



ALL ENVIRONMENTAL, INC.

Environmental Engineering & Construction

February 22, 1999

ENVIRONMENTAL
PROTECTION

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Mr. Scott Seery
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Re: 1075 40th Street
Oakland, California
Project No. 3119

Dear Mr. Seery:

All Environmental, Inc. (AEI) is pleased to present this workplan for the installation of one groundwater monitoring well at the above referenced site (refer to Figure 1 for site location). This workplan was prepared at your request to obtain the information necessary to achieve final site closure. AEI is providing environmental engineering, consulting, and construction services to Mr. Monte Upshaw, and is submitting this letter on his behalf.

Site Description and Background

The site is located in a commercial zone at 1075 40th Street in Oakland, California, and currently supports the operation of Fidelity Roof Company, a roofing company. The topography of the site slopes gently to the south.

On December 19, 1995, Tank Protect Engineering removed one (1) 1,000 gallon underground storage tank (UST) and one (1) 500 gallon gasoline UST from the southeast corner of the property. The removal of the tanks produced a single excavation. The excavated soil was stockpiled north of the excavation. Three discrete soil samples were collected from beneath the USTs. Analysis of the samples indicated that soil beneath the 1,000 gallon UST was impacted with minor concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline, TPH as diesel, benzene, toluene, ethylbenzene and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE). A single soil sample collected from beneath the 500 gallon UST indicated 100 mg/kg TPH as gasoline and 96 mg/kg TPH as diesel present. BTEX was present at concentrations of 2.0 mg/kg, 0.26 mg/kg, 1.9 mg/kg and 8.0 mg/kg, respectively. MTBE was not present above the detection limit of 0.30 mg/kg.

Four discrete soil samples were collected from the excavated soil. The samples were analyzed as one composite sample. TPH as gasoline and TPH as diesel were present

Corporate Headquarters:

901 Moraga Road, Suite C
Lafayette, CA 94549-4567
Phone: (925) 283-6000
Fax: (925) 283-6121

(800) 801-3224
www.all-environmental.com

Los Angeles Office:

2309 Pacific Coast Hwy, Suite 206
Hermosa Beach, CA 90254-2753
Phone: (310) 798-4255
Fax: (310) 798-2841

within the representative sample at concentrations of 580 mg/kg and 120 mg/kg, respectively. BTEX concentrations were 2.3 mg/kg, 11 mg/kg, 6.8 mg/kg and 47 mg/kg, respectively. MTBE was not detected within the composite stockpile soil sample above the detection limit.

AEI issued a workplan on August 28, 1996 to the Alameda County Health Care Services Agency (ACHCSA) designed to define the extent and magnitude of petroleum hydrocarbon contamination in the vicinity of the former USTs. On September 11, 1996, Ms. Susan Hugo of the ACHCSA approved the workplan.

On September 12, 1996, AEI advanced four soil borings in the vicinity of the former UST excavation (Phase II Soil and Groundwater Investigation report, dated October 7, 1996). Soil samples were collected from all of the borings and groundwater samples were collected from two of the borings. Analytical results from the subsurface investigation revealed significant levels of gasoline and diesel present in soil to the south and west of the open excavation, believed to extend beneath the existing pump island. Groundwater analysis indicated maximum concentrations of 5,500 µg/l TPH as gasoline, 340 µg/l benzene, and 2,100 µg/l TPH as diesel. Due to the high concentrations of petroleum hydrocarbons within the groundwater, the ACHCSA required further investigation into the extent and magnitude of the groundwater contaminant plume.

During the Phase II Subsurface Investigation, AEI collected four soil samples from the stockpile. The samples were combined by the laboratory into one composite sample for analysis. Analysis of the samples indicated the presence of concentrations of 3.8 mg/kg TPH as gasoline, 28 mg/kg TPH as diesel and minor concentrations of BTEX. Approval was obtained from Ms. Hugo of the ACHCSA to reuse the stockpiled soil as backfill material.

On October 25, 1996, AEI extended the excavation laterally 7 feet to the south and 12 feet to west (Excavation and Disposal of Contaminated Soil report, dated January 7, 1997). Soil was removed to a depth of 9 feet below ground surface (bgs). The contaminated soil was stockpiled on-site and profiled for disposal into a Class III Landfill. The dispenser island and associated piping were also removed. Groundwater was not encountered during the excavation activities. Four confirmation soil samples were collected from the excavation sidewalls. Analyses of the soil samples collected from the excavation sidewalls indicated that up to 150 mg/kg TPH as gasoline, 16 mg/kg benzene, and 300 mg/kg TPH as diesel remains within the western sidewall of the excavation.

The excavated soil was profiled and accepted for disposal at the BFI Vasco Road Sanitary Landfill, in Livermore, California. On November 27 and November 29, 1996,

approximately 235 tons of contaminated soil was loaded and transported to the landfill, under non-hazardous waste manifest, for disposal.

On March 6, 1997, AEI drilled three soil borings and converted them to groundwater monitoring wells (Groundwater Monitoring Well Installation report, dated May 30, 1997). The wells were developed on March 10, 1997 and sampled on March 19, 1997, June 23, 1997, October 8, 1997 and January 16, 1998. Based on the data collected during the four monitoring episodes, groundwater beneath the site is impacted with petroleum hydrocarbons. The most recent analytical data indicated 29,000 µg/l TPH as gasoline, 5,600 µg/l benzene and 7,300 µg/l of TPH as diesel present in the groundwater.

At the request of the ACHCSA, AEI drilled six soil borings on the property on November 4, 1998. The locations of these borings were chosen to determine the lateral extent of impacted groundwater at the site. Groundwater was collected and analyzed from five of the borings. **TPH as diesel was detected in the boring to the south of the former excavation at 2,400 µg/L.** No significant concentrations of petroleum hydrocarbons were detected in any of the other boring.

The following workplan describes the installation of one groundwater monitoring well south of the former excavation, which was requested by the ACHCSA in a letter dated January 6, 1999.

Geologic Setting

According to logs of the soil borings advanced by AEI, the near surface sediments beneath the site consist of mainly sandy clay with intermittent gravel up to 1/8" in diameter to a depth of at least 21 feet below ground surface (bgs). These sediments make up the water-bearing stratum.

Water level measurements collected during groundwater monitoring and sampling, indicate that groundwater is located at an elevation of between 34 and 39 feet above mean sea level. Groundwater flow beneath the site is to the west/southwest.

Scope of Work

AEI proposes to advance one soil boring south of the former tank location, within 10 feet and to the west of the former soil boring location SB-1 performed on November 4, 1998. The boring will be converted to a 2-inch groundwater monitoring well. Please refer to figure 2 for well location.

A Mobile B-57 or CME 75 hydraulic rotary drill with 6.25" I.D. by 10.5" O.D. hollow stem augers will be used to drill the borings. The borings will be drilled to first encountered groundwater plus at least 12 feet, corresponding to a maximum depth of approximately 30 feet bgs.

The soil borings will be logged on-site by an AEI geologist using the Unified Soil Classification System. Undisturbed soil samples will be collected at 5-foot intervals, beginning at five feet bgs for visual classification and chemical analysis. Two soil samples from the boring will be analyzed at a state certified laboratory as determined by the on-site geologist. The soil samples will be sealed with teflon tape and caps. Soil samples obtained during drilling will be screened in the field using a portable organic vapor meter. Groundwater samples will be collected from all of the borings.

All samples will be put on ice and transported, under chain of custody procedures to McCampbell Analytical, Inc. of Pacheco, California. Selected soil samples will be analyzed for TPH as gasoline (EPA method 5030/8015), TPH as diesel (EPA method 3510/8015), benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) (EPA method 5030/8020). The remaining soil samples will be placed on hold at the laboratory.

All sampling equipment will be cleaned in buckets with brushes with a TSP or Alconox solution, then rinsed twice with tap water. The drilling augers will be steam cleaned prior to drilling. Rinsate will be contained on-site in sealed, labeled drums.

Cuttings generated during drilling will be stored on-site in 55 gallon drums. The soil will be sampled, analyzed and disposed of in a local landfill unless deemed suitable for re-use on-site.

The monitoring well will be constructed of 2" flush threaded Schedule 40 PVC casing, with approximately 15 feet of .01" or .02" factory-slotted well screen. The top of the well screen will extend up to 5 feet above the encountered groundwater level to account for seasonal fluctuations. The well casing will be inserted through the augers to a point a few inches above the borehole terminus where it will be suspended until the well is secured within the sand pack. Sand (#2 or #3) will be poured through the augers in one- to two-foot lifts up to two feet above the top of the perforated casing. Two feet of bentonite

pellets will be placed above the sand and activated with tap water. The seal will be finished up to the surface with cement/bentonite grout. A locking top cap and a flush-mounted watertight well cover will be installed.

The well will be developed by bailing water into a DOT 17H drum until the water appears to be reasonably clear with a minimum of 10 well volumes removed. **Well development will take place no less than 72 hours after installation of the wells.**

Prior to obtaining water samples from the four monitoring wells, no less than 5 well volumes of water will be bailed from the wells. Groundwater will be checked for sheen and free product prior to purging and sampling. Samples will be obtained in a clean disposable bailer, secured in 40 milliliter volatile organic analysis vials and amber liter bottles, placed in a cooler with wet ice and transported, under chain of custody procedures to the laboratory. Water samples will be analyzed for TPH as gasoline, TPH as diesel, BTEX and MTBE. The four wells will be sampled four times over a period of one year following the installation of the fourth well.

The new well along with the three existing wells will be surveyed to Mean Sea Level, with an accuracy of 0.01 foot for calculation of groundwater flow direction and gradient.

Site Safety

Prior to commencement of field activities, a site safety meeting will be held at a designated command post near the working area. Emergency procedures will be outlined at this meeting. Also, the hazards of the known or suspected chemicals of interest will be explained. Level D personal protection equipment is the anticipated maximum amount of protection needed. A site safety plan conforming to Part 1910.120 (i) (2) of 29 CFR will be on site at all times during the project.

A working area will be established with barricades and warning tape to delineate the zone where hard hats and steel-toed shoes must be worn, and where unauthorized personnel will not be allowed. If, during drilling, fuel product odors are deemed to be substantial, half-face respirators with organic vapor cartridges will be worn.

A nearby hospital will be designated in the site safety plan as the emergency medical facility of first choice. A map with a course plotted to the hospital will be on-site.

Estimated Schedule

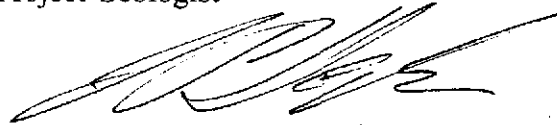
Work will commence within two weeks after approval from the ACHCSA. The ACHCSA will be given adequate notification of the scheduled day of drilling so they can schedule field inspectors if desired. Laboratory analytical results will be obtained within two weeks of collection. The final report will be prepared promptly, and copies will be delivered to the ACHCSA.

AEI requests your approval to proceed with this project. AEI is eager to complete this work as soon as possible. Please let me know if you need additional information and please do not hesitate to call me at (925) 283-6000 if you have any questions.

Sincerely,



Peter McIntyre
Project Geologist



Joseph P. Derhake, PE
Senior Author



cc: Mr. Monte Upshaw, Fidelity Roof Company, 1075 40th Street, Oakland, California 94608

Attachments



SOURCE:
 THOMAS GUIDE
 1997
 SCALE: 1" = 2,400'

ALL ENVIRONMENTAL, INC.
 901 MORAGA ROAD, SUITE C, LAFAYETTE, CA

SITE LOCATION MAP

1075 40th STREET
 OAKLAND, CALIFORNIA

FIGURE 1

