CAMBRIA

RO415

JUL 08 2002

1, 2002

Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California, 94502-6577

Re: **Monitoring Well Installation Report**
Former Shell Service Station
4411 Foothill Boulevard
Oakland, California
Incident #98995756
Cambria Project #244-0897-007

Dear Mr. Chan:

Cambria Environmental Technology, Inc. (Cambria) is submitting this *Monitoring Well Installation Report* on behalf of Shell Oil Products US. The investigation was conducted on May 9, 2002, in accordance with Cambria's April 2, 2002 *Monitoring Well Installation Work Plan* which was approved in an Alameda County Health Care Services Agency (ACHCSA) letter dated April 5, 2002. The purpose of the investigation was to replace tank backfill well BW-A, which was destroyed and removed in January 2002 during tank removal activities. Presented below are summaries of the site background, investigation procedures, investigation results, and conclusions.

SITE BACKGROUND

Site Description: The site is a former Shell-branded service station located on the southwest corner of the intersection of Foothill Boulevard and High Street in Oakland, California (Figures 1 and 2). The neighborhood in the vicinity of the site 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.

1992 Waste Oil Tank Removal: The environmental investigation at this site was initiated in November 1992, following the removal of an underground waste-oil tank. A soil sample was collected at the bottom of the excavation at a depth of approximately 11 feet below grade (fbg). No total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), benzene, toluene, ethylbenzene and xylenes (BTEX), oil and grease, halogentated volatile organic compounds or

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

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Oakland, CA 94608
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metals were detected in the sample. Total lead was detected at 6.7 parts per million (ppm). This likely represents the background lead concentration in the local soil. Details of the waste oil tank removal and sampling activities are presented in the GeoStrategies Inc. (GeoStrategies) report dated March 26, 1992.

1992 Monitoring Well Installation: A single monitoring well (S-1) was installed in the vicinity of the waste-oil tank location. Details of this well installation are presented in GeoStrategies' *Monitoring Well Installation Report* dated January 19, 1993.

1993 Monitoring Well Installations: Monitoring wells S-2 and S-3 were installed by Hydro Environmental Technologies Inc. (HETI) on May 21, 1993. Details of the well installations are presented in HETI's report dated July 22, 1993.

1995 Soil and Groundwater Investigation: Pacific Environmental Group (PEG) of San Jose, California conducted a Geoprobe investigation in June 1995. The investigation consisted of advancing eight onsite soil borings and two offsite borings for the collection of soil and groundwater samples. Details of this investigation are presented in PEG's *Site Investigation* report dated September 12, 1995.

1998 Product Equipment Upgrades: Paradiso Mechanical (Paradiso) of San Leandro, California upgraded the service station in November 1998 by adding secondary containment to the gasoline turbines and dispensers. Details of dispenser upgrade and sampling activities are presented in Cambria's *Dispenser Soil Sampling Report* dated November 30, 1998.

January 1999 Letter Response and Work Plan: In response to the December 7, 1998 ACHCSA letter to Equiva Services LLC (Equiva), Cambria prepared a *Letter Response and Work Plan* dated January 11, 1999. In the January 1999 work plan, Cambria proposed an additional onsite groundwater monitoring well (S-4) and enhanced groundwater oxygenation via hydrogen peroxide injection into existing site wells.

March 1999 Work Plan Addendum: In a phone conversation with Cambria on February 1, 1999, the ACHCSA requested additional information regarding the location of proposed well S-4 and the use of hydrogen peroxide. As a result, Cambria submitted a *Work Plan Addendum* dated March 18, 1999. In the March 1999 addendum, Cambria proposed that well S-4 be located between the station building and the nearest dispenser-island to the north. Due to the lack of requested response from the ~~Hayward~~ Oakland Fire Department on the safety of hydrogen peroxide use, Cambria also proposed the application of oxygen releasing compound (ORC) in lieu of hydrogen peroxide.

April 1999 ACHCSA Letter: In an April 30, 1999 letter to Equiva, ACHCSA requested further information regarding the application of ORC. In addition, the ACHCSA requested Cambria perform a feasibility study to evaluate alternatives to prevent the migration of methyl tertiary butyl ether (MTBE). Cambria provided the requested information in the *Letter Response* dated June 15, 1999. In September 1999, ORC socks were subsequently installed in wells S-1, S-2, and BW-A.

December 1999 Letter Response, Work Plan and Conduit Study: In a letter dated November 10, 1999, the ACHCSA requested a site conceptual model and work plan be prepared for the site. Cambria submitted a *Letter Response and Work Plan* dated December 13, 1999. In that work plan, Cambria presented findings of a subsurface conduit study. Several conduits, which may provide limited preferential groundwater flow at times of high groundwater elevations, were identified.

