

August 8, 2006  
Work Plan 0387.W2

Inspector Jesse Kupers  
City of Oakland Fire Department  
Hazmat Division  
250 Frank Ogawa Plaza, Suite 3341  
Oakland, CA 94612

**RECEIVED**

2:21 pm, Oct 20, 2008

Alameda County  
Environmental Health



**SUBJECT: SOIL EXCAVATION WORK PLAN**  
Brandywine Realty Trust  
2100 Franklin Street  
Oakland, California

Dear Mr. Kupers:

RGA Environmental, Inc. (RGA) is pleased to present this work plan for excavation of oil-impacted soil in the vicinity of the former Underground Storage Tank (UST) at the subject site. In addition, confirmation soil samples will be collected at the perimeter of the area of excavation, groundwater grab samples are proposed to be collected from hand augered boreholes at the perimeter of the excavation, and criteria for case closure are proposed.

The entire site is presently a mass open excavation to a depth of approximately 12 feet below the adjacent sidewalk. The mass excavation has been done in preparation for construction of an office building. The bottom of the former UST was at a depth of approximately 12 feet below the adjacent sidewalk.

The proposed area of oil-impacted soil excavation is the area to the east of the former UST for a radius of approximately ten feet from the former UST. Based on limitations associated with the Franklin Street shoring (located immediately to the west of the former UST), the depth of oil-impacted soil removal will be three feet below the bottom of the existing site mass excavation, which is approximately 15 feet below the adjacent Franklin Street sidewalk. A total of two soil confirmation samples (C1 and C2) will be collected from the sidewalls of the excavation to augment existing information (B5 and B6 soil sample results) regarding oil concentrations in soil at the perimeter of the proposed area of excavation. In addition, a total of three groundwater grab samples are proposed to be collected at proposed confirmation sample collection locations C1, C2 and C3 to augment existing groundwater quality information (groundwater grab samples collected from boreholes B1 and B7 through B12).

A Site Location Map (Figure 1), a Site Plan showing the former UST location (Figure 2), a Site Plan Detail showing the soil sample collection locations at the time of UST removal (Figure 3), a Site Plan Detail showing four soil boring locations (B3 through B6) that were hand augered near the former UST on July 28, 2006 (Figure 4), a Site Plan showing six soil boring locations (B7 through B12) at the site where groundwater grab samples were collected on June 5, 2006 (Figure 5), and a Site Plan Detail showing the proposed area of excavation (Figure 6) are attached with this work plan.

All work will be performed under the direct supervision of an appropriately registered professional. This work plan is prepared in accordance with guidelines set forth in the document "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991 and California Code of Regulations Title 23 Sections 2720-2728.

## BACKGROUND

The subject site has presently been excavated to a depth of approximately 12 feet below the Franklin Street sidewalk for construction of a high-rise office building. During excavation at the site, an UST was discovered on May 12, 2006 at a depth of approximately 8 feet below the Franklin Street sidewalk (see Figure 2). Inspection of the UST showed that the UST had been previously filled with concrete. The UST was measured to be approximately four feet four inches in diameter and approximately 12 feet in length. The UST was removed from the UST pit and demolished and stored on site on May 23, 2006.

At the time of UST removal, soil samples were collected from directly beneath the UST following excavation of approximately a one foot thick layer of loose, oily soil (samples T1-0.0 and T2-0.0). Two additional soil samples were collected at a depth of two feet below the first two samples (samples T1-2.0 and T2-2.0). In addition, one groundwater grab sample was collected from borehole B1 at a depth of five feet beneath the bottom of the UST. A petroleum sheen was observed on the water in collected from the borehole. Borehole B1 was hand augered directly beneath the UST. The soil sample and borehole locations are shown in Figure 3.

The soil sample results showed that MTBE and benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected in any of the samples. However, Total Petroleum Hydrocarbons as Diesel (TPH-D) were detected in the deeper soil samples at concentrations ranging up to 990 mg/kg, and Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) were detected in the deeper soil samples at concentrations ranging up to 880 mg/kg (see Table 1). The laboratory identified the TPH-D results as fuel oil-range compounds. The groundwater grab sample from borehole B1 showed that MTBE and BTEX were not detected, with TPH-D and TPH-MO were detected at concentrations of 64,000 and 57,000 ug/L, respectively (see Table 3). The laboratory identified the TPH-D results as diesel-range compounds with no recognizable pattern and as oil-range compounds.

Borehole B2 was hand augered near the UST pit to a depth at which groundwater was encountered (see Figure 3). Although discolored soil and a petroleum hydrocarbon odor were encountered at a depth of approximately three feet below the bottom of the UST, the discoloration is interpreted to be related to horizontal movement of petroleum hydrocarbons in groundwater and associated capillary fringe wicking of petroleum hydrocarbons. No petroleum sheen was observed on the water in borehole B2. The subsurface materials encountered in boreholes B1 and B2 consisted of interlayered silty clay, fine-grained sand, silt, and clay. Documentation of the UST demolition and associated sample results are presented in RGA's May 25, 2006 Underground Storage Tank Removal Report (document 0387.R1). The UST and concrete that was inside the UST were removed from the site on May 31, 2006.

At the time of UST removal, the entire site had been excavated to a depth of approximately 10 feet below the Franklin Street sidewalk. After the UST was demolished, soil at the site was removed to a depth of approximately 12 feet below the Franklin Street sidewalk. This depth is approximately the same depth as the depth of the bottom of the UST.

RGA provided a Subsurface Investigation Work Plan (B3 Through B17) dated June 1, 2006 (document 0387.W1) to the Oakland Fire Department for review. The work plan proposed investigation of soil in the immediate vicinity of the former UST (B3 through B6), collection of onsite groundwater grab samples (B7 through B12), and offsite soil and groundwater quality investigation using soil conductivity and depth-discrete groundwater sampling techniques to define the vertical and horizontal extent of impact to soil and groundwater at offsite locations (B13 through B17).

Following approval of the work plan, on June 5, 2006 a total of six soil borings (B7 through B12) were hand augered at onsite locations in the mass excavation and groundwater grab samples were collected from the boreholes (see Figure 5). The results of the groundwater grab samples (see Table 4) showed that no petroleum hydrocarbons were detected in any of the boreholes at concentrations exceeding their respective Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL). The subsurface materials encountered in the boreholes consisted of interlayered silty clay, fine-grained sand, silt, and clay.

