three groundwater monitoring wells were installed at the former General Tire site between March, 1992 and September, 1993 by Jonas & Associates, Inc. The wells (labeled MW-1, MW-2 and MW-3) were installed to investigate petroleum hydrocarbon contamination. During

quarterly monitoring of the wells, solvents were present in groundwater samples collected from MW-2 at concentrations ranging from 14 µg/l to 44 µg/l.

AEI performed a subsurface investigation at the subject property on December 13, 1996 (Ref. 1). The investigation included advancing five soil borings (BH-1 through BH-5). Concentrations of tetrachloroethene (PCE) were detected in all analyzed soil samples at concentrations ranging from 8.7 µg/kg to 150 µg/kg. Trichloroethene (TCE) and chloroform were detected in the soil at maximum concentrations of 0.45 µg/kg and 640 µg/kg, respectively. No other volatile halocarbons were detected above the method detection limit. PCE, TCE and chloroform were present in grab groundwater samples collected from four of the soil borings at maximum concentrations of 1100 µg/l, 3.0 µg/l and 4.8 µg/l, respectively.

On July 3, 1997, AEI installed a single groundwater monitoring well (AE-1) located approximately 10 feet down-gradient from the dry cleaning machine (Figure 2, Ref. 2). Groundwater samples were collected from the well on July 31, 1997. Groundwater samples were also collected from MW-1 and MW-2 located on the adjacent site. MW-3 was not sampled. The four wells were surveyed in order to determine groundwater flow direction and gradient during each monitoring episode. Well AE-1 was monitored on a quarterly basis whereas the off-site wells were monitored on a semi-annual basis. No volatile halocarbons were detected in groundwater samples collected from AE-1, the on-site well during the monitoring episodes on July 31, 1997, November 6, 1997 and March 3, 1998 (Ref. 2, 3, 4). Refer to Table 2 for a summary of the analytical results from the first and subsequent groundwater monitoring episodes.

On February 7, 2007, the ACHCSA requested that a Work Plan be submitted to investigate soil vapor beneath the subject site in order to evaluate the possibility for vapor intrusion. The following work plan details the planned soil vapor investigation activities proposed by AEI.

SOIL VAPOR SURVEY

A soil vapor survey to assess potential for vapor intrusion into the building at the subject site is proposed by AEI. The purpose of the survey is determine if known PCE in soil beneath the site is a potential concern for contaminant vapor intrusion into buildings at and in the vicinity of the subject site. Data will be compared against the San Francisco Regional Water Quality Control Board's (RWQCB) Environmental Screening Levels (ESLs) as a preliminary screening tool.

A total of eight (8) primary vapor sampling locations are proposed. Following the collection of these vapor samples, if necessary and/or feasible, additional vapor sampling locations may be advanced (up to ten total borings) depending on the results of the primary samples. The location of the provisional borings will be based on laboratory analysis obtained in the field. Each vapor probe location is expected to be advanced to approximately 5 feet bgs where a soil vapor sample will be collected from permeable soil. The locations of the proposed borings (primary only) are displayed on Figure 3.

Field Operation Procedures

The project will be performed in accordance with generally accepted standards and practices in the field of environmental engineering. Additionally, drilling, soil gas sampling procedures, and sample analyses will be performed based on the *Advisory – Active Soil Gas Investigation*, January 28, 2005, issued by the Department of Toxic Substances Control (DTSC) and Los Angeles RWQCB. Detailed operating procedures and practices are outlined below.

Permits and Clearances

Upon approval of a scope of work for these investigation activities, a soil boring permit application will be submitted to the Alameda County Public Works Agency (ACPWA). Prior to beginning drilling activities, Underground Service Alert (USA) will be notified. All drilling work will be performed by a California C57 licensed drilling contractor working under the direction of AEI professional staff. The selected contractor will have experience performing soil vapor sampling investigations. Once drilling dates have been established, the ACPWA and other parties will be given adequate notification to schedule any necessary inspections and site visits.

