July 29, 2004

Mr. Barney Chan
Alameda County Health Care Services (ACHCSA)
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re:

Subsurface Investigation Report

Former Chevron Service Station 9-2960

2416 Grove Way Castro Valley, CA



Dear Mr. Chan:

On behalf of Chevron Environmental Management Company (ChevronTexaco), Cambria Environmental Technology, Inc. (Cambria), is submitting this Subsurface Investigation Report, which summarizes recent soil boring and soil vapor sampling activities at the above referenced site. As stated in our Investigation Workplan Addendum dated March 24, 2004, the four soil vapor samples were collected to assess indoor air human health risks for residential standards and the grab groundwater sample was collected for plume delineation purposes. The workplan was approved by the ACHCSA in a May 20, 2004 letter, which is presented as Attachment A. Presented below are a site description and our investigation results.

SITE DESCRIPTION

The site is a former Chevron service station located at the northeast corner of the Grove Way and Redwood Road intersection in Castro Valley, California (Figure 1). Topography in the general site vicinity is flat and gently slopes to the south. The site is currently occupied by a Trader Joe's grocery store and an associated parking lot (Figure 2). Two monitoring wells, C-7 and C-8, remain on and near the site, respectively. Monitoring well C-7 is located west of the site across Redwood Road; this well was removed from the monitoring and sampling program in 2002 because no petroleum hydrocarbon constituents had been detected since sampling began in 1990. Monitoring well C-8 is located within the landscaping on the southwest margin of the site.

Cambria Environmental Technology, Inc.

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

PREVIOUS INVESTIGATIONS

October 1986, Monitoring Well Installation: In October 1986, EMCON Associates installed groundwater monitoring wells C-1 through C-4. The highest hydrocarbon concentrations in groundwater detected were from well C-1 with 120,000 parts per billion (ppb) total petroleum hydrocarbons as gasoline (TPHg) and 25,000 ppb benzene, respectively.

August 1990, Monitoring Well Installation: GeoStrategies, Inc. installed offsite wells C-5 through C-7 to delineate the lateral extent of hydrocarbons in groundwater.



November 1993, Groundwater and Soil Vapor Extraction System: Weiss Associates (WA) installed well EW-1, which was used as a groundwater and soil vapor extraction system. The system operated from November 1993 through 1996 and removed approximately 8,900 pounds of petroleum hydrocarbons. In 1997, the extraction system was shut down and removed with approval from ACHCSA.

February 1997, Subsurface Investigation: In February 1997, Gettler-Ryan (G-R) advanced borings B-1 through B-6 to investigate soil near the former product piping and dispenser island areas. Borings B-1 though B-4 were advanced to a total depth of 16.5 feet below grade (fbg); borings B-5 and B-6 were advanced to 19.5 fbg. TPHg and benzene concentrations were detected in the capillary fringe zone, from 15.5 to 18.5 fbg, at a maximum of 2,300 and 13 milligrams per kilogram (mg/kg), respectively.

April 1997, Well Abandonment and Destruction: In April 1997, G-R abandoned off-site well C-5 to allow construction activities. Wells C-1, C-2, C-3 and EW-1 were abandoned in September 1998, prior to the Redwood Road widening project. Wells C-4 and C-6 were paved over during the road widening project. Numerous attempts to recover the wells were made by G-R but the wells were not located.

Groundwater Monitoring: Gettler-Ryan (GR) began groundwater monitoring in March 1987. In October 1989, C-1 contained 0.91 feet of separate-phase hydrocarbons (SPH). GR began interim recovery of SPH from C-1 in January 1990. Bailing and pumping continued through January 1995. Semi-annual monitoring and sampling was initiated for all wells in January 1997, during the first and third quarters.

INVESTIGATION RESULTS

The objective of this investigation was to assess indoor air human health risks for residential standards and to further define the methyl tertiary butyl ether (MTBE) plume. Our investigation results are presented below. The boring log for SB1 is presented as Attachment B. The laboratory analytical reports for soil, groundwater and soil vapor samples are presented as Attachment C. A copy of the Alameda County Public Works Agency (ACPWA) well permit is presented as Attachment D.

Soil Boring and Soil Vapor Point Installation & Sampling

9

Personnel Present: Cambria staff scientist Melissa Terry and staff geologist Aja Yee

conducted fieldwork under the direction of Registered Geologist N.

Scott MacLeod.

Permits: Work was conducted under permit numbers W04-0403 and W04-0404,

issued by the Alameda County Public Works Agency, Water

Resources Section.

Drilling Company: Soil boring SB1 was drilled by Vironex Environmental Field Services

of San Leandro, California; C57 No. 720904.

Drilling Date: April 13, 2004 (soil boring), April 30, 2004 (soil vapor points

installation), May 18, 2004 (soil vapor sampling).

Drilling Method: Two-inch diameter GeoProbe® (soil boring) and a four-inch diameter

hand auger (soil vapor points).

Number of Borings: Five. Four shallow (<5 fbg) borings/temporary soil vapor points (SV1

through SV4) were installed within the landscaping along the southern margin of the site. One soil boring (SB1) was advanced to 22 fbg near

the west margin of the site, within the paved parking area.

Sampling Techniques: SB1 was cleared by hand augering to eight fbg prior to drilling with the

GeoProbe®. SB1 was advanced using a 2-inch diameter dual-tube direct push sampler. Undisturbed soil samples were collected at five foot intervals. The soil samples were properly sealed, logged on the chain-of-custody form, preserved on ice and released to the laboratory

for analysis.



Temporary soil vapor points SV1 through SV4 were installed two weeks prior to sampling. Soil vapor samples were collected using 30-minute flow meters and 6-liter SummaTM canisters connected to the sampling tubing at each vapor point. A battery powered air pump with attached vacuum-chamber and TedlarTM bag was used to purge an appropriate volume from the sampling point tubing. After purging, the valve between the purge pump and SummaTM canister was closed and the SummaTM canister valve was opened. The vacuum of the SummaTM canister was used to draw the soil vapor through the flow controller until a negative pressure of approximately 5-inches of Hg was observed on the vacuum gauge. After sampling, the SummaTM canisters were packaged and sent to the Air Toxics laboratory under chain-of-custody for analysis.

