CAMBRIA

February 7, 2002

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Agency Response**
Shell-branded Service Station
610 Market Street
Oakland, California
Incident # 98995750
Cambria Project # 244-0594

Dear Mr. Chan:

Cambria Environmental Technology, Inc. (Cambria) is submitting this *Agency Response* on behalf of Equiva Services LLC. This correspondence was requested in a January 2, 2002 Alameda County Health Care Services Agency (ACHCSA) letter. The site is located on Market Street between Sixth and Seventh Streets in Oakland, California (Figures 1 and 2).

RESPONSE TO JANUARY 2, 2002 LETTER

The January 2, 2002 ACHCSA letter summarizes Cambria's December 19, *2001 Soil Vapor Extraction Pilot Test Report and Investigation Work Plan* and approves the scope of work described. The letter also recommends additional sampling locations near a former dispenser island and within the current tank pit, and requests written comment prior to implementation of the approved subsurface investigation. Our responses follow excerpts from the ACHCSA letter, as indicated below.

To estimate the extent of MTBE release our office recommended the installation of a well near SB-A. Cambria, however, does not see this need since over-excavation of the former dispenser area near SB-A was successful in removing TPHg and BTEX. Unfortunately, MTBE was not analyzed in soil samples from the over-excavation. The grab groundwater samples from SB-A reported 14,000 ppb MTBE and 1.8 ppm MTBE in the soil sample from 13.5' bgs.

The reasoning stated in our December 19, 2001 report for not installing a well near boring SB-A (Figure 2) differs somewhat from your summary. Our reasoning was that a monitoring well located in that area would not be downgradient of any remaining potential sources and would

this area may be a potential source

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

therefore not be necessary. Monitoring well MW-1 adequately assesses groundwater concentrations in the upgradient direction of the underground storage tank (UST) pit, and since any possible source (the former piping and dispensers or impacted soil) between the UST pit and well MW-1 has been removed or over-excavated, an additional well between the UST pit and well MW-1 would be redundant. Boring SB-A was installed after the fuel-related equipment and impacted soil were removed from the area. There is no reason to believe that methyl tertiary butyl ether (MTBE) concentrations in the vicinity of SB-A have increased or will increase in the absence of any remaining source. The extent of the MTBE release can be adequately determined using the SB-A grab groundwater and soil sample data, the continued quarterly monitoring groundwater samples, and data from the borings and monitoring wells proposed in our December 19, 2001 report. In particular, we believe enough data will be obtained to provide isoconcentration contours of the MTBE and total petroleum hydrocarbon as gasoline plumes.

Cambria recommends taking PID readings from T1 and T2 to confirm no rebound in vapor concentrations occur and show adequate remediation. This is not an acceptable approach without adequate site characterization.

Monthly vapor concentration monitoring in wells T-1 and T-2 is not intended as a substitute for site characterization, nor is it intended to show adequate remediation. The December 19, 2001 report stated that monthly vapor monitoring will be conducted to assess any rebound of hydrocarbons which will help determine whether a more permanent soil vapor extraction (SVE) system is warranted at the site. If vapor concentrations in the tank pit indicate a considerable rebound, more permanent SVE at the site may be recommended. If vapor concentrations in the tank pit do not indicate a rebound, additional SVE would not be effective or necessary.

Cambria's December 19, 2001 report states that quarterly monitoring data would be evaluated to observe the effects of mobile groundwater extraction (GWE) and the SVE pilot test on groundwater concentrations. MTBE concentrations detected in quarterly monitoring samples collected from well MW-3 have decreased from 610,000 parts per billion (ppb) on June 28, 2001 (prior to the October SVE testing) to 160,000 ppb on December 12, 2001. MTBE concentrations in well MW-2 decreased from a maximum of 17,000 ppb on September 12, 2001 to 3,000 ppb on December 12, 2001. (A complete groundwater monitoring report for the December sampling results will be submitted under separate cover.) These results suggest that GWE and SVE have been effective in decreasing dissolved MTBE concentrations in groundwater at the site.

