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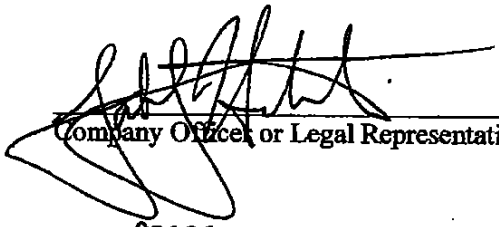
**Alameda County Environmental Health Services
1131 Harbor Bay parkway, Suite 250
Alameda, CA 94502-6577**

PERJURY STATEMENT

Name of Document or Report: 1685 24th Street Revised Work Plan

RO#: 2568

I declare, under penalty and perjury, that the information and/or recommendations contained in the above stated document or report is true and correct to the best of my knowledge.



Company Officer or Legal Representative

manager
Title

9/1/06
Date

CC: ACC Environmental Consultants



June 20, 2006

Mr. Jabari J. Herbert
Capital Stone Group, LLC
1485 8th Street
Oakland, California 94607

RE: Revised Work Plan – Additional Subsurface Investigation
1685 24th Street, Oakland, California

Dear Mr. Herbert:

ACC Environmental Consultants, Inc., (ACC) presents this revised Work Plan (WP) to perform additional subsurface investigation at 1685 24th Street, Oakland, California (Site). The purpose of additional site investigation is to further characterize suspect petroleum hydrocarbon impacts in soil and groundwater in the vicinity of seven former underground storage tanks (USTs) identified at the Site and to obtain additional data to confirm the preliminary Site Conceptual Model (SCM). ACC understands that the Oakland Fire Department (OFD) previously forwarded this case to the Alameda County Health Care Services Agency (ACHCSA) for regulatory oversight. While ACHCSA is the lead regulatory agency, the OFD has been contacted for assistance and to help expedite the work necessary to move the Site towards full regulatory case closure.

INTRODUCTION

The general goals of additional subsurface investigation will be to: 1) advance exploratory soil borings to further characterize subsurface conditions, sample encountered media, and investigate the potential for vertical and horizontal migration of petroleum hydrocarbons in the subsurface; 2) obtain additional data regarding human health and ecological risk associated with suspect residual petroleum hydrocarbons in the subsurface; 3) obtain additional data to confirm and further refine the preliminary SCM and determine optimal locations of potential groundwater monitoring wells; 4) obtain additional data to determine if remedial soil or water removal is warranted to approve unrestricted land use; and 5) prepare a report of findings for submission to the ACHCSA and OFD for review and comment.

This work is scheduled to be performed in July 2006.

BACKGROUND

The subject property is bound by 24th Street to the north, Willow Street to the west, and the Pacific Pipe Company (PPC) pipe storage yards to the east and south (Figure 1). Circa 1966 to 1990, the subject property was utilized as a taxicab maintenance facility. From 1990 to the present, automotive repair operations have been conducted at the site by Lee's Auto Shop. In April 1987, seven underground storage tanks (USTs) were reportedly removed from the Site. According to records obtained at the OFD Office of Emergency Services, three 1,000 gallon gasoline USTs, two 8,000-gallon USTs, and two 7,500-gallon USTs were permitted for the Site. UST removal records obtained during the Phase I Environmental Site Assessment indicate that two 7,500-gallon gasoline USTs, two 10,000-gallon gasoline USTs, and one 550-gallon waste oil tank were removed.

The site plan generated during UST removal was not scaled so exact former UST locations are unknown. Estimated former UST locations are illustrated on Figure 2. Specifically, the USTs illustrated at soil boring locations TB-4, SS-1, and TB-10 are known due to the observation of gasoline-discolored soil and obvious backfill materials as sand and pea gravel at these three locations. The four suspect USTs depicted in the vicinity of soil borings TB-6 through TB-9 are known with less confidence but are estimated based on the depicted locations on the unscaled site plan. Product dispenser locations are unknown but seven holes for seven vent lines are located in the southwest corner of the building.