Approximate depths to local sewer and storm drain conduit flowlines are shown on Figure 2. The deepest conduits located near the site are sanitary sewer pipelines with flowlines ranging from approximately 6 to 11 fbg. Although the depth to water in wells S-2 and S-3 along the western perimeter of the site has ranged from approximately 6 to 10.5 fbg, the depth to water is typically 8 to 9 fbg. Therefore, only the deepest sanitary sewer conduit trench has the potential to cause preferential flow of impacted groundwater. However, given that only a small portion of the trench backfill typically intersects groundwater and the fact that gravel lenses exist locally from 10 to 13 fbg, the potential for significant preferential groundwater flow in the utility trench is considered to be low.

January 2000 Site Investigation: Cambria conducted a site investigation in January 2000. Per the ACHCSA request, well S-4 was proposed between the station building and southeastern dispenser-island. However, a conduit was encountered while drilling boring SB-4, and the boring was relocated approximately 50 feet southeast. The second boring (SB-4B) was located adjacent to the southeast corner of the station building, and well S-4 was installed in boring SB-4B to a depth of 20 fbg. In boring SB-4B, the maximum concentrations of TPHd and TPHg were detected in sample SB-4B-5.5 at 27.2 ppm and 28.2 ppm, respectively. The maximum concentration of benzene was detected in sample SB-4B-10.5 at 0.0696 ppm. The maximum concentration of MTBE by EPA Method 8020 was reported in sample SB-4B-19.0 at 0.233 ppm. MTBE was confirmed by EPA Method 8260 in sample SB-4B-19.0 at a concentration of 0.0549 ppm.

November 2001 Corrective Action Plan (CAP): Cambria submitted a CAP in preparation for impending site demolition and fueling facility removal. In the CAP, Cambria discussed remedial alternatives and made recommendations for remedial action. Cambria recommended additional onsite over-excavation, following removal of the underground facilities, to substantially remove residual impacted soils from within the property boundaries. Cambria also recommended

removal of groundwater from the excavation, and placing ORC at the base of the excavation to enhance biological degradation of residual impacted soil and groundwater. Continued quarterly groundwater monitoring was recommended to track the subsequent natural attenuation process.

February 2002 Underground Storage Tank (UST) Closure Report: Paradiso removed the gasoline USTs and hydraulic hoists, and over-excavated approximately 1,250 cubic yards of impacted soil around and beneath the USTs, product dispenser islands, and hydraulic hoists. Phillips Services Corporation extracted approximately 16,000 gallons of groundwater from the excavation pits. Subsequent to over-excavation, Paradiso placed 810 pounds of ORC powder over the excavation bottom. Details of the fuel facilities removal and corrective action are presented in Cambria's *Underground Storage Tank Closure Report* dated February 25, 2002.

Sediment Lithology: Sandy clay underlies the site from approximately 6 to 10 fbg. Clayey sand with lenses of gravel underlies the sandy clay from approximately 10-13 fbg. Sandy clay underlies the clayey sand to the maximum onsite explored depth of 26 fbg.

Groundwater Characteristics and Monitoring Results: Groundwater has been monitored at the site since December 1992. Since that time, groundwater depth has ranged from approximately 6 to 12 fbg. The calculated groundwater gradient typically trends to the south-southwest at 0.12. The first quarter 2002 maximum concentrations of TPHg, benzene, and MTBE in groundwater are 14,000 parts per billion (ppb) in S-4, 1,700 ppb in S-4, and 7,500 ppb in S-2, respectively.

INVESTIGATION PROCEDURES

Cambria installed one groundwater monitoring well (S-5) to complete the network of monitoring [redacted] The monitoring well location is shown on Figure 2. Specific procedures for this investigation are summarized below. The soil boring log and well completion details, and Cambria's Standard Field Procedures for Monitoring Well Installation are presented as Attachments A and B, respectively. Copies of the well permit and access agreement are included as Attachment C. The Department of Water Resources (DWR) well completion report is included as Attachment D.

Drilling Dates: May 9, 2002.

Drilling Company: Gregg Drilling and Testing Inc. (Gregg) of Martinez, California (C 57 License #485165).

