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June 27, 2000

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Don Hwang

Subject: Workplan to Conduct Soil and Groundwater Investigation
Former F. G. Gasoline UST Site
3314 San Pablo Avenue, Oakland, California
GA Project No. 180-01-01

Ladies and Gentlemen:

Gribi Associates is pleased to submit this workplan on behalf of Mr. Ken Tran for the former F. G. Gasoline underground storage tank (UST) site located at 3314 San Pablo Avenue in Oakland, California (see Figure 1 and Figure 2). This workplan proposes the drilling and sampling of approximately six soil borings at the site. The goal of proposed soil boring activities will be to assess soil and groundwater conditions in an expected downgradient (westerly) direction from previously-removed USTs at the site.

SITE BACKGROUND

The project site is situated on the gently southwest-sloping East Bay Plain, approximately one mile east-southeast from San Francisco Bay and two miles west-southwest from the Berkeley Hills. The project site elevation is about 30 feet above mean sea level, and the project site vicinity is underlain by several tens to hundreds of feet of Bay Mud sediments. The Bay Mud sediments found along the East Bay Plain generally consist of low-permeability silts and clays, with occasional thin sand and gravel lenses. Shallow groundwater is generally encountered at a depth of about ten feet below surface in the site vicinity, generally flowing to the west towards San Francisco Bay. The Bay Mud sediments generally do not make good groundwater aquifers, and there is no significant beneficial groundwater usage in Bay Mud sediments in the site vicinity.

According to *Tank Removal Activities Report, W B Detailing, 3314 San Pablo Avenue, Oakland, California* (SEMCO, March 19, 1996), four USTs were removed from the site in February and March 1996. These USTs consisted of two 4,000-gallon gasoline USTs, one 6,000-gallon gasoline UST, and one 8,000-gallon gasoline UST, all located immediately southeast from three dispenser islands at the site. Soil samples collected from UST excavation sidewalls at about ten feet in depth contained levels of Total Petroleum Hydrocarbons as Gasoline (TPH-G) ranging from 120 parts per million (ppm) to 8,000 ppm. A grab groundwater sample collected from the UST excavation cavity

GRIBI Associates

Geological & Environmental Consulting Services

James E. Gribi, R.G.
Geologist

1350 Hayes St. Ste. C-14 • Benicia, CA 94510
Phone (707) 748-7743 • Fax (707) 748-7763

contained 46 ppm of TPH-G, with 0.44 ppm of Benzene. Two composite soil samples collected from the excavated soil stockpile contained 860 ppm and 1,500 ppm of TPH-G. The UST excavation cavity was apparently backfilled both with excavated soils and imported clean backfill material.

On February 19, 1999, Alameda County Department of Environmental Health issued a letter requesting a workplan to further delineate the extent of hydrocarbon impacts to soil and groundwater at the site.

WORKPLAN ELEMENTS

In order to investigate possible soil and shallow groundwater impacts and to proceed towards regulatory closure of this site, we propose to drill and sample approximately six soil borings at the site using direct-push coring equipment. The proposed soil boring investigation will include the following workplan elements. All activities will be conducted in accordance with applicable local, State, and Federal guidelines and statutes.

Prefield Activities

Prior to implementing this workplan, written approval will be obtained from the Alameda County Department of Environmental Health. Also, a soil boring installation permit will be obtained from Alameda County Department of Public Works, and 48-hour notification will be given to Alameda County Department of Environmental Health. In addition, proposed boring locations will be marked with white paint, and Underground Services Alert (USA) will be notified at least 48 hours prior to drilling. Also, a private underground utility locator will clear proposed boring locations. Prior to initiating drilling activities, a Site Safety Plan will be prepared, and a tailgate safety meeting will be conducted with all site workers.

Location of Borings

Proposed soil boring locations are shown on Figure 2. Based on the expected westerly groundwater flow beneath the site, five of the proposed borings will be sited on the west side of the site, west from both the removed USTs and from the former fuel dispenser islands. The sixth boring will be sited within the former UST excavation cavity to assess UST excavation cavity backfill material.