Drilling and Sample Collection

In order to obtain the soil gas samples, the temporary soil gas sampling probes will be installed in the proposed locations. The vapor probe consists of hollow $\frac{3}{4}$ inch stainless steel rods with an internally threaded bottom sub and sacrificial tip. At the desired depth, the rods are pulled back, dropping the sacrificial tip. The top of the borehole will be sealed with a temporary seal of hydrated Bentonite and an appropriate leak detection compound utilized. Due to difficult access issues at the site (raised floor with a concrete bottom inside the active fish store) borehole locations and the bentonite seal may be adjusted during sampling. A $\frac{1}{4}$ -inch disposable poly sampling line is then inserted inside the rods and screwed into the end sub. Air is then flushed from the rods prior to sample collection. Samples will be collected into one or more new, disposable sampling syringes. Immediately upon collection, the samples will be analyzed by the onsite mobile laboratory. The first sampling point will be obtained in area of suspected contamination and a purge volume test will be performed per DTSC guidelines. A sample will be collected at 1, 3, and 7 purge volumes and analyzed. The purge volume which yields the highest concentrations will be used for the remainder of the borings.

Should no flow conditions be encountered during vapor sampling or vacuum necessary to induce flow is too high [>10 inches of mercury (in Hg)], a vapor sample will be attempted at a shallower depth. If extensive no flow conditions are encountered, soil matrix sampling in lieu of soil gas sampling may be performed. In this event, the regulatory agency and client will be contacted immediately.

Upon completion of sampling activities, all probes and sampling materials will be removed from the boreholes and each grouted to ground surface in accordance with State and local guidelines.

Sample Analyses

All samples will be analyzed onsite with certified mobile laboratory equipment operated by a chemist qualified and experienced in performing soil gas analyses. Samples will be analyzed for CVOCs by EPA method 8260 along with the leak detection compounds, with appropriate detection limits. Laboratory procedures will include appropriate quality assurance / quality control analyses, including method blanks and use of surrogates during sample analyses.

Equipment Decontamination

Sampling equipment used to sample the soil vapor will be decontaminated between samples using a triple rinse system containing Alconox™ or similar detergent.

REPORTING

AEI will prepare and issue a final report following receipt of all necessary data. The report will include data tables, figures of drilling and sampling locations, and copies of laboratory analytical reports. A written discussion of the methods and findings, and recommendations will be included. AEI will compare findings with RWQCB ESLs to initially determine whether further evaluation is necessary. Site data will be uploaded into the GeoTracker database, as well as an electronic copy of each report, as necessary. The project will be overseen and the report(s) signed by an AEI California registered professional geologist or engineer.

SITE SAFETY

Prior to commencement of field activities, a site safety meeting will be held at a designated command post near the working area. Emergency procedures will be outlined at this meeting, including an explanation of the hazards of the known or suspected chemicals of interest. All site personnel will be in Level D personal protection equipment, which is the anticipated maximum amount of protection needed. A working area will be established with barricades and warning tape to delineate the zone where hard hats and steel-toed shoes must be worn, and where unauthorized personnel will not be allowed. A site safety plan conforming to Part 1910.120 (i) (2) of 29 CFR will be on site at all times during the project.

ESTIMATED SCHEDULE

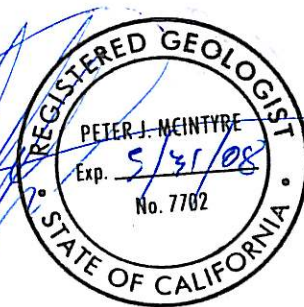
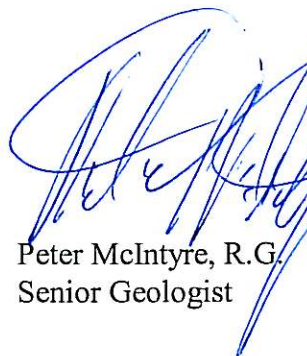
Once a scope of work has been agreed upon by all involved parties, drilling permit applications for the subsurface investigation will be submitted. Upon approval of the permits, field work will be scheduled and the ACPWA as well as the ACHCSA will be notified of the schedule. It is expected that the subsurface investigation will occur within approximately 2 to 3 weeks of permit approval. The final report will be issued approximately 2 months following of receipt of all necessary documentation.