Personnel Present:	Shannon Couch, Senior Staff Geologist, Cambria Trevor Joyner, Driller, Gregg Don Pearson, Driller's Assistant, Gregg
Permit:	Alameda County Public Works Agency Permit # W02-0442, Access agreement between Equilon Enterprises LLC and The Walter and Jeanette Watters Revocable Trust (Attachment C).
Drilling Method:	Ten-inch hollow-stem auger.
Soil Sampling Method:	As proposed in our April 2, 2002 *Monitoring Well Installation Work Plan*, soil samples were collected at 15 and 20 fbg for lithologic logging purposes. Because these soil samples were collected beneath the water table, they were not submitted for chemical analysis.
Number of Wells:	One (S-5) (Figure 2, Attachment A).
Well Depth:	22.0 fbg (Attachment A).
Sediment Lithology:	[redacted] Sand and then silt underlie the fill to the total explored depth of 22 fbg. (Attachment A).
Well Materials:	Well S-5 was constructed using 4-inch diameter Schedule 40 PVC casing with 0.010-inch slotted screen. The wells were completed with a filter pack of Monterey #2/12 sand from the bottom of the boring to approximately 2 feet above the top of the screened casing. Approximately 1 foot of bentonite was placed above the filter pack, and Portland neat cement was poured above the bentonite to 1 fbg. A flush-mounted, traffic-rated well box was installed in concrete to protect the well and complete the well to grade (Attachments A and B).
Screened Interval:	[redacted] A).
Well Elevation Survey	The top of casing elevations and latitude/longitude horizontal locations for new and existing wells will be surveyed by Virgil Chavez Land Surveying of Vallejo, California.

Well Development and Sampling: During the next quarterly groundwater monitoring event, Blaine Tech Services, Inc. (Blaine) of San Jose, California will develop the new well using surge-block agitation and pump evacuation prior to sampling for TPHg, BTEX and MTBE.

Chemical Analyses: To characterize soil cuttings from the borings for disposal, four brass tubes of soil were collected, then composited and analyzed by the analytical laboratory for TPHg, BTEX and MTBE by Method 8260B, and total threshold limit concentration lead.

Soil Handling: Soil cuttings produced from the well were transported by Manley & Sons Trucking, Inc. of Sacramento, California to Forward Landfill in Manteca, California for disposal on June 3, 2002 (Attachment E).

INVESTIGATION RESULTS

Because the soil boring was advanced in imported clean backfill to 12 fbg, and because no soil samples were collected above the water table, no soil samples were submitted for chemical analysis. Groundwater samples from S-5 will be collected during the next quarterly monitoring event subsequent to developing the new well.

CONCLUSIONS

Well S-5 is located in the former UST complex and approximately in the center of the site. This location provides direct and downgradient monitoring of the remedial efforts performed in the former UST complex and former pump islands located adjacent to Foothill Boulevard. The five onsite wells will adequately monitor site groundwater conditions, while coordinated monitoring with the Chevron Service Station located across High Street and with the BP Service Station located on the opposite corner from the site will adequately monitor offsite groundwater conditions. Given that the site source has been removed, continued groundwater monitoring should be performed to determine that groundwater concentrations are attenuating naturally towards the cleanup levels established in Cambria's November 12, 2001 *Corrective Action Plan*.

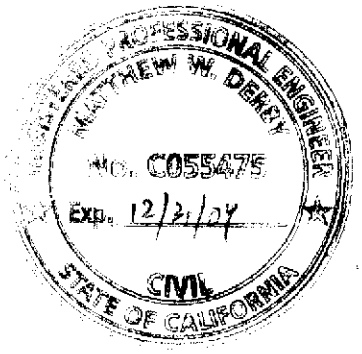
CLOSING

Please call James Loetterle at (510) 420-3336 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

James Loetterle
Project Geologist

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



Figures: 1 - Vicinity/ Area Well Survey Map
2 - Monitoring Well Location Map

Attachments: A- Soil Boring Log and Well Completion Details
B - Standard Field Procedures for Monitoring Well Installation
C - Well Permit and Access Agreement
D - DWR Well Completion Report
E - Soil Disposal Confirmation

cc: Karen Petryna, Shell Oil Products US, P.O. Box 7869, Burbank, CA 91510-7869
Tom Bauhs, Chevron Texaco, 6001 Bollinger Canyon Road, San Ramon, CA 94583
Mr. Alan Gibbs, Levine Fricke, 4080 Cabitt Stallman South Road, Suite 100, Granite Bay, CA, 95756
J.T. & Elizabeth G. Watters, Trs., 600 Caldwell Road, Oakland, CA 94611
Walter G. & Jeanette P Watters, Trs., 101 Jasmine Creek Drive, Corona Del Mar, CA 92665

