

August 14, 2006  
Work Plan 0387.W3

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

**RECEIVED**

2:20 pm, Oct 20, 2008

Alameda County  
Environmental Health



**SUBJECT:** WELL INSTALLATION WORK PLAN (MW1 AND MW2)  
Brandywine Realty Trust  
2100 Franklin Street  
Oakland, California

Dear Mr. Kupers:

RGA Environmental, Inc. (RGA) is pleased to present this work plan for installation of two groundwater monitoring wells in the vicinity of the former Underground Storage Tank (UST) at the subject site. The two wells (MW1 and MW2) will be installed on site in the area of the present mass excavation. Based on pending limited site access for drill rigs because of site construction (grade beams and footings will be installed in the proposed areas of excavation and the ramp for access to the mass excavation will be removed in the very near future) wells MW1 and MW2 will be installed prior to the completion of the offsite groundwater quality investigation. However, based on the distribution of petroleum-impacted soil and groundwater in soil borings B1 and C1 through C3, the proposed locations are anticipated to be upgradient and transgradient to petroleum-impacted groundwater associated with the former UST.

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), a Site Plan Detail showing the area of soil excavated on August 11, 2006 in an effort to remove oil-impacted soil from the former UST vicinity and also showing soil boring locations C1 through C3 (Figure 6), and a Site Plan showing the proposed locations of groundwater monitoring wells MW1 and MW2 (Figure 7) 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 approximately 10 to 13 feet below the bottom of the former UST, as observed

in borings C1 through C3 (see below). 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.

On August 11, 2006 RGA observed the excavation of soil from the accessible areas surrounding the former UST. The area to the west of the former UST was not accessible because it was located beneath Franklin Street. Following excavation within the site mass excavation to a depth of three feet below the bottom of the mass excavation and adjacent to the former UST, boreholes C1 through C3 were hand augered in the bottom of the excavated area. Groundwater was encountered in a sand layer at depths of approximately 7 to 10 feet below the bottom of the excavated area (approximately 10 to 13 feet below the bottom of the former UST). No evidence of petroleum hydrocarbons was detected in soil or water in borehole C1, strong petroleum odors were detected in the soil and a sheen was observed on the water sample collected from borehole C2, and although moderate petroleum hydrocarbon odors were detected in the soil no evidence of petroleum hydrocarbons were detected in the water sample at the time of sample collection. The groundwater grab sample results for boreholes C1 through C3 are summarized in Table 5.

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. Review of the distribution of detected petroleum hydrocarbons in the groundwater grab samples collected from the onsite boreholes (Tables 3, 4 and 5 and Figure 5) suggests that fuel oil-range petroleum hydrocarbons are migrating from the UST pit area towards the southwest.

Although petroleum hydrocarbons were detected in groundwater grab samples collected from boreholes B8 and B9, review of the laboratory analytical reports and Table 4 shows that the detected petroleum hydrocarbons are gasoline-range compounds with detectable concentrations of ethylbenzene and xylenes. These compounds are distinctly different from the petroleum hydrocarbons detected elsewhere at the site and suggest that the distal end of an old gasoline plume was detected in boreholes B8 and B9.

The absence of petroleum hydrocarbons in groundwater grab samples collected from boreholes B7 and C1, and the absence of oil-range compounds in groundwater grab samples from boreholes B8 and B9 also suggest a southwesterly groundwater flow direction. The concentrations of oil-range petroleum hydrocarbons detected in groundwater grab samples collected from boreholes B11 and B12, the absence of petroleum hydrocarbons in the groundwater grab sample from borehole B10, and the comparatively high concentrations of oil-range petroleum hydrocarbons detected in groundwater grab samples from boreholes B1, C2 and C3 suggests that borehole B10 defines the eastern edge of a plume that originates at the former UST and extends southwesterly.

#### SCOPE OF WORK

For well installation, P&D will perform the following tasks.

- Obtain permits.
- Prepare a health and safety plan.
- Arrange for borehole drilling at two locations and construction of one well in each of

- the boreholes.
- Develop the wells.
- Monitor, purge and sample the wells.
- Report preparation.

Each of these is discussed below.

#### Obtain Permits

A permit will be obtained from the ACPWA for the drilling of the soil borings and construction of groundwater monitoring wells at the two locations.

#### Health and Safety Plan Preparation

A health and safety plan will be prepared for the scope of work identified in this work plan.

#### Soil Boring Oversight and Well Construction

During conditions when site dewatering is not occurring, groundwater is anticipated at a depth of approximately 5 feet below the bottom of the former UST. However, in the vicinity of the former UST the depth to groundwater is presently approximately 10 to 13 feet below the bottom of the former UST because of site dewatering activities.

