

June 12, 1999 Project A51-01.01

Mr. Don Hwang Alameda County Health Care Services Agency Environmental Health Services Environmental Protection (LOP) 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Revised Work Plan for Drilling, Sampling, and Monitoring Well Installation, Alaska Gasoline Company, Oakland, California

Dear Mr. Hwang:

HerSchy Environmental is pleased to present this revised work plan for continued investigation at the above-referenced site. The site is located at 6211 San Pablo Avenue, which is on the northwest corner of San Pablo Avenue and 62nd Street in Oakland, Alameda County, California. This workplan was prepared in response to the April 30, 1999 correspondence from your office requesting a preliminary investigation of soil and groundwater conditions at the site.

Previous work included the drilling, sampling, and laboratory analysis of soil and groundwater from three soil borings (B-1 through B-3), as shown on Figure 1. Details of this investigation is contained in the April 22, 1999 "Results of Underground Storage Tank (UST) Site Assessment, Alaska Gasoline Company, Oakland, California", prepared by HerSchy Environmental. Laboratory analytical results are summarized in Table 1 below. Groundwater was encountered during the initial assessment at a depth of approximately 10 feet. Groundwater gradient and flow direction beneath the site is believed to be to the west. Groundwater was sampled from one of the borings.

	Table 1 Laboratory Analytical Results, Alaska Gasoline, Oakland								
Sample	TPH			Ethylbenzene	Xylenes	MTBE			
B-1 @ 10'	440	2.3	4.8	7.4	31	3.7			
B-1 @ 15'	74	1.4	1.6	1.6	6.3	4.8			
B-2 @ 10'	290	3.6	9.0	5.8	24	2.0			

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			Table (continu			
Sample	TPH	Benzene		Ethylbenzene	Xylenes	MTBE
B-3 @ 10' B-1, GW		3.8 10,000	18 4,300	7.6 3,100	37 11,000	86 48,000

All results expressed in parts per million (ppm) GW results expressed in parts per billion (ppb)

Significant concentrations of gasoline constituents are present in both soil and groundwater beneath the site. The purpose of this proposed work is to provide additional information regarding the lateral extent of petroleum hydrocarbon-impacted soil and to evaluate groundwater conditions beneath the site.

1.0 Work Plan for Continued Investigation:

1.1 Drilling and Soil Sampling

Drilling will be performed using a truck-mounted direct push drill rig. Direct push rods will be steam cleaned prior to arriving on site. Five soil borings will be drilled to evaluate subsurface conditions. Borings B-4 through B-8 will be installed in an arcuate pattern in the presumed down gradient direction west and southwest of the existing USTs (Figure 1). These locations were chosen to evaluate the extent and concentrations of gasoline constituents in soil and groundwater.

Soil samples will be collected at five feet and at the capillary fringe of groundwater at an approximate depth of ten feet. Soil samples will be collected within acrylic liners with a four-foot drive sampler. A six-inch section of the liners will be selected for analysis. The soil samples will be sealed with teflon tape and end caps. All ten of the soil samples will be retained for laboratory analysis.

Soil samples will be field screened using a portable organic vapor analyzer (OVA) for the presence of volatile organic compounds (VOCs). Samples will be maintained in a cooler chest with frozen gel packs ("blue ice"), and maintained at a minimum of four degrees Celsius until delivered to the laboratory. Soil samples and drill cuttings will be described in accordance with the Unified Soil Classification System by a California Registered Geologist. Drill cuttings will be stored in DOT-approved 55-gallon drums, labeled, and stored on site for later handling.

Soil sampling will be discontinued upon encountering groundwater, an estimated depth of ten feet. Groundwater samples will be collected through the direct push rods. If groundwater is not generated using this method, then a grab groundwater sample will be collected following removal of the rods. Following sample collection the borings will be

filled with cement slurry. Groundwater samples will be stored, transported, and handled in a similar manner as described for soil above.

1.3 Laboratory Analysis:

Soil and groundwater samples will be analyzed for gasoline-range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE). Analytical methods used will be EPA method 8015 for gasoline-range TPH, and EPA method 8020 for BTEX and MTBE.

1.4 <u>Report Preparation:</u>

A report will be prepared documenting the results of the investigation. The report will include borings logs, well construction details, certified analytical report, and maps showing the site location, and location of monitoring wells indicating groundwater flow direction and gradient. Based on the results of the investigation, recommendations will be made for additional investigation and/or remediation as appropriate.

If you have any questions or need additional information, please contact me at the letterhead address or at (559) 641-7320.

With best regards,

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Herman Schymiczek CHG #418, CEG #2023

pc: Mr. Pritpaul Sappal, Alaska Gasoline Company Mr. Hernan Gomez, Oakland Fire Services Agency





