CAMBRIA Environmental Technology
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FAX TRANSMITTAL

TO: Juliet Shin
COMPANY: Alameda County Env.
FAX NUMBER: (510) 337-9335
SUBJECT: Shell, 4255 MacArthur Blvd. Oakland, CA

FROM: Paul Waite
DATE: 5/19
PROJECT NUMBER:
PAGES TO FOLLOW: 4

COMMENTS:

Ms. Shin,

The hardcopy is being sent in the mail. If you have any questions, please call me at (510) 420-3305.

Thank You,

Paul

CAMBRIA

May 19, 1997

Juliet Shin
Alameda Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Additional Information**
Shell Service Station
4255 MacArthur Boulevard
Oakland, California
WIC #204-5510-0600
Cambria Project #240-524-1

Dear Ms. Shin:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) has prepared this correspondence in response to your October 31, 1996 letter regarding the site referenced above. In your letter, you requested (1) a corrective action proposal, (2) risk assessment information, (3) analysis of ground water samples for selected metals, and (4) use of a lower detection limit for the analysis of total petroleum hydrocarbons as gasoline. The following presents our response to these requests.

Corrective Action Proposal

Weiss Associates (Weiss) submitted a *SVE Test Work Plan* (Work Plan) dated June 21, 1996 for this site. In your letter, you indicate that although the Work Plan was approved, soil-vapor extraction may not address the hydrocarbons in and beyond monitoring well MW-4, and you requested an addendum to the Work Plan addressing greater containment measures for the offsite, downgradient extent of the hydrocarbon plume.

We are evaluating possible containment and remediation alternatives for this site, including active skimming of separate phase hydrocarbons (SPHs), soil vapor extraction, and enhanced biodegradation using oxygen releasing compounds (ORCs). We will contact you shortly to discuss possible options.

CAMBRIA
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TECHNOLOGY, INC.
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Juliet Shin
May 19, 1997

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Risk Assessment Information

SPH has been detected in the wells at the downgradient property boundary (wells MW-2 and MW-3). Your letter requested an assessment of the health risk to people residing in the trailer park adjacent to the site.

SPH has been detected in well MW-2 during the last seven sampling events since August 1995, at thicknesses between 0.03 ft and 0.52 ft. SPH was detected in well MW-3 in the five sampling events from August 1995 through July 1996 at thicknesses between 0.02 ft and 0.24 ft, but has not been detected during the 3 most recent sampling events. Since August 1995, the depth to water in these wells has been between 10 ft and 16 ft, and the shallow water bearing zone is not a known drinking water source. The adjacent trailer park appears to be covered with asphalt, and fine-grained, low permeability soil separates the surface from the water-bearing zone.

Until the state and local regulatory agencies develop a standardized risk based corrective action (RBCA) protocol, we do not recommend conducting RBCA analysis at this time. We will discuss other options with you in conjunction with possible corrective actions at the site.

need to look at risks!

Ground Water Metals Analysis

Analytical results of the soil samples collected during the underground storage tank removal in 1985 identified elevated concentrations of chromium, copper, and lead. In your letter, you requested analysis of these metals in ground water. This analysis was conducted in the first quarter 1997 sampling event. ← where is this report?

Well MW-2 could not be sampled due to the presence of SPH. Samples from wells MW-1, MW-3, and MW-4 were analyzed for cadmium, chromium, copper, and lead using EPA Method 6010. The results are summarized below and compared with the California primary or secondary maximum contaminant levels (MCLs). Complete analytical reports are presented in the *First Quarter 1997 Monitoring Report* dated May 16, 1997.

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Ground Water Analytic Results for Selected Metals Shell Service Station WIC #204-5510-0600 4255 MacArthur Boulevard, Oakland, California				
Well ID	**Cadmium**	**Chromium**	**Copper**	**Lead**
	Results in milligrams per Liter (mg/L)			
MW-1	< 0.010	< 0.010	< 0.010	< 0.10
MW-2	Not sampled due to SPH			
MW-3	< 0.010	0.025	0.034	< 0.10
MW-4	< 0.010	0.19	0.14	< 0.10
California MCL	0.005	0.050	1.0	Not Established

It should be noted that these samples were not field filtered after collection, which may account for the detected metals concentrations. During the next sampling event, the samples will be filtered in the field. We will also collect a sample for metals analysis from well MW-2, regardless of the presence of SPH.

Detection Limits

In your letter, you mentioned that the detection limits for total petroleum hydrocarbons as gasoline (TPHg) in ground water were elevated in previous quarters, and requested that a detection limit of 50 parts per billion (ppb) be used, if possible. Sequoia Analytical of Redwood City, California, the laboratory that analyzed the samples, uses the 50 ppb detection limit for TPHg when conditions allow. Review of the analytical data for previous quarters indicates that the elevated detection limits for TPHg were related to interference from methyl tertiary butyl ether detected in the samples.

Juliet Shin
May 19, 1997

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Closing

We appreciate your assistance with this project, and we will contact you shortly to discuss remediation alternatives for this site. If you have any questions or comments, please contact me at (510) 420-3301.

Sincerely,
Cambria Environmental Technology, Inc.

Khaled Labban for

N. Scott MacLeod, R.G.
Principal Geologist

cc: A. E. (Alex) Perez, Shell Oil Products Company, P.O. Box 4023, Concord, California 94524

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