Boreholes will be drilled at a total of two locations identified as MW1 and MW2 on Figure 7. Soil samples will be collected at each location for lithologic logging purposes by continuously coring to a total depth of 12 feet below the bottom of the site mass excavation using a 2.5-inch outside diameter Geoprobe macrcore lined with a cellulose acetate sleeve. The boreholes for the wells will then be drilled with 8-inch outside diameter hollows stem augers. No soil or groundwater samples will be collected during drilling for laboratory analysis.

The soil from the borings will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. All soil from the boreholes will be evaluated with a Photoionization Detector (PID) equipped with a 10.3 eV bulb and calibrated using a 100 ppm isobutylene standard.

The wells will be constructed to a total depth of 12 feet below the bottom of the existing mass excavation, and will consist of 2-inch diameter Schedule 40 PVC pipe with the bottom 8 feet constructed of 0.010-inch factory slot screen. The well screen will be surrounded with #2/16 washed sack sand to a height of one foot above the top of the screen. Bentonite pellets will be placed in the borehole above the filter sand to a height of one foot above the sand. The remaining annular space will be filled with neat cement grout to approximately the bottom of the existing mass excavation. The tops of the wells will be marked to prevent damage during site construction.

All drilling equipment will be cleaned by steam cleaning with an Alconox solution followed by a clean water rinse prior to use in each borehole. Following completion of sample collection activities, the boreholes will be filled with neat cement grout. Any soil or water generated during drilling will be stored in labeled drums at the site pending characterization and disposal.

The wellhead elevations and locations will be surveyed vertically and horizontally by a State-licensed surveyor in accordance with State of California Water Resources Control Board (SWRCB) Geotracker guidelines to allow determination of groundwater flow direction at the site. The wellhead elevations and locations for wells MW1 and MW2 will be surveyed following completion of the offsite subsurface investigation and installation of at least one offsite well.

#### Well Development

At least 72 hours after construction, the wells will be developed by surging and over-pumping until the water discharged from the wells is relatively clear. Prior to development, the wells will be monitored for depth to water using an electric water level indicator with an accuracy of 0.01 feet, and for the presence of free product and sheen using a transparent bailer. Water removed from the wells during development will be stored in labeled drums onsite, pending analysis and appropriate disposal.

#### Monitor and Sample the Wells

Beginning at least 48 hours after well development, the two wells will be monitored for depth to water using an electric water level indicator with an accuracy of 0.01 foot and for the presence of free product or sheen using a transparent bailer.

Prior to well sampling the wells will be purged of a minimum of three casing volumes of water, or until the wells are purged dry. During purging operations, the field parameters of electrical conductivity, temperature, and pH will be monitored. Once the field parameters are observed to stabilize, and a minimum of three casing volumes have been purged or the wells have purged dry and partially recovered, water samples will be collected using a clean Teflon bailer.

The water samples will be transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials and 1-liter amber glass bottles that will be sealed with Teflon-lined screw caps. The VOA vials will be overturned and tapped to assure that no air bubbles are present. The VOA vials and bottles will then be transferred to a cooler with ice, until they are transported to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-certified hazardous waste testing laboratory. Chain of custody documentation will accompany the samples to the laboratory. Records of the field parameters measured during well purging will be attached with the report documenting well installation.

#### Arrange for Sample Analysis

The groundwater samples collected from the wells will be analyzed 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.

August 14, 2006  
Work Plan 0387.W3

Report Preparation

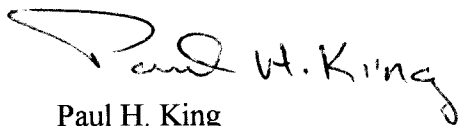
Upon receipt of the laboratory analytical results, a report will be prepared. The report will document well installation and the monitoring results from the wells. The report will include a site plan detail showing the drilling locations, boring logs, well construction diagrams, tables summarizing the sample results and well monitoring results, recommendations based on the sample and monitoring results, and the stamp of an appropriately registered professional.

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  
Figure 7 – Site Plan

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>	<b>78,f</b>	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	<b>200c,d</b>	<b>320</b>	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
B12-Water	ND<50	<b>60,d</b>	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.

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

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

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

f = Laboratory report note: one to a few isolated peaks present.

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.

**TABLE 5**  
**SUMMARY OF LABORATORY ANALYTICAL RESULTS**  
**BOREHOLE GROUNDWATER GRAB SAMPLES**  
**(Samples Collected on August 11, 2006)**

Sample No.	TPH-G	TPH-D	TPH-MO	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
C1-Water	ND<50	ND<50	ND<250	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
C2-Water	ND<50	<b><u>5700,c,d</u></b>	<b><u>6400</u></b>	ND<5.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5
C3-Water	ND<50	<b><u>200,c,d</u></b>	<b><u>300</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.