Drilling and Sampling of Investigative Soil Borings

The six investigative soil borings will be drilled to a depth of about 15 feet below surface grade using direct-push hydraulically-driven soil coring equipment. This coring system allows for the retrieval of almost continuous soil cores, which are contained in a clear plastic acetate tube, nested inside a stainless steel core barrel. After the core barrel is brought to the surface and exposed, the core will be examined, logged, and field screened for hydrocarbons by a qualified Gribi Associates scientist using sight and smell. Following completion, the two investigative borings will be grouted to match existing grade using a cement/sand slurry. Soil cuttings generated during this investigation will be stored onsite in sealed DOT-approved containers.

Subsurface soils will be sampled at approximately five-foot intervals starting at five feet in depth. After the sample and core barrel are raised to the surface, each sample was collected as follows: (1) The filled acetate tube will be exposed for visual examination; (2) The selected sample interval will be collected by cutting the sample and acetate plastic tubing to the desired length (typically about six inches); (3) The ends of the selected sample will be quickly wrapped with Teflon sheets or aluminum foil, capped with plastic end caps, labeled and wrapped tightly with tape; and (4) The sealed soil sample will be labeled and immediately placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All coring and sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water. Cleaning rinseate will be contained onsite in a sealed drum pending laboratory results.

Following completion of soil sampling activities, 3/4 inch diameter Schedule 40 PVC well casing will be placed in the five downgradient borings, with 0.01-inch slotted well screen from about 15 feet to five feet in depth, followed by blank well casing to above surface grade. Grab groundwater samples will then be collected from each of the borings using the clean stainless steel bailer as follows: (1) Laboratory-supplied containers will be completely filled directly from the bailer with a minimum of agitation; (2) After making sure that no air bubbles are present, each container will then be tightly sealed with a Teflon-lined septum; and (3) Each container will then be labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody. All sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing as described above.

Laboratory Analysis of Soil and Water Samples

Approximately 12 soil samples (one to two samples per boring) and five grab groundwater samples will be analyzed for the following parameters:

USEPA 8015M Total Petroleum Hydrocarbons as Gasoline (TPH-G)
USEPA 8020 Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
USEPA 8020 Methyl-t-Butyl Ether (MTBE)

Positive MTBE results in grab groundwater samples will be confirmed using USEPA Method 8260. All analyses will be conducted by a California-certified analytical laboratory with two-week turn around on lab results.

Preparation of Summary Report

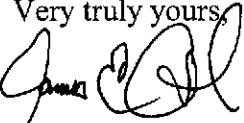
A report of findings will be prepared for submittal to Alameda County Department of Environmental Health. This report will describe all investigative methods and results, and will include tabulated laboratory analytical results, as well as laboratory reports and chain-of-custody records.

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PROJECT SCHEDULE

Mr. Tran is currently in the process of applying to the State UST Cleanup Fund. Given the length of time required for this process, Mr. Tran requests a project schedule of about six months to complete the proposed workplan activities.

We appreciate the opportunity to present this workplan for your review. Please contact us if you have questions or require additional information.

Very truly yours,


James E. Gribi
Registered Geologist
California No. 5843



JEG:ct
Enclosure

c Mr. Ken Tran

File: C:\MyFiles\Workplans\KenTranSBI.wp1.wpd



TOPOGRAPHY FROM USGS 7.5-MINUTE QUADRANGLE MAP, (TOPOI 2000)



DESIGNED BY:	CHECKED BY:	SITE VICINITY MAP	DATE: 06/27/00	FIGURE: 1
DRAWN BY: JG	SCALE: 1:24,000		GRIBI Associates	
PROJECT NO: 180-01-01		FORMER F. G. GASOLINE UST SITE 3314 SAN PABLO AVENUE OAKLAND, CALIFORNIA		

SAN PABLO AVENUE

SIDEWALK

OVERHEAD CANOPY

OFFICE

FORMER DISPENSER ISLANDS

BACKFILLED UST EXCAVATION CAVITY

FORMER GASOLINE UST'S (REM., 03/96)

SIGN

4,000 GAL.

4,000 GAL.

8,000-GAL

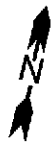
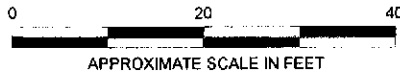
6,000-GAL

LANDSCAPING

SIDEWALK

33RD STREET

○ - PROPOSED BORING LOCATION



DESIGNED BY:

CHECKED BY: SS

DRAWN BY: JG

SCALE:

PROJECT NO: 156-01-01

PROPOSED BORING LOCATIONS

FORMER F. G. GASOLINE UST SITE
3314 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

DATE: 06/27/00

FIGURE: 2

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