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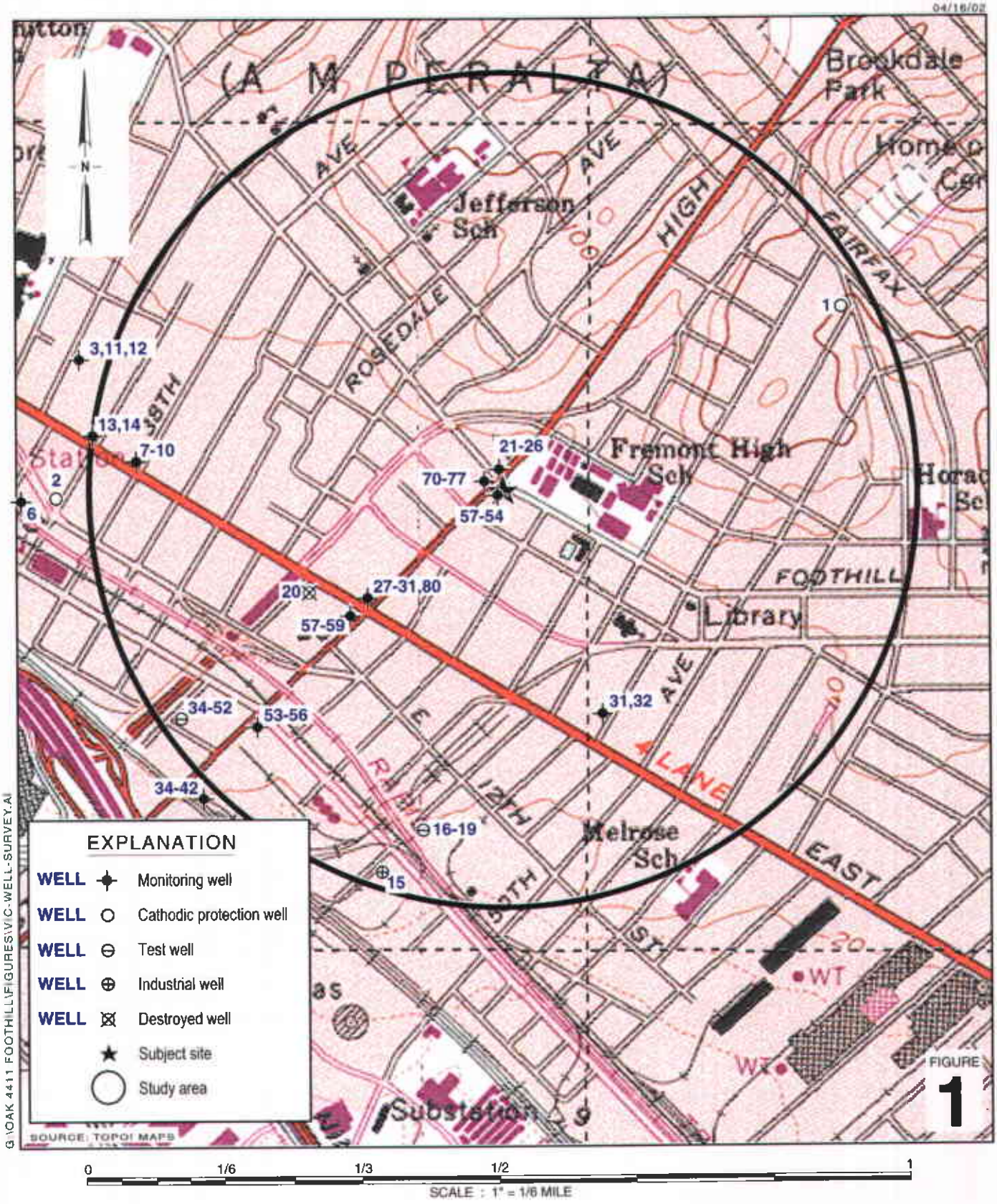