Laboratory Analyses:

Based on field screening, selected soil and soil vapor samples were analyzed for:

- TPHg by EPA Method 8015M (soil and groundwater samples only),
- Benzene, toluene, ethylbenzene and toluene (BTEX), MTBE, and fuel oxygenates (DIPE, ETBE, TAME and TBA) by EPA Method 8260B (soil and groundwater samples only) and
- BTEX, C0₂ and O₂ by EPA Method T0-14 (soil vapor samples only).

Results of the analyses are presented in Tables 1 and 2.

Hydrocarbon Distribution in Soil: Analytic results of soil samples collected from SB-1 indicate no significant concentrations of hydrocarbons are present in soil in the vicinity of SB-1. The only hydrocarbon constituent detected in SB-1 soil samples was TPHg, at a concentration of 3.6 mg/kg. No BTEX or MTBE was detected in soils collected from SB-1.

Hydrocarbon Distribution in Groundwater: Analytic results of the grab groundwater sample collected from SB-1 confirm that no significant concentrations of hydrocarbons are present in the vicinity of SB-1. TPHg was detected at a concentration of 180 micrograms per liter ($\mu g/l$) and benzene at a concentration of 0.5 $\mu g/l$. Concentrations of MTBE were <0.5 $\mu g/l$, indicating that



the MTBE plume has likely not migrated offsite.

Hydrocarbon Vapors Distribution in Soil: Analytical results of soil vapor sampling indicate only very slight concentrations of hydrocarbon constituents exist in onsite soils in the vicinity of the vapor points. Vapor samples were analyzed for BTEX and the results were compared to the relatively conservative residential indoor air environmental screening levels (ESL) for these constituents. None of the vapor samples contained concentrations of toluene, ethylbenzene or xylene above residential indoor air ESLs. Two of the four vapor samples did not contain concentrations of benzene above the residential indoor air ESL. One of the vapor samples (SVI) contained high levels of a non-petroleum hydrocarbon constituent; this resulted in the laboratory having to raise the reporting limit. A discussion of the data with Air Toxics Limited indicated the presence of non-target species identified as 2-proponol and is not considered consistent with a petroleum release. As a result, it cannot be verified if the vapor sample from SV1 is below or above the ESL for benzene. Vapor sample SV2 only slightly exceeded the ESL for benzene for residential indoor air.



RECOMMENDATIONS

With the exception of one vapor sample slightly exceeding the ESL for benzene for residential indoor air, all other soil, groundwater and soil vapor samples collected during this investigation were below the conservative standards for ESLs for residential indoor air. The site is currently used for commercial activities (Trader Joe's grocery store) and will likely remain commercial property for the foreseeable future. The surrounding properties also are used for commercial activities. Based on the results of this investigation, it is Cambria's opinion that no further environmental investigation is necessary at this site. Cambria recommends that quarterly groundwater monitoring of this site be discontinued and the two remaining groundwater monitoring wells associated with this site be destroyed.

CLOSING

Please contact Bruce Eppler or Sara Giorgi at (916) 630-1855 with any questions or comments regarding the site or this workplan.

Sincerely,

Cambria Environmental Technology, Inc.



Melissa Terry Staff Scientist

N. Scott MacLeod Principal Geologist, R.G.

Figures:

1 - Vicinity Map

2 - Site Map

Tables:

1 – Soil Analytical Data

2 - Grab Groundwater Analytical Data

3 - Soil Vapor Analytical Data

4 - ESL Analyses

Attachment:

A - ACHCSA Letter dated May 20, 2004

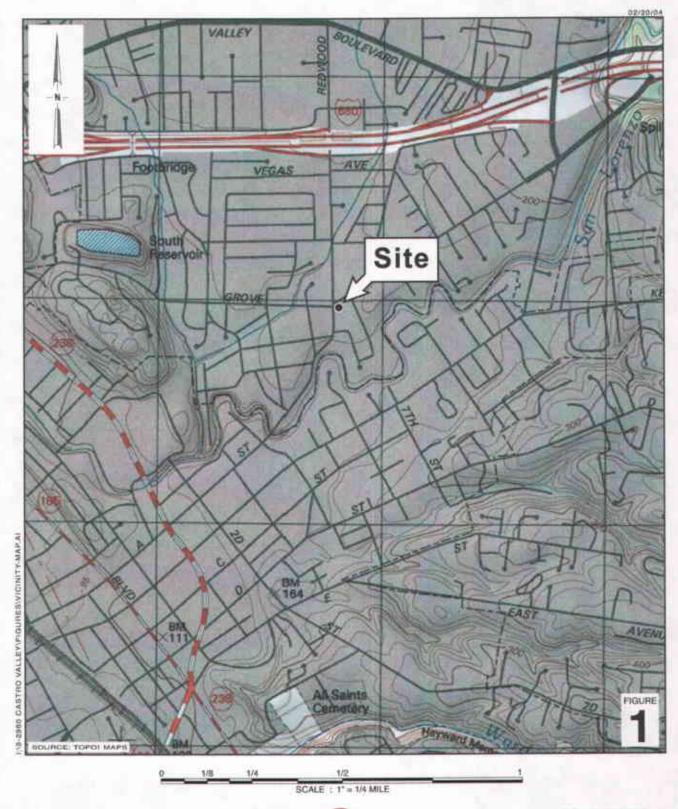
B - Boring Log for SB-10

C - Laboratory Analytic Results for Soil, Groundwater and Soil Vapor Samples

No 574

D - ACPWA Well Permits

cc: Ms. Karen Streich, Chevron Environmental Management Company, P.O. Box 6012, L4052 San Ramon, CA 94583-0804



