

January 23, 2004

Mr. Keith L. Matthews
Oakland Fire Department, Office of Emergency Services
1605 Martin Luther King, Jr. Way
Oakland, California 94612

Re: **Subsurface Investigation Report**
2834 East 7th Street
Oakland, California
Cambria Project No. 557-1000

RECEIVED
OAKLAND FIRE OES
2004 JAN 26 P 3:41

Dear Mr. Matthews:

On behalf of Mr. Gunter Kitsch, Cambria Environmental Technology, Inc. (Cambria), is submitting this *Subsurface Investigation Report* for the site referenced above (Figure 1). This report details the drilling and sampling activities as proposed in Cambria's *Investigation Work Plan* (workplan) dated November 3, 2003. This work was requested by the Oakland Fire Department (OFD). The objective of the proposed work was to provide additional assessment of soil beneath the former underground storage tank (UST) at the site. The site background, subsurface investigation activities, investigation results, conclusions, and recommendation are described below.

SITE BACKGROUND

Cambria understands that the site had been owned and used by Hans and Gunter Roofing, Inc. since the early 1970's. Based on discussions with former owner Mr. Gunter Kitsch, the former UST at the site was approximately 820 gallons and had been used for gasoline storage at the site for approximately 4 years about 25 years ago during the gasoline crisis in the 1970's. The tank was removed about 2 years ago by the seller's neighbor, a contractor experienced with tank removal. During tank removal the tank looked clean with no holes and no contamination was observed in the native soil or excavation cavity. No documentation regarding the UST removal has been provided to Cambria.

Cambria conducted a subsurface investigation on July 28, 2003. Consistent with the Tri-Regional Guidelines for UST investigations for a UST less than 1,000 gallons in capacity, Cambria collected at least one soil sample from native soil [at 10.5 feet (ft) below grade surface (bgs)] just beneath the UST. Based on logged soil, the bottom of the former tank excavation was encountered at approximately 10 ft bgs. To exceed the recommendations of the Tri-Regional Guidelines, Cambria submitted a second soil sample for analysis (deeper soil at 14.5 ft bgs), and drilled deeper (to 28 ft bgs) to qualitatively assess soil conditions and to collect and analyze groundwater samples (although no groundwater was encountered). Cambria also exceeded the Tri-Regional Guidelines by analyzing soil for total petroleum hydrocarbons as diesel (TPHd) and motor oil (TPHmo), semi-volatile organic compounds (SVOCs), volatile organic compounds (VOCs) beyond oxygenates and EDB and 1,2-DCA, and LUFT metals beyond total lead. Investigation results presented in Cambria's *Subsurface*

**Cambria
Environmental
Technology, Inc.**

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



Alameda County

11/14/2003

Investigation Report dated August 14, 2003 indicated that no TPHg, TPHd, TPHmo, VOCs, or SVOCs were detected in the soil samples from beneath the former tank. Metal concentrations appear to represent background conditions.


An *Environmental Transaction Screen* dated May 27, 2003 was prepared by AEI Consultants of Walnut Creek. The transaction screen recommended investigation beneath the former UST, which Cambria conducted. Additional background data is presented in Cambria's August 14, 2003 report.



SUBSURFACE INVESTIGATION ACTIVITIES

To provide additional assessment of soil beneath the former underground storage tank (UST) at the site, Cambria performed a subsurface investigation using direct-push sampling techniques. The investigation scope involved advancing two direct-push soil borings to a total depth of 16 ft bgs, and collecting soil samples from native soil immediately beneath the former UST (10.5 ft bgs) and from deeper native soil (16 ft bgs). To further evaluate soil conditions beyond the scope of the workplan, Cambria logged soil continuously and collected at least two soil samples above and below the first encountered native soil at approximately 10 ft bgs in each boring. A total of six soil samples were analyzed by a certified analytical laboratory as described below. Groundwater was not encountered. The boring locations are shown on Figure 1, as is the former UST excavation area at the site. Cambria's standard field procedures for soil borings and grouting are presented in Attachment C. Additional investigation activities are described below.

- Sampling Date:*** December 5, 2003.
- Drilling Permit:*** Alameda County Public Works Agency issued permit number W03-1083 for drilling two borings. The drilling permit is included in Attachment A.
- Personnel Present:*** Matthew Meyers, Cambria's Senior Staff Geologist performed all field activities, which were overseen by Cambria's Principal Engineer Bob Clark-Riddell, a California Registered Professional Engineer. Mr. Keith Matthews, Hazardous Materials Inspector for the City of OFD's Office of Emergency Services, was also present.
- Drilling Company:*** Resonant Sonic International of Woodland, California (C-57 License # 802334) performed the drilling activities.