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.

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.

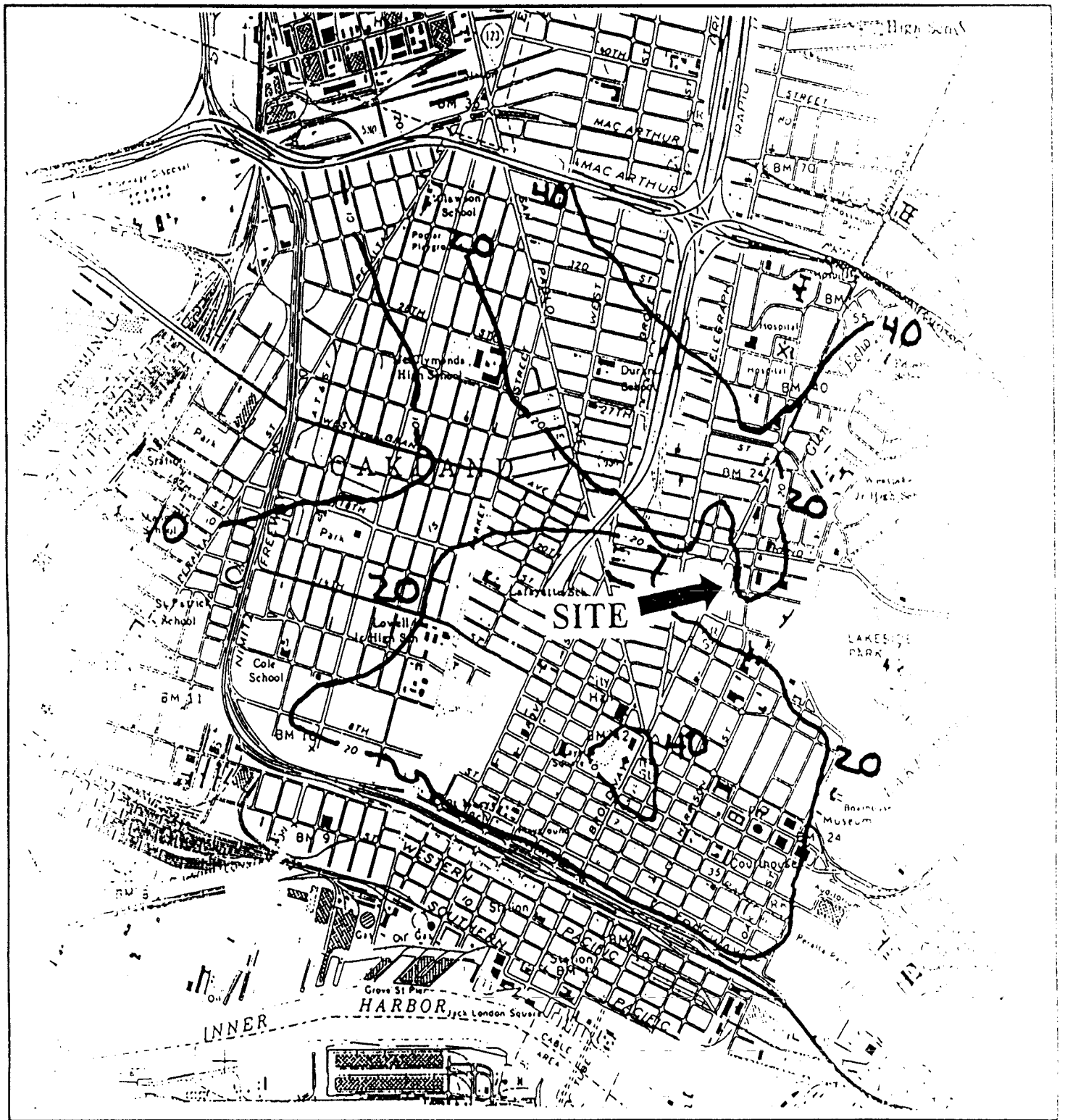
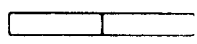