As part of the site construction, in July 2006 a grade beam was partially installed at the base of the west wall of the mass excavation, adjacent to Franklin Street. The grade beam trench measures approximately four feet wide and three feet deep. Soil removed from below the former UST and for a distance of approximately 10 feet from each end of the former UST was stockpiled and subsequently disposed of at the Richmond landfill.

On July 28, 2006 a total of four soil borings (B3 through B6) were hand augered at locations adjacent to the former UST (see Figure 4) and soil samples were collected in the boreholes at a depth of approximately three feet, which is equivalent to a depth of approximately three feet below the bottom of the former UST. Oily soil was encountered at a depth of approximately 1.5 feet in each of the boreholes closest to the former UST (B3 and B4) to the total depth explored of approximately 3.5 feet below the bottom of the mass excavation. No discoloration or petroleum odors were detected in the soil from boreholes B5 and B6 (located approximately 10 feet east of the former UST) at depths shallower than approximately 2.5 feet. Below a depth of approximately 2.5 or 3.0 feet gray discolored soil was encountered to the total depth explored of approximately 3.5 feet. The subsurface materials encountered in the boreholes consisted of interlayered silty clay, fine-grained sand, silt, and clay.

The sample results for the soil samples collected from the two boreholes located approximately 5 feet east of the former UST (B3 and B4) showed that MTBE and BTEX were not detected and that TPH-D and TPH-MO were detected in soil at concentrations ranging up to 1,800 and 1,500 mg/kg, respectively (see Table 2). The laboratory identified the TPH-D results as consisting of fuel oil-range compounds. The sample results for the soil samples collected from the two boreholes located approximately 10 feet from the former UST (B5 and B6) showed that MTBE and BTEX were not detected and that TPH-D and TPH-MO were detected in soil at concentrations ranging up to 740 and 660 mg/kg, respectively (see Table 2). The laboratory identified the TPH-D results for one of the samples as consisting of fuel oil-range compounds, and for the other sample as consisting of oil-range compounds and diesel-range compounds with no recognizable pattern.

As part of the construction activities at the site, a total of five dewatering wells were installed at the south end of the site in June, 2006. Groundwater at the site was encountered during UST removal at a depth of approximately 5 feet below the bottom of the UST prior to site dewatering. Similarly, groundwater was encountered in onsite boreholes B7 through B12 prior to site dewatering at a depth of approximately 5 feet below the bottom of the mass excavation (approximately 5 feet below the bottom of the UST). Following dewatering of the site, the depth to groundwater in the vicinity of the former UST is presently unknown. It is RGA's understanding that the pump intakes for the dewatering wells were set at a depth of approximately 15 feet below the bottom of the mass excavation.

The groundwater flow direction at the site is unknown. Although Lake Merritt is located to the east and southeast of the site, review of Figure 1 shows that local topography suggests that the groundwater flow direction at the site could be to the west or southwest.

### SCOPE OF WORK

To remove oil-impacted soil from the vicinity of the former UST, RGA will perform the following tasks:

- Permitting.
- Health and safety plan preparation.
- Observe excavation, and loading of soil from the east of the UST to a depth of three feet below existing grade.
- Collection of a total of two confirmation soil samples (one each from the north and south end of the area of excavation).
- Attempt to collect a total of three groundwater grab samples from boreholes hand augered at the perimeter of the area of oily soil excavation.
- Arrange for sample analysis for TPH Multi-Range and MBTEX.
- Prepare a report documenting soil and groundwater sample collection and the laboratory analytical results.

Each of these is discussed below in detail.

#### Permitting

A soil boring permit will be obtained from the Alameda County Public Works Agency prior to hand augering for the collection of groundwater grab samples from boreholes C1 through C3 (see Figure 6).

#### Health and Safety Plan Preparation

A health and safety plan will be prepared for observation of excavation and associated sample collection.

### Excavation Observation

RGA will observe excavation of the proposed area of excavation shown in Figure 6. The area will be excavated to a depth of approximately three feet below the bottom of the existing mass excavation. Deeper excavation is not possible based on safety and cost concerns associated with the adjacent Franklin Street shoring. A letter dated August 2, 2006 from Brandywine Realty Trust discussing the safety and cost considerations associated with excavation to greater depths or to the west of the Franklin Street shoring is attached with this work plan.

Documentation of disposal of the excavated soil at the Richmond landfill will be obtained using the landfill weight tickets for each truck transporting excavated soil.

### Soil Confirmation Sample Collection

One confirmation soil sample will be collected at each of locations C1 and C2 (see Figure 6) at a depth of approximately 3 feet below the bottom of the mass excavation (at a depth of approximately 3 feet below the bottom of the former UST). The confirmation soil samples will be collected from the bottom of the excavated area by driving a stainless steel sampler lined with a 2-inch diameter, 6-inch long brass or stainless steel tube into the bottom of the borehole with a slide hammer. The tube will be removed from the sampler, the ends of the tube will be evaluated to verify that no head space is present, and the ends of the tube will then be sequentially covered with aluminum foil and plastic end caps. The tube will be labeled and placed in a cooler with ice pending delivery to a State-accredited hazardous waste testing laboratory. Chain of custody procedures will be observed for all sample handling.

All hand augering, drilling, and sampling equipment will be cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. All soil and water generated during subsurface investigation will be stored in 55-gallon drums at the site and labeled pending characterization and proper disposal.

### Groundwater Grab Sample Collection

A total of three soil borings (C1 through C3) will each be hand augered using a 3.5-inch outside diameter stainless steel hand auger at locations shown on Figure 6 to evaluate the horizontal extent of petroleum hydrocarbons in groundwater in the immediate vicinity of the former UST.

The boreholes will each be hand augered in the area of excavation and at the perimeter of the area of excavated oily soil until groundwater is encountered. The depth to groundwater is presently unknown because of site dewatering for construction purposes. After waiting for water to enter the boreholes, one groundwater grab sample will be collected from each of boreholes C1 through C3 with a Teflon bailer. The presence of odors, sheen and separate phase layers of petroleum hydrocarbons will be recorded if observed for any of the water from any of the boreholes. All water samples will be transferred to one-liter amber bottles and 40-milliliter glass Volatile Organic Analysis (VOA) vials containing hydrochloric acid preservative, which will be sealed with Teflon-lined screw caps. The VOAs will be overturned and tapped to ensure that air bubbles are not present. The samples will be labeled and then placed into a cooler with ice pending delivery to the laboratory. Chain of custody procedures will be observed for all sample handling.