Whether or not an additional well is installed near SB-A, enough data must be provided to determine the area extent and iso-concentration contour of the TPH and MTBE releases.

As stated above, Cambria believes that the area extent of MTBE can be determined without the installation of a monitoring well near boring SB-A. Cambria believes that the borings and monitoring wells proposed in the December 19, 2001 report coupled with data from previously installed borings and monitoring wells will be adequate to determine the extent and isoconcentration contours of the TPH and MTBE plumes at the site. As requested in your November 5, 2001 letter and stated in our December 19, 2002 report, isoconcentration contours will be completed and reported following the subsurface investigation conducted at the site.

Groundwater beneath the pit must be characterized and it must be determined if such contamination is a source of hydrocarbons detected in the backfill wells.

Characterizing groundwater directly beneath the UST pit is impractical and unnecessary. Groundwater beneath the UST pit is adequately represented by samples from well MW-3 located immediately downgradient of the UST pit. As shown by the rose diagram presented on Figure 2, groundwater flow direction is consistently southwest, and well MW-3 is located 10 feet southwest of the UST pit. The difficulty and expense of trying to sample groundwater a few feet closer to potential source is unjustified.

CLOSING

Cambria assumes that the above responses adequately address your concerns at this time, and we will therefore proceed to schedule the field work for the approved *Investigation Work Plan.* Please call Jacquelyn Jones at (510) 420-3316 if you have any questions.

Sincerely,
Cambria Environmental Technology, Inc.

Jacquelyn L. Jones
Project Geologist

Stephan A. Bork, C.E.G, C.HG.
Associate Hydrogeologist

REGISTERED GEOLOGIST
STEPHAN A. BORK
No. EG 2058
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Figures: 1 - Vicinity/Area Well Survey Map
2 - Proposed Monitoring Well and Soil Boring Location Map

cc: Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, California 91501-7869
Virginia R. Rawson, Tr., 1860 Tice Creek Dr. #1353, Walnut Creek, CA 94595
Ronald L. & Cathy L. Labatt, P.O. Box 462, Kamiah, ID 83536