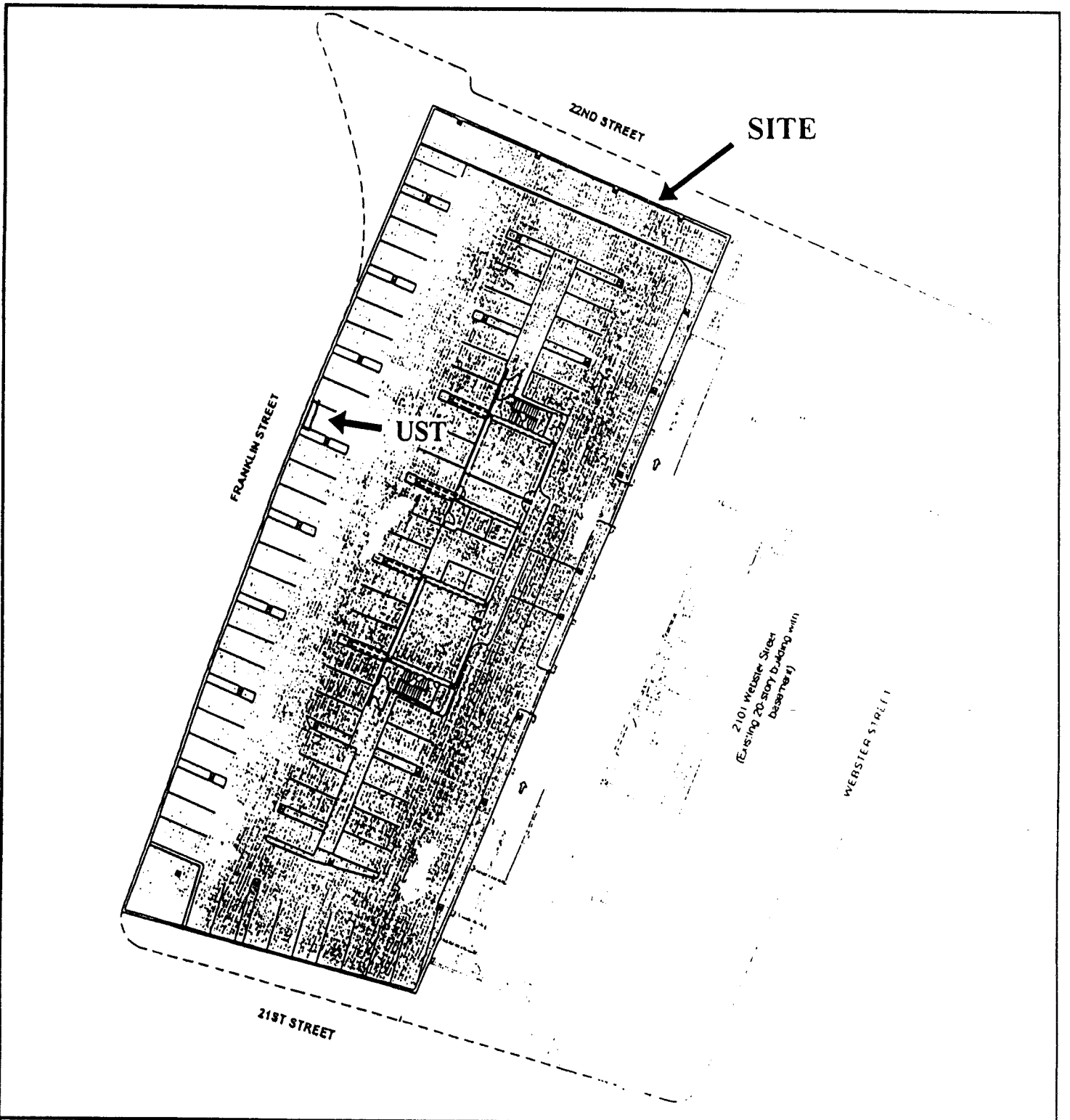
FIGURE 1  
 Site Location Map  
 2100 Franklin Street  
 Oakland, California