Following completion of sample collection activities, the boreholes will be filled with neat cement grout. All hand augering, drilling, and sampling equipment will be cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. All soil and water generated during subsurface investigation will be stored in 55-gallon drums at the site and labeled pending characterization and proper disposal.

### Sample Analysis

All of the samples will be analyzed basis at McCampbell Analytical, Inc. in Pittsburg, California for TPH MultiRange (Gasoline, Diesel and Oil-range petroleum hydrocarbons) using EPA Method 5030/3510/3550 in conjunction with Modified EPA Method 8015, and for MBTEX by EPA Method 8021B. McCampbell Analytical, Inc. is a State-accredited hazardous waste testing laboratory.

### Report Preparation

Upon receipt of the laboratory analytical results, a report will be prepared. The report will document sample collection procedures and sample results. The report will include a site plan detail showing the area of excavation and sample collection locations, tables summarizing the sample results, documentation of soil disposal, recommendations based on the sample results, and the stamp of an appropriately registered professional.

### CASE CLOSURE CRITERIA

The offsite investigation portion of the June 1, 2006 work plan is intended to complete delineation of the horizontal and vertical extent of petroleum hydrocarbons in soil and groundwater associated with the former UST. Following completion of the delineation of petroleum hydrocarbons, RGA will recommend steps necessary to obtain case closure. Assuming that the offsite investigation also shows limited impact, RGA will recommend that a low-risk case closure be obtained. This conditional recommendation is based on the limited impact to groundwater observed in groundwater grab samples from boreholes B7 through B12, the absence of MTBE and BTEX, the sample descriptions by the laboratory of the detected petroleum hydrocarbons consisting of fuel oil-range hydrocarbons, the commercial land use in the site vicinity, and the absence of groundwater as a drinking water source in Alameda county in general and in downtown Oakland in particular.

The RWQCB low-risk case closure criteria are detailed in the RWQCB Interim Guidance Document 1996, which are supplemental instructions to RWQCB Executive Director Walter Pettit's interim guidance letter dated December 8, 1995. According to the Interim Guidance Document 1996, "Mr. Pettit's letter urges cleanup agencies to proceed aggressively to close low risk soil cases only and not to require active remediation of low risk groundwater cases." In order to qualify for closure, the case must satisfy the following criteria:

- 1. The tank or appurtenant structure that leaked must be repaired or permanently closed and free product shall be removed to the extent practicable.
- 2. The Site has been adequately characterized.
- 3. The dissolved hydrocarbon plume is not migrating.

August 8, 2006  
Work Plan 0387.W2

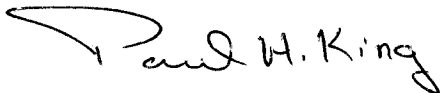
- 4. No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.
- 5. The site presents no significant risk to human health.
- 6. The site presents no significant risk to the environment.

Should you have any questions, please do not hesitate to contact us at (510) 658-4363.

Sincerely,

RGA Environmental, Inc.

Kenneth Pilgrim  
Project Manager



Paul H. King  
Professional Geologist #5901  
Expires: 12/31/07

Attachments: Tables 1, 2, 3, 4  
Figure 1 – Site Location Map  
Figure 2 – Site Plan  
Figure 3 – Site Plan Detail  
Figure 4 – Site Location Map  
Figure 5 – Site Plan  
Figure 6 – Site Plan Detail  
August 2, 2006 Letter From Brandywine Realty Trust

Cc: Ms. Kaki Coleman, Brandywine Realty Trust

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**TABLE 1**  
**SUMMARY OF LABORATORY ANALYTICAL RESULTS**  
**UST PIT SOIL SAMPLES**  
**(Samples Collected on May 23, 2006)**

Sample No.	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
T1-0.0	<b><u>300,a</u></b>	<b><u>7300,b</u></b>	<b><u>5700</u></b>	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50
T1-2.0	<b>10,a</b>	<b><u>990,b</u></b>	<b>880</b>	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
T2-0.0	<b>9.7,a</b>	<b><u>170,b</u></b>	<b>150</b>	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
T2-2.0	<b>6.9,a</b>	<b><u>780,b</u></b>	<b>690</b>	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
ESL <sub>1</sub>	100	100	1000	0.023	0.044	2.9	3.3	2.3

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil

ND = Not detected.

a = Laboratory report note: strongly aged gasoline or diesel range compounds are significant.

b = Laboratory report note: fuel oil.

Results in bold identify detected analytes.

Results with underline identify values exceeding their respective ESL value.

ESL<sub>1</sub> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table A – Shallow Soils, Groundwater is a current or potential source of drinking water (commercial land use).

Results are in milligrams per kilogram (mg/kg), unless otherwise noted.



**TABLE 2**  
**SUMMARY OF LABORATORY ANALYTICAL RESULTS**  
**SOIL BORING SOIL SAMPLES**  
**(Samples Collected on July 28, 2006)**

Sample No.	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
B3-3.0	<b>11,a</b>	<b><u>1100,b</u></b>	<b><u>1100</u></b>	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B4-3.0	<b>26,a</b>	<b><u>1800,b</u></b>	<b><u>1500</u></b>	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B5-3.0	<b>1.4,a</b>	<b><u>300,c,d</u></b>	<b>380</b>	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
B6-3.0	<b>6.0,a</b>	<b><u>740,b</u></b>	<b>660</b>	ND<0.05	ND<0.005	ND<0.005	ND<0.005	ND<0.005
ESL <sub>1</sub>	100	100	1000	0.023	0.044	2.9	3.3	2.3

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil

ND = Not detected.

a = Laboratory report note: strongly aged gasoline or diesel range compounds are significant.

b = Laboratory report note: fuel oil.

c = Laboratory report note: oil range compounds are significant.

d = Laboratory report note: diesel range compounds are significant, no recognizable pattern.

Results in bold identify detected analytes.

Results with underline identify values exceeding their respective ESL value.

ESL<sub>1</sub> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table A – Shallow Soils, Groundwater is a current or potential source of drinking water (commercial land use).

Results are in milligrams per kilogram (mg/kg), unless otherwise noted.

**TABLE 3**  
**SUMMARY OF LABORATORY ANALYTICAL RESULTS**  
**GROUNDWATER SAMPLE COLLECTED FROM BENEATH UST**  
**(Sample Collected on May 23, 2006)**

Sample No.	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
B1-Water	<b>54,a</b>	<b><u>64,000,c,d</u></b>	<b><u>57,000</u></b>	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ESL <sub>1</sub>	100	100	100	5.0	1.0	40	30	20

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil

ND = Not detected.

a = Laboratory report note: strongly aged gasoline or diesel range compounds are significant.

c= Laboratory report note: oil range compounds are significant.

d= Laboratory report note: diesel range compounds are significant, no recognizable pattern.

