R0415

Denis L. Brown

Shell Oil Products US
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

September 13, 2005

Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Over-Excavation Work Plan
Former Shell Service Station
4411 Foothill Boulevard
Oakland, California
SAP Code 135686
Incident #98995746

Dear Mr. Wickham:

Attached for your review and comment is a copy of the *Over-Excavation Work Plan* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Sr. Environmental Engineer

CAMBRIA

September 13, 2005

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Over-Excavation Work Plan**
Former Shell Service Station
4411 Foothill Boulevard
Oakland, California
Incident # 98995746
Cambria Project # 247-0897-006

Dear Mr. Wickham:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Cambria Environmental Technology, Inc. (Cambria) prepared this work plan to propose over-excavation activities following the discovery of hydrocarbon-impacted soil and groundwater in several soil borings near the 1958-era underground storage tanks (USTs) at the former Shell station. The former UST area is located within the footprint of a new building to be constructed at the site. In order to remove hydrocarbon-impacted soil beneath the building prior to site redevelopment activities, Cambria proposes to excavate soil to the extent feasible. The scope of work proposed in this document complies with the Alameda County Health Care Services Agency (ACHCSA) request letter dated September 9, 2005.

SITE LOCATION AND DESCRIPTION

The site is a former Shell-branded service station located on the southwest corner of the Foothill Boulevard and High Street intersection in Oakland, California (Figures 1 and 2). Land use in the site vicinity is mixed commercial and residential, with gasoline service stations occupying the northeastern and northwestern corners of the intersection. Fremont High School is located on the southeastern intersection corner. The property is currently being redeveloped for commercial use by the property owner. Prior to its removal, the station layout included three gasoline USTs, a waste oil UST, and four product dispensers (Figure 2). An earlier generation of USTs was located in the southern corner of the site. Records recently found indicate that a fuel leak occurred in 1958. These USTs were removed sometime between July and September 1971.

In September 2005, Cambria completed a subsurface groundwater investigation to assess the impact of the 1958 release. Three soil borings were attempted and soil and groundwater samples were collected at two locations within the former UST complex (Figure 2). Total petroleum

Cambria Environmental Technology, Inc.

5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

hydrocarbons as gasoline (TPHg) was detected in soil collected from TB-1 at 7.0 feet below grade (fbg), 10.5 fbg, and 12 fbg at concentrations of 2.2 parts per million (ppm), 1,600 ppm, and 570 ppm, respectively, and in soil collected from TB-3 at 12.0 fbg at 22 ppm. Benzene was also detected in soil samples collected from the two borings with a maximum concentration of 2.2 ppm in TB-3 at 15.0 fbg. Grab groundwater samples collected from the two borings contained a maximum TPHg concentration of 180,000 parts per billion (ppb) and a maximum benzene concentration of 22,000 ppb.

WORK TASKS

Site Safety Plan: Cambria will prepare a site safety plan for field work.

Over-Excavation: Cambria proposes to direct over-excavation in the former gasoline UST complex area (shown on Figure 2) based on preliminary analytical data from the September 2005 soil borings. A Shell-selected excavation contractor will conduct excavation work. Cambria will attempt to remove impacted soil in these areas to the extent feasible. Cambria estimates that excavation of the outlined areas (Figure 2), approximately 20 feet long by 25 feet wide by 20 fbg, will generate approximately 370 cubic yards of soil. It is anticipated that 20 fbg will be the maximum vertical extent of the excavation. The final extent of over-excavation will be based on field observations and photo-ionization detector (PID) measurements.

The depth of soil excavation may be limited by groundwater. In site monitoring wells, the static depth to groundwater was approximately 10 fbg in September 2004. However, during the September 2005 subsurface investigation, groundwater was first encountered between 20 and 22 fbg. Cambria will supervise de-watering of the excavation as necessary to preserve the integrity of the excavation and to remove any potentially contaminated groundwater. In the event groundwater seepage is excessive and cannot be adequately controlled during excavation, the excavation may not be as deep as proposed.