ACC conducted an initial subsurface investigation at the Site in August 2002 for a prospective buyer. Subsurface soil and groundwater characterization was requested by the prospective buyer for due diligence purposes due to historical site use and documented USTs at the Site. In order to confirm suspect soil and groundwater impacts from the former USTs, ACC located and advanced seven exploratory soil borings to collect representative soil and grab groundwater samples. Soil boring TB-1 and TB-2 were advanced on August 2, 2002 and "step-out" soil borings B25 through B29 were advanced on August 12, 2002. The soil boring designations used reflect the fact that the soil borings advanced at the Site were part of a much larger comprehensive subsurface investigation at a number of properties. Field indications and sample analytical results indicated that gasoline and diesel fuel impact was evident in several soil and groundwater samples collected in these soil borings.

TPHg was reported in the grab groundwater sample from soil boring TB-1 at 5,000 micrograms per Liter ($\mu\text{g}/\text{L}$) with relatively minor associated BTEX. TEPH was reported in sample TB-1-W at a concentration of 2,000 $\mu\text{g}/\text{L}$. TPHg was reported in soil in soil borings B25, B28, and B29 at concentrations ranging from 36 to 190 milligrams per kilogram (mg/kg). Traces of emulsified free-phase floating product (free product) were observed on groundwater in soil boring B25, as evidenced by grab groundwater sample analytical results reported in grab groundwater sample B25-W. Some reported concentrations of TPHg and BTEX were significant but appeared localized. Groundwater was generally encountered at approximately 9 feet below ground surface (bgs) perched above a silty clay aquitard approximately 10 feet thick (Figure 3).

TPHg, BTEX, and TEPH as diesel were the primary constituents of concern identified in soil and groundwater. These constituents are likely the result of unauthorized releases from the former

gasoline and diesel fuel USTs. Subsurface impacts were not entirely characterized but appear to be largely localized to the general vicinity of the former USTs and horizontal and vertical migration potential is estimated to be minimal due to the low permeability aquitard observed from approximately 9.5 to 20 feet bgs. TPHg and BTEX concentrations in select locations are above regulatory action levels and may represent an unacceptable human health risk and/or the necessity for land use restrictions and groundwater monitoring. In addition, halogenated volatile organic compounds (HVOCs) were reported in one groundwater sample.

SCOPE OF WORK

ACC proposes the following scope of work to further characterize subsurface conditions in the vicinity of the former USTs,:

- Advance eight exploratory soil borings to total depths ranging from 4 to 16 feet bgs to log soils and collect representative media samples and advance two exploratory soil borings TB-12 and TB-18 to 30 to 35 feet bgs to log deeper soils and collect grab groundwater samples if a second deeper water-bearing zone is encountered between 20 and 35 feet bgs;
- Log and screen soils in the continuously-cored soil borings, including screening surface soils from the surface to 4 feet bgs at 1-foot intervals with a photoionization detector, and revise the existing cross section as necessary to illustrate Site hydrogeological conditions;
- Collect representative soil and grab groundwater samples from the logged, continuously cored soil borings, and analyze samples for constituents of concern;
- Submit select soil and all grab groundwater sample to a state certified analytical laboratory for analysis of TPHg, BTEX, and MTBE by EPA Method 8260B and total extractable petroleum hydrocarbons diesel and motor oil by EPA Method 3510/8015M; and
- Obtain data regarding the location and depth of utilities along 24th and Willow Streets to evaluate the potential of preferential migration, and obtain data regarding the location and type of sensitive receptors in the estimated downgradient direction including, schools, hospitals, daycare centers, and water wells;
- Prepare a report of findings and revised SCM for submission to the ACHCSA and the OFD.

All work will be performed according to Tri-Regional Guidelines set forth by the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) and standard ACC sampling protocols.