FIGURE 1

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

CAMBRIA

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

06/26/02

Monitoring Well Location Map

EAST 17th STREET

BOND STREET

HIGH STREET

FOOTHILL BOULEVARD

apartments

storage

house

apartments

house

C-5

C-1

C-3

C-2

C-4

C-6

C-8

C-7

loss

pump islands

Chevron Service Station

MW-8

MW-2

MW-4

MW-6

MW-3

MW-5

MW-9

Station Building

pump islands

BP Service Station

15" Ø SS 5.5 fbg

8" Ø SS 4.6 fbg

12" Ø SS 4.8 fbg

24" Ø SD 4.4 fbg

12" Ø SD

16" Ø SS 5.9 fbg

12" Ø SD 4.0 fbg

8" Ø SS 6.2 fbg

18" Ø SS 11.1 fbg

16" Ø SS 10.7 fbg

6" Ø SS 11.5 fbg

6" Ø SS 11.5 fbg

24" Ø SD 4.1 fbg

6" Ø SS 2.7 fbg

former canopy

DISP-4

Former Shell Service Station

S-3

S-2

former pump islands

BW-A

DISP-3

S-5

former USTs

former waste oil tank

S-1

DISP-2

former pump islands

DISP-1

SB-4

former canopy

excavation boundary

excavation boundary

former Station Building

S-4/SB-4B

house

apartments

house

commercial

EXPLANATION

S-1	Shell monitoring well location
BW-A	Destroyed tank backfill well
SB-4	Soil boring location (01/07/00)
DISP-1	Dispenser sample location (08/26/99)
C-1	Chevron monitoring well location
MW-2	BP monitoring well location
MW-3	Groundwater extraction well
	Fire hydrant
	Storm drain
	Manhole
	Power pole
	Storm drain (SD), conduit diameter shown
	Sanitary sewer (SS), conduit diameter shown
	Overhead power lines
	Flow direction
4.0 fbg	Depth to flowline, in feet below grade

0 20 40

SCALE 1:40

FIGURE

2

CAMBRIA

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

G:\OAKLAND\4411FOOTHILL\FIGURES\WELL-LOC-5-15-02.AI

ATTACHMENT A

Soil Boring Log and Well Completion Details

Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Shell Oil Products US	**BORING/WELL NAME**	S-5
JOB/SITE NAME	Shell-branded Service Station	**DRILLING STARTED**	09-May-02
LOCATION	4411 Foothill Blvd, Oakland	**DRILLING COMPLETED**	09-May-02
PROJECT NUMBER	244-0897	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	10"	**SCREENED INTERVAL**	5 to 22 ft bgs
LOGGED BY	S. Couch	**DEPTH TO WATER (First Encountered)**	9.0 ft (09-May-02) ▽
REVIEWED BY	M. Derby, PE# 55475	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand Augered to 5 fbg. Well located 50' southeast of the middle of northwest driveway.		

TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.3	Portland Type I/II Cement
							FILL light brown; damp; silty, sandy.		Bentonite Seal
				5					2"-diameter, 0.010" Slotted Schedule 40 PVC
				10			@ 9 fbg - wet. ▽		
							SAND (SP) grayish brown; saturated; 10% silt, 90% sand.	12.0	
	17 30 37			15	SP		@ 15.0 fbg - strong odor detected.		4"-diam., 0.010" Slotted Schedule 40 PVC
	18 50			20	ML		**SILT** (ML); light grayish brown; wet; 10% clay, 80% silt, 10% sand; odor detected.	20.0	
								22.0	Bottom of Boring @ 22 ft

WELL LOG (SHELL) G:\OAF450-1\GINT\GINT.GPJ DEFAULT.GDT 6/26/02

ATTACHMENT B

Standard Field Procedures for Monitoring Well Installation

CAMBRIA

STANDARD FIELD PROCEDURES FOR MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4° C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 fee below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Upon receipt of analytic results, the water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.

ATTACHMENT C

Well Permit and Access Agreement

Post-it® Fax Note 7671 | Date 4/16/02 | # of pages ▶ 2
To James Yoo | From James Loetterle
Co./Dept. ACPWA | Co. Cambria Env. Tech
Phone # 510-670-6633 | Phone # 510-420-3336
Fax # 510-782-1939 | Fax # 510-420-9170

NTY PUBLIC WORKS AGENCY

PUBLIC WORKS

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5554 MARLON MAGALLANES/FRANK CODD (510) 670-5783
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 4411 Foothill Blvd. Oakland, CA

CLIENT
Name Shell Oil Products US Phone 559-645-9806
Address P.O. Box 7869 Zip 91510
City Burbank CA

APPLICANT
Name Cambria Environmental Technology Inc.
Fax 510-420-9170
Address 1144 65th St. Suite B Phone 510-420-3336
City Oakland CA Zip 94608

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	[ ]	General	[ ]
Water Supply	[ ]	Contamination	[ ]
Monitoring	[✓]	Well Destruction	[ ]

PROPOSED WATER SUPPLY WELL USE

New Domestic	[ ]	Replacement Domestic	[ ]
Municipal	[ ]	Irrigation	[ ]
Industrial	[ ]	Other	[ ]

DRILLING METHOD:

Mud Rotary	[ ]	Air Rotary	[ ]	Auger	✓
Cable	[ ]	Other	[ ]		

DRILLER'S NAME Gregg Drilling & Testing Inc.

DRILLER'S LICENSE NO. 485165

WELL PROJECTS
Drill Hole Diameter 9 in. Maximum Depth 22 ft.
Casing Diameter 4 in. Owner's Well Number 5-5
Surface Seal Depth 3 ft.

screen interval 5-22 fbg
top of filter pack 3 fbg

5' surface seal composed of 1' bentonite, and 2' cement grout

GEOTECHNICAL PROJECTS
Number of Borings ____ Maximum Depth ____ ft.
Hole Diameter ____ in.