Soil Sampling and Chemical Analyses: During excavation, Cambria will collect soil samples along all four sidewalls of the excavation at depths where PID readings are elevated and/or where staining and odors are present. To document soil conditions at the excavation limits, Cambria will also collect "confirmation" samples from the sides and bottom of the excavation at its lateral extent and final depth. Soil samples will be analyzed for total petroleum hydrocarbons as diesel, waste oil, gasoline, benzene, toluene, ethylbenzene, xylenes, tert-butyl alcohol, di-isopropyl ether, ethyl tert butyl ether, tert amyl methyl ether, and methyl tertiary butyl ether by EPA Method 8260B. To expedite project completion, Cambria will request a 24-hour turn-around time for the laboratory results.

Additional Soil Removal and Backfilling: Following receipt and review of laboratory data, if hydrocarbon concentrations in excess of the California Regional Water Quality Control Board's environmental screening levels are detected in the confirmation soil samples, Cambria will consider expanding the excavation in an effort to remove any additional contaminated soils. Once the final limits of the excavation have been reached, additional confirmation samples will be taken where appropriate, as confirmed by visual observations of absence of staining or odors, and by PID readings in the field.

Because the prior analytical data indicated that shallow soils were not impacted by hydrocarbons, Cambria anticipates that soils from ground surface to approximately 6 fbg may be re-used for filling the excavation. Additional clean fill material will be imported to backfill the remainder of the excavation. The filler soils will be emplaced and compacted according to Shell's or the site owner's specifications.

Soil and Water Disposal: Soil generated during over-excavation activities will be classified for reuse or disposal. Soils will be stockpiled on site for re-use, or directly loaded into trucks for transportation to Allied Waste's Forward Landfill in Manteca, California under an existing profile as a non-hazardous waste. Water generated during the excavation will be pumped directly into a mobile vacuum truck and transported to the Shell refinery in Martinez, California for recycling.

Report Preparation: Within 60 days following the receipt of all analytical results from the laboratory, Cambria will prepare a written report which will include field procedures, soil volumes removed, water volumes removed, laboratory results, and conclusions.

The scope of work described in this work plan will be performed under the supervision of a professional geologist or engineer.

SCHEDULE

Cambria proposes to conduct these over-excavation activities as soon as possible. The work is tentatively scheduled for September 20 and 21, 2005, pending approval from ACHCSA.

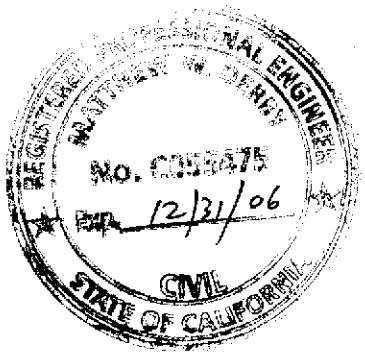
CLOSING

If you have any questions regarding the scope of work outlined in this work plan, please call David Gibbs at (510) 420-3363.

Sincerely,
Cambria Environmental Technology, Inc.

David M. Gibbs, P.G.
Project Geologist

Matthew W. Derby, P.E.
Senior Project Engineer



Figures: 1 - Vicinity/Area Well Survey Map
2 - Site Plan

cc: Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810
H.K. Phares Corporation, 10700 MacArthur Boulevard, Suite 200, Oakland, CA 94605-5260
Bill Phua, P.O. Box 10664, Oakland CA 94610-0664