- 
- Number of Borings:** Two borings (B-2 and B-3) were drilled to approximately 16 ft bgs. The borings locations are shown on Figure 1.
- Drilling Method:** A truck-mounted, direct-push rig was used to drill the soil boring.
- Sampling Method:** The borings were sampled continuously using Macrocore sampling tubes.
- Soil Types Encountered:** The boring location was underlain by fill material to a depth of approximately 10 ft bgs. Fill materials predominantly consisted of sand and clayey silt materials with slate fragments and gravels. Underlying the fill were interbedded layers of sandy silt, silty sand, clayey silt, sandy clay, and silty clay to the total depth explored of approximately 16 ft bgs. Boring logs are presented in Attachment B.
- Soil Sampling:** Soil samples were collected from boring B-2 at depths of 5.5, 7.0, 8.5, 10.5, 12.5, 14.0, and 16.0 ft bgs. Soil samples were collected from boring B-3 at depths of 5.5, 8.5, 10.5, 12.0, 14.0, and 16.0 ft bgs. The 10.5 ft bgs samples were from native soil at approximately 10.0 to 10.5 ft bgs, which corresponds to approximately 6 inches beneath the estimated floor of the UST excavation.
- Groundwater Sampling:** Groundwater was not encountered in either boring.
- Chemical Analysis:** Soil samples were sent to state-certified McCampbell Analytical, Inc. (McCampbell) of Pacheco, California. The two soil samples collected immediately below the UST cavity (at 10.5 ft) were analyzed for multiple-range petroleum hydrocarbons [total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo)] by analytical method SW8015C with silica gel cleanup; oxygenated volatile organics including diisopropyl ether (DIPE), tert-amyl methyl ether (TAME), t-butyl alcohol (TBA), ethyl tert-butyl ether (ETBE), MTBE, and gasoline lead scavengers [1,2-dibromoethane (EDB) and 1,2-dichloroethane (1,2-DCA)] by analytical method SW8260B, and for lead with laboratory filtration by analytical method 6010C.

Due to detections in the samples from 10.5 ft bgs, additional soil analysis was performed. Soil samples from boring B-2 at 8.5 and 12.5 ft bgs and boring B-3 at 8.5 and 12.0 ft bgs were analyzed for multiple-range petroleum hydrocarbons (TPHg, TPHd, and TPHmo) by analytical method SW8015C with silica gel cleanup. Soil samples from boring B-2 at 8.5 and 12.5 ft bgs were also analyzed for oxygenated volatile organics (DIPE, TAME, TBA, ETBE, MTBE) and gasoline lead scavengers (EDB and 1,2-DCA) by analytical method SW8260B.

**Backfill Method:**

The borings were sealed to surface with bentonite-cement grout. See Cambria's *Standard Field Procedures for Soil Borings and Grouting* in Attachment C.

INVESTIGATION RESULTS

TPHg, TPHd, and EDB were the only compounds detected in soil from beneath the former tank (except for a background concentration of lead). These compounds were detected in soil from 10 to 10.5 ft bgs in borings B-2 and B-3. These detections correspond to odors and soil staining, which was only observed in logged soil from approximately 10 to 11 ft bgs. No TPHg, TPHd, or EDB was detected in shallower or deeper soil from both borings. The laboratory description of chromatograms from TPHg and TPHd analysis suggest the detected compounds are from aged gasoline. EDB was commonly used as a lead scavenger in gasoline.

All detected TPHg, TPHd, and EDB concentrations are below the ESL for commercial/industrial land use where groundwater is *not* a potential source of drinking water. The TPHg concentration of 270 milligrams per kilogram (mg/kg) in boring B-2 exceeds the Environmental Screening Levels (ESLs) of 100 mg/kg for commercial/industrial land use where groundwater *is* a potential source of drinking water. The detected EDB concentration of 9.4 micrograms per kilogram ($\mu\text{g}/\text{kg}$) from boring B-2 also exceeds the ESL of 0.33 $\mu\text{g}/\text{kg}$ for commercial/industrial land use where groundwater *is* a potential source of drinking water. Soil analytical results are summarized on Table 1. The laboratory analytical reports are presented in Attachment D.

Subsurface Investigation Report
2834 East 7th Street
January 23, 2004

CONCLUSIONS

Based on analytical results, field observations, and our understanding of the UST history, Cambria offers the following conclusions:

- The detected compounds appear related to aged gasoline.
- Soil impact appears to be limited to an approximate 1-ft thick layer in first encountered native soil immediately beneath the former UST, at a depth of 10 to 11 ft bgs.
- All detected concentrations are below the ESLs for commercial/industrial land use where groundwater is *not* a potential source of drinking water.
- While detected TPHg and EDB concentrations exceed the ESL where groundwater is a potential source of drinking water, the "clean" soil beneath the limited soil impact suggests that the residual compounds do not pose a significant threat to groundwater. This conclusion is corroborated by the prior investigation results from deeper boring B-1 by Cambria in July 2003. During the July 2003 investigation no soil impact was detected by laboratory analysis from approximately 10 and 14 ft bgs in boring B-1, and no odor, staining, or groundwater was observed to the total explored depth of 28 ft bgs.
- In addition, the site is located approximately 1,000 ft from the Oakland Harbor so groundwater may not likely be used as a source of drinking water.
- Based on the ESLs, the residual concentrations at approximately 10.5 ft bgs would not pose a significant risk to human health via volatilization to indoor air, dermal contact, or other exposure pathways.

RECOMMENDATION

Cambria recommends no further action at this site.

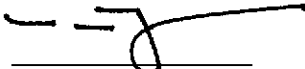
CLOSING

Enclosure


Cambria appreciates this opportunity to provide services on this project. If you have any questions or comments, please call Matt Meyers at (510) 420-3314 or Bob Clark-Riddell at (510) 420-3303.