AEI requests your approval to proceed with this project. Please contact the undersigned at (925) 944-2899 if you have any questions or need any additional information.

Sincerely,
AEI Consultants



Jeremy Smith
Project Manager



Peter McIntyre, R.G.
Senior Geologist

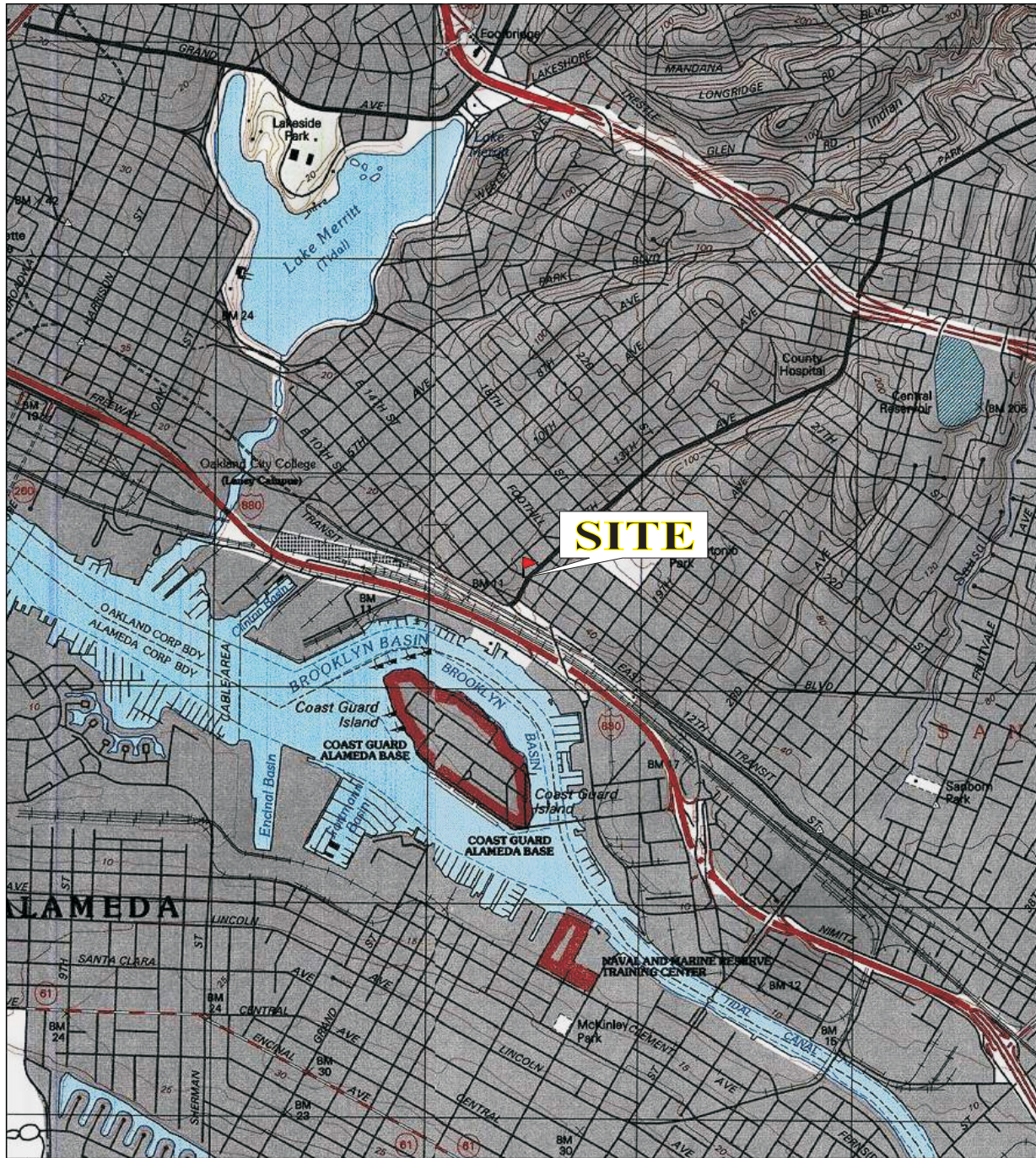
- Figure 1** – Site Location Map
- Figure 2** – Extended Site Plan
- Figure 3** – Site Plan