Results in bold identify detected analytes.

Results with underline identify values exceeding their respective ESL value.

ESL<sub>1</sub> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table A – Shallow Soils, Groundwater is a current or potential source of drinking water.

Results are in micrograms per Liter (ug/L), unless otherwise noted.

**TABLE 4**  
**SUMMARY OF LABORATORY ANALYTICAL RESULTS**  
**BOREHOLE GROUNDWATER GRAB SAMPLES**  
**(Samples Collected on June 5, 2006)**

Sample No.	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
B7-Water	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
B8-Water	<b>54,e</b>	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	<b>2.4</b>	<b>14</b>
B9-Water	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	<b>0.70</b>
B10-Water	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
B11-Water	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
B12-Water	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ESL <sub>1</sub>	100	100	100	5.0	1.0	40	30	20

Notes:

TPH-G = Total Petroleum Hydrocarbons as Gasoline

TPH-D = Total Petroleum Hydrocarbons as Diesel.

TPH-MO = Total Petroleum Hydrocarbons as Motor Oil

ND = Not detected.

e = Laboratory report note: heavier gasoline range compounds are significant (aged gasoline?).

Results in bold identify detected analytes.

ESL<sub>1</sub> = Environmental Screening Level, developed by San Francisco Bay – Regional Water Quality Control Board (SF-RWQCB) updated February 2005, from Table A – Shallow Soils, Groundwater is a current or potential source of drinking water (commercial land use).

Results are in milligrams per Liter (ug/L), unless otherwise noted.

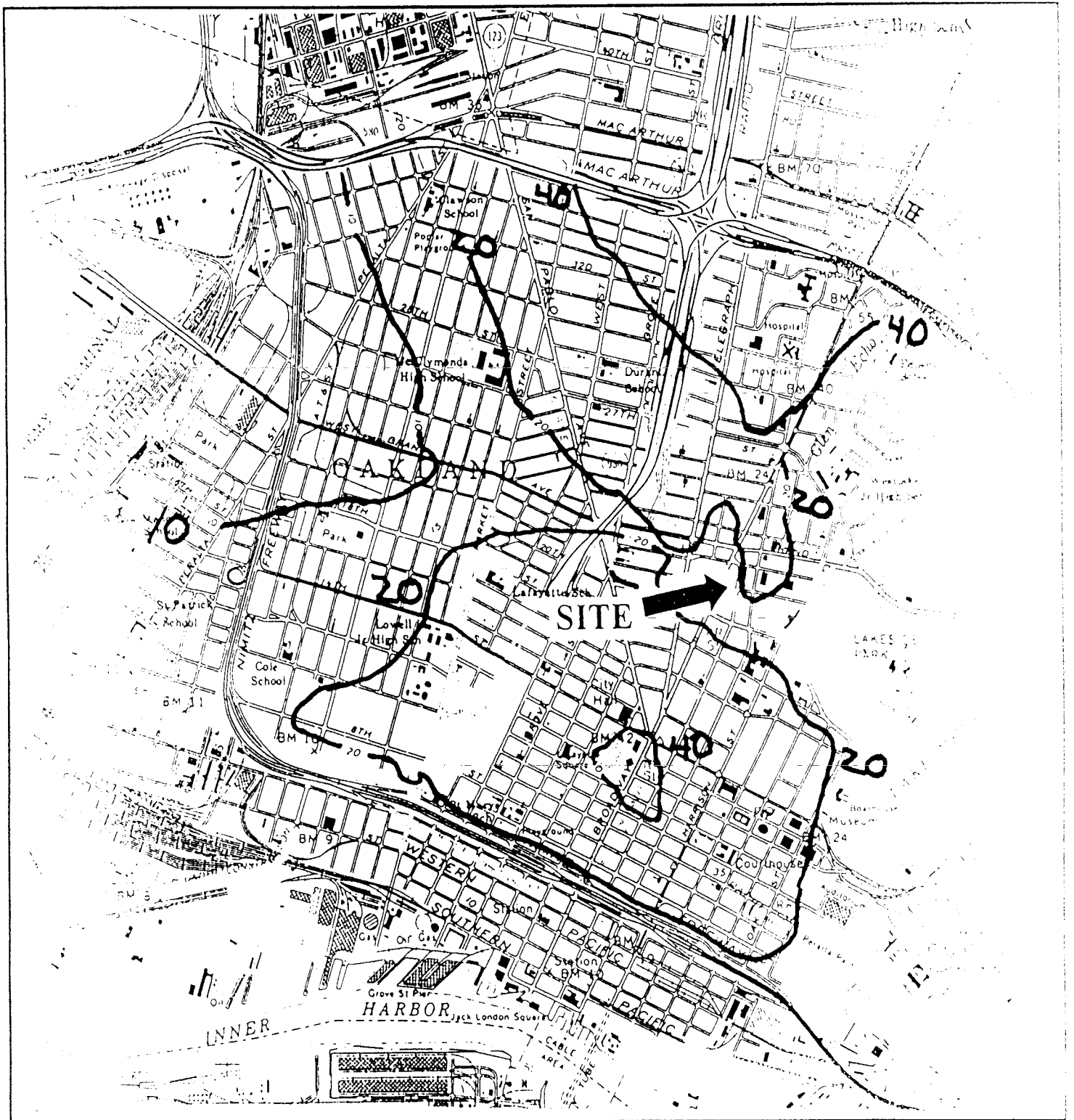
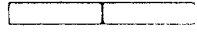


FIGURE 1  
 Site Location Map  
 2100 Franklin Street  
 Oakland, California



Base Map From:  
 United States Geological Survey  
 Oakland West, Calif. Quadrangle Map  
 Photorevised 1980