RATIONALE FOR PROPOSED SCOPE OF WORK

ACC proposes to advance 10 Geoprobe[®] exploratory soil borings to total depths ranging from 4 to approximately 35 bgs. Proposed soil boring locations are illustrated on Figure 2. The primary goal of

obtaining data from these sampling locations is to further characterize soil and groundwater conditions in the vicinity of and downgradient of the former UST locations. Secondary goals are to address concerns expressed by the ACHCSA in their September 17, 2003 and December 27, 2004 letters, and discussed in a meeting conducted April 4, 2006.

The estimated bottom of the former USTs was a depth of 8 to 10 feet bgs and groundwater was encountered at approximately 8 to 9 feet bgs. Therefore, ACC believes the primary horizontal migration pathway is along a relatively thin groundwater horizon observed from 9 to 11 feet bgs. First-encountered groundwater appears to be groundwater perched on the 10-foot-thick, silty clay aquitard observed in soil boring TB-10 (Figure 3). ACC will document the location and depth of utility pathways along 24th Street and Willow Street to determine if any preferential migration may be occurring along utility trenches.

Additional soil and groundwater characterization is also necessary to evaluate the potential human health and ecological risks associated with suspect residual petroleum hydrocarbon concentrations in subsurface media and recently proposed residential land use. Surface soils will be logged for suspect impacts by screening the soils for field indications of petroleum hydrocarbon impact and collecting PID readings at 12 inch intervals. Deeper soils in the continuously-cored soil borings will be screened at approximate 2-foot intervals with a PID and logged for field indications of impact such as soil discoloration and characteristic odor. Surface soils exhibiting soil discoloration or staining will be investigated and one to two shallow soil samples will be analyzed for TEPH to assess incidental impacts to surface soils from historic site use as an automobile repair facility. Similarly, soils in the immediate vicinity of storm drains will be logged and screened with a PID to assess suspect petroleum hydrocarbon impacts. Soils exhibiting elevated PID levels without a characteristic gasoline odor will be analyzed for HVOCs.

The secondary goal of this investigation is to assess potential human health risk associated with residual gasoline constituents in soil and groundwater. ACC proposes to compare sample analytical results with petroleum hydrocarbon environmental screening levels (ESLs) promulgated by the RWQCB. Due to the lack of mitigating factors and the depth of petroleum hydrocarbon-impacted groundwater, ESLs appear appropriate for a Tier 1 risk evaluation, and their use should provide justification for more extensive human health risk evaluation and groundwater monitoring.

The soil borings will be continuously cored and soil will be logged and screened for field indications of petroleum hydrocarbon impact. Vadose and saturated soils will be specifically logged for their estimated permeability and migration potential. Based on soil logging results and PID screening, selected representative soil sample will be prepared for analysis. Soil screening will be done with a calibrated ppbRAE PID. This PID measures volatile constituents in air in the ppb range and is highly effective at prioritizing potential soil samples for analysis. Soil samples exhibiting the highest PID readings, or soil samples deemed most representative of existing soil conditions will be prepared for analysis.

Proposed sample rationale and analyses are summarized in Table 1.

