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ENVIRONMENTAL
CONSULTANTS

August 10, 2004

TD Rowe
c/o Mr. William Banker, Jr.
5980 Horton Street, Suite 180
Emeryville, California 94608

RE: Work Plan – Additional Subsurface Investigation
8134 Capwell Drive, Oakland, California
ACC Project Number: 6520-001.01

Dear Mr. Banker:

ACC Environmental Consultants, Inc., (ACC) presents this Work Plan (WP) to perform additional subsurface investigation at 8134 Capwell Drive, Oakland, California (Site). The purpose is to further characterize suspect petroleum hydrocarbon impacts in soil and groundwater in the vicinity of the two former underground storage tanks (USTs) removed from the Site in April 1999. ACC understands that the Oakland Fire Service Agency (OFSA) is the lead regulatory agency. In order to facilitate timely approval of the WP, ACC is also forwarding a copy of the WP directly to the OFSA and will follow-up with them as the lead regulatory agency.

INTRODUCTION

The general goals of this additional subsurface investigation will be to: 1) advance 3 exploratory soil borings to further characterize soil and groundwater in the vicinity of the former underground storage tanks (USTs); 2) further investigate the potential for vertical and horizontal migration of petroleum hydrocarbons in the subsurface; 3) obtain additional data regarding human health and ecological risk associated with suspect residual petroleum hydrocarbons in the subsurface; and 4) prepare a report of findings for submission to the OFSA for purposes of obtaining full regulatory closure in regards to the former USTs.

BACKGROUND

The subject property is located at 8134 Capwell Drive (Figure 1). Circa 1999, the facility was operated by TD Rowe which utilized two fiberglass 3,000-gallon gasoline USTs. In April 1999, the two USTs were removed from the Site under the direction of ACC. Under permit from the OFSA, the two USTs were removed by DCM Construction and Services (DCM) along with approximately

150 tons of gasoline-impacted soil and 800 gallons of pit water. Following initial removal of the two USTs, ACC collected one confirmation sidewall soil sample from each side of the UST excavation. Minor gasoline concentrations were reported along the south, east, and west sidewalls but elevated gasoline concentrations were reported along the north side. Sidewall soil samples are illustrated on Figure 2. ACC then directed DCM to overexcavate the north sidewall approximately 4 feet and collected two confirmation sidewall soil samples. Both sidewall soil samples collected after overexcavation did not contain any reportable gasoline concentrations indicating that overexcavation had successfully removed residual gasoline concentrations in soil.

At the direction of the OFSA, water initially found in the pit displaying characteristic gasoline odor was sampled for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE). Elevated concentrations of TPHg and BTEX were reported in the pit water sample. Following UST removal and prior to backfilling the excavation, the pit water was pumped out to remove traces of gasoline floating product observed on the water. Following some recharge of groundwater, a second pit water sample was collected and analyzed for TPHg, BTEX, and MTBE. Gasoline constituent concentrations decreased significantly and the excavation was backfilled. During UST removal activities, groundwater was generally encountered at approximately 5 feet below ground surface (bgs) but displayed significant fluctuations in elevation due to tidal influences. Following receipt of all analytical results and documentation of proper disposal of soil and pit water, ACC submitted a report of findings dated August 6, 1999 to the OFSA.

SCOPE OF WORK

ACC proposes the following scope of work to address current concerns of the OFSA and characterize subsurface conditions in the vicinity of the former USTs:

- Advance 3 exploratory soil borings to total depths of approximately 8 feet bgs to log encountered soils and collect representative media samples;

- Two soil borings (B1 and B2) will be advanced near the northeast and northwest corners of the former UST excavation and one soil boring will be advanced approximately 20 to 25 feet west of the former UST excavation in the estimated downgradient direction toward the San Leandro Creek outlet to San Leandro Bay;

- Collect one representative soil and grab groundwater samples from the logged, continuously cored soil borings, and collect a representative grab groundwater sample from soil boring B3 as shown on Figure 2;

- Submit each soil and grab groundwater sample to a state certified analytical laboratory for analysis of TPHg, BTEX, and MTBE by EPA Method 8260B; and
- Prepare a letter report of findings for submission to the OFSA.

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 (attached).