ESTIMATED STARTING DATE 5/9/02
ESTIMATED COMPLETION DATE 5/9/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE _____ DATE 4/16/02

PLEASE PRINT NAME James Loetterle

FOR OFFICE USE
PERMIT NUMBER W02-0442
WELL NUMBER
APN

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole above zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached requirements for destruction of shallow wells. Send a map of work site. A different permit application is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED _____ DATE 4-17-02

Rev. 6-3-00

LC# 135686

243-0897

ACCESS AGREEMENT

This Agreement is made as of October 3, 2001 effective on December 1, 2001 by and between the following entities, referred to herein as the Parties:

Equilon Enterprises LLC ("Equilon")
c/o Equiva Services LLC
12700 Northborough
Houston, Texas 77067
Attn: Director Safety, Health & Environment/
Science & Engineering

Site: 4411 Foothill, Oakland
Proj. ☑ Rem. ☐ Rpt. ☐ Bill ☐
1 ☐ 2 ☐ 3 ☐ 4 ☑ 5 ☐ 6 ☐

and

The Walter and Jeanette Watters Revocable Trust
DTD 01.22.90, Walter and Jeanette Watters, Trustees
101 Jasmine Creek Dr., Corona Del Mar, Ca 92625-1420;
James T. Watters, 600 Caldwell Rd., Oakland, CA 94611

James T. Watters
510.547.3303

WHEREAS, petroleum underground storage tanks as defined in 40 CFR Part 280 or supplanting federal regulations owned [or previously owned] by Equilon] or its predecessors in interest ("USTs") 1 [may have been/may be/are/were] present on the Property, and

WHEREAS, petroleum hydrocarbons may be present on the Property, and

WHEREAS, the Parties desire to investigate and, if necessary, perform [UST abandonment or removal and/or] remediation of petroleum hydrocarbons to bring the Property into compliance with applicable law,

NOW, THEREFORE, in consideration of the of the termination of the Ground lease between Equilon and the Licensor, and the mutual promises and considerations stated herein the Parties agree as follows:

1. Grant of License. Licensor hereby grants a nonexclusive irrevocable license from the date of this Agreement to Equilon, its employees, authorized agents and contractors to enter the Property to perform all monitoring well installations, tests, inspections, borings, engineering studies, surveys, appraisals, environmental studies, remediation operations and/or other activities hereinafter referred to as "Corrective Action" that Equilon deems necessary to comply with all applicable federal, state and local statutes, regulations, ordinances directives, orders and standards for [abandonment or removal of USTs and] Corrective Action related to USTs. If Licensor fails to provide

[1] If this Agreement is used in connection with the sale of a terminal property then, the term "UST's" shall mean underground storage tanks and above ground storage tanks and regulations covering above ground storage tanks shall also apply.

Post-it® Fax Note 7671	Date 11-5-01	# of pages ▸ 6
To S. Bork	From K. Petryna	
Co./Dept. Cambria	Co. Equiva	
Phone #	Phone #	
Fax # FYI for 4411 Foothill		

reasonable access to Equilon, or Licensor unreasonably interferes with Equilon's activities on the Property, such failure shall constitute waiver of any right, claim or cause of action Licensor may have against Equilon, to perform or continue Corrective Action on the Property. Such waiver shall not constitute the sole remedy for breach of this provision which remedies may include without limitation, consequential damages.

2. Environmental Investigation and Remediation. For as long as this Agreement remains in effect, Equilon, at its sole expense, agrees to conduct any necessary Corrective Action at the Property in accordance with all applicable federal, state and local statutes, regulations, ordinances and standards; however, Licensor agrees Equilon is under no obligation to Licensor to remedy or respond to any environmental liability or condition on the Property that cannot be attributed to the alleged ownership or operation of the USTs on the Property.

3. Regulations. Licensor hereby agrees to comply with all existing and future applicable laws and regulations pertaining to underground storage tanks, including but not limited to liability and insurance requirements, inventory records, leak detection devices, system inspections, tank and line tests and tank field monitoring well tests. Licensor further agrees to copy Equilon, within fifteen (15) days of the date request is made by Equilon, with any records pertaining to the above. Further, upon written request by Equilon, Licensor shall make available all records required by applicable laws for review by Equilon at the Property during normal business hours.