TABLE 1 – PROPOSED ANALYSES

Soil Boring	Depth	Matrix	Constituent Analysis	Rationale
TB-11	8.0-8.5	Soil	TPHg, BTEX, MTBE, TPHd	Perimeter at estimated downgradient extent,
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd, HVOCs	
TB-12	8.0-8.5	Soil	TPHg, BTEX, MTBE, TPHd	Perimeter at estimated downgradient extent
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd, HVOCs	
TB-13	8.0-8.5	Soil	TPHg, BTEX, MTBE, TPHd, TEPH	Perimeter at estimated downgradient extent, sample aquitard
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd, HVOCs	
	11.5-12.0	Soil	TPHg, BTEX, MTBE	
TB-14	1.0-1.5	Soil	TEPH	Perimeter in estimated crossgradient direction, shallow soil
	3.0-3.5	Soil	TEPH	
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd	
TB-15	8.0-8.5	Soil	TPHg, BTEX, MTBE, TPHd	Evaluate area SE of suspect tank location
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd	
TB-16	8.0-8.5	Soil	TPHg, BTEX, MTBE, TPHd	Evaluate area NW of suspect tank location
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd, HVOCs	
TB-17	1.0-1.5	Soil	TEPH	Evaluate area E of suspect tank location, evaluate shallow soil and groundwater
	3.0-3.5	Soil	TEPH	
	8.0-8.5	Soil	TPHg, BTEX, MTBE, TPHd	
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd	
TB-18	8.0-8.5	Soil	TPHg, BTEX, MTBE, TPHd	Evaluate soil and groundwater
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd	
TB-19	1.0-1.5	Soil	TEPH	Evaluate area S of suspect tank location, evaluate shallow soil and groundwater
	8.0-8.5	Soil	TPHg, BTEX, MTBE, TPHd	
	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd	
TB-20	9.0-12.0	Water	TPHg, BTEX, MTBE, TPHd	Evaluate Groundwater

Additional goals of additional site characterization are to further determine if suspect gasoline and diesel fuel impacts in shallow soil exceed ESLs and if remedial soil excavation and/or pit dewatering is warranted. Collecting current media samples will facilitate this evaluation. Additional subsurface soil characterization, especially confirming that the aquitard layer from approximately 10 to 20 feet bgs is adequate to eliminate potential vertical migration and assessing potential preferential pathways in the vicinity of the Site, will aid in evaluating potential petroleum hydrocarbon migration and help determine that: 1) the site has been adequately characterized; 2) the dissolve hydrocarbon plume is not migrating; 3) no water wells or other sensitive receptors are likely to be impacted; and 4) optimize locating any potential groundwater monitoring wells.

DRILLING PROGRAM

A drilling permit will be obtained from the Alameda County Public Works Agency (ACPWA) prior to fieldwork. The proposed soil boring locations are illustrated on Figure 2. All soil borings will be clearly marked and outlined in white paint. Underground Service Alert will be notified at least two business days prior to performing drilling activities. Exploratory soil borings will be advanced in a manner similar to the previously advanced exploratory soil borings. The soil borings will be advanced using a truck-mounted, hydraulically driven Geoprobe[®] sampling tool equipped with 2.0-inch inside diameter clear acetate liners. Drilling will be performed under the direct observation of a Professional Geologist, and the subsurface materials in the borings will be identified and logged according to the Unified Soil Classification System. The sampling probe and rods will be pre-cleaned prior to use and between sample drives by washing them with a trisodium phosphate and potable water solution, a potable water rinse, and distilled water rinse. The work will be conducted in one day and soil cuttings will not be generated.

Grab groundwater samples will be collected in select proposed borings. Samples will be collected using a pre-cleaned HydroPunch[®] tool that has been hydraulically driven to the desired depth, retracted, and the 4-foot long screen exposed to the formation. Grab groundwater samples will then be collected using disposable polyethylene tubing equipped with a check valve or bailed with a disposable polyethylene bailer inserted into the HydroPunch tool. Water will be agitated to the least extent practical during collection. The grab groundwater samples will then be immediately placed in approved, laboratory-supplied sample vials without headspace, sealed, and stored in a pre-chilled, insulated container pending transport to a state-certified analytical laboratory. Every effort will be made to minimize disturbance of the groundwater samples prior to placement in the sample containers and maintaining the samples at the four degrees Celsius prior to analysis.

The soil samples will be submitted to a state-certified analytical laboratory following standard chain of custody procedures for analysis. Standard turnaround time for analytical results is seven working days. Following drilling and sample collection, the soil boring will be abandoned with neat cement to just below the surface (3 to 6 inches). The soil boring will then be completed with concrete to grade to match the surrounding material.