RATIONALE FOR PROPOSED SCOPE OF WORK

In order to obtain current data regarding suspect residual gasoline concentrations in soil and groundwater, and satisfy concerns of the OFSA, ACC proposes to advance three Geoprobe® exploratory soil borings to total depths of approximately 8 feet bgs at select locations estimated to provide the optimum data regarding subsurface conditions. 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 the former USTs. Based on the relatively shallow depth of first-encountered groundwater of 5 to 7 feet bgs, ACC proposes to only advance the exploratory soil borings to 8 to 10 feet bgs or approximately three feet into saturated soils.

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 risk-based screening levels (RBSLs) promulgated by the RWQCB. Due to the lack of mitigating factors and the likely scenario of long-term commercial site use, RBSLs appear appropriate for a Tier 1 risk evaluation.

The soil borings will be continuously cored and soil will be logged and screened for field indications of contamination. Vadose and saturated soils will be specifically logged for their estimated permeability and migration potential. Soil screening will be done with a calibrated ppbRAE photoionization detector (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 collected immediately above first encountered groundwater will be prepared for analysis. Proposed sample analyses are summarized in Table 1.

TABLE 1 – PROPOSED ANALYSES

Soil Boring	Depth	Matrix	Constituent Analysis
B-1	4.0-4.5	Soil	TPHg, BTEX, MTBE
	6.0-9.0	Water	TPHg, BTEX, MTBE
B-2	4.0-4.5	Soil	TPHg, BTEX, MTBE
	6.0-9.0	Water	TPHg, BTEX, MTBE
B-3	6.0-9.0	Water	TPHg, BTEX, MTBE

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 2 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 hydraulically driven Geoprobe® sampling tool equipped with 2.0-inch inside diameter clear acetate liners. Drilling will be performed under the direction of a Staff 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 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 each proposed boring by bailing each open hole with a disposable 0.5-inch-diameter polyethylene bailer. The grab groundwater samples will be 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 4 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 discussing fieldwork, observations and findings, analytical results, conclusions, and recommendations will be prepared for submission to the OFSA. Since groundwater in the area is strongly influenced by tidal influences and demonstrates significant fluctuations in elevation, and significantly impacted soil was successfully excavated, ACC estimates that significant natural attenuation of any residual petroleum hydrocarbons has occurred since 1999.

HEALTH AND SAFETY PLAN

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.

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.