Sincerely,
Cambria Environmental Technology, Inc.




Matthew A. Meyers
Senior Staff Geologist




Bob Clark-Riddell, P.E.
Principal Engineer

ATTACHMENTS

Figure 1 – Soil Boring Location Map

Table 1 – Soil Analytical Data

Attachment A – Drilling Permit

Attachment B – Boring Logs

Attachment C – Cambria's *Standard Field Procedures for Soil Borings and Grouting*

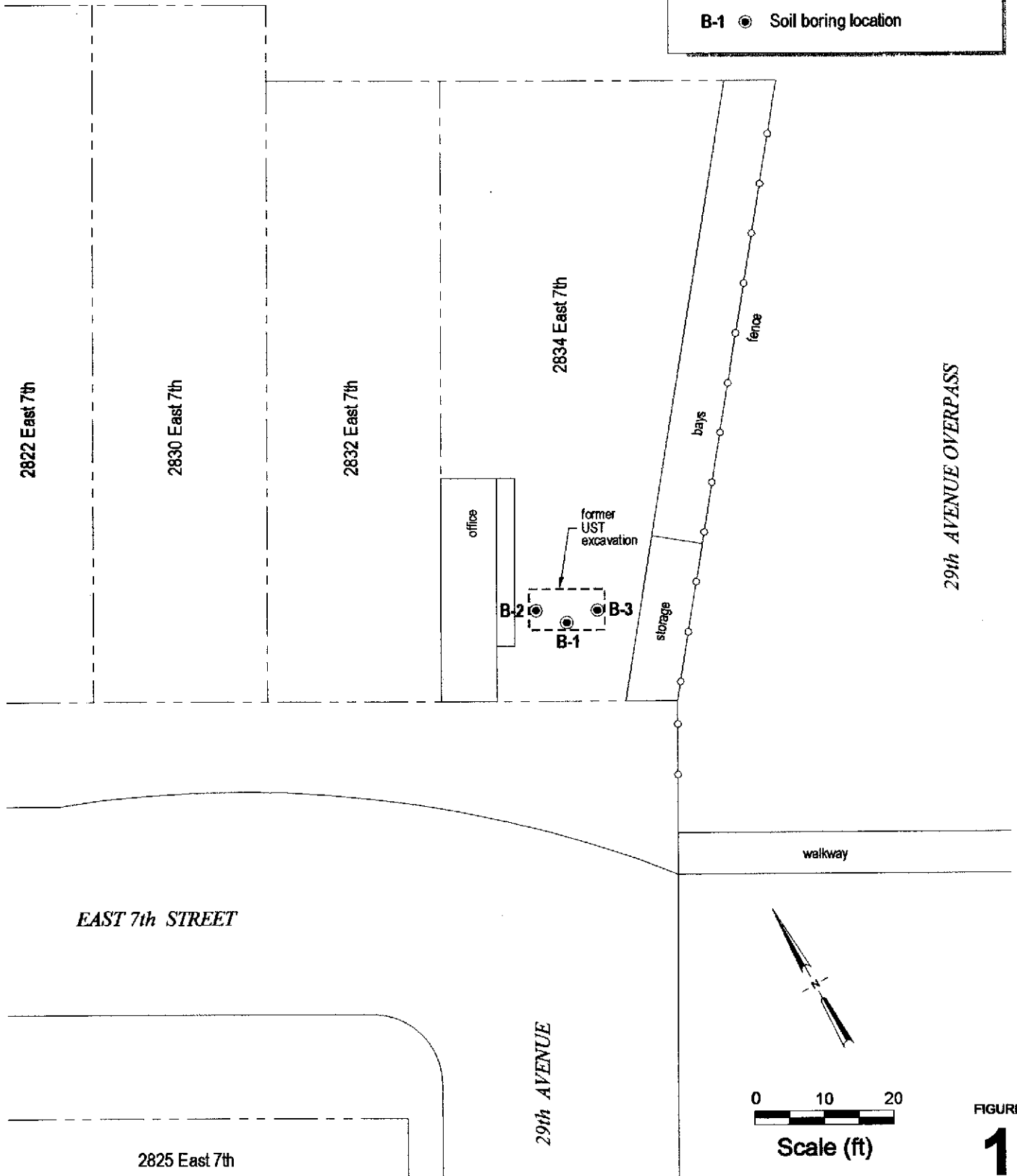
Attachment D – Laboratory Analytical Reports

Cc: Gunter Kitsch, 2325 Belvedere Avenue, San Leandro, California 94577
Steve Oelschlaegel, 1432 Via Lucas, San Lorenzo, California 94580

H:\Misc Sites\Raymond Hien (Hans & Gunter)\Gunter Investigation\Subsurface Investigation Dec 2003.doc

EXPLANATION

B-1 ● Soil boring location



K:\MISC SITE\RAVADND\HENHANS & GUNTHER\FIGURE1\FIG1PLAN.DWG

Former Hans & Gunther Roofing
 2834 East 7th Street
 Oakland, California



C A M B R I A

**Soil Boring
 Location Map**

FIGURE
1

CAMBRIA

Table 1: Soil Analytical Data - Petroleum Hydrocarbons, Volatile Organic Compounds, and Metals: 2834 East 7th Street, Oakland, California