REPORT PREPARATION

A technical report will be prepared for submission to the lead regulatory agency that summarizes previously performed site investigation and discusses the fieldwork performed; presents new observations, findings, and analytical results; and presents new conclusions and recommendations.

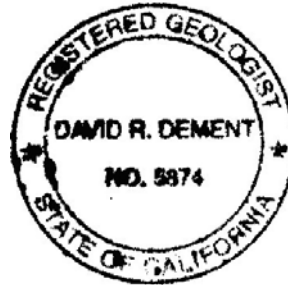
The report of findings will specifically present a revised SCM. The revised SCM will: 1) further evaluate subsurface conditions; 2) evaluate human and ecologic health risk; 3) present additional data necessary to approve regulatory closure or provide the rationale for instituting groundwater monitoring; and 4) present necessary site characterization data to approve unrestricted site use prior to obtaining full regulatory closure in regards to the former USTs.

A site-specific health and safety plan which encompasses the proposed work at the site and complies with the requirements of 29 CFR Part 1910.120 will be prepared and present during field activities.

Mr. Jabari Herbert
June 20, 2006
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If you have any questions concerning this Work Plan, please call me at (510) 638-8400, ext. 109 or email me at ddement@accenv.com.

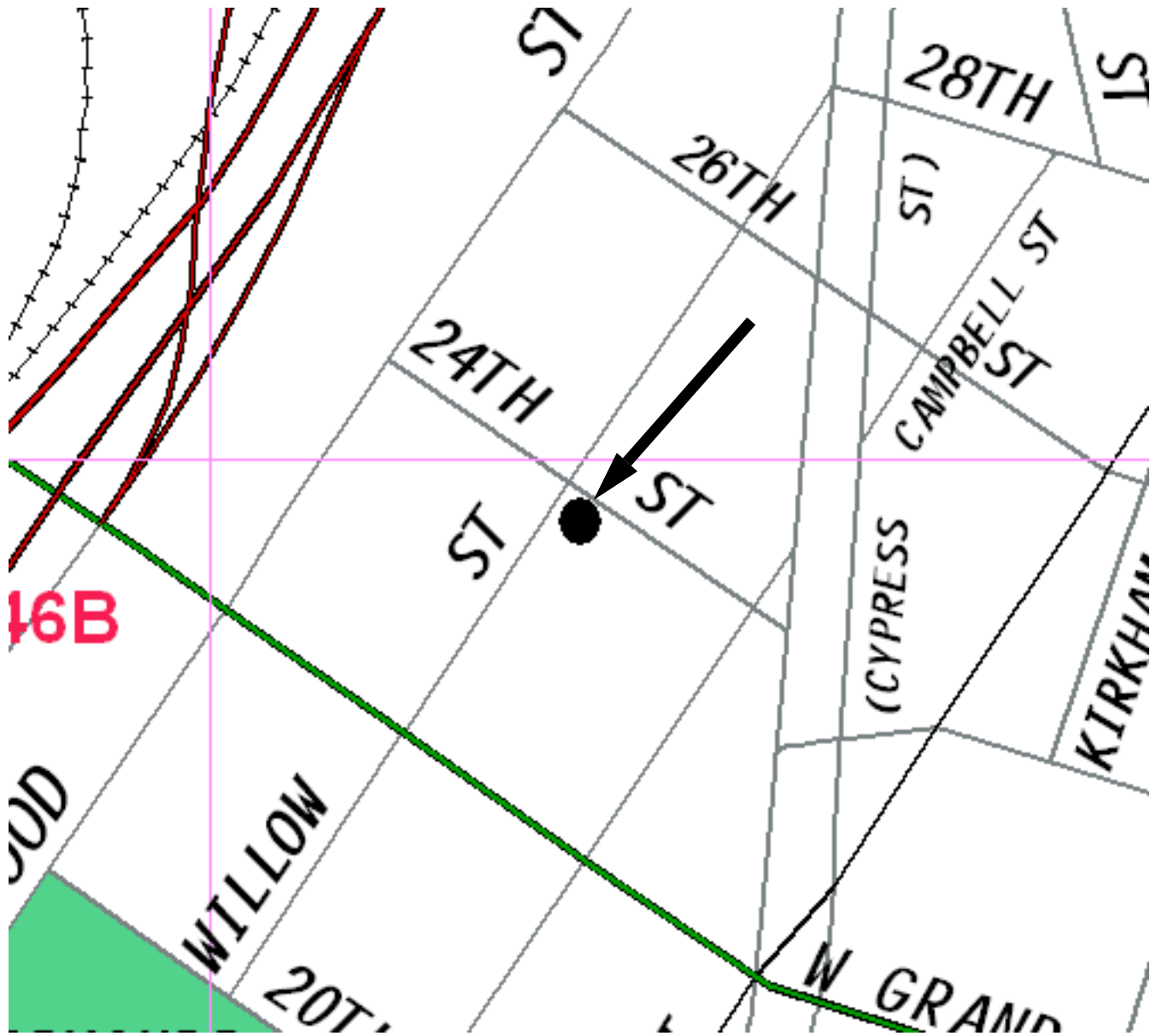
Sincerely,




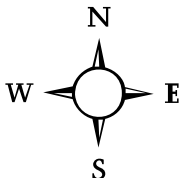
David DeMent, PG, REA II
Division Manager