4. Termination. Upon the completion of the Corrective Action, Equilon shall provide notice and appropriate documentation to the relevant government agencies having jurisdiction ("Agency") and to Licensor that Equilon considers the Corrective Action to be complete. Determination by the Agency that no further action is required or that the Corrective Action has been completed shall be conclusive and binding on Licensor and Licensor's successors and assigns. In the event that the Agency does not, for a period of one (1) year following the date of submission of Equilon's written notice, express objections to the notice, then the Corrective Action shall likewise be conclusively presumed to be complete. Once the Corrective Action is complete, Equilon shall have no further obligation or liability to Licensor or Licensor's successors and assigns for Corrective Action.

5. Mutual Cooperation. Equilon agrees to coordinate its activities with Licensor to minimize any inconvenience to or interruption of the conduct of Licensor's business or development of the Property including, but not limited to, providing reasonable notice prior to all activities which may interrupt the conduct of Licensor's business. Licensor agrees to cooperate with Equilon, and execute any additional documents, without limitation, permit applications, which may reasonably be required to effectuate the purpose of this Agreement. Licensor further agrees not to interfere with the activities conducted by Equilon on the Property.

6. Permits. Equilon, with the reasonable cooperation of Licensor, but at no expense to Licensor, shall obtain any and all permits which may be required for the Corrective Action it conducts pursuant to this Agreement.

7. Periodic Reports. Equilon agrees to provide Licensor with periodic reports which are submitted to the Agency outlining the results of Equilon's Corrective Action performed pursuant to this Agreement.

8. Site Restoration. Equilon agrees, upon completion of the Corrective Action contemplated by this Agreement, to restore the surface of the Property to as near the approximate grade and pavement as existed prior to said Corrective Action as is reasonably possible, including proper plugging, abandonment or removal of any monitoring well as may be required in accordance with applicable law.

9. Indemnities. Equilon agrees to indemnify, defend and hold Licensor, and its officers, directors, shareholders, employees, agents, insurers, representatives, successors, and assigns (collectively referred to as "Indemnified Party") harmless from any and all liabilities, losses, claims, demands, or orders arising out of the Corrective Action Equilon performs pursuant to this Agreement, except to the extent that any said liabilities, losses, claims, demands, or orders may be attributed in whole or in part to the negligence, gross negligence or intentional act of the Indemnified Party. Equilon's indemnification obligation shall not include direct or indirect economic loss attributable to short term business interruptions as a result of Equilon's activities on the Property. This indemnity shall terminate at the time the Corrective Action is complete as set forth in paragraph 4 of this Agreement and be of no further force or effect.

10. Assignment and Reimbursement from Trust Funds. Licensor hereby assigns to Equilon any and all rights it may have against the applicable state and federal fund established by the state or federal government to fund or reimburse cleanups, assessments, remediations or satisfaction of claims at UST sites. Licensor agrees to cooperate with Equilon, including execution of additional documents, if necessary, in obtaining any allowable reimbursement from a state and federal fund established by the state or federal government to fund or reimburse cleanups, assessments, remediations, or satisfaction of claims at UST sites and that any moneys obtained from said fund shall belong solely to Equilon.

11. Dispute Resolution. The Parties agree that should any dispute arise under this Agreement which cannot be amicably resolved, the dispute shall be submitted to mediation prior to being submitted to Arbitration under the rules and procedures of the American Arbitration Association and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Any mediator or arbitrator selected by the parties shall be knowledgeable in environmental law and/or remediation technologies.

12. Execution of Agreement. Each of the undersigned hereby represents and warrants that it is authorized to execute this Agreement on behalf of the respective Party to the Agreement and that this Agreement, when executed by those Parties, shall become a valid and binding obligation, enforceable in accordance with its terms. Licensor represents and warrants that it is the owner of the property described in Exhibit A or that it has full lawful authority to grant access to the Property for the purposes described herein.

13. Assignment, Successor and Assigns. In the event Licensor's interests in the Property are conveyed, transferred or in any way assigned in whole or in part to any other person or entity, whether by contract, operation of law or otherwise, Licensor shall take any and all actions necessary at Licensor's sole cost to render any such conveyance, transfer or assignment subject to the terms of this Agreement and shall provide notice thereof to Equilon. Except as set forth hereinafter, this Agreement cannot be assigned by either Party without the prior written consent of the other, which consent shall not be unreasonably withheld. Licensor hereby assigns to Equilon any and all claims, causes of action and suits it may have against any third party who may have financial responsibility for any environmental response costs or other damages at the Property including but not limited to any rights to recover any insurance policy that may name Licensor as a beneficiary or against which Licensor may have a right of recovery. Licensor agrees to cooperate with Equilon in determining whether such claims exist. This Agreement is binding upon, and shall inure to the benefit of, all heirs, successors, and assigns of the Parties.