Sample ID	Date Sampled	Sample Depth (ft)	TPH			Oxygenated VOCs & EDB, 1,2-DCA								Metals				
			TPHg ← mg/kg →	TPHd ← mg/kg →	TPHmo ← mg/kg →	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	1,2-DCA	VOCs	SVOCs	Cadmium	Chromium	Nickel	Lead	Zinc
B-1@10.5	07/29/03	10.5	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	ND	ND	<0.5	49	121	10	42
B-1@14.5	07/29/03	14.5	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	ND	--	--	--	--	--	--
B-2@8.5	12/05/03	8.5	<1.0	<1.0	<5.0	--	--	--	--	<5.0	ND	--	--	--	--	--	--	--
B-2@10.5	12/05/03	10.5	270	68	<5.0	--	--	--	--	<5.0	9.4 EDB	--	--	--	--	--	<5.0	--
B-2@12.5	12/05/03	12.5	<1.0	<1.0	<5.0	--	--	--	--	<5.0	ND	--	--	--	--	--	--	--
B-3@8.5	12/05/03	8.5	<1.0	<1.0	<5.0	--	--	--	--	--	--	--	--	--	--	--	--	--
B-3@10.5	12/05/03	10.5	91	48	<5.0	--	--	--	--	<5.0	ND	--	--	--	--	--	10	--
B-3@12.5	12/05/03	12.5	<1.0	<1.0	<5.0	--	--	--	--	--	--	--	--	--	--	--	--	--

Water is NOT a potential source of drinking water:

ESLs for Commercial Use, Soil <9.8 ft:	400	500	1,000	380	9,300	13,000	1,500	5,600	21 EDB	--	--	7.4	58	150	750	600
ESLs for Commercial Use, Soil >9.8 ft:	400	500	1,000	500	9,300	13,000	1,500	5,600	21 EDB	--	--	38	58	1,000	750	5,000

Water is a potential source of drinking water:

ESLs for Commercial Use, Soil <9.8 ft:	100	100	1,000	44	2,900	3,300	1,500	23	0.33 EDB	--	--	7.4	58	150	750	600
ESLs for Commercial Use, Soil >9.8 ft:	100	100	1,000	44	2,900	3,300	1,500	23	0.33 EDB	--	--	38	58	1,000	750	5,000

Abbreviations and Methods:

ft = measured in feet

TPHg = Total petroleum hydrocarbons as gasoline (C6-C16) by analytical method SW8015Cm

TPHd = Total petroleum hydrocarbons as diesel (C10-23) by analytical method SW8015C with silica gel cleanup

TPHmo = Total petroleum hydrocarbons as motor oil (C18+) by analytical method SW8015C with silica gel cleanup

Benzene, toluene, ethylbenzene, and xylenes by analytical method SW8260B

MTBE = Methyl tertiary butyl ether by analytical method SW8260B

Oxygenated VOCs & EDB, 1,2-DCA = Oxygenated volatile organics (MTBE, DIPE, TAME, TBA, ETBE), plus 1,2-Dibromoethane (EDB) and 1,2-Dichloroethane (1,2-DCA) by analytical method SW8260B

VOCs = Volatile organics by analytical method SW8260B

SVOCs = Semi-volatile organics by analytical method SW8270D

µg/kg = Micrograms per kilogram

mg/kg = Milligrams per kilogram

ND = analyte not detected above laboratory limit. See report laboratory report for limits.

-- = Not analyzed or not applicable

EDB = 1,2-Dibromoethane

ESLs = Environmental screening levels

ATTACHMENT A

Drilling Permit



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-4433 Janet Yoo
FAX (510) 782-1939

APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 2834 East 7th Street
Oakland, Ca

PERMIT NUMBER W03-1083

WELL NUMBER _____
APN _____

CLIENT
Name Gunther Kitsch
Address 2325 Belvedere Ave Phone 510-351-6991
City San Leandro Zip 94577

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name Matt Meyers of Cambria
Environmental Tech, Inc Fax 510-420-9170
Address 5700 Hollis St, Ste A Phone 510-420-3314
City Emeryville, CA Zip 94608

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.

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input type="checkbox"/>
		SOIL CORRECTION	<input checked="" type="checkbox"/>

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth is 30 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by trowel.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Entry	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	<u>Geoprobe</u>	

D. GEOTECHNICAL/CONTAMINATION

Backfill bore hole by trowel with cement grout or cement grout and mixture. Upper two-three feet replaced in kind or with cement grout.

DRILLER'S NAME Resonant Sonic International

DRILLER'S LICENSE NO. 802334

E. CATHODIC

Fill hole anode zone with concrete placed by trowel.

F. WELL DESTRUCTION

Send a map of work site. A separate permit 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.

WELL PROJECTS

Drill Hole Diameter	<u> </u> in.	Maximum	
Casing Diameter	<u> </u> in.	Depth	<u> </u> ft.
Surface Seal Depth	<u> </u> ft.	Owner's Well Number	<u> </u>

GEOTECHNICAL PROJECTS

Number of Borings	<u> 2 </u>	Maximum	
Hole Diameter	<u> 3 </u> in.	Depth	<u> 15 </u> ft.