- Table 1** – Historical Groundwater Sample Data
- Table 2** – Historical Soil Sample Data

Distribution :

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Attn: Marc Foss
1357 International Blvd.
Oakland, CA 94606



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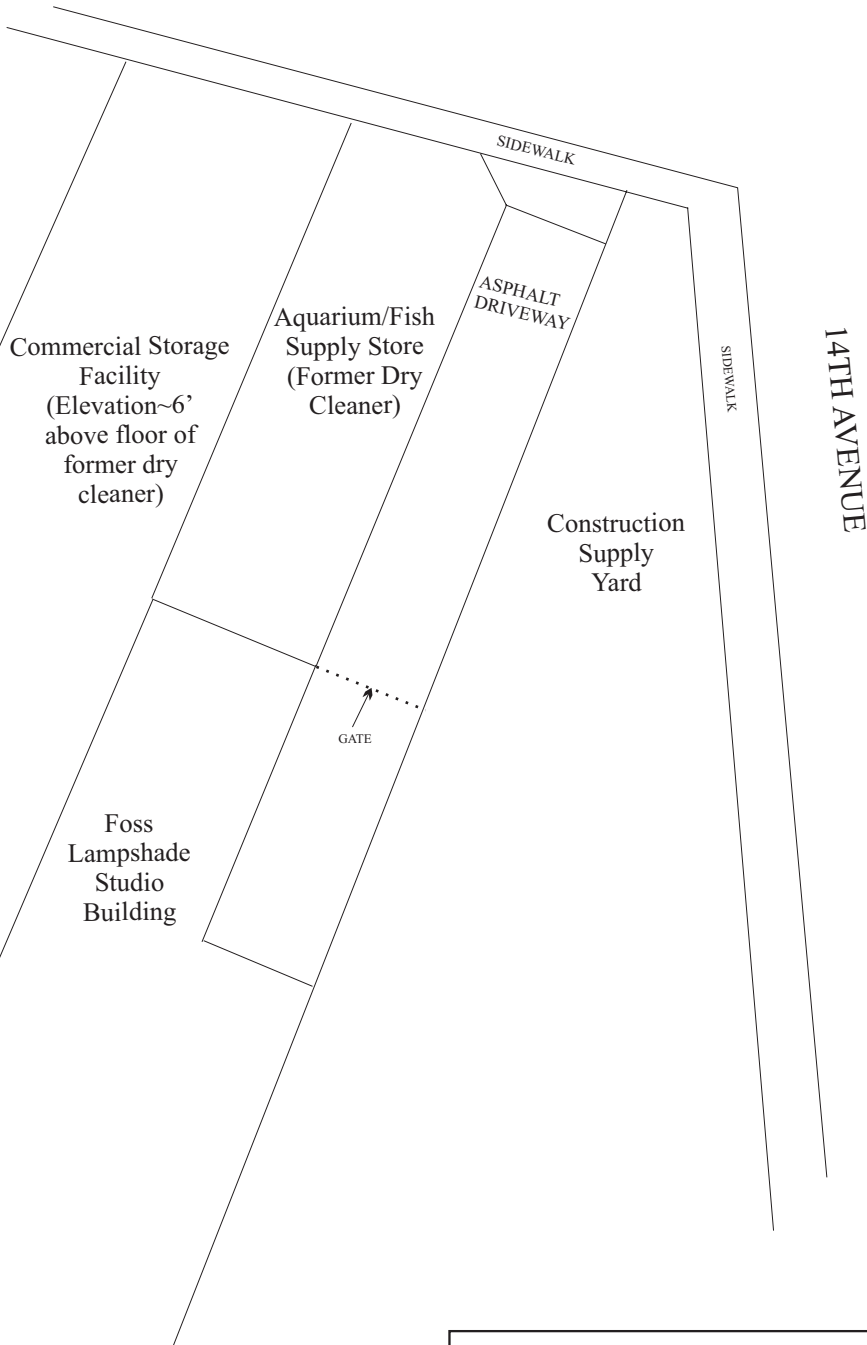
0 1000 FEET 0 500 1000 METERS
 0 5 1 MILE
 Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)