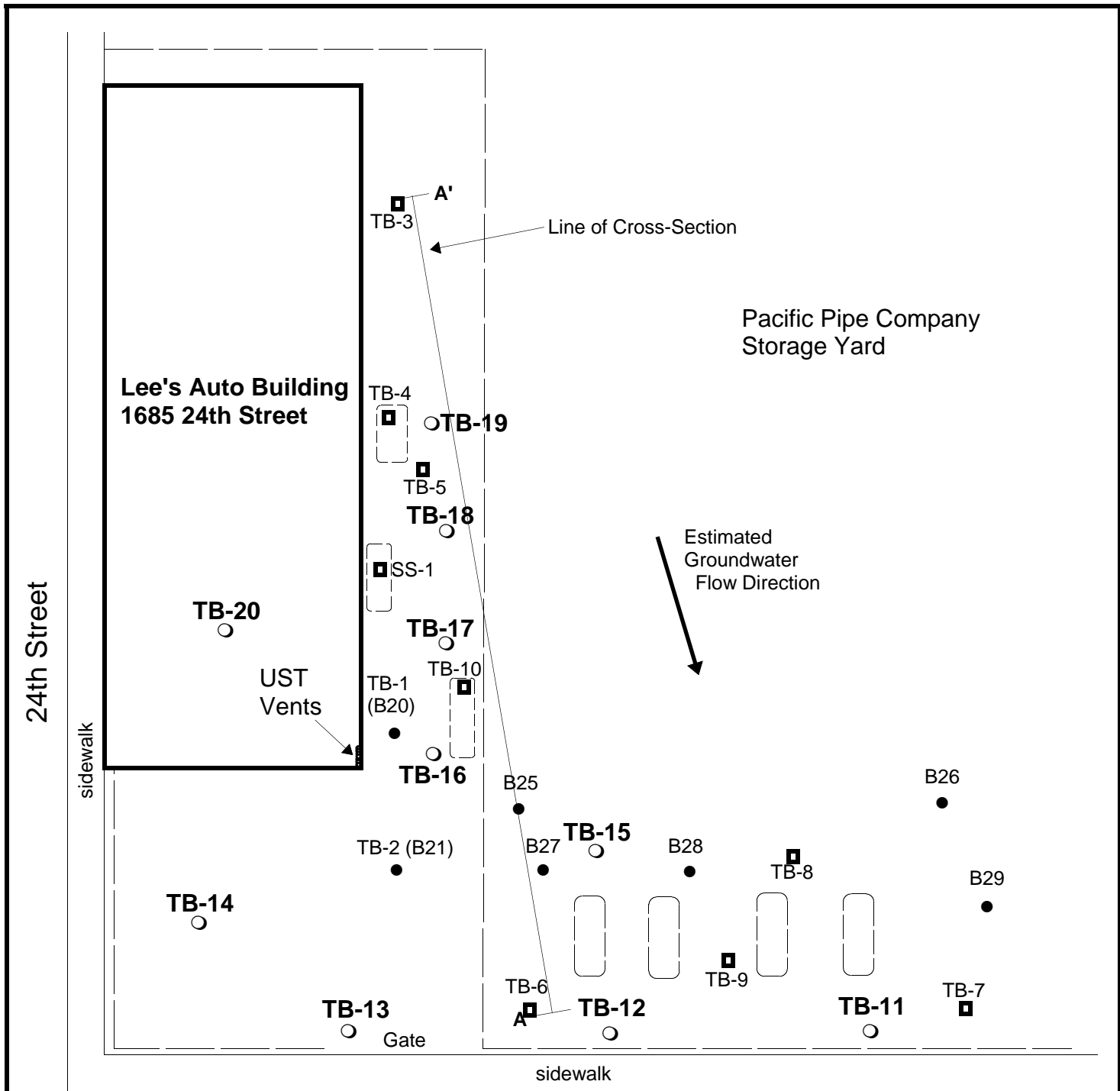
/drd:kld

cc: Mr. Leroy Griffin, Oakland Fire Services Agency
Ms. Don Hwang, Alameda County Health Care Services



Source: The Thomas Guide, Bay Area Metro 2004

Title: Location Map 1685 24th Street Oakland, California	
Figure Number: 1	Scale: None
Project Number: 6871-001	Drawn By: TRB
 Northern California 7977 Capwell Drive, Suite 100 Oakland, CA 94621 (510) 638-8400	Date: 6/17/06
	



Legend

- TB-11**
○ Proposed Boring Locations - Feb 2006
- TB-10**
■ 6/04 Boring Locations
- B 29**
● 8/02 Boring Locations
- ⎓ Approximate Former UST Locations
- Fence Line

Map Source: Winter Construction Inc.

Title: Proposed Soil Boring Locations
1685 24th Street
Oakland, California

Figure Number: 2

Scale: 1" = 30'