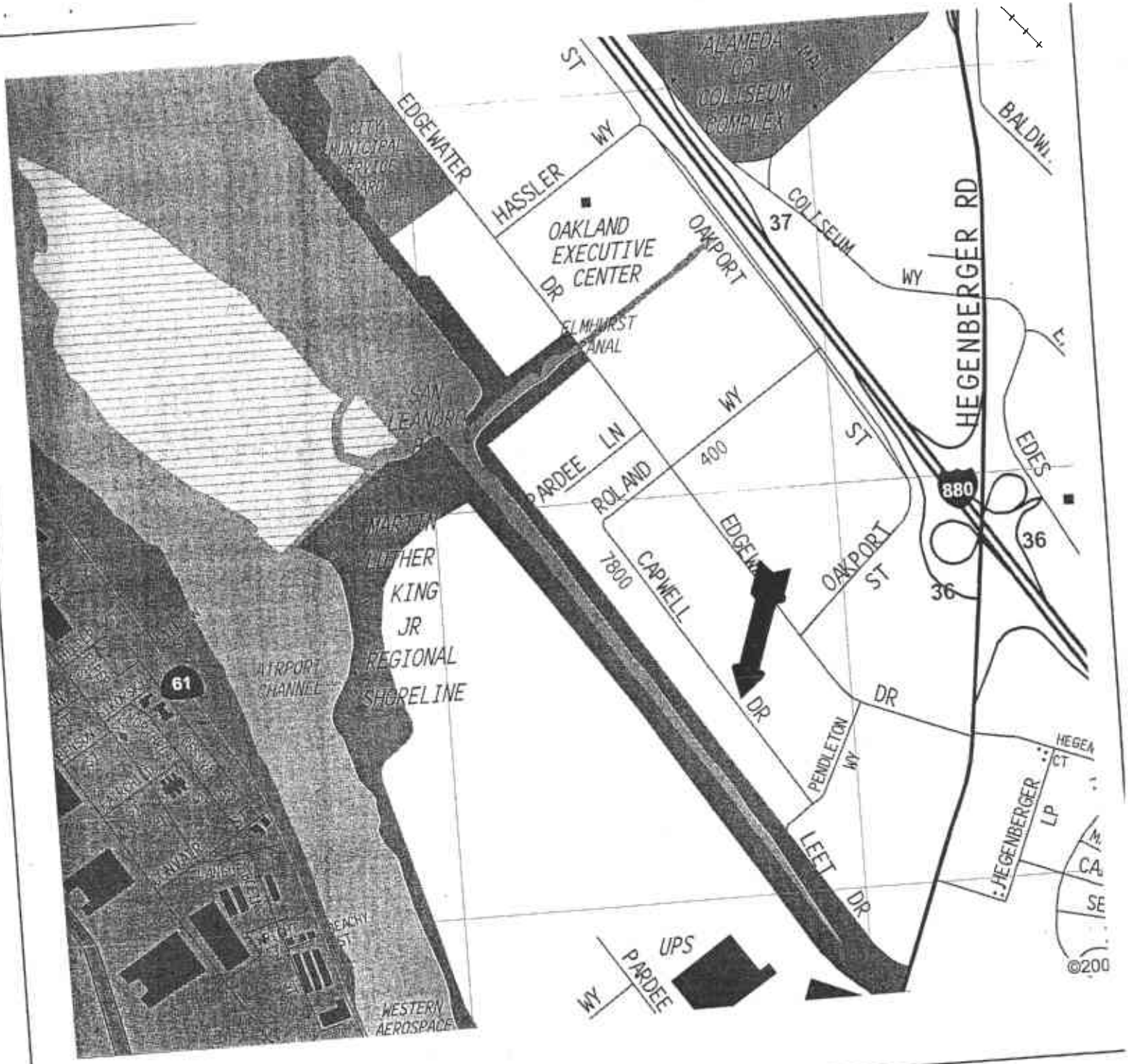
Sincerely,

David R. DeMent, RG, REA II
Environmental Division Manager

/drd:ejg

cc: Mr. Leroy Griffin, Oakland Fire Services Agency
Mr. Edward Giacometti, ACC

FIGURES



Source:The Thomas Guide, Bay Area 2004

Title: ***Location Map***
8134 Capwell Drive
Oakland, California

Figure Number: 1	Scale: None
Project No: 6520-001.01	Drawn By: EJG
	Date: 8/10/04

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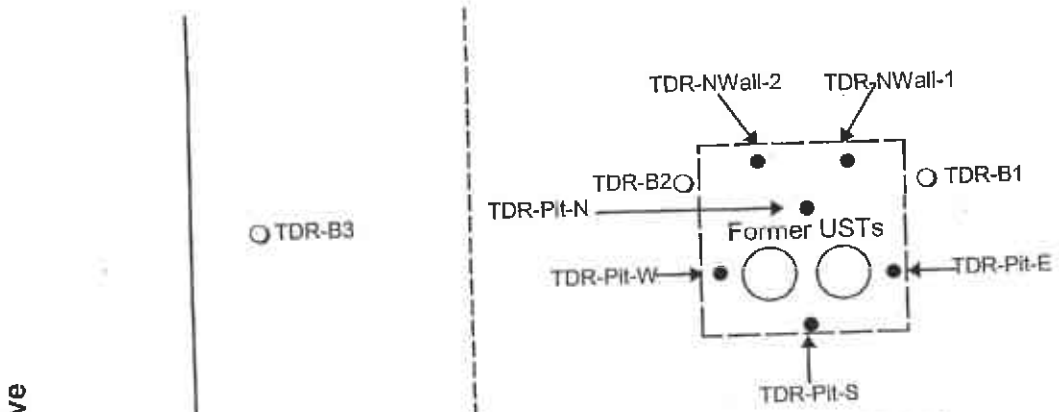

Capwell Drive

Building

Building

LEGEND

TDR-B3 - Proposed Soil Boring Locations

TDR-Pit-N - ACC Soil Sampling Locations

-Chainlink Fence

-Area of Former Excavation

Title: ***Site Plan***
8134 Capwell Drive
Oakland, California

Figure Number: 2	Scale: 1"=20'
Project No:6520-001.01	Drawn By: EJG
	Date: 8/10/04

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