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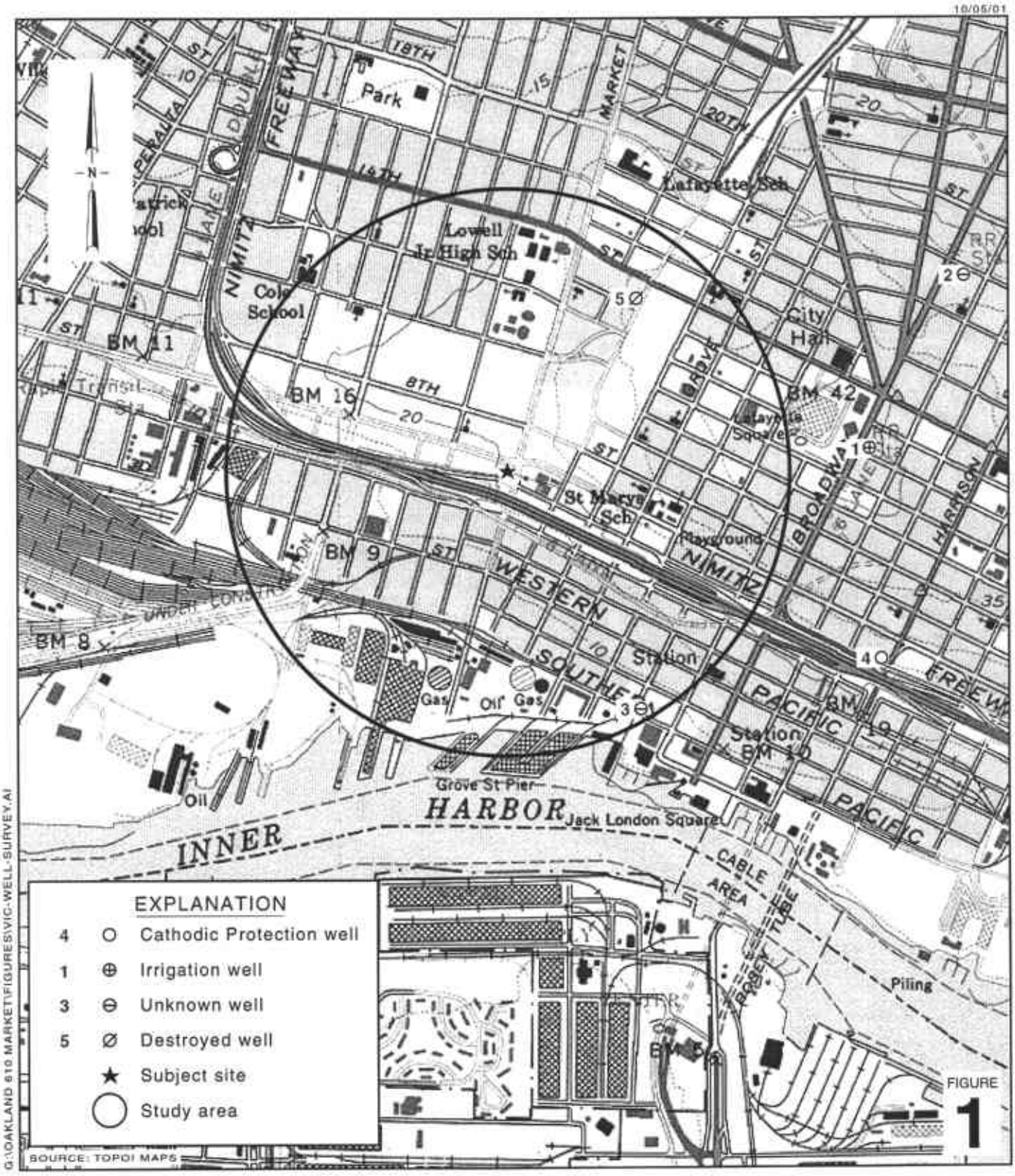

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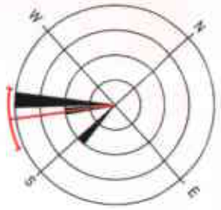
Vicinity / Area Well Survey Map

1/2 Mile Radius

12/12/01

EXPLANATION

- MW-4 — Proposed monitoring well location
- Proposed soil boring location
- MW-1 — Monitoring well installed November 17, 1998
- SB-B — Geoprobe boring drilled March 31, 1998
- T1 — Tank backfill well
- Storm Drain line
- Sanitary Sewer line
- Water Main
- Gas line
- Electrical line
- Flow direction
- F.L. = 5.6 — Flowline elevation, above mean sea level
- MH — Manhole



Groundwater Flow Direction
(4q99 through 3q01)

MARKET STREET

INTERSTATE 880 OVERPASS

INTERSTATE 880 OFFRAMP

6th STREET

7th STREET

MH F.L. = 5.8

F.L. = 8.0

F.L. = 8.9

F.L. = 2.8

30" SD

F.L. = 3.3

18" SD

8" SS

F.L. = 10.0

F.L. = 5.6

MH F.L. = 6.5

12" SS

F.L. = 8.20

MW-5

MW-2

MW-3

MW-4

MW-1

SB-A

SB-B

SB-C

T1

T2

PG&E

SIC

City of Oakland electrical

drain

Caltrans

transformer

FG&E

PacBell

sidewalk

planter

driveway

pump islands

canopy

kiosk

water

EBMUD

carwash

storage

trash

USTs

193 APTOS

0 20 40

Scale (ft)

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Proposed Monitoring Well and Soil Boring Location Map

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FIGURE
2