RGA Environmental, Inc  
 1466 66th Street  
 Emeryville, CA 94608

0 1000 2000  
  
 Scale In Feet

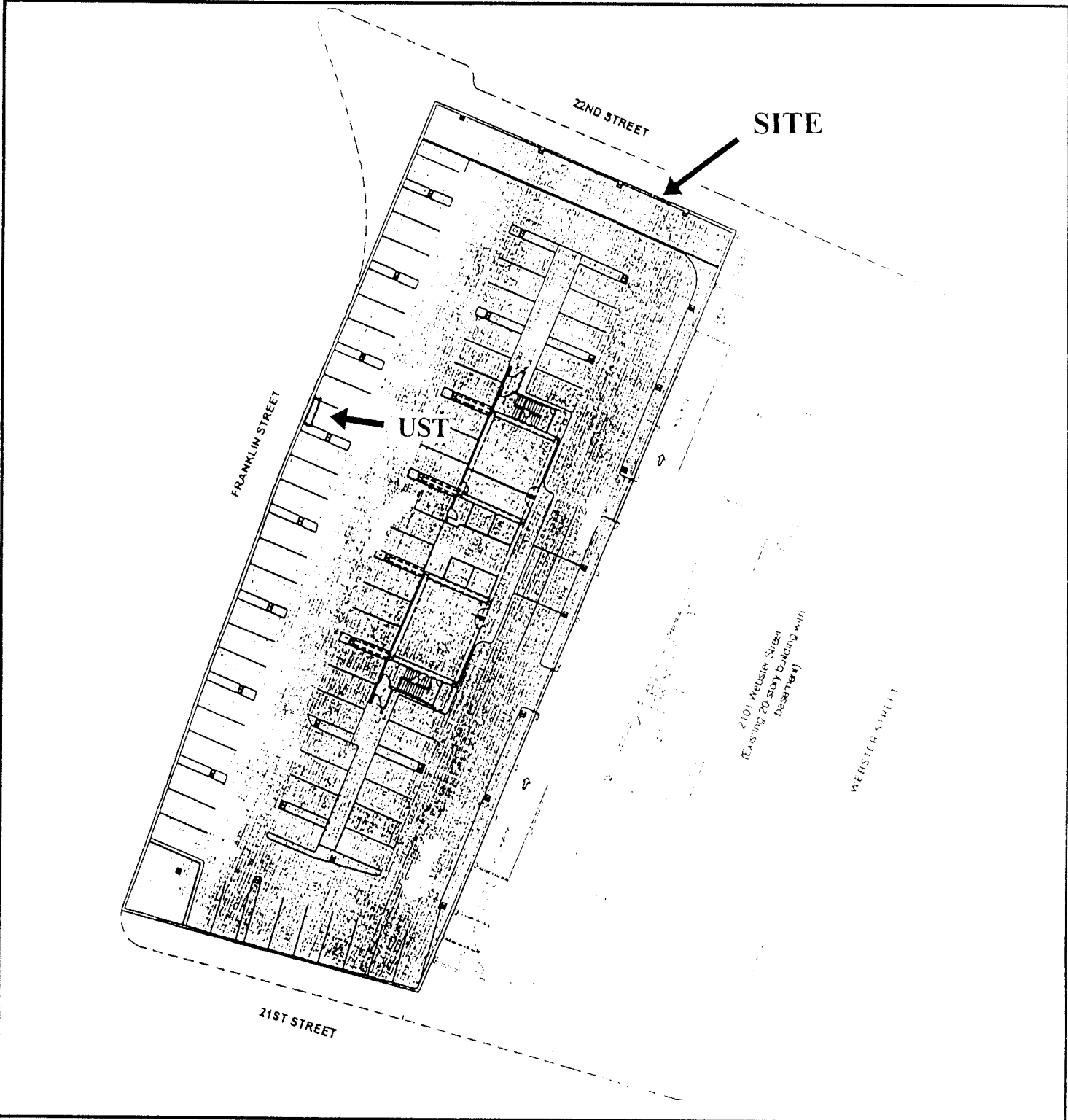


FIGURE 2  
 Site Plan  
 2100 Franklin Street  
 Oakland, California

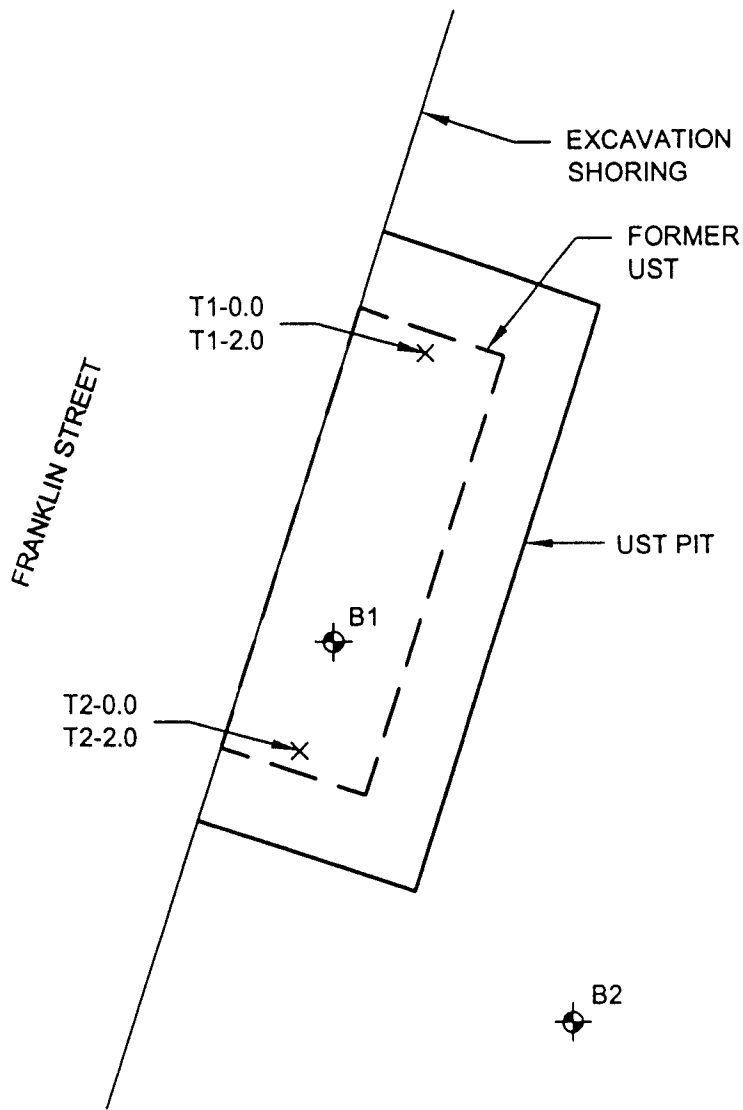


Base Map From:

