

March 16, 2007

Mr. Steven Plunkett
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

**RE: Work Plan for Soil and Groundwater Investigation
Allied Engineering Co., 2421 Blanding Avenue, Alameda, CA
Fuel Leak Case No. RO0002601**

Dear Mr. Plunkett:

As requested in your previous letters dated September 22, 2006 and March 28, 2005, Geo-Logic has prepared this work plan for a soil groundwater investigation at the above-referenced site.

SITE DESCRIPTION

The subject site is located on the northeastern side of Blanding Avenue, southeast of Park Street, on the eastern perimeter of Alameda, Alameda County, California. The site is located adjacent to tidal canal of Alameda Harbor. At the site, a 2,000-gallon gasoline tank, dispenser and the related product piping were removed. A site plan (Figure 1) showing the location of these features is attached to this report.

PREVIOUS FIELD ACTIVITIES

On January 7, 2004, one 2,000-gasoline tank was removed. Mr. Bill Oyas, Fire Inspector with the City of Alameda, and Mr. Rob Weston of Alameda County Environmental Health (ACEH) witnessed the tank removal. Mr. Weston also directed the soil and groundwater sampling.

The tank was constructed of single wall steel, and appeared to have been covered with a tar paper that was largely dissolved. The tank, which measured approximately six feet in diameter and ten feet in length, appeared to be in good condition and no holes were observed. The fill port for the tank was located on the eastern end of the tank, and had consisted of a "T" fitting that was plumbed to a remote fill location and a fill port directly over the tank. The tank was transported under manifest to ECI in Richmond, California.

Odors of hydrocarbons were detected in the excavated soils and sidewalls, and in the groundwater. Groundwater collected in the tank pit excavation at approximately nine feet below grade.

The tank pit backfill material appeared to be a silty fine-grained sand which was stained dark gray to black. The native material in the sidewalls, beneath about 1.5 feet of fill material, appeared to be clayey silt and silty clay, which was dark brown to about five feet below grade, where the color changed to olive green.

Following tank removal, a "grab" groundwater sample was collected from the tank pit excavation. The sample was collected using a disposable teflon bailer. Some oily product appeared to have collected on the surface of the water, which may have been the result of the dissolving of the tar paper that was originally on the tank. The sample was decanted into VOAS, which were labeled and then stored on ice prior to same day delivery to the analytical laboratory. The groundwater sample had a moderate odor of weathered fuel.

One soil sample, designated as TP-W (7.25'), was collected from the sidewall of the western end of the tank pit excavation at the depth indicated. The soil at this location consisted of dark gray to black silty sand backfill with a moderate odor of weathered fuel. A second sample, designated as TP-N (8'), was collected from the northern sidewall of the excavation. The soil at this location consisted of green clayey silt/silty clay, which also had a moderate odor of weathered fuel. The locations of the sample points are shown on Figure 1.

One soil sample, designated as P1 (3.5'), was collected at a 90 degree elbow location in the product piping trench, approximately 1.5 foot below the excavation bottom. No odors of hydrocarbons were observed at this location. Another soil sample, designated as Disp. (3.5'), was collected from beneath the former dispenser location. A moderate odor of weathered fuel was observed on this sample. The materials at these locations consisted of native dark gray clayey silt/silty clay. The locations of these sample points are shown on Figure 1.

In addition, a four-part composite sample was collected from the excavated soils, which consisted of about 75 cubic yards of dark gray to black silty fine-grained sand. The sample had a slight to moderate odor of weathered fuel.

The soil samples were all collected from bulk material excavated by backhoe, except for the stockpile sample, which was collected by inserting liners directly into points approximately one foot below the surface of the stockpile.

The soil and groundwater samples were analyzed for TPH as gasoline, benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8020, and for total lead. All of the soil and groundwater samples were also analyzed for the eight fuel oxygenates by EPA Method 8260. The groundwater sample was also analyzed for organic lead.

Elevated concentrations of TPH as gasoline and BTEX were detected in the soil and groundwater samples. MTBE and the eight fuel oxygenates were non-detectable. 8.4 parts per billion of 1,2-dichloroethane was detected in the grab groundwater sample. Total Lead was detected in the samples at what appears to be naturally-occurring background concentrations. Organic Lead was non-detectable in the grab ground water sample.

PROPOSED SCOPE OF WORK

Seven borings are proposed, including directly downgradient of the former tank (B1) at the location of the former dispenser (B5), and downgradient to cross-gradient from these locations (other borings). The borings would be completed using a geoprobe rig. The borings would be continuously cored and the subsurface soils would be examined for evidence of contamination.

One or more soil samples would be selected from each boring for analyses. The borings would be extended to groundwater at approximately eight feet below grade and “grab” groundwater samples would be collected. The groundwater samples would be collected by placing one-inch diameter slotted PVC casing in the borehole. The samples would then be retrieved by using small diameter vinyl tubing fitted with a chuck ball tip.

The locations of the proposed borings are shown on Figure 2. It is anticipated that the exact locations may be modified in the field based on access considerations and conditions encountered in previous borings.

Prior to drilling, a health and safety plan will be prepared, and the site will be marked for Underground Service Alert. Also, permits will be obtained from Alameda County Public Works.

Soil cuttings from the borings will be stored in a drum prior to disposal. The borings will be backfilled with neat cement grout using a tremmie pipe. The work described above will be summarized in a technical report, which will be submitted to the ACDEH.

The groundwater samples will be decanted into VOAs, labeled, placed in an ice chest, and entered on a chain of custody form prior to same day delivery to the laboratory. The samples will be analyzed for TPH as gasoline, BTEX, and MTBE by EPA Methods 8015 and 8020, The ground water samples would also be analyzed for the fuel oxygenates and lead scavengers by EPA Method 8260.

In your previous letter dated September 22, 2006, analyses of all samples for the fuel oxygenates and lead scavengers by EPA Method 8260, TPH as diesel and total lead was requested.

During the previous investigation, none of the four soil samples yielded detectable concentrations of fuel oxygenates or lead scavengers, although the samples were impacted by gasoline constituents. Therefore, if you concur, Geo-Logic proposes discontinuing this analyses for soil samples. The analyses would be performed on the water samples because 8.4 ppb of 1,2-dichloroethane was detected in the original grab water sample.

Similarly, all of the previous analyses for total lead indicated non-detectable (water sample) or what appears to be naturally-occurring background levels (soil samples). Therefore, if you concur, Geo-Logic proposes discontinuing this analysis for soil and water samples.

Finally, there is no indication in the historical record that diesel was stored in the tank. The footnotes from the original laboratory analytical data sheets would have shown if there was overlap into the diesel range in the gasoline analyses. Therefore, if you concur, Geo-Logic proposes not conducting diesel analyses on any of the samples.

ld you have any questions regarding this work plan, please do not hesitate to call me at (510)
5382.

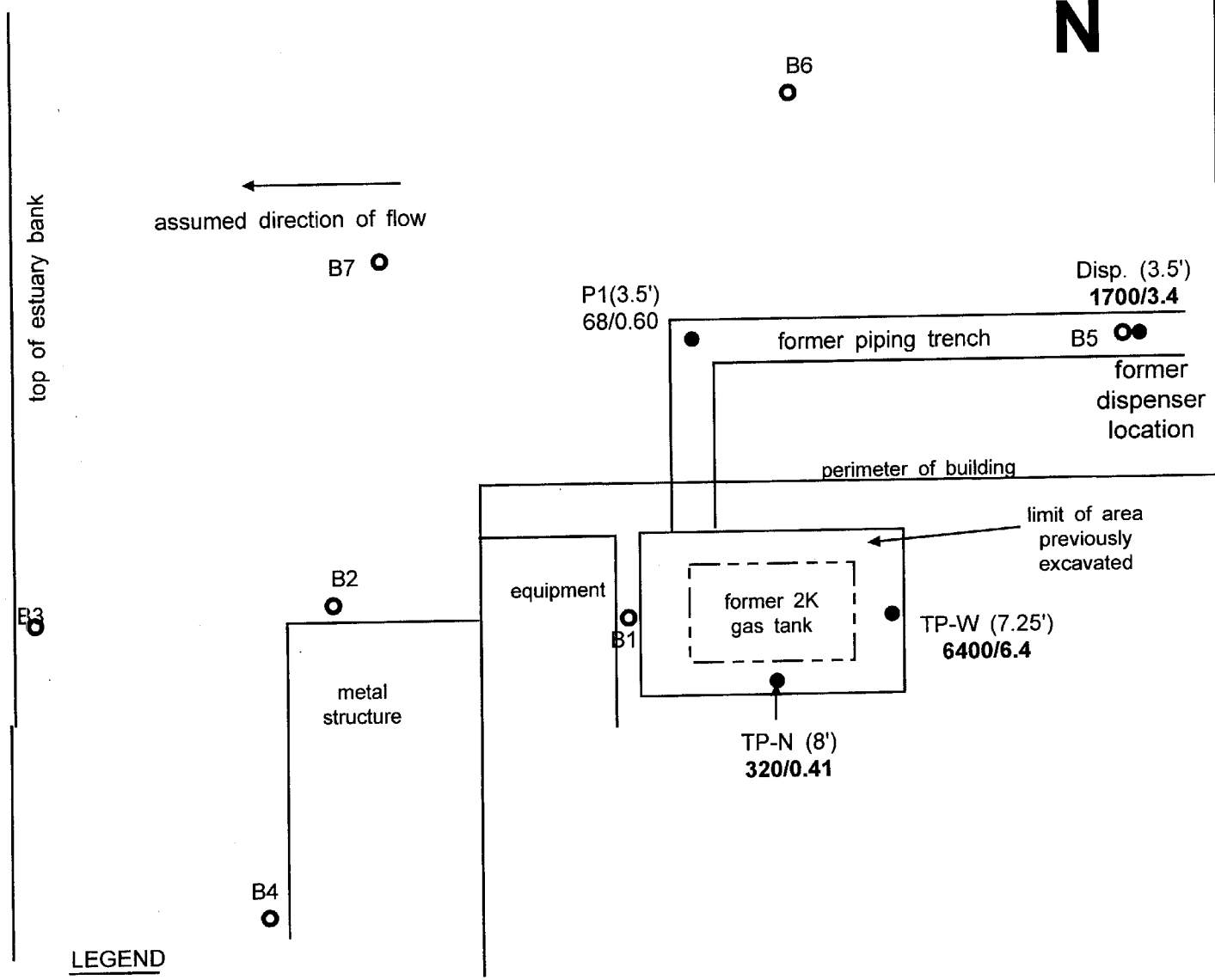
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-Logic



Joel Greger
Joel G. Greger
EG # EG1633, REA # 07079

Attachments: Figure 1



LEGEND

- soil sample, 1/7/04
- 6400/6.4** concentration of TPH as gasoline/ benzene, parts per million
- exploratory boring, proposed

SCALE: 1" = 10'

Allied Engineering & Production Co. 2421 Blanding Avenue Alameda, California	Figure No:	Date: March 12, 2004
	1	Drawn By: JG/Geo-Logic

Site Plan - Proposed Boring Locations