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May 10, 1994
BEI Job No. 94047

Ms. Juliet Shin
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, CA 94621

**Subject: Subsurface Investigation Workplan
Fountain Cleaners, 2006 Encinal Avenue, Alameda, CA**

Dear Ms. Shin:

Blymyer Engineers, Inc., on behalf of Mike Yue, is pleased to present this letter workplan to assess the extent of petroleum and solvent contamination in soil and groundwater at the above referenced site.

Background

On July 11, 1989, seven underground storage tanks (USTs) were removed from the subject facility. A list of the USTs follows:

- 1,000-gallon gasoline
- 1,000-gallon fuel oil
- 550-gallon diesel
- 300-gallon stoddard solvent
- 2,000-gallon spent solvent
- 1,000-gallon solvent
- 2,000-gallon slurry-filled (unknown)

Strong hydrocarbon odors were apparent during the removal. Soil sampling was performed in the presence of Mr. Larry Seto of the Alameda County Health Care Services Agency (ACHCSA). Seven soil samples were collected and analyzed for a combination of Total Petroleum Hydrocarbons (TPH) as gasoline, TPH as diesel, benzene, toluene, ethylbenzene, and total xylenes (BTEX), and Total Oil & Grease (TOG). **No soil samples were analyzed for halogenated volatile organics.** All of the soil samples contained detectable concentrations of petroleum. No subsurface investigation work has occurred since that time.

In order to further assess the extent of soil and groundwater contamination at the site, Blymyer Engineers proposes the following scope of work:

Scope of Work

- **Prepare a site-specific health and safety plan**

A site-specific health and safety plan will be prepared by Blymyer Engineers prior to the implementation of investigative activities at the site. The plan will address personnel and their responsibilities relative to health and safety, chemical and physical hazards, risk evaluation and management, personal protective equipment, and emergency procedures.

- **Obtain all required permits**

A monitoring well permit from Zone 7 of the Alameda County Flood Control & Water Conservation District will be obtained.

- **Install one 2-inch-diameter monitoring well to a total depth of 20 feet**

Using a hollow-stem auger drill rig, a soil bore will be advanced to a maximum depth of 20 feet and converted into a groundwater monitoring well if groundwater is encountered in soil. The monitoring well will then be developed by pumping and surging.

- **Collect soil samples at 5-foot intervals**

Soil samples will be collected, logged, and field-screened for petroleum contamination at 5-foot intervals. A maximum of two soil samples will be forwarded to an analytical laboratory. These two soil samples would come from approximately 5 feet below grade surface and the soil/groundwater interface, which is assumed to be at approximately 10 feet below grade surface.

- **Submit soil samples for laboratory analysis**

As outlined in the Regional Water Quality Control Board (RWQCB)'s TriRegional Guidelines, the soil samples will be analyzed for:

- TPH as gasoline by modified EPA Method 8015;
- BTEX by EPA Method 8020;
- TPH as diesel by modified EPA Method 8015;
- TOG by Standard Method 5520 D & F;
- Chlorinated Hydrocarbons by EPA Method 8010;
- and total cadmium, chromium, lead, zinc, and nickel by inductively-coupled argon plasma spectroscopy (ICAP).

- **Collect a groundwater sample from the monitoring well**

A groundwater sample will be collected from the monitoring well using protocols outlined by the RWQCB.

- **Submit the groundwater sample for laboratory analysis**

The groundwater sample will be analyzed for the same constituents as the soil samples.

- **Drum soil cuttings and development water**

All soil cuttings, well development water, and purge water will be stored on-site in DOT-approved, 55-gallon drums for later disposal by the owner.

- **Prepare a letter report**

A letter report will be prepared for submission to the ACHCSA which will document all work performed, including summaries of the data, with conclusion and recommendations for further work.

Proposed Work Schedule

Blymyer Engineers anticipates that drilling can be scheduled within 3 weeks of approval of this workplan. Two additional weeks will be required for receipt of laboratory results. Technical review of the results and report preparation will require an additional three to four weeks.

Please call me at (510) 521-3773 with any questions or comments regarding this project.



Sincerely,

Blymyer Engineers, Inc.

By: John Morrison
John Morrison
Director, Earth Sciences
Registered Geologist 5773

cc: Mr. Mike Yue, Fountain Cleaners

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