Date: 08/05/05	Project No: 4149 01	Figure: 2
<b>Treadwell &amp; Rollo</b>		

RGA Environmental, Inc  
 1466 66th Street  
 Emeryville, CA 94608

0 30 feet  
 Approximate scale



**LEGEND**

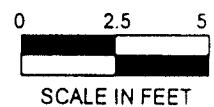
- X SOIL SAMPLE COLLECTION LOCATION
- ⊕ B2 EXISTING BOREHOLE LOCATION

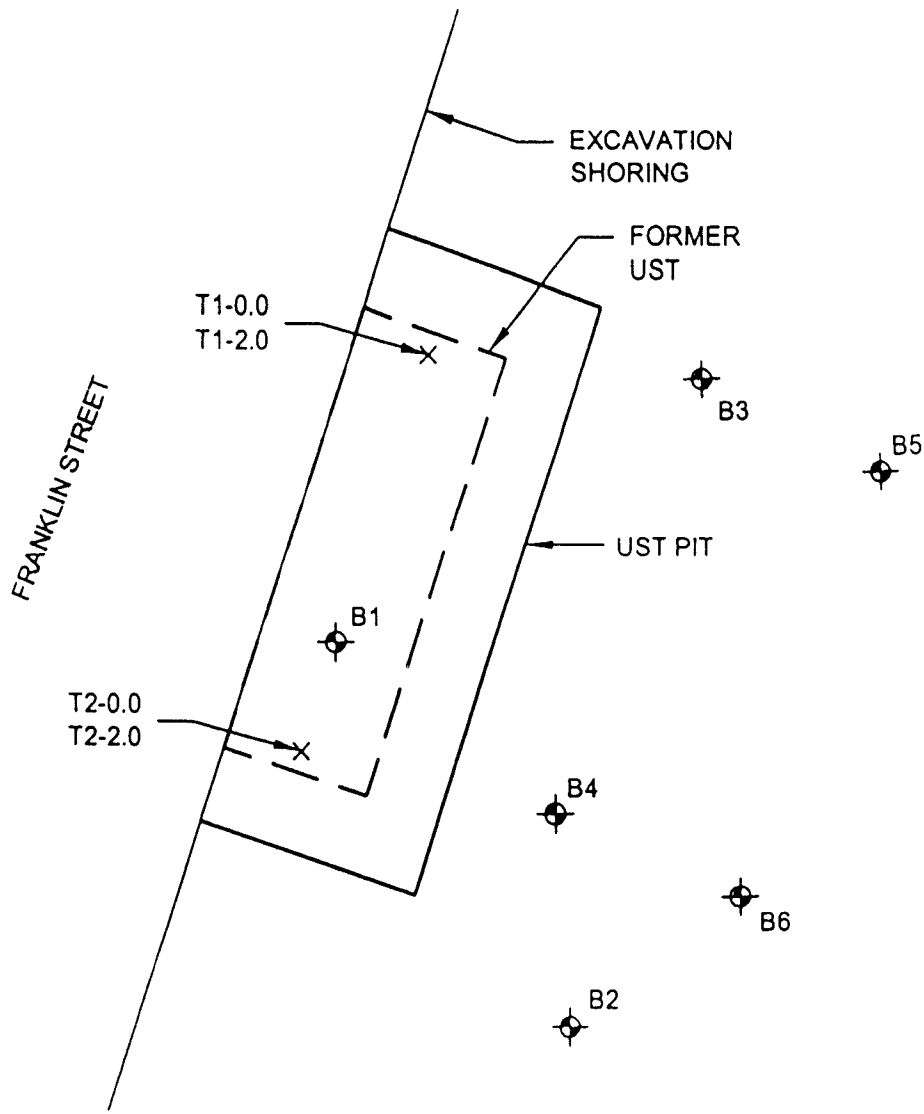
Figure 3  
 Site Plan Detail  
 2100 Franklin Street  
 Oakland, California



Base Map prepared by:  
 RGA Environmental, Inc.  
 5/23/03

RGA Environmental, Inc.  
 1466 66th St.  
 Emeryville, CA 94608





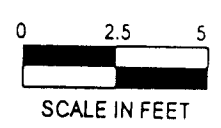
- LEGEND**
- X SOIL SAMPLE COLLECTION LOCATION
  - ⊕ B6 EXISTING BOREHOLE LOCATION

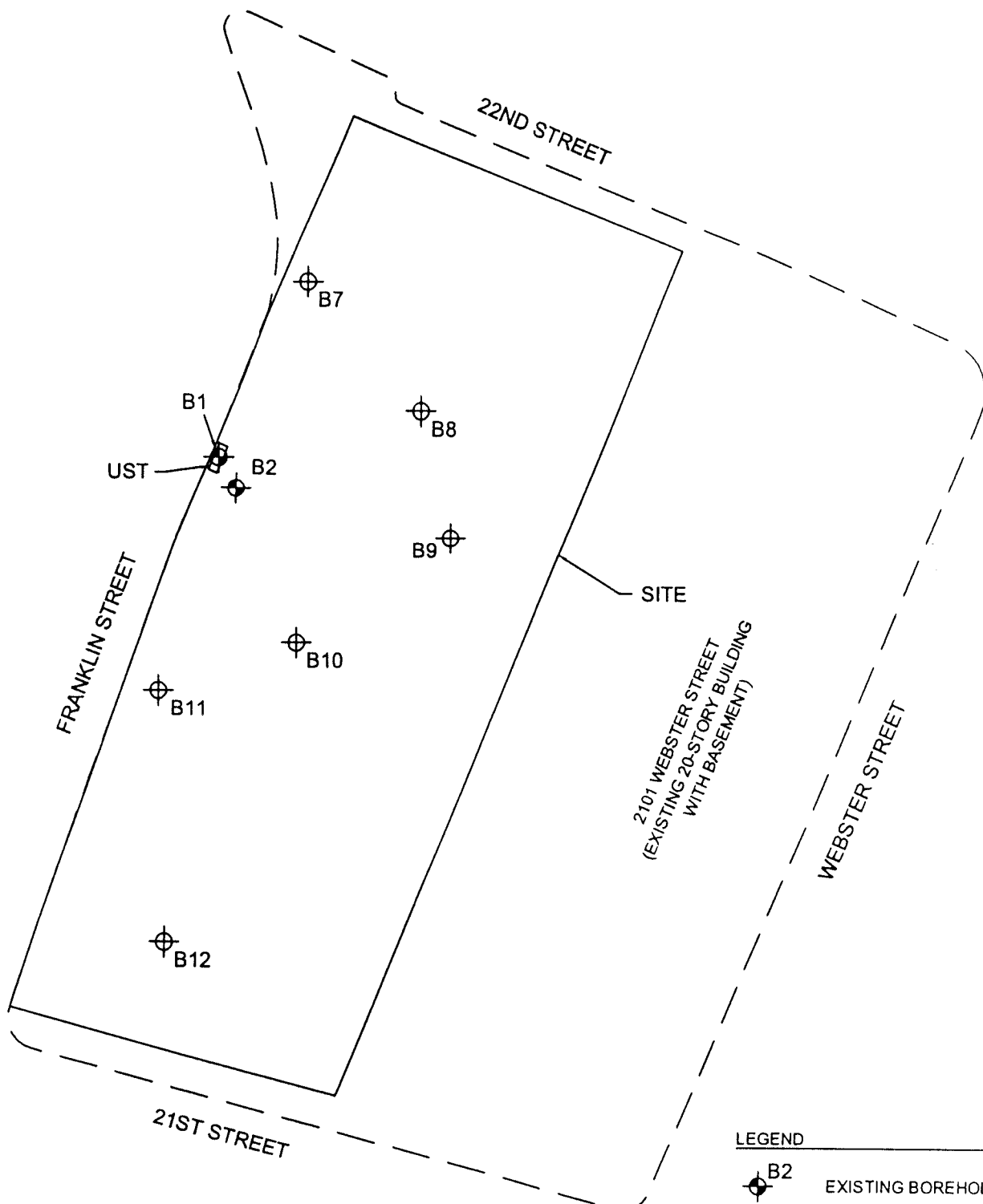
Figure 4  
 Site Plan Detail  
 2100 Franklin Street  
 Oakland, California