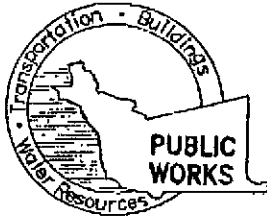
ESTIMATED STARTING DATE 12/3/03
ESTIMATED COMPLETION DATE 12/13/03

APPROVED [Signature] DATE 12-10-03

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

APPLICANT'S SIGNATURE [Signature] DATE 11/26/03

PLEASE PRINT NAME Matt Meyers of Cambria Environmental Technology, Inc. Rev. 3-04-02



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

399 ELMHURST ST. HAYWARD, CA. 94544-1395

PHONE (510) 670-6633 James Yoo FAX (510) 782-1939

PERMIT NO. W03-1083

WATER RESOURCES SECTION GROUNDWATER PROTECTION ORDINANCE

B#1-GENERAL CONDITIONS: GEOTECHNICAL & CONTAMINATION BOREHOLES

1. Prior to any drilling activities shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that Federal, State, County or to the City and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained.
2. Boreholes shall not be left open for a period of more than **24 hours**. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permitte, permittee's, contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statues regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on-or off site storm sewers, dry wells, or waterways or be allowed to move off the property where wok is being completed.
4. Permit is valid only for the purpose specified herein **December 3 to December 3, 2003**. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.
5. Drilling Permit(s) can be voided/ canceled only in writing. It is the applicants responsibilities to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
6. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

ATTACHMENT B

Soil Boring Logs



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

BORING/WELL LOG

CLIENT NAME	Gunter Kitsch	BORING/WELL NAME	B-2
JOB/SITE NAME	Phase II Site Assessment	DRILLING STARTED	05-Dec-03
LOCATION	2834 East 7th Street, Oakland	DRILLING COMPLETED	05-Dec-03
PROJECT NUMBER	557-1000-002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Resonant Sonic International	GROUND SURFACE ELEVATION	
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	NA
BORING DIAMETER	2 1/8"	SCREENED INTERVAL	NA
LOGGED BY	M. Meyers	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	R. Clark-Riddell, PE# 49629	DEPTH TO WATER (Static)	NA
REMARKS	Located on the east side of the tank pit.		

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
								CONCRETE: 3 inches thick.	0.3	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 16 ft</p>
			B-2@5.5		5			FILL: brown; loose; damp; 15% silt, 80% very fine to fine grained sand, 5% gravel to 5mm diameter; high estimated permeability; some brick fragments.		
			B-2@7					@ 2': brown; loose; damp; 95% fine to medium grained sand, 5% gravel to 10mm diameter; high estimated permeability; some gray slate fragments.		
			B-2@8.5					@ 3.5': dark brown; medium stiff; damp; 60% clay, 30% silt, 10% very fine grained sand; low plasticity; low estimated permeability.		
0								@ 4.5': light brown; medium stiff; damp; 60% clay, 25% silt, 15% very fine to fine grained sand; low plasticity; low estimated permeability.		
0	<1.0		B-2@10.5		10	SM		@ 5': light brown; stiff; damp; 20% clay, 45% silt, 30% very fine grained sand, 5% gravel to 20mm in diameter; low plasticity; low estimated permeability; some brick fragments.	10.0	
2								@ 8': light brown; stiff; damp; 40% clay, 60% silt; medium plasticity; low estimated permeability.	11.0	
5	270		B-2@12.5			ML		Gravelly Silty SAND (SM): gray and light brown; medium dense; moist; 30% silt, 50% very fine to coarse grained sand, 20% angular gravel to 20mm diameter; medium estimated permeability; mottled.	14.0	
0	<1.0		B-2@14			CL		Clayey SILT (ML): light brown; medium stiff; moist; 30% clay, 70% silt; low plasticity; low estimated permeability.	15.0	
0			B-2@16		15	CL		Sandy CLAY (CL): light brown; medium stiff; moist; 80% clay, 20% fine to coarse grained sand; medium plasticity; low estimated permeability.	16.0	
								Silty CLAY (CL): light brown; medium stiff; moist; 60% clay, 40% silt; medium plasticity; low estimated permeability.		

WELL LOG (PID/TPHG) H:\MISC\1-1RAYMON-1\GUNTER-1\GUNTER.GPJ DEFAULT.GDT 12/30/04



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

BORING/WELL LOG

CLIENT NAME	Gunter Kitsch	BORING/WELL NAME	B-3
JOB/SITE NAME	Phase II Site Assessment	DRILLING STARTED	05-Dec-03
LOCATION	2834 East 7th Street, Oakland	DRILLING COMPLETED	05-Dec-03
PROJECT NUMBER	557-1000-002	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Resonant Sonic International	GROUND SURFACE ELEVATION	
DRILLING METHOD	Hydraulic push	TOP OF CASING ELEVATION	NA
BORING DIAMETER	2 1/8"	SCREENED INTERVAL	NA
LOGGED BY	M. Meyers	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	R. Clark-Riddell, PE# 49629	DEPTH TO WATER (Static)	NA
REMARKS	Located on the west side of the tank pit.		