14. Notice. Any notice, consent, request, report, demand, or other document required to be given to one Party by the other shall be in writing and be delivered to or mailed to the receiving Party at its address, referenced on page 1 above. Facsimile copies shall be sufficient.

15. Modifications. This Agreement contains the entire understanding of the Parties. Any change, amendment, or alteration must be in writing and signed by both Parties to this Agreement to be effective. This Agreement supersedes all prior discussions and agreements between the Parties with respect to the subject matter hereof and thereof.

16. No Admissions. Nothing contained in this Agreement shall be construed as an admission of any fact or liability of any Party to this Agreement.

17. GOVERNING LAW. THIS AGREEMENT SHALL BE GOVERNED IN ALL RESPECTS BY THE LAWS OF THE STATE IN WHICH THE CORRECTIVE ACTION IS PERFORMED WITHOUT REGARD TO THE CONFLICT OF LAWS PRINCIPLES THEREOF.

18. This Agreement may be executed in multiple counterparts, each of which shall be deemed to be an original and of equal force and effect.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the dates set forth below.

EQUILON ENTERPRISES LLC

By: _____ Date: 11-02-01

Printed Name: Charles T. Badrick
Attorney-in-Fact

Title: Attorney-in-Fact

LICENSOR

James T. Watters and The Walter and Jeanette Watters Revocable Trust DTD 01-22-90

By: _____ Date: 10/10/01

Printed Name: James T. Watters

By: _____ Date: 10/15/01

Printed Name: Walter Watters, Trustee

EXHIBIT A

The land referred to herein is situated in the State of California, County of Alameda, City of Oakland, described as follows:

A portion of Plot 7, as said plot is shown on the "Map of Patterson Ranch, subdivided December 1877", which accompanies the final decree in partition in the case of Solomon B. Boswell, vs. Levi Stevens, et. al., recorded in Book 187 of Deeds, at pages 228 and 229, in the Office of the County Recorder of Alameda County, described as follows:

Beginning at a point on the Southwestern line of Foothill Boulevard, distant thereon Northwesterly 137 feet from the Northwestern line of 45th Avenue; and running thence parallel with said line of 45th Avenue Southwesterly 100 feet to the direct extension Southeasterly of the Northeastern line of a parcel of land described in the Deed by J. R. Talcott and Cynthia R. Talcott, to Anna Fay Talcott, dated June 17, 1897, recorded June 18, 1897, in Book 646 of Deeds, at page 131, Alameda County Records; thence along said extended line Northwesterly 11.33 feet to the Southeastern line of said land described in said deed; thence along the last named line South 38°13' West 43.79 feet to a line drawn Southeasterly parallel with the Northeastern line of Bond Street, as said Bond Street existed on October 13, 1959, from a point on the Southeastern line of High Street, distant thereon Northeasterly 100 feet from said Northeastern line of Bond Street; thence along the line so drawn Northwesterly 153.50 feet to said Southeastern line of High Street; thence along the last named line North 45°50' East 138.99 feet to said Southwestern line of Foothill Boulevard; and thence along the last named line Southeasterly 130.87 feet to the point of beginning.

ATTACHMENT D

DWR Well Completion Report

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

ATTACHMENT E

Soil Disposal Confirmation

MANLEY & SONS TRUCKING, INC.
ROCK
SAND
DEMO
FILL DIRT
TOP SOIL
CA009450
(916) 381-6864

Hazardous Waste Hauler (Registration #2843)

8896 Elder Creek Rd. • Sacramento, CA 95828 • FAX (916) 381-1573

Disposal Confirmation

Request for Transportation Received: 05/28/02

Consultant Information

Company:	Cambria
Contact:	Couch, Shannon
Phone:	510-420-3339
Fax:	510-420-9170

Site Information

Station #:	
Street Address:	4411 Foothill Blvd
City, State, ZIP:	Oakland, CA 94601
Customer:	Shell Oil Company RESA-0023-LDC
RIPR #:	12008
SAP # / Location:	135686
Incident #:	989957546
Location / WIC #:	2045508-3400
Environmental Engineer:	Petryna, Karen E.
Fax:	
Material Description:	Soil stockpile from drill cuttings
Estimated Quantity:	3 Cubic Feet
Service Requested Date:	06/07/02
Disposal Facility:	Forward Landfill
Contact:	Joe Griffith
Phone:	800-204-4242
Approval #:	1999
Date of Disposal:	06/03/02
Actual Tonnage	1.44 Tons
Transporter:	Manley & Sons Trucking, Inc.
Contact:	Glenell Forbes
Phone:	916 381-6864
Fax:	916 381-1573
Invoice:	50205C
Date of Invoice:	06/05/02

Fax To: Consultant Cc:Tim Dazey Shell