Base Map prepared by:  
 RGA Environmental, Inc.  
 5/23/03

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 Emeryville, CA 94608







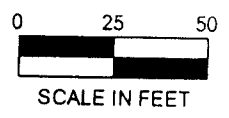
- LEGEND**
-  B2 EXISTING BOREHOLE
  -  B12 HAND AUGERED 6/5/06

Figure 5  
 Site Plan  
 2100 Franklin Street  
 Oakland, California



Base Map prepared by:  
 Treadwell & Rollo, 8/5/05

RGA Environmental, Inc.  
 1466 66th St.  
 Emeryville, CA 94608





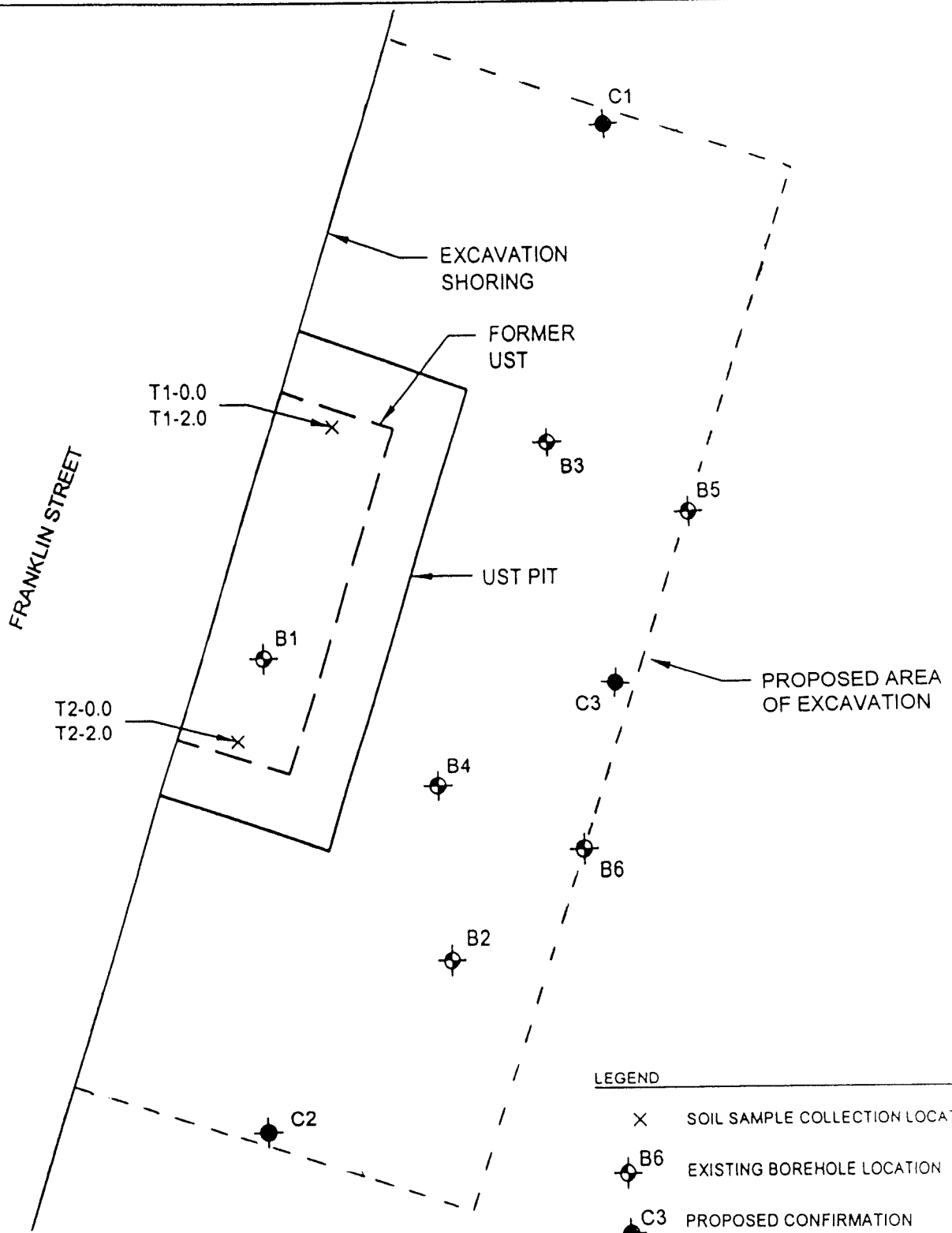
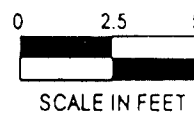



Figure 6  
Site Plan Detail  
2100 Franklin Street  
Oakland, California



Base Map prepared by:  
RGA Environmental, Inc.  
5/23/03

RGA Environmental, Inc.  
1466 66th St.  
Emeryville, CA 94608





BrandywineRealtyTrust

August 2, 2006

Paul King  
RGA Environmental  
1466 66th Street  
Emeryville, CA 94608

Re: Underground Storage Tank -- 2100 Franklin Street, Oakland

Dear Paul:

Thank you for your continuing efforts in dealing with the circa 1920 previously abandoned underground storage tank that we uncovered under the sidewalk at our site on Franklin Street. We believe there is a reasonable basis to close this issue without long term detriment and your advocacy on our behalf is appreciated.