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

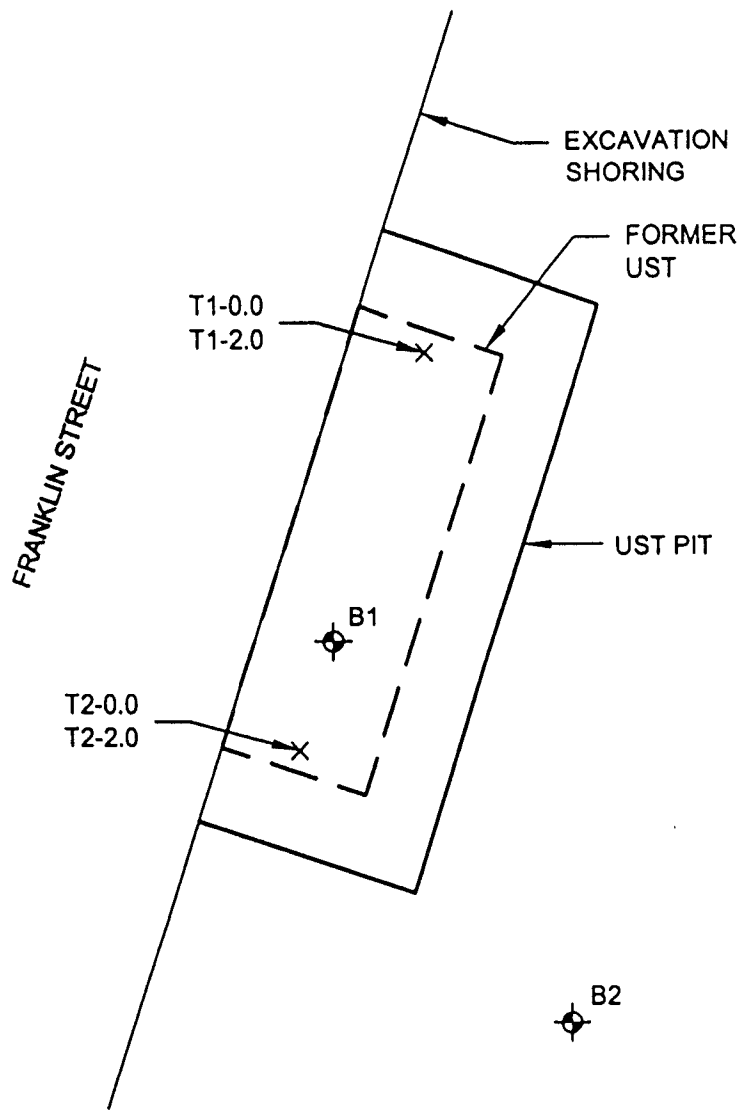


Base Map From:

Date 06/02/05	Project No. 4149.01	Figure 2
<b>Treadwell &amp; Rollo</b>		

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





**LEGEND**

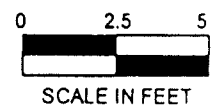
- X SOIL SAMPLE COLLECTION LOCATION
- ⊕ B2 EXISTING BOREHOLE LOCATION

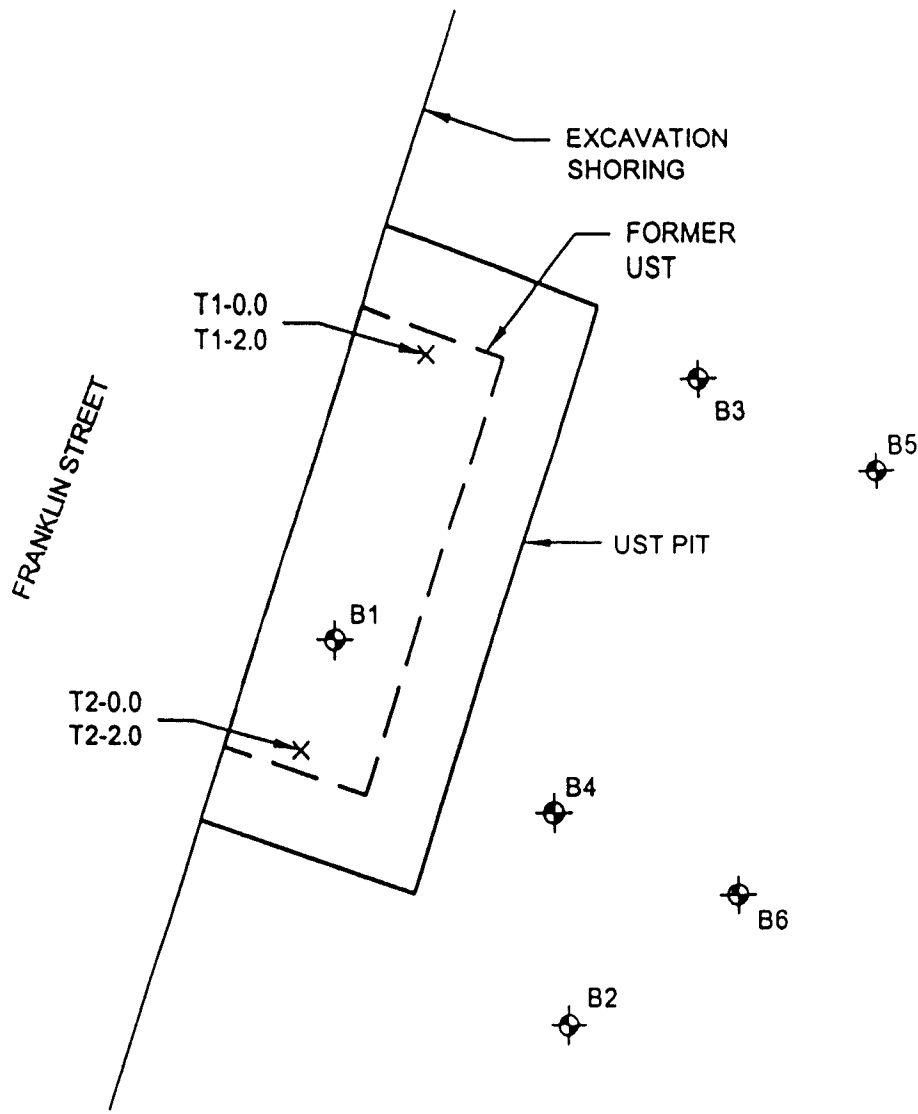
Figure 3  
 Site Plan Detail  
 2100 Franklin Street  
 Oakland, California