AEI CONSULTANTS 2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597	
SITE LOCATION PLAN	
1353 International Blvd. Oakland, CA 94606	FIGURE 1 Job No: 272297

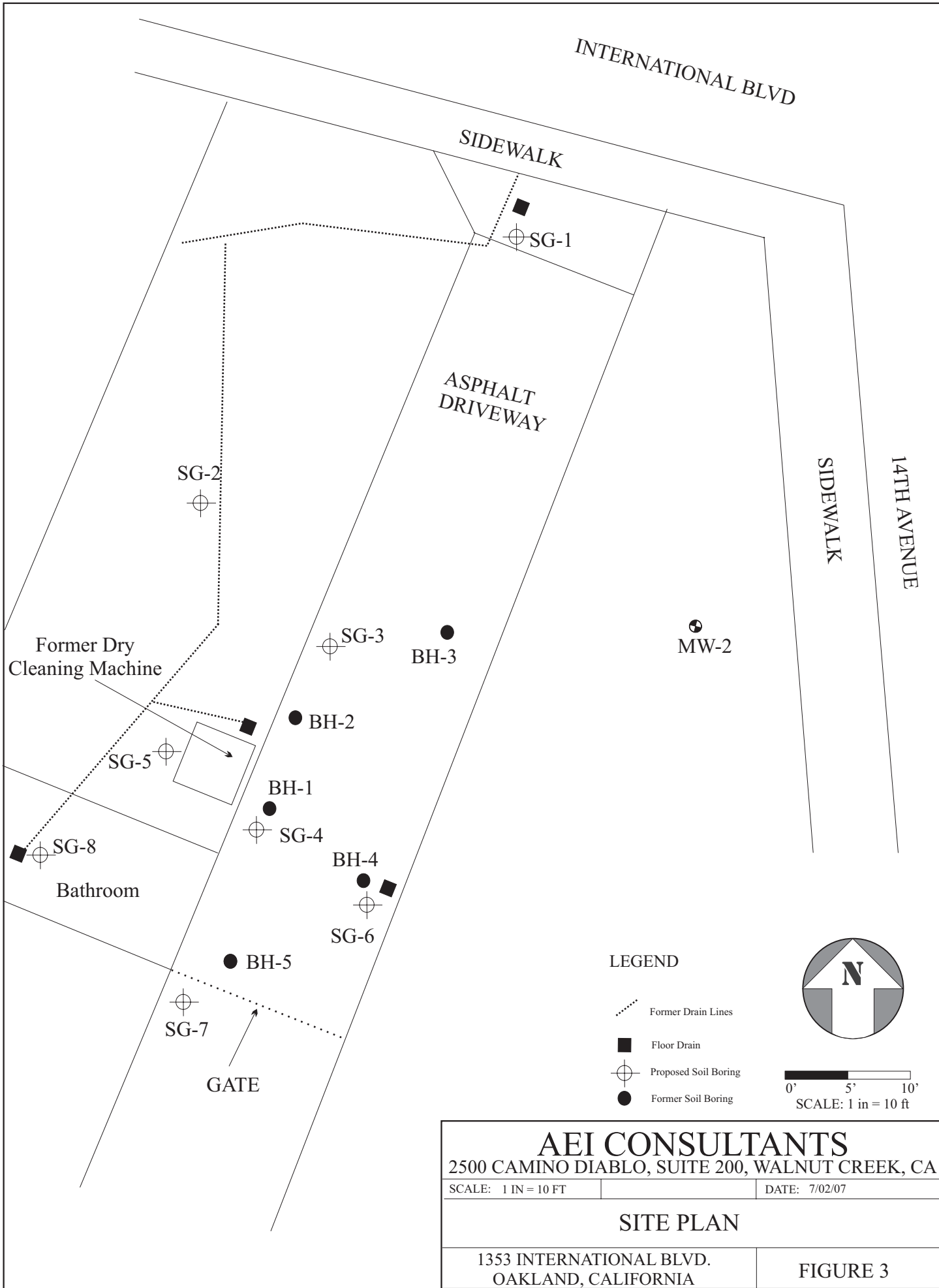
Commercial
Property

Commercial
Property

INTERNATIONAL BLVD



AEI CONSULTANTS	
2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA	
SCALE: Not to Scale	DATE: 7/02/07
EXTENDED SITE PLAN	
1353 INTERNATIONAL BLVD. OAKLAND, CALIFORNIA	FIGURE 2



AEI CONSULTANTS	
2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA	
SCALE: 1 IN = 10 FT	DATE: 7/02/07
SITE PLAN	
1353 INTERNATIONAL BLVD. OAKLAND, CALIFORNIA	FIGURE 3

Table 1
1353 International Blvd., Oakland, CA
Historical Groundwater Sample Data

Sample ID	Date	PCE µg/L	TCE µg/L	1,1-DCE µg/L	c-1,2-DCE µg/L	t-1,2-DCE µg/L	1,1-DCA µg/L	Chloroform µg/L	Vinyl Chloride µg/L
<i>EPA method 601</i>									
<i>Groundwater Monitoring Wells</i>									
AE-1	7/31/1997	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	11/6/1997	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	3/3/1998	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	6/15/1998	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-1	7/31/1997	ND<0.5	ND<0.5	ND<0.5	0.80	ND<0.5	0.63	ND<0.5	ND<0.5
	11/6/1997	NS	NS	NS	NS	NS	NS	NS	NS
	3/3/1998	ND<0.5	0.95	ND<0.5	2.0	ND<0.5	2.0	ND<0.5	ND<0.5
	6/15/1998	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	7/31/1997	27	100	1.4	46	1.9	ND<1.0	ND<1.0	2.3
	11/6/1997	NS	NS	NS	NS	NS	NS	NS	NS
	3/3/1998	3.7	14	0.57	6.6	ND<0.5	ND<0.5	ND<0.5	1.4
	6/15/1998	NS	NS	NS	NS	NS	NS	NS	NS
<i>Soil Borings - December 1996</i>									
BH-1 W	12/16/1996	1,100	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25
BH-3 W	12/16/1996	22	3.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4.8	ND<0.5
BH-4 W	12/16/1996	220	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10.0	ND<10
BH-5 W	12/16/1996	24	0.85	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5

Notes:

PCE = Tetrachloroethene
TCE = Trichloroethene
1,1-DCE = 1,1-Dichloroethene
c-1,2-DCE = cis-1,2-Dichloroethene
t-1,2-DCE = trans-1,2-Dichloroethene
1,1-DCA = 1,1-Dichloroethane
µg/L = micrograms per liter
ND = Not detected
NA = Not analyzed

Compounds not listed not reported at or above the laboratory detection limit. See individual laboratory report for details

Table 2
1353 International Blvd., Oakland, CA
Histoical Soil Sample Data

Sample ID	Date Sampled	PCE µg/kg	TCE µg/kg <i>EPA method 601</i>	Chloroform µg/kg	All Others µg/kg
BH-1, L3 (8')	12/13/1996	87	ND<5.0	640	All < RL
BH-2, L3 (8')	12/13/1996	45	0.034	0.039	All < RL
BH-3, L3 (8')	12/13/1996	150	ND<0.005	ND<0.005	All < RL
BH-4, L3 (8')	12/13/1996	8.7	0.064	0.24	All < RL
BH-5, L3 (8')	12/13/1996	20	0.45	9.6	All < RL

Notes:

PCE = Tetrachloroethene

TCE = Trichloroethene

µg/kg = micrograms per kilogram

See laboratory report for details