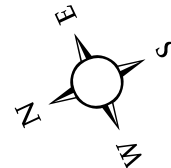
Project No.: 6871-001.00

Drawn By: DRD

Date: 6/17/06

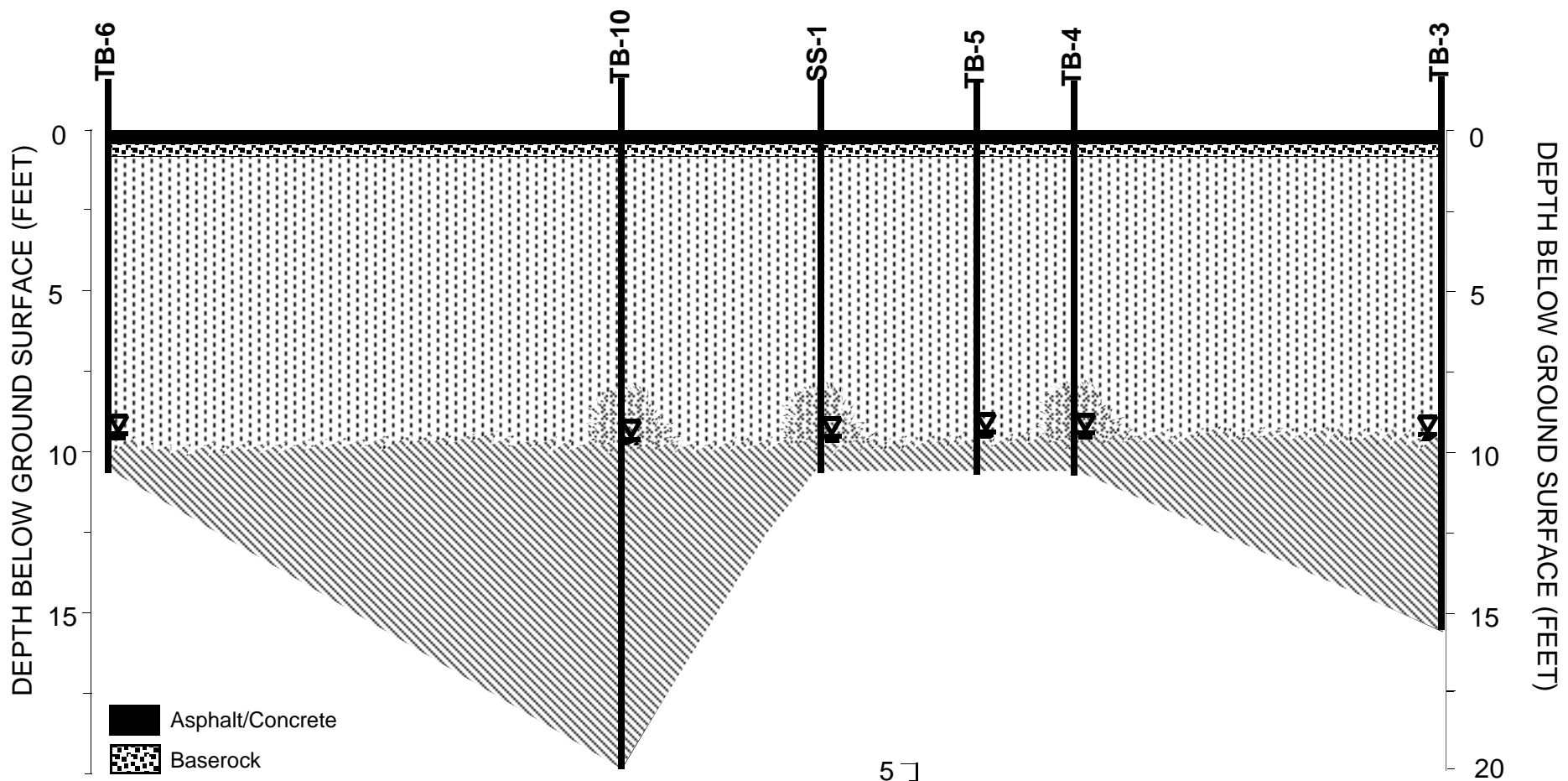








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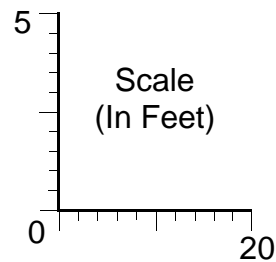


A West

A' East



-  Asphalt/Concrete
 -  Baserock
 -  Silty sand (SM), olive brown, poorly graded, loose, trace to 10% fines, grades to SP, uniform, damp, no gasoline odor or soil discoloration
 -  Silty Clay (CL), brown, slightly to mod. plastic, medium stiff, trace v fine grained sand, uniform, damp, no odor or discoloration noted
 -  Fill material, sand with silts, some brick fragments and other organic debris
- TB-10**
Soil Boring Location
-  Depth of First-Encountered Groundwater



Title: Geologic Cross Section	
1685 24th Street	
Oakland, California	
Figure No. 3	Date: 06/16/05
Drawn By: DRD	Project 6871-001-00
ACC Environmental Consultants	
7977 Capwell Drive, Suite 100	
Oakland, California 94621	
(510)638-8400 Fax: (510)638-8404	