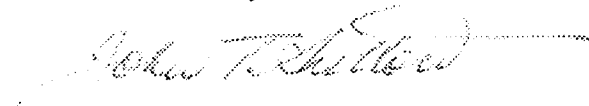
This site was acquired by us through the Redevelopment Agency of the City of Oakland and the tank location was outside our actual site in an area that has been excavated under the City's sidewalk. Even though we are not responsible for the origin of this tank, we need to get it dealt with in a timely way for the sake of our project.

Enclosed herewith is a fairly detailed letter from Charles Pankow Builders describing the dangers and difficulties of significant additional excavation particularly into the Franklin Street right-of-way. With the utility and communications elements in the street, it is virtually impossible to excavate this area on any reasonable basis. Also, Pankow has outlined the considerable costs and risk of more extensive excavation of the construction site. Overall, it looks like a multi-million dollar proposition.

Additional development costs related to delay of the project, financing and loss of revenue are also substantial. The order of magnitude is millions of dollars.

Paul, given that the tank was previously abandoned and was presumably benignly sitting there, we are hopeful for a reasonable solution that let's us move ahead with our project and does not represent a serious long term issue. Please call Kaki Coleman or me if we can assist in the process.

Yours sincerely,



John T. Sutton  
Vice President



August 2, 2006

Brandywine Realty Trust  
2101 Webster Street, Suite 600  
Oakland, CA 94612  
Attn: Kaki Coleman

Dear Kaki:

This letter responds to your request for a description of the physical and construction cost implications to excavate soil surrounding the underground tank that was recently found under the City sidewalk along Franklin Street. This tank is in the City of Oakland sidewalk encroachment area adjacent to the 2100 Franklin Street property.

In accordance with the recommendations of RGA Environmental, the requested excavation would extend 10 feet horizontally on all sides of the former tank location and seven feet vertically below the bottom of the tank. Given that our foundation excavation now goes three feet below where the tank stood, this would entail an additional four feet of removal. Please note that any excavation beyond a three foot limit within twenty feet of the shoring wall creates a dangerous and unacceptable situation.

**Scope of Work:**

This is a significant undertaking and would include the following elements:

1. Design and construction of a retention system at the perimeter of the area as defined by RGA. This area extends to the west under Franklin Street and considerably deeper than the present excavation. This proposed excavation area will undermine the existing retention system and will require significant hand digging work and underpinning at the intersections of the existing and proposed work. In addition, the tie-backs for the expanded area may likely require an additional sub-surface major encroachment permit.
2. Removal or temporary relocation of the adjacent utilities (e.g. sanitary sewer, water main, fiber optic cables, etc.) that occur in the Franklin Street right of way. These utilities serve other users in the neighborhood.
3. Removal and demolition of the existing retention system and excavation of the subject material. This excavation will extend below and undermine the existing soldier pile, lagging and tie-back system.
4. Removal of the additional area of material within the construction area. This extends into several of the pile caps and grade beams that are presently formed and ready for concrete placement for the 2100 Franklin building foundation.

5. Design and construction of a de-watering program to manage the water that will be encountered at the lower elevations. This will include settling tanks, filters and monitored disposal.
6. Re-design and construction of the foundations, basement wall, waterproofing, utility, drainage and electrical systems to accommodate and compensate for the changed conditions for the building that is presently underway.
7. Reconstruction of the street, sidewalk and curbs.

All of this would require the cessation of other construction activities at the site as we will not be able to proceed with an incomplete foundation.

**Cost of the Work:**

Contemplating what this overall program may cost is multi-faceted. On a direct cost basis, the magnitude of our scope of work would likely run over seven figures (over one million), excluding any unforeseen conditions.

In addition, EBMUD, PG&E, AT&T, City of Oakland Public Works would have significant work that may equal or even exceed our scope. We are not able to accurately estimate their elements. However, based on our present and past experience with projects that involve these providers, you should contemplate it being into seven figures excluding fees and charges for potential service interruption issues.

**Timing Implications:**

Construction costs in the Bay area are presently escalating at an alarming rate. Increases of 19% and 12% respectively have been apparent over the last two years. The pace is not slowing. Delays to the execution of the 2100 Franklin building will not allow us to honor our guaranteed maximum price for this contract.

Overhead. General Conditions and direct staffing costs are presently running just under \$200,000 per month. Given the overall scope of this remediation, this program could take over a year for approvals and construction. It may take longer than this with the utility and public agency involvement.

**Safety Implications:**

These activities will involve significant risks to on-site workers and the public at large. The risks with extending the open time for construction shoring systems are well documented. These systems are designed and fabricated for short term use until an actual building is in place. They are not designed to be open for years.

**Conclusion:**

Charles Pankow Builders is not an environmental contractor. The "ideal" program as proposed is essentially unfeasible. It has indeterminate cost and time implications that are considerable.

**An Alternative:**

We propose an excavation as outlined by RGA Consulting, limited to approximately three feet below the original tank location and extending ten feet into the site to the east and going ten feet in both the north and south directions. Going deeper than this undermines the retention system and is hazardous to workers and the integrity of the adjoining street. Extending the excavation into Franklin Street involves all of the implications as outlined above and is outside of our control from a cost and timing viewpoint.

Again, please note that any excavation beyond an additional three feet within twenty feet of the retaining system wall would create a risk to site workers and the public at large on Franklin Street.

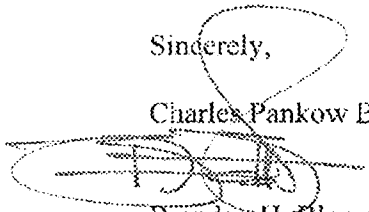
It is of our opinion that we can achieve the limited scope of work without significantly interfering with the ongoing construction of 2100 Franklin Street. However, we need to receive clear and concise direction on this issue to avoid further impacts to the project...

We trust this addresses the issues as presented and look forward to a timely response.

Should you have any Questions please feel free to contact me.

Sincerely,

Charles Pankow Builders, Ltd.



Brendan H. Bloom  
Project Sponsor