PID (ppm)	TPHg (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
					0.3			CONCRETE: 3 inches thick.	0.3	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 16 ft</p>
			B-2@5.5		5			FILL: brown; loose; damp; 15% silt, 80% very fine grained sand, 5% gravel to 8mm diameter; high estimated permeability; some slate and brick fragments. @ 2.5': brown; loose; damp; 70% fine to medium grained sand, 30% gravel to 10mm diameter; high estimated permeability; some gray slate fragments. @ 5': gray; stiff; damp; 100% fine grained sand; high estimated permeability.		
	<1.0		B-2@8.5		8.5			@ 8': olive brown; stiff; damp; 60% clay, 40% very fine to medium grained sand; low plasticity; low estimated permeability.	10.0	
	91		B-2@10.5		10	SM		Gravelly Silty SAND (SM): gray and brown; medium dense; moist; 25% silt, 60% very fine to coarse grained sand, 15% angular gravel to 15mm diameter; medium estimated permeability; mottled.	12.0	
	<1.0		B-2@12		12			Sandy CLAY (CL): light brown; stiff; moist; 70% clay, 30% very fine to coarse grained sand; low plasticity; low estimated permeability.	15.0	
			B-2@14		14	CL		@13.5': Increasing sand content; 55% clay, 45% sand.	16.0	
			B-2@16		16	CH		Silty CLAY (CH): light brown; stiff; moist; 70% clay, 30% silt; high plasticity; low estimated permeability.		

WELL LOG (PID/TPHG) H:\MISC\11RAYMON-1\GUNTER-1\GUNTER.GPJ DEFAULT.GDT 1/23/04

ATTACHMENT C

Cambria's Standard Field Procedures for Soil Borings and Grouting

CAMBRIA

STANDARD FIELD PROCEDURES FOR SOIL BORINGS AND GROUTING

This document describes Cambria Environmental Technology's standard field methods for drilling and sampling soil borings. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate ground water depth and quality and to submit samples for chemical analysis.

Soil Classification/Logging

All soil samples are classified according to the Unified Soil Classification System by a trained geologist or engineer working under the supervision of a California Registered Geologist (RG) or a Certified Engineering Geologist (CEG). The following soil properties are noted for each soil sample:

- X Principal and secondary grain size category (i.e. sand, silt, clay or gravel)
- X Approximate percentage of each grain size category,
- X Color,
- X Approximate water or product saturation percentage,
- X Observed odor and/or discoloration,
- X Other significant observations (i.e. cementation, presence of marker horizons, mineralogy),
and
- X Estimated permeability.

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or hydraulic push technologies. At least one and one half ft of the soil column is collected for every five ft of drilled depth. 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 beyond the bottom of the borehole. The vertical location of each soil sample is determined by measuring the distance from the middle of the soil sample tube to the end of the drive rod used to advance the split barrel sampler. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

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 Storage, Handling and Transport

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.

CAMBRIA

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 photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the field observations, odors, stratigraphy and ground water 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 ground water 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.

Duplicates and Blanks

Blind duplicate water samples are collected usually collected only for monitoring well sampling programs, at a rate of one blind sample for every 10 wells sampled. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory QA/QC blanks contain the suspected field contaminants. An equipment blank may also 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.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite on top of and covered by plastic sheeting. At least four individual soil samples are collected from the stockpiles for later compositing at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Ground water removed during sampling and/or rinsate generated during decontamination procedures are 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. Disposal of the water is based on the analytic results for the well samples. 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 D

Analytical Laboratory Reports

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #557-1000-002; Gunther Kitsch	Date Sampled: 12/05/03
		Date Received: 12/09/03
	Client Contact: Matt Meyers	Date Reported: 12/11/03
	Client P.O.:	Date Completed: 12/11/03

WorkOrder: 0312180

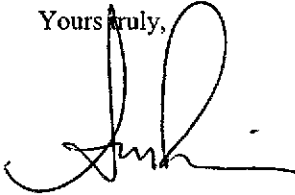
December 11, 2003

Dear Matt:

Enclosed are:

- 1). the results of 2 analyzed samples from your #557-1000-002; Gunther Kitsch project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager



McC Campbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
 http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #557-1000-002; Gunther Kitsch	Date Sampled: 12/05/03
	Client Contact: Matt Meyers	Date Received: 12/09/03
	Client P.O.:	Date Extracted: 12/09/03
		Date Analyzed: 12/10/03

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0312180

Lab ID	0312180-004A	0312180-010A	Reporting Limit for DF =1	
Client ID	B-2@10.5	B-3@10.5		
Matrix	S	S		
DF	1	1		

Compound	Concentration				µg/Kg	µg/L
	Diisopropyl ether (DIPE)	ND	ND			5.0
tert-Amyl methyl ether (TAME)	ND	ND			5.0	NA
t-Butyl alcohol (TBA)	ND	ND			25	NA
1,2-Dibromoethane (EDB)	9.4	ND			5.0	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND			5.0	NA
Ethyl tert-butyl ether (ETBE)	ND	ND			5.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND			5.0	NA

Surrogate Recoveries (%)

%SS:	88.7	91.1		
------	------	------	--	--

Comments

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.
 ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.
 # surrogate diluted out of range or surrogate coelutes with another peak.
 h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.



QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S

WorkOrder: 0312180

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 9597			Spiked Sample ID: 0312156-003A			
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex) [£]	ND	0.60	102	105	3.43	108	107	0.925	70	130
MTBE	ND	0.10	98.3	102	4.13	98.1	97.8	0.280	70	130
Benzene	ND	0.10	101	100	0.775	103	99	4.37	70	130
Toluene	ND	0.10	88.7	89.4	0.804	90.3	86.5	4.23	70	130
Ethylbenzene	ND	0.10	97	94.7	2.31	107	104	2.85	70	130
Xylenes	ND	0.30	88	88.3	0.378	100	95.7	4.43	70	130
%SS:	96.8	100	92.2	87.5	5.23	102	100	1.98	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



McC Campbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
 http://www.mcccampbell.com E-mail: main@mcccampbell.com

QC SUMMARY REPORT FOR SW8015C

Matrix: S

WorkOrder: 0312180

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 9614		Spiked Sample ID: 0312179-004B			
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	ND	150	101	102	1.11	103	105	1.36	70	130
%SS:	106	100	105	105	0	106	108	1.39	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

$\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8260B

Matrix: S

WorkOrder: 0312180

EPA Method: SW8260B		Extraction: SW5030B		BatchID: 9580			Spiked Sample ID: 0312123-002A			
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
tert-Amyl methyl ether (TAME)	ND<100	50	103	102	1.06	102	99.5	2.71	70	130
t-Butyl alcohol (TBA)	ND<500	250	77.9	75.9	2.59	77.4	77.4	0	70	130
1,2-Dibromoethane (EDB)	ND<100	50	115	115	0	117	114	2.27	70	130
1,2-Dichloroethane (1,2-DCA)	ND<100	50	115	111	3.84	114	113	1.28	70	130
Diisopropyl ether (DIPE)	ND<100	50	107	104	3.05	105	106	0.548	70	130
Ethyl tert-butyl ether (ETBE)	ND<100	50	98.8	96.6	2.28	98.4	99.2	0.812	70	130
Methyl-t-butyl ether (MTBE)	2769.00	50	NR	NR	NR	107	107	0	70	130
%SS1:	110	100	99.5	100	0.709	101	101	0	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount Spiked)$; $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



QC SUMMARY REPORT FOR 6010C

Matrix: S

WorkOrder: 0312180

EPA Method: 6010C		Extraction: SW3050B			BatchID: 9595		Spiked Sample ID: N/A			
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Lead	N/A	50	N/A	N/A	N/A	109	109	0	80	120
%SS:	N/A	100	N/A	N/A	N/A	102	103	0.390	80	120
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount\ Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

McC Campbell Analytical Inc.

CHAIN-OF-CUSTODY RECORD



110 Second Avenue South, #D7
 Pacheco, CA 94553-5560
 (925) 798-1620

WorkOrder: 0312180

Report to:		Bill to:	Requested TAT:
Matt Meyers"	TEL: (510) 420-0700	Accounts Payable	5 days
Cambria Env. Technology	FAX: (510) 420-3394	Cambria Env. Technology	
5900 Hollis St, Suite A	ProjectNo: #557-1000-002; Gunther Kitsch	5900 Hollis St, Ste. A	<i>Date Received:</i> 12/9/03
Emeryville, CA 94608	PO:	Emeryville, CA 94608	<i>Date Printed:</i> 12/9/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
0312180-004	B-2@10.5	Soil	12/5/03 7:55:00 AM	<input type="checkbox"/>	A	A	A													
0312180-010	B-3@10.5	Soil	12/5/03 8:30:00 AM	<input type="checkbox"/>	A	A	A													

Test Legend:

1	5-OXYS+PBSCV_S	2	G-MBTEX_S	3	PB_S	4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: **Melissa Valles**

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



McC Campbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #557-1000-002; Gunther Kitsch	Date Sampled: 12/05/03
	Client Contact: Matt Meyers	Date Received: 12/09/03
	Client P.O.:	Date Reported: 12/30/03
		Date Completed: 12/30/03

WorkOrder: 0312180

December 30, 2003

Dear Matt:

Enclosed are:

- 1). the results of 4 analyzed samples from your #557-1000-002; Gunther Kitsch project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager



McC Campbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
 http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #557-1000-002; Gunther Kitsch	Date Sampled: 12/05/03
	Client Contact: Matt Meyers	Date Received: 12/09/03
	Client P.O.:	Date Extracted: 12/19/03
		Date Analyzed: 12/20/03

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0312180

Lab ID	0312180-003A	0312180-005A	Reporting Limit for DF =1	
Client ID	B-2@8.5	B-2@12.5		
Matrix	S	S		
DF	1	1		

Compound	Concentration			µg/Kg	ug/L
Diisopropyl ether (DIPE)	ND	ND		5.0	NA
tert-Amyl methyl ether (TAME)	ND	ND		5.0	NA
t-Butyl alcohol (TBA)	ND	ND		25	NA
1,2-Dibromoethane (EDB)	ND	ND		5.0	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND		5.0	NA
Ethyl tert-butyl ether (ETBE)	ND	ND		5.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND		5.0	NA

Surrogate Recoveries (%)

%SS:	95.7	95.8			
------	------	------	--	--	--

Comments

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.



QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: S

WorkOrder: 0312180

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 9792			Spiked Sample ID: 0312404-002A			
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex) [£]	ND	0.60	94.6	97.4	2.92	110	104	5.56	70	130
MTBE	ND	0.10	80.8	82.1	1.59	88.1	89.9	2.04	70	130
Benzene	ND	0.10	100	103	3.05	102	103	1.48	70	130
Toluene	ND	0.10	101	104	3.13	88.8	91	2.44	70	130
Ethylbenzene	ND	0.10	102	105	2.95	106	106	0	70	130
Xylenes	ND	0.30	103	110	6.25	96	96	0	70	130
%SS:	92.8	100	110	115	4.44	103	106	2.87	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = $100 * (MS - Sample) / (Amount Spiked)$; RPD = $100 * (MS - MSD) / ((MS + MSD) / 2)$.

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8015C

Matrix: S

WorkOrder: 0312180

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 9786			Spiked Sample ID: 0312394-004A		
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(d)	ND	150	103	104	1.21	99.8	97.5	2.31	70	130
%SS:	103	100	109	109	0	109	106	2.37	70	130
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE										

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

$\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8260B

Matrix: S

WorkOrder: 0312180

EPA Method: SW8260B	Extraction: SW5030B		BatchID: 9780			Spiked Sample ID: 0312390-004A				
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/Kg	µg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
tert-Amyl methyl ether (TAME)	ND	50	88.5	87.8	0.749	90.7	92.5	1.95	70	130
t-Butyl alcohol (TBA)	ND	250	106	99.5	6.10	109	113	3.60	70	130
1,2-Dibromoethane (EDB)	ND	50	104	101	2.16	106	109	2.66	70	130
1,2-Dichloroethane (1,2-DCA)	ND	50	121	112	8.04	115	117	1.75	70	130
Diisopropyl ether (DIPE)	ND	50	121	120	0.827	120	121	0.878	70	130
Ethyl tert-butyl ether (ETBE)	ND	50	104	103	0.727	105	105	0	70	130
Methyl-t-butyl ether (MTBE)	ND	50	114	112	1.64	113	114	0.411	70	130
%SS1:	95.4	100	95.1	93.5	1.71	96.4	95	1.55	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
 NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

$\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

McC Campbell Analytical Inc.



110 Second Avenue South, #D7
 Pacheco, CA 94553-5560
 (925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0312180

Report to:		Bill to:	Requested TAT:
Mary C. Holland-Ford	TEL: (510) 420-0700	Accounts Payable	5 days
Cambria Env. Technology	FAX: (510) 420-3394	Cambria Env. Technology	<i>Date Received:</i> 12/9/03
5900 Hollis St, Suite A	ProjectNo: #557-1000-002; Gunther Kitsch	5900 Hollis St, Ste. A	<i>Date Add-On:</i> 12/19/03
Emeryville, CA 94608	PO:	Emeryville, CA 94608	<i>Date Printed:</i> 12/30/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0312180-003	B-2@8.5	Soil	12/5/03 7:55:00 AM	<input type="checkbox"/>	A	A	A												
0312180-005	B-2@12.5	Soil	12/5/03 8:05:00 AM	<input type="checkbox"/>	A	A	A												
0312180-009	B-3@8.5	Soil	12/5/03 8:30:00 AM	<input type="checkbox"/>		A	A												
0312180-011	B-3@12	Soil	12/5/03 8:30:00 AM	<input type="checkbox"/>		A	A												

Test Legend:

1	5-OXYS+PBSCV_S	2	G-MBTEX_S	3	TPH(DMO)_S	4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments: Some samples off hold 12/19 per fax from m.m

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

0216

0312180

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560

Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME:

RUSH 24 HOUR 48 HOUR 5 DAY

EDF Required? Yes No

Report To: Matt Meyers Bill To: Cambria
Company: Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, Ca 94608 E-mail: mmeyers@cambria-env.com
Tele: (510) 420-3314 Fax: (510) 420-9170
Project #: 557-1000-002 Project Name: Gunther Kitsch
Project Location: 2834 East 7th Street, Oakland
Sampler Signature: _____

Analysis Request

Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				BTEX & TPH as Gas (602/8020 + 3015) / MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239 2/6010)	RCI	TPHg/d/mo multi range.	Oxygenates and Lead Scavengers by 8260	Total Lead	Comments	
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other																				
B-205.5		12/5/03	7:45	1	TRIS	X					X																						HOLD	
B-207			7:50																														HOLD	
B-208.5			7:55																														HOLD off hold STAT	
B-2010.5			7:55																															
B-2012.5			8:05																															HOLD off hold STAT
B-2014			8:05																															HOLD
B-2016			8:05																															HOLD
B-305.5			8:25																															HOLD
B-308.5			8:30																															HOLD off hold STAT
B-3016.5			8:30																															HOLD off hold STAT
B-3012			8:30																															HOLD off hold STAT
B-3014			8:40																															HOLD
B-3016		✓	8:40	✓	✓	✓					✓																						HOLD	

Relinquished By: _____ Date: 12/5/03 Time: 7pm Received By: "SECURED LOCATION"
Relinquished By: _____ Date: 12/9 Time: 11:05 Received By: ULTRA EX P. E. RICARDO
Relinquished By: _____ Date: 12/9 Time: 11:40 Received By: Muli Valleri

Remarks: Lowest possible detection limits.
Silica gel cleanup for TPHd/mo.

ICE/✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ✓
PRESERVATION VOAS O&G METALS OTHER