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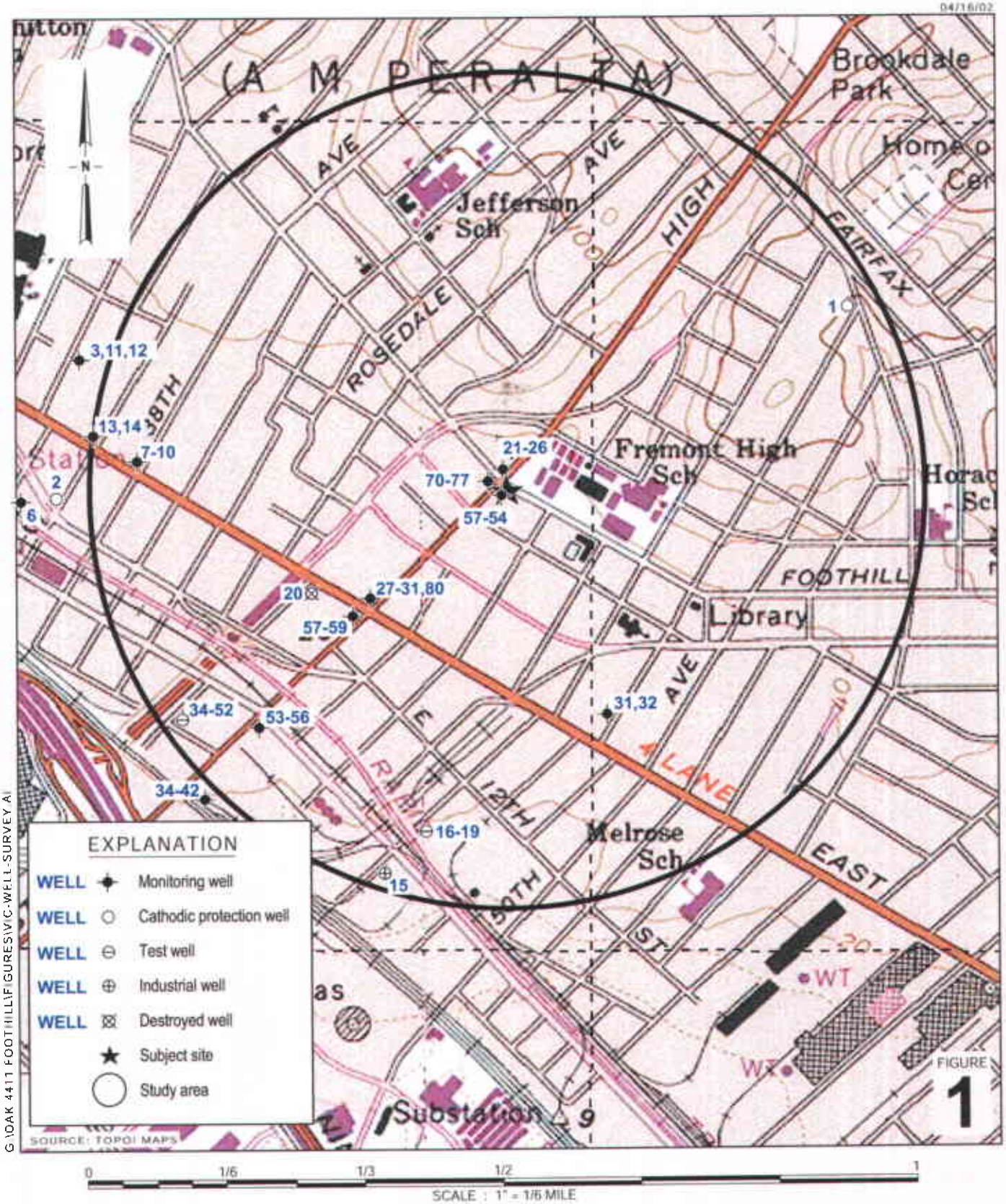

FIGURE 1

Former Shell Service Station
4411 Foothill Boulevard
Oakland, California
Incident #98995746

CAMBRIA

Vicinity/Area Well Survey Map
(1/2-Mile Radius)

09/12/05

Site Plan

HIGH STREET

FOOTHILL BOULEVARD

BOND ST.

Former Shell Station
4411 Foothill

PROPOSED BLDG. A

PROPOSED BLDG. B

Fremont High School

4427-33 Foothill

apts w/o basement

4340 Bond

parking

former dispensers

former USTs

former W/O UST

former dispenser islands

Former excavation area

Proposed excavation area

former building

proposed parking

proposed planter

proposed trash encl.

Former USTs (~1958)

S-1 S-2 S-3 S-4 S-5

BW-A

SB-5 SB-6 SB-7 SB-8 SB-9 SB-10 SB-11 SB-12

TB-1 TB-2 TB-3

EXPLANATION

- SB-5 — Proposed soil boring location
- S-1 — Destroyed monitoring well location
- BW-A — Destroyed tank backfill well location
- Overhead electrical lines (E)
- Sanitary sewer (SS)
- Storm drain (SD)
- Fire hydrant
- Storm drain inlet
- Manhole
- Power pole
- Flow direction

0 15 30 60

Scale (ft)

FIGURE **2**

Former Shell Service Station
4411 Foothill Boulevard
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Incident No.98995746

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