Former Chevron Station 9-2960

2416 Grove Way Castro Valley, California



CAMBRIA

Vicinity Map

Former Chevron Service Station 9-2960 2416 Grove Way
Castro Valley, California

FIGURE

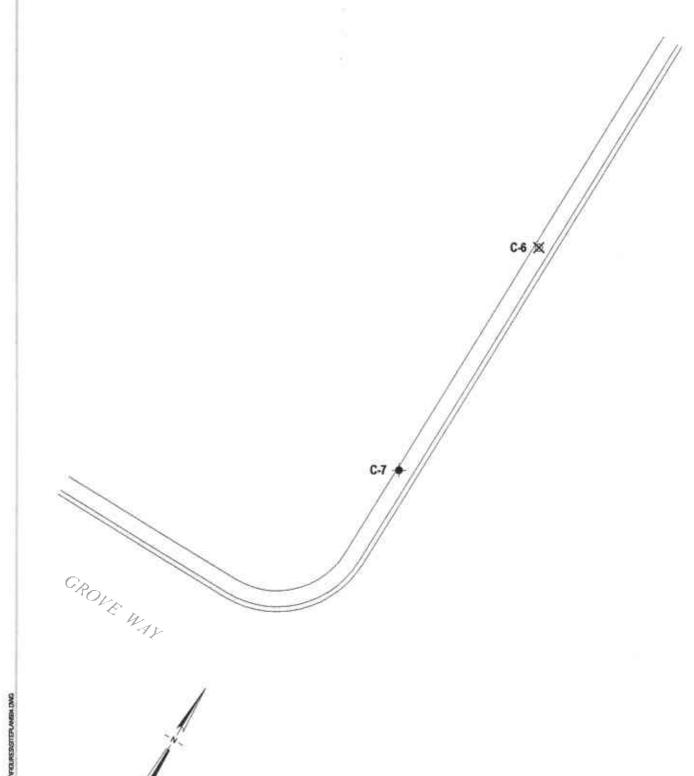
EXPLANATION 8V-1

Vapor boring location Monitoring well location Soil boring location C-2 X Abandoned well location

C-5 💥 Soil Boring Location **B-5 ●**

C-4 🕱

GROVE WAY



Scale (ft)

Table 1. Analytic Results for Soil Samples - Former Chevron Station 9-2960, 2416 Grove Way, Castro Valley, CA

Sample	Sample	Sample	ТРНд	В	T	Е	X	MTBE	
ID	Depth (ft.)	Date	Co	ncentrations repor	rted in milligrams	per kilogram mg/l	kg = parts per mill	ion	
B-10	10	4/13/2004	<1.0	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.0005	
	18	4/13/2004	3.6	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.0005	
	22	4/13/2004	<1.0	< 0.0005	< 0.001	< 0.001	< 0.001	< 0.0005	

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B Methyl tertiary butyl ether (MTBE) by EPA Method 8260B <x = Not detected above method detection limit

Table 2. Analytic Results for Grab Groundwater Sample - Former Chevron Station 9-2960, 2416 Grove Way, Castro Valley, CA

Sample	Sample	TPHg	В	T	Е	X	MTBE	
ID	Date		Concentrations	reported in microgra	ms per liter - μg/l =	parts per billion		
B-10	4/13/2004	180	0.5	<0.5	0.9	< 0.5	<0.5	

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015M

Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8260B

Methyl tertiary butyl ether (MTBE) by EPA Method 8260B

 $\leq x = Not$ detected above method detection limit

Table 3. Analytic Results for Soil Vapor Samples - Former Chevron Station 9-2960, 2416 Grove Way, Castro Valley, CA

Sample	Sample	В	T	E	X	 ,—
ID	Date	Concentrati	ons reported in micr	$eter = \mu g/m3$		
SV-1	5/18/2004	<1100	<1200	<1400	<1400	
SV-2	5/18/2004	100	16	5.1	<3.6	
SV-3	5/18/2004	9.7	3.6	<3.6	6.3	
SV-4	5/18/2004	<2.3	4.9	<3.2	9	

Abbreviations/Notes:

Benzene, toluene, ethylbenzene and xylenes (BTEX) by Modified EPA Method TO-14A

 $\leq x = Not$ detected above method detection limit

Table 4. ESL Analyses, Trader Joe's Area Wells, Residential Exposure

Former Chevron Station #9-2960, 2416 Grove Way, Castro Valley, CA

			-	• .							
Sample ID	Depth (ft.)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE				
Shallow Soil ESLs			(conc	entrations reporte	ed in mg/kg)						
B-10	10	<1.0	<0.0005	< 0.001	<0.001	< 0.001	<0.0005				
	18	3.6	< 0.0005	< 0.001	< 0.001	<0.001	< 0.0005				
	22	<1.0	< 0.0005	< 0.001	<0.001	<0.001	< 0.0005				
Indoor Impacts ESL		(No ESL)	0.18	180	4.7	45	2.0				
Groundwater ESLs	3	(concentrations reported in μg/L)									
B-10W	22	180	0.5	<0.5	0.9	<0.5	<0.5				
Indoor Impacts ESL		(No ESL)	530	500,000	14,000	150,000	24,000				
Soil Vapor ESLs			(concent	trations reported	in μg/m³)						
SVI	5	NA	<1100	<1200	<1400	<2800	NA				
SV2	3.6	NA	100	16.0	5.1	<7.2	NA				
SV3	3.5	NA	10.0	3.6	<3.6	6.3	NA				
SV4	4	NA	<2.3	4.9	<3.2	9.0	NA				
Indoor Impacts ESL	1.44	(No ESL)	84	83,000	2,200	21,000					

Abbreviations/Notes:

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl-tertiary butyl ether

mg/kg = milligrams per kilogram

 μ g/L = micrograms per liter

 $\mu g/m^3 = \text{micrograms per cubic meter}$

<x = not detected above laboratory reporting limits</p>

NA = Not analyzed.

ESL = Environmental screening level, from: Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater, dated July 2003, by the Regional Water Quality Control Board-San Francisco Bay Region.

ATTACHMENT A ACHCSA Letter dated May 20, 2004

RO0000275

May 20, 2004

Ms. Karen Streich Chevron P.O. Box 6012, L4052 San Ramon, CA 94583-0804

RE: Workplan Approval for Former Chevron 9-2960 at 2416 Grove Way, Castro Valley, CA

Dear Ms. Streich:

I have completed review of Cambria's February 25, 2004 Investigation Workplan and their March 24, 2004 Investigation Workplan Addendum prepared for the above referenced site. The proposal to collect soil vapor samples to assess indoor air human health risks and to collect soil and groundwater samples to better delineate the contaminant plume at the site is acceptable.

Field work should commence within 90 days of the date of this letter, or by June 28, 2004. Please provide at least 72 hours advance notice of field activities. If you have any questions, I can be reached at (510) 567-6762 or by email at eva.chu@acgov.org.

eva chu Hazardous Materials Specialist

c: Donna Drogos email: Sara Giorgi, Cambria ATTACHMENT B
SB-10 Boring Log



Cambria Environmental Technology, Inc. 5900 Hollis Street, Suite A Emeryville, CA 94608 Telephone: (510) 420-0700 Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME Chevron Products Company BORING/WELL NAME B10 **JOB/SITE NAME** Former Chevron # 9-2960, currently Trader Joe's DRILLING STARTED 13-Apr-04 LOCATION 2416 Grove Way, Castro Valley, CA DRILLING COMPLETED 13-Apr-04 WELL DEVELOPMENT DATE (YIELD) NA PROJECT NUMBER 61D-1964 Not Surveyed **DRILLER** Vironex GROUND SURFACE ELEVATION DRILLING METHOD Hydraulic push TOP OF CASING ELEVATION Not Surveyed BORING DIAMETER SCREENED INTERVAL LOGGED BY M. Terry DEPTH TO WATER (First Encountered) 16.0 fbg (13-Apr-04) B. Foss, RG # 7445 REVIEWED BY___ **DEPTH TO WATER (Static)** NA REMARKS

PID (ppm)	BLOW	SAMPLE ID	EXTENT	DEРТН (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WE	LL DIAGRAM
dd) (IId	COUNT	B10 @ 5 B10 @ 10 B10 @ 18 B10 @ 22		Ltd30	ML ML CL CL SC	GRAPH	Sandy SILT/FILL: Grey brown; dry; 60% sand, 20% silt, 20% gravel (peices of bricks and asphalt); no plasticity; high estimated permeability. Sandy SILT: Light brown; dry; 50% silt, 30% sand, 20% clay; low plasticity; moderate estimated permeability. Sandy SILT: Brown; dry; 40% silt, 40% sand, 20% clay; low plasticity; moderate estimated permeability. Silty CLAY: Orange brown; dry; 30% clay; 30% silt, 20% sand, 20% gravel; low plasticity; moderate estimated permeability. Silty CLAY: Orange brown; dry; 40% clay; 30% silt, 20% sand, 10% gravel; low plasticity; moderate estimated permeability.	3.0 5.0 6.5 8.0 21.0 22.5	WE	■ Portland Type I/II Bottom of Boring @ 22.5 ft

ATTACHMENT C

Laboratory Analytic Results for Soil, Groundwater and Soil Vapor Sampling

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

ANALYTICAL RESULTS

Prepared for:

ChevronTexaco C/O Cambria 4111 Citrus Avenue Suite 9 Rocklin CA 95677 916-630-1855

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 892203. Samples arrived at the laboratory on Thursday, April 15, 2004. The PO# for this group is 99011184 and the release number is MTI.

Client Description			Lancaster Labs Number
B10-S-10-040413	NA	Soil	4254642
B10-S-18-040413	NA	Soil	4254644
B10-S-22-040413	NA	Soil	4254645
B10-W-040413	Grab	Water	4254646

1 COPY TO

Cambria Rocklin

Attn: Ms. Ann Navarro



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative Alison M O'Connor at (717) 656-2300.

Respectfully Submitted,

Victoria M. Martell

Chemist



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Page 1 of 1

Lancaster Laboratories Sample No. SW 4254642

B10-S-10-040413 NA Soil Facility# 92960 MTI# 61D-1964 CETR 2416 Grove Way-Castro Val T0600100318 B-10

Collected: 04/13/2004 08:40 by MT

Submitted: 04/15/2004 08:55

Reported: 05/14/2004 at 12:06

Discard: 06/14/2004

Account Number: 10880

ChevronTexaco C/O Cambria

4111 Citrus Avenue

Suite 9

Rocklin CA 95677

B1010

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01725	TPH-GRO - Soils	n.a.	N.D.	1.0	mg/kg	25
	The analysis for volatiles was in methanol. The reporting lim The reported concentration of T gasoline constituents eluting p start time.	its were adjus PH-GRO does no	ted appropriately t include MTBE or	other		
07361	BTEX+5 Oxygenates+EDC+EDB					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	1.01
02017	di-Isopropyl ether	108-20-3	N.D.	0.001	mg/kg	1.01
02018	Ethyl t-butyl ether	637-92-3	N.D.	0.001	mg/kg	1.01
02019	t-Amyl methyl ether	994-05-8	N.D.	0.001	mg/kg	1.01
02020	t-Butyl alcohol	75-65-0	N.D.	0.020	mg/kg	1.01
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	1.01
05461	1,2-Dichloroethane	107-06-2	N.D.	0.001	mg/kg	1.01
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	1.01
05471	1,2-Dibromoethane	106~93-4	N.D.	0.001	mg/kg	1.01
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	1.01
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	1.01

State of California Lab Certification No. 2116

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Laboratorv	I'NYOI	n 1 ~ 1 🛆
Dabotacoty		TTCTC

CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01725	TPH-GRO - Soils	N. CA LUFT Gasoline method	1	04/15/2004 22:30	Steven A Skiles	25
07361	BTEX+5 Oxygenates+EDC+EDB	SW-846 8260B	1	04/22/2004 07:25	Anastasia Papadoplos	1.01
00374	GC/MS VOA Soil Prep	SW-846 5030A	1	04/22/2004 04:56	Anastasia Papadoplos	n.a.
01150	GC VOA Soil Prep	SW-846 5035	1	04/15/2004 15:22	Eric L Vera	n.a.



Account Number: 10880

ChevronTexaco C/O Cambria

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Page 1 of 1

Lancaster Laboratories Sample No. SW 4254644

B10-S-18-040413 Facility# 92960 MTI# 61D-1964 CETR 2416 Grove Way-Castro Val T0600100318 B-10

Collected: 04/13/2004 08:55 by MT

Submitted: 04/15/2004 08:55

Discard: 06/14/2004

Reported: 05/14/2004 at 12:06

4111 Citrus Avenue Suite 9 Rocklin CA 95677

B1018

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01725	TPH-GRO - Soils	n.a.	3.6	1.0	mg/kg	25
	The analysis for volatiles was in methanol. The reporting lim The reported concentration of T gasoline constituents eluting p start time.	its were adjus PH-GRO does no	ted appropriately t include MTBE of	y. r other		
07361	BTEX+5 Oxygenates+EDC+EDB					
02016	Methyl Tertiary Butyl Ether	1634-04-4	И.D.	0.0005	mg/kg	1.01
02017	di-Isopropyl ether	108-20-3	N.D.	0.001	mg/kg	1.01
02018	Ethyl t-butyl ether	637-92-3	N.D.	0.001	mg/kg	1.01
02019	t-Amyl methyl ether	994-05-8	N.D.	0.001	mg/kg	1.01
02020	t-Butyl alcohol	75-65-0	N.D.	0.020	mg/kg	1.01
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	1.01
05461	1,2-Dichloroethane	107-06-2	N.D.	0.001	mg/kg	1.01
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	1.01
05471	1,2-Dibromoethane	106-93-4	N.D.	0.001	mg/kg	1.01
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	1.01
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	1.01

State of California Lab Certification No. 2116

Laboratory Chronicle CAT Analysis Dilut									
CAT				Analysis					
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor			
01725	TPH-GRO - Soils	N. CA LUFT Gasoline method	1	04/15/2004 23:06	Steven A Skiles	25			
07361	BTEX+5 Oxygenates+EDC+EDB	SW-846 8260B	1	04/22/2004 08:58	Anastasia Papadoplos	1.01			
00374	GC/MS VOA Soil Prep	SW-846 5030A	1	04/22/2004 05:01	Anastasia Papadoplos	n.a.			
01150	GC VOA Soil Prep	SW~846 5035	1	04/15/2004 15:25	Eric L Vera	n.a.			



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Page 1 of 1

Lancaster Laboratories Sample No. SW 4254645

B10-S-22-040413 Soil Facility# 92960 MTI# 61D-1964 CETR 2416 Grove Way-Castro Val T0600100318 B-10

Collected: 04/13/2004 09:10

Submitted: 04/15/2004 08:55 Reported: 05/14/2004 at 12:06

Discard: 06/14/2004

Account Number: 10880

ChevronTexaco C/O Cambria

4111 Citrus Avenue

Suite 9

Rocklin CA 95677

B1022

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01725	TPH-GRO - Soils	n.a.	N.D.	1.0	mg/kg	25
	The analysis for volatiles was in methanol. The reporting lit The reported concentration of gasoline constituents eluting patent time.	mits were adjus FPH-GRO does no	ted appropriately t include MTBE or	y. r other		
07361	BTEX+5 Oxygenates+EDC+EDB					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	mg/kg	1
02017	di-Isopropyl ether	108-20-3	N.D.	0.001	mg/kg	1
02018	Ethyl t-butyl ether	637-92-3	N.D.	0.001	mg/kg	1
02019	t-Amyl methyl ether	994-05-8	N.D.	0.001	mg/kg	1
02020	t-Butyl alcohol	75-65-0	N.D.	0.020	mg/kg	1
05460	Benzene	71-43-2	N.D.	0.0005	mg/kg	1
05461	1,2-Dichloroethane	107-06-2	N.D.	0.001	mg/kg	1
05466	Toluene	108-88-3	N.D.	0.001	mg/kg	1
05471	1,2-Dibromoethane	106-93-4	N.D.	0.001	mg/kg	1
05474	Ethylbenzene	100-41-4	N.D.	0.001	mg/kg	1
06301	Xylene (Total)	1330-20-7	N.D.	0.001	mg/kg	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT		•		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01725	TPH-GRO - Soils	N. CA LUFT Gasoline method	1	04/15/2004 23:42	Steven A Skiles	25
07361	BTEX+5 Oxygenates+EDC+EDB	SW-846 8260B	1	04/22/2004 09:29	Anastasia Papadoplos	1
00374	GC/MS VOA Soil Prep	SW-846 5030A	1	04/22/2004 05:03	Anastasia Papadoplos	n.a.
01150	GC VOA Soil Frep	SW-846 5035	1	04/15/2004 15:31	Eric L Vera	n.a.



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Page 1 of 1

Lancaster Laboratories Sample No. WW 4254646

B10-W-040413 Grab Water Facility# 92960 MTI# 61D-1964 CETR 2416 Grove Way-Castro Val T0600100318 B-10

Collected: 04/13/2004 09:30 by MT

Submitted: 04/15/2004 08:55 Reported: 05/14/2004 at 12:06

Discard: 06/14/2004

Account Number: 10880

ChevronTexaco C/O Cambria

4111 Citrus Avenue

Suite 9

Rocklin CA 95677

B10WW

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01728	TPH-GRO - Waters	n.a.	180.	50.	ug/l	1
	The reported concentration of T gasoline constituents eluting p start time.					
06058	BTEX+5 Oxygenates+EDC+EDB					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
02011	di-Isopropyl ether	108-20-3	N.D.	0.5	ug/l	1
02013	Ethyl t-butyl ether	637-92-3	N.D.	0.5	ug/l	1
02014	t-Amyl methyl ether	994-05-8	N.D.	0.5	ug/l	1
02015	t-Butyl alcohol	75-65-0	N.D.	5.	ug/l	1
05401	Benzene	71-43-2	0.5	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05412	1,2-Dibromoethane	106-93-4	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	0.9	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

Trip blank vials were not received by the laboratory for this sample group.

		Laboratory	· Chro	nicle		
CAT		-		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01728	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	04/19/2004 19:39	Linda C Pape	1
06058	BTEX+5 Oxygenates+EDC+EDB	SW-846 8260B	1	04/22/2004 11:21	Carrie J McCullough	1
01146	GC VOA Water Prep	SW-846 5030B	1	04/19/2004 19:39	Linda C Pape	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	1	04/22/2004 11:21	Carrie J McCullough	n.a.



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Page I of 3

Quality Control Summary

Client Name: ChevronTexaco C/O Cambria

Reported: 05/14/04 at 12:06 PM

Group Number: 892203

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank MDL	Report <u>Units</u>	LCS %REC	LCSD <u>%RBC</u>	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 04099A34B TPH-GRO - Soils	Sample num	mber(s): 1.0	4254642,42 mg/kg	54644-425 112	4645	67-119		
Batch number: 04109A16A TPH-GRO - Waters	Sample num	mber(s): 50.	4254646 ug/l	93	103	70-130	10	30
Batch number: D041131AA Methyl Tertiary Butyl Ether di-Isopropyl ether Ethyl t-butyl ether t-Amyl methyl ether t-Butyl alcohol Benzene 1,2-Dichloroethane Toluene 1,2-Dibromoethane Ethylbenzene Xylene (Total)	Sample num N.D. N.D. N.D. N.D. N.D. N.D. N.D. N.D	mber(s): 0.5 1. 1. 20. 0.5 1. 1. 1. 1. 1. 1. 1. 1. 1.	4254642,421 ug/kg	54644-425 101 99 100 97 103 101 100 95 99	4645	75-125 70-129 71-124 74-117 51-160 83-118 76-126 81-116 77-114 82-115 82-117		
Batch number: P041131AA Methyl Tertiary Butyl Ether di-Isopropyl ether Ethyl t-butyl ether t-Amyl methyl ether t-Butyl alcohol Benzene 1,2-Dichloroethane Toluene 1,2-Dibromoethane Ethylbenzene Xylene (Total)	Sample num N.D. N.D. N.D. N.D. N.D. N.D. N.D. N.D	nber(s): 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	3. 2	99 95 97 103 98 101 98 95 95 93 96		77-127 67-130 74-120 79-113 57-141 85-117 77-132 85-115 81-114 82-119 84-120		

Sample Matrix Quality Control

Analysis Name	ms <u>%rec</u>	msd <u>%rbc</u>	MS/MSD Limits	RPD	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP RPD	Dup RPD <u>Max</u>
Batch number: 04099A34B TPH-GRO - Soils	Sample 85	number 77	(s): 4254642 39-118	2,4254 10	644-4254 30	4645			
Batch number: 04109A16A TPH-GRO - Waters	Sample	number	(s): 4254646 63~154	6					

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



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Page 2 of 3

Quality Control Summary

Client Name: ChevronTexaco C/O Cambria

Group Number: 892203

Reported: 05/14/04 at 12:06 PM

Sample Matrix Quality Control

Analysis Name	ms <u>%rec</u>	MSD %REC	MS/MSD <u>Limits</u>	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: D041131AA	Sample	number	(s): 4254642	,42546	44-425	4645			
Methyl Tertiary Butyl Ether	97 ~	98	57-136	1	30				
di-Isopropyl ether	94	93	55-132	1	30				
Ethyl t-butyl ether	96	95	58-127	0	30				
t-Amyl methyl ether	91	91	58-126	0	30				
t-Butyl alcohol	105	108	38-160	3	30				
Benzene	97	93	52-141	4	30				
1,2-Dichloroethane	95	95	57-137	0	30				
Toluene	91	87	45-142	4	30				
1,2-Dibromoethane	95	95	61-125	0	30				
Ethylbenzene	96	92	40-143	4	30				
Xylene (Total)	96	92	40-143	4	30				
Batch number: P041131AA	Sample	number	(s): 4254646						
Methyl Tertiary Butyl Ether	103	104	69-134	1	30				
di-Isopropyl ether	100	101	75-130	1	30				
Ethyl t-butyl ether	101	102	78-119	1	30				
t-Amyl methyl ether	104	107	77-117	3	30				
t-Butyl alcohol	107	108	51-147	1	30				
Benzene	107	109	83-128	2	30				
1,2-Dichloroethane	101	102	73-136	1	30				
Toluene	102	101	83-127	0	30				
1,2-Dibromoethane	97	97	78-120	0	30				
Ethylbenzene	102	102	82-129	0	30				
Xylene (Total)	103	104	82-130	0	30				

Surrogate Quality Control

Analysis Name: TPH-GRO - Soils Batch number: 04099A34B Trifluorotoluene-F

4254642	104
4254644	100
4254645	99
Blank	110
LCS	115
MS	88
MSD	83

Limits: 71-122

Analysis Name: TPH-GRO - Waters Batch number: 04109A16A Trifluorotoluene-F

4254646	126
Blank	120
LCS	125
LCSD	126
MS	126

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



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Page 3 of 3

Quality Control Summary

Client Name: ChevronTexaco C/O Cambria

Group Number: 892203

Reported: 05/14/04 at 12:06 PM

Surrogate Quality Control

	Name: BTEX+5 Oxygenates+ED ber: D041131AA			
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzen
4254642	86	83	81	80
4254644	88	82	80	82
4254645	88	83	81	80
Blank	84	83	81	81
LCS	87	85	83	83
MS	86	84	83	83
MSD	87	85	83	83
Limits:	70-129	70-121	70-130	70-128
Analysis 1	Name: BTEX+5 Oxygenates+ED		70-130	70-128
Analysis 1			70-130 Toluene-d8	70-128 4-Bromofluorobenzen
Analysis 1	Name: BTEX+5 Oxygenates+ED ber: P041131AA	C+EDB		
Analysis Datch num	Name: BTEX+5 Oxygenates+ED ber: P041131AA Dibromofluoromethane	C+EDB 1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzen
Analysis I Batch numl	Name: BTEX+5 Oxygenates+ED ber: P041131AA Dibromofluoromethane	C+EDB 1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzen
Analysis Datch num 4254646 Blank	Name: BTEX+5 Oxygenates+ED ber: P041131AA Dibromofluoromethane 99 101	C+EDB 1,2-Dichloroethane-d4 95 94	Toluene-d8 94 95	4-Bromofluorobenzen

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

Chevron California Region Analysis Request/Chain of Custody

412	Lancaster	Laboratories
W.	Where quality is a	science.

041404-02

Acct. #: 10880 For Lancaster Laboratories use only
Sample #: 4254641-46

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Explanation of Symbols and Abbreviations

Inorganic Qualifiers

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	1	liter(s)
m3	cubic meter(s)	ul	microliter(s)

- less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- J estimated value The result falls within the Method Detection Limit (MDL) and Limit of Quantitation (LOQ).
- ppm parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- ppb parts per billion
- **Dry weight basis**Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	Ε	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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WORK ORDER #: 0405332A

Work Order Summary

CLIENT:

Mr. Brandon Wilken

BILL TO: Mr. Brandon Wilken

Cambria Environmental Technology

Cambria Environmental Technology

5900 Hollis Street

Emeryville, CA 94608

5900 Hollis Street

31C-1676

Suite A

PHONE:

510-420-0700

P.O. #

Emeryville, CA 94608

FAX:

510-420-9170

61D-1964 9-2960

DATE RECEIVED:

05/20/04

Suite A

PROJECT # CONTACT:

Taryn Badal

DATE COMPLETED:

05/28/04

			RECEIPT
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.
01A	SV1	Modified TO-14A	5.5 "Hg
02A	SV2	Modified TO-14A	5.0 "Hg
03A	SV3	Modified TO-14A	5.0 "Hg
04A	SV4	Modified TO-14A	2.0 "Hg
04AA	SV4 Duplicate	Modified TO-14A	2.0 "Hg
05A	Lab Blank	Modified TO-14A	NA
06A	CCV	Modified TO-14A	NA
07A	LCS	Modified TO-14A	NA

CERTIFIED BY:

06/02/04 DATE:

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP - AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE Modified TO-14A

Cambria Environmental Technology Workorder# 0405332A

Four 6 Liter Summa Canister samples were received on May 20, 2004. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

Requirement	TO-14A/TO-15	ATL Modifications
Continuing Calibration criteria	= 30% Difference</td <td><= 30% Difference with two allowed out to <= 40% Difference; flag and narrate outliers</td>	<= 30% Difference with two allowed out to <= 40% Difference; flag and narrate outliers
Initial Calibration criteria	RSD<30% (TO-14A)	RSD =30%, two compounds allowed up to 40%.</td
Moisture control	Nafion Dryer (TO-14A)	Multisorbent trap
Blank acceptance criteria	<0.20 ppbv (TO-14A)	<reporting limit<="" td=""></reporting>
Primary ions for Quantification	Freon 114: 85, Carbon Tetrachloride: 117, Trichloroethene: 130, Ethyl Benzene, m,p- and o-Xylene: 91, Vinyl Acetate: 43, 2-Butanone: 43, 4-Methyl-2-Pentanone: 43.	Freon 114: 135, Carbon Tetrachloride: 119, Trichloroethene: 95, Ethyl Benzene, m,p- and o-Xylene: 106, Vinyl Acetate: 86, 2-Butanone: 72, 4-Methyl-2-Pentanone: 58.
Dilutions for Initial Calibration	Dynamic dilutions or static using canisters	Syringe dilutions
BFB absolute abundance criteria	Within 10% of that from previous day. (TO-14A)	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D.
Sample Load Volume	400 mL (TO-14A)	Varied to 200 mL
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Concentration of IS Spike.	10 ppbv (TO-15)	25 ppbv.
BFB Abundance	CLP Protocol (TO-15)	SW-846 Protocol
IS Recoveries.	Within 40% of mean over ICAL for blanks, and within 40% of daily CCV for samples. (TO-15)	Within 40% of CCV recoveries for blanks and samples.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample SV1 due to the presence of high level non-target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
 - J Estimated value.
 - E Exceeds instrument calibration range.
 - S Saturated peak.
 - Q Exceeds quality control limits.
 - U Compound analyzed for but not detected above the reporting limit.
 - UJ- Non-detected compound associated with low bias in the CCV
 - N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

SAMPLE NAME: SV1

ID#: 0405332A-01A

Elicaterino de la companya del companya del companya de la company	6052722		Date of Gollection: 5/18/04 Date of Gollection: 5/18/04 12:55 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Benzene	330	Not Detected	1100	Not Detected	
Toluene	330	Not Detected	1200	Not Detected	
Ethyl Benzene	330	Not Detected	1400	Not Detected	
m,p-Xylene	330	Not Detected	1400	Not Detected	
o-Xylene	330	Not Detected	1400	Not Detected	
Container Type: 6 Liter Summa Surrogates	Canister	%Recovery		Method Limits	
1,2-Dichloroethane-d4		105		70-130	
Toluene-d8		99		70-130	
4-Bromofluorobenzene		101		70-130	

SAMPLE NAME: SV2

ID#: 0405332A-02A

				28/04 01:37 AM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.80	32	2.6	100
Toluene	0.80	4.2	3.1	16
Ethyl Benzene	0.80	1.2	3.6	5.1
m,p-Xylene	0.80	Not Detected	3.6	Not Detected
o-Xylene	0.80	Not Detected	3.6	Not Detected
Container Type: 6 Liter Summa	Canister			
oomanor typo. o Enter ountina	ournote:			Method
Surrogates		%Recovery		Limits
1,2-Dichloroethane-d4	_	99		70-130
Toluene-d8		96		70-130

SAMPLE NAME: SV3

ID#: 0405332A-03A

			eno zace nikalar	5/18/04
			undigenerynes.	HZBIDAEDEZZVAMI
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.80	3.0	2.6	9.7
Toluene	0.80	0.94	3.1	3.6
Ethyl Benzene	0.80	Not Detected	3.6	Not Detected
m,p-Xylene	0.80	1.0	3.6	4.5
o-Xylene	0.80	Not Detected	3.6	Not Detected
Container Type: 6 Liter Summa	Canister			
Surrogates	·	%Recovery		Method Limits
1,2-Dichloroethane-d4		95		70-130
Toluene-d8		96		70-130
4-Bromofluorobenzene		100		70-130

SAMPLE NAME: SV4

ID#: 0405332A-04A

File Name)	EUS.		Tate of Collection Legis of Analysis: 5	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.72	Not Detected	2.3	Not Detected
Toluene	0.72	1.3	2.8	4.9
Ethyl Benzene	0.72	Not Detected	3.2	Not Detected
m,p-Xylene	0.72	1.7	3.2	7.4
o-Xylene	0.72	Not Detected	3.2	Not Detected
Container Type: 6 Liter Summa Surrogates	Canister	%Recovery		Method Limits
1,2-Dichloroethane-d4		98		70-130
Toluene-d8		96		70-130
4-Bromofluorobenzene		100		70-130

SAMPLE NAME: SV4 Duplicate

ID#: 0405332A-04AA

jejn Namos (18. Miestokas (18.	104/154:		Date of Collections 5/18/03		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Benzene	0.72	Not Detected	2.3	Not Detected	
Toluene	0.72	1.2	2.8	4.4	
Ethyl Benzene	0.72	Not Detected	3.2	Not Detected	
m,p-Xylene	0.72	1.6	3.2	7.1	
o-Xylene	0.72	Not Detected	3.2	Not Detected	
Container Type: 6 Liter Summa Surrogates	Canister	%Recovery		Method Limits	
1,2-Dichloroethane-d4		98		70-130	
Toluene-d8		97		70-130	
4-Bromofluorobenzene		100		70-130	

SAMPLE NAME: Lab Blank

ID#: 0405332A-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

d052706	F 3 - 1 4 F 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
0.50	Not Detected	1.6	Not Detected
0.50	Not Detected	1.9	Not Detected
0.50	Not Detected	2.2	Not Detected
0.50	Not Detected	2.2	Not Detected
0.50	Not Detected	2.2	Not Detected
able	%Recoverv		Method Limits
··	101		70-130
	96		70-130
	97		70-130
	Rpt. Limit (ppbv) 0.50 0.50 0.50 0.50 0.50	Rot. Limit (ppbv) (ppbv) 0.50 Not Detected 0.50 Not Detected 0.50 Not Detected 0.50 Not Detected 0.50 Not Detected 0.50 Not Detected 0.50 Not Detected 0.50 Not Detected 10.50 Not Detected 10.50 Not Detected	Rot. Limit (ppbv) (ppbv) (uG/m3)

SAMPLE NAME: CCV

ID#: 0405332A-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Fila Name: A Property of the P		ollere in a 122
Dietaron	Date of A	navalet - 227 northead (
Compound		%Recovery
Benzene	**	94
Toluene		104
Ethyl Benzene		108
m,p-Xylene		11 1
o-Xylene		108
Container Type: NA - Not Applicable		
		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

SAMPLE NAME: LCS

ID#: 0405332A-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Elle Name de do	Zanci de la companya de la companya de la companya de la companya de la companya de la companya de la companya	lige to the light of the light
Dil Factor		alvas and house AM
Compound		%Recovery
Benzene		107
Toluene		109
Ethyl Benzene		113
m,p-Xylene		115
o-Xylene		110
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130

Mr. Gregory J. Smith SMCHSA Groundwater Protection Program 455 County Center Redwood City, CA 94063



Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- · Work order Summary;
- · Laboratory Narrative;
- · Results; and
- · Chain of Custody (copy).

WORK ORDER #: 0405332B

Work Order Summary

CLIENT:

Mr. Brandon Wilken

BILL TO: Mr. Brandon Wilken

CLIENT:

Cambria Environmental Technology

Cambria Environmental Technology

5900 Hollis Street

5900 Hollis Street Suite A

Suite A Emeryville, CA 94608

Emeryville, CA 94608

PHONE:

510-420-0700

P.O. # 31C-1676

FAX:

510-420-9170

PROJECT# (

61D-1964 9-2960

DATE RECEIVED: DATE COMPLETED: 05/20/04 06/02/04

CONTACT:

Taryn Badal

FRACTION#	NAME
01A	SV1
02A	SV2
02AA	SV2 Duplicate
03A	SV3
04A	SV4
05A	Lab Blank
06A	LCS

	RECEIPT
<u>TEST</u>	VAC./PRES.
Modified ASTM D-1946	5.5 "Hg
Modified ASTM D-1946	5.0 "Hg
Modified ASTM D-1946	5.0 "Hg
Modified ASTM D-1946	5.0 "Hg
Modified ASTM D-1946	2.0 "Hg
Modified ASTM D-1946	NA
Modified ASTM D-1946	NA

CERTIFIED BY:

Linda d. Fruman

DATE: 06/02/04

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000. (800) 985-5955. FAX (916) 985-1020

LABORATORY NARRATIVE Modified ASTM D-1946

Cambria Environmental Technology Workorder# 0405332B

Four 6 Liter Summa Canister samples were received on May 20, 2004. The laboratory performed analysis via Modified ASTM Method D-1946 for fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample. See the data sheets for the reporting limits for each compound.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL (2.0 mL for He and H2) on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 30% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

SAMPLE NAME: SV1

ID#: 0405332B-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

FigName: Po	Augustus Paugoli (Co	ellectrons 5/18/04
Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.16	1.0
Oxygen Carbon Dioxide	0.016	13

SAMPLE NAME: SV2

ID#: 0405332B-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Ello Name: A Republic Communication Communic	3052116	llection = 5/18/04 nalysis: -5/ <u>21/04 03:34</u> PM
	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.16	1.7
Carbon Dioxide	0.016	11

SAMPLE NAME: SV2 Duplicate

ID#: 0405332B-02AA

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File lame:	3052117 Date of Car 1.61 Date of An	avas. 77 cara (C SES) (E
	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.16	1.7
Oxygen Carbon Dioxide	0.016	11

SAMPLE NAME: SV3

ID#: 0405332B-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Elle Name: 1000 CS	Date of An	lection: 5/18/04 aysis: 5/21/04/02/97/042/0
	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.16	20
Oxygen Carbon Dioxide	0.016	0.47

SAMPLE NAME: SV4