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

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





**LEGEND**

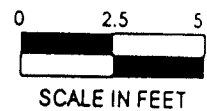
- X SOIL SAMPLE COLLECTION LOCATION
- ⊕ B6 EXISTING BOREHOLE LOCATION

Figure 4  
 Site Plan Detail  
 2100 Franklin Street  
 Oakland, California

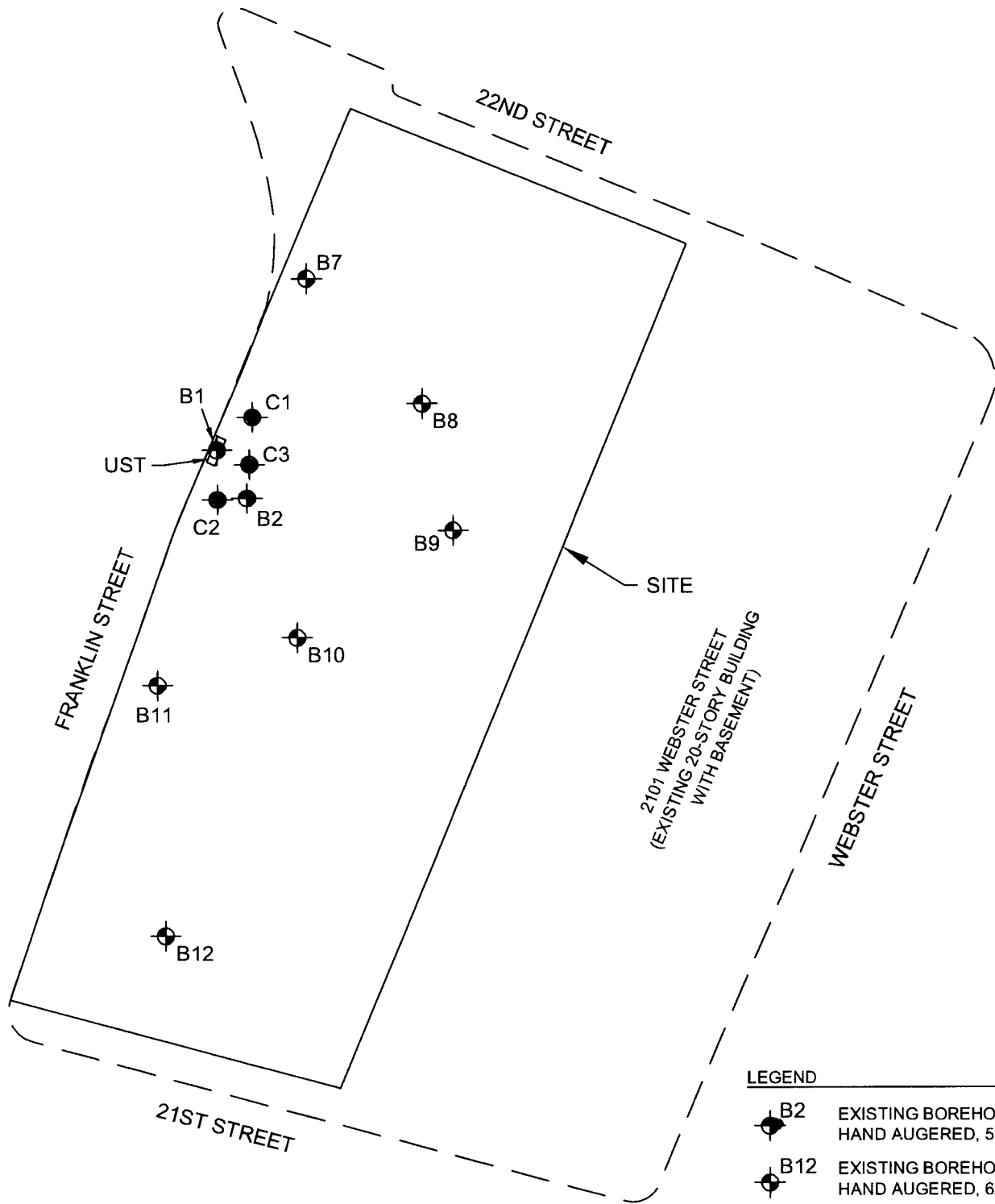


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**LEGEND**

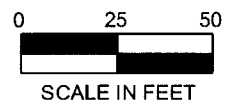
-  B2 EXISTING BOREHOLE  
HAND AUGERED, 5/23/06
-  B12 EXISTING BOREHOLE  
HAND AUGERED, 6/5/06
-  C3 EXISTING BOREHOLE  
HAND AUGERED, 8/11/06

Figure 5  
Site Plan  
2100 Franklin Street  
Oakland, California



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

RGA Environmental, Inc.  
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Emeryville, CA 94608



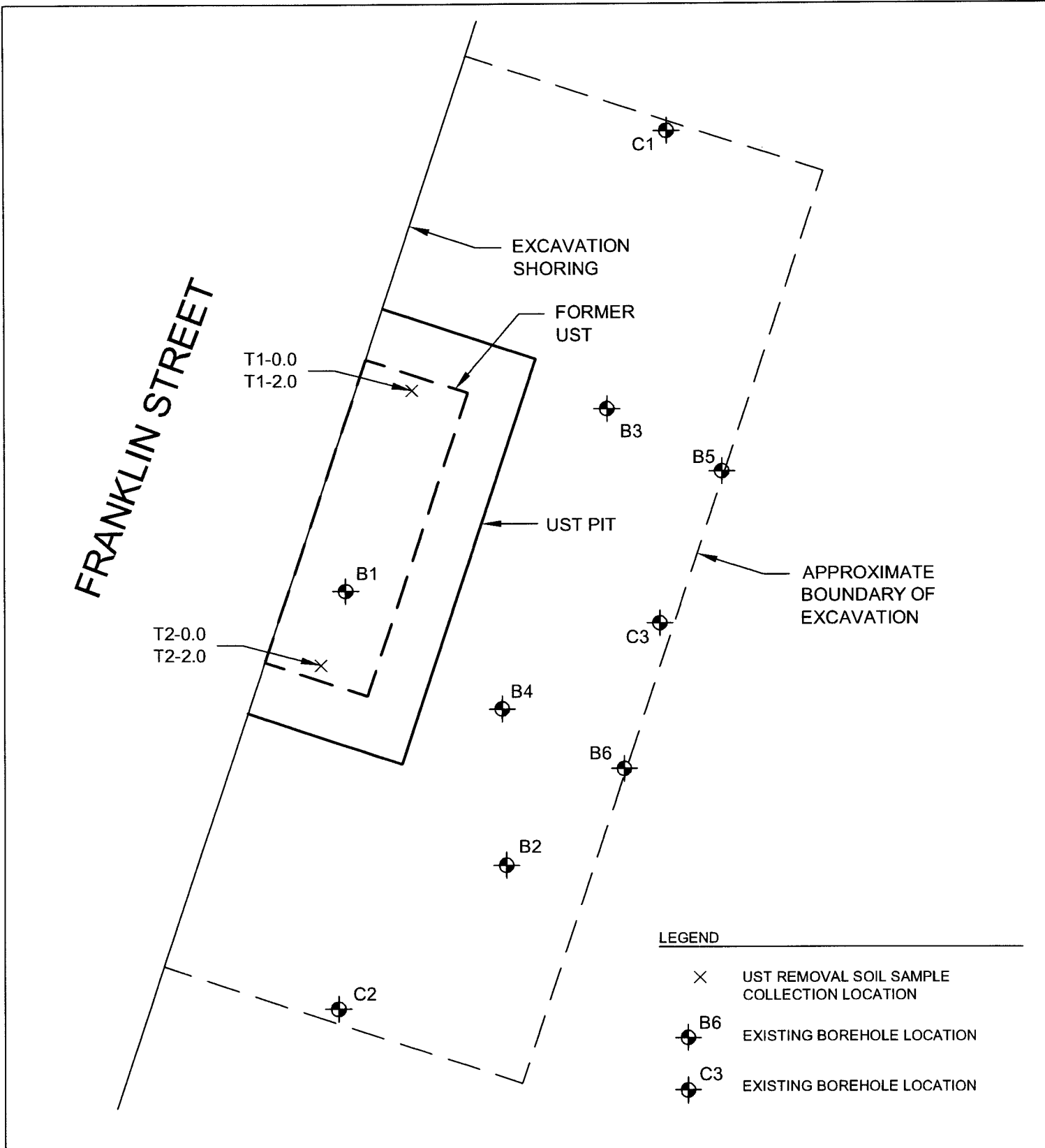
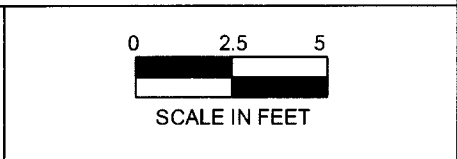


Figure 6  
 Site Plan Detail  
 2100 Franklin Street  
 Oakland, California



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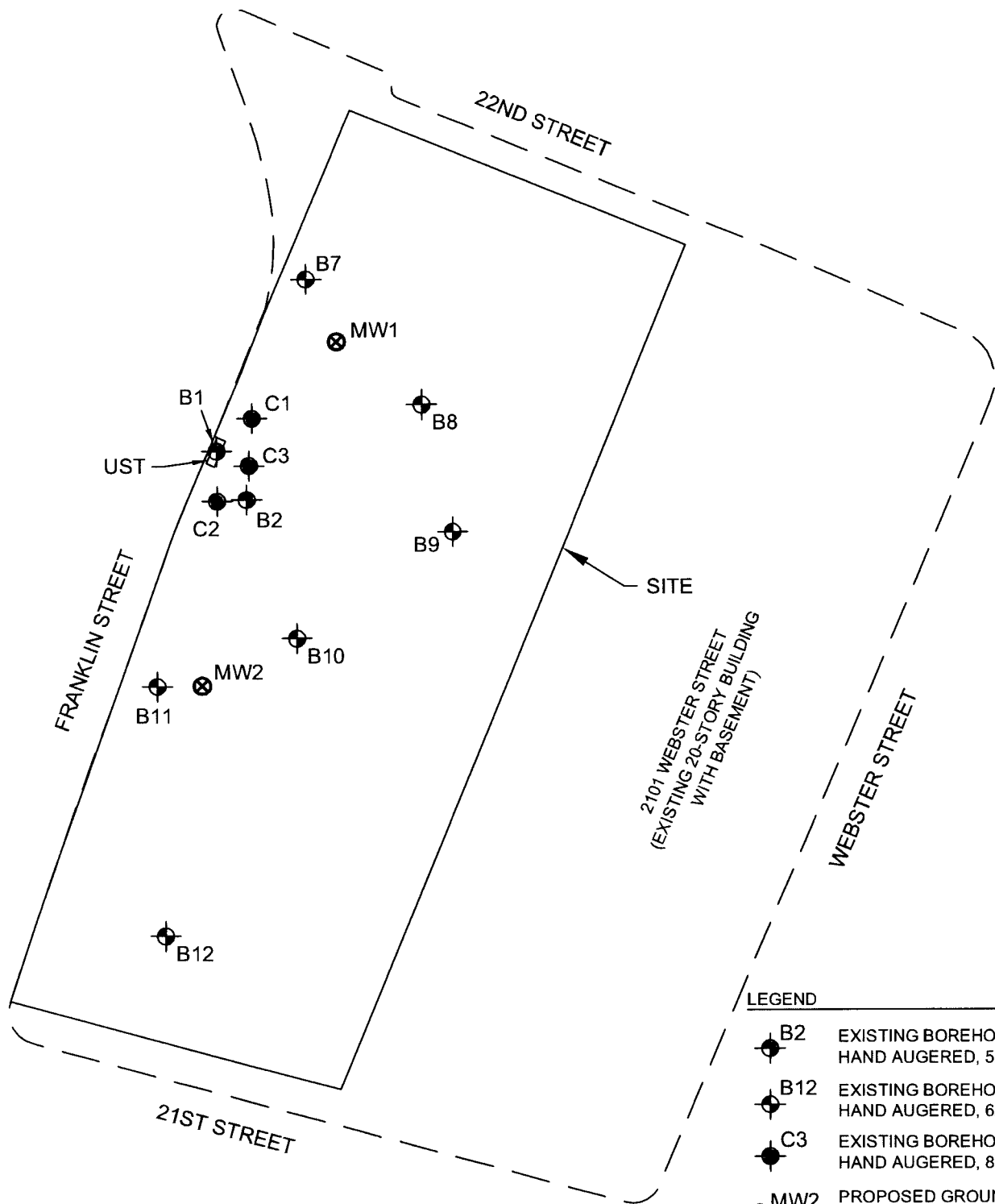


Figure 7  
 Site Plan  
 2100 Franklin Street  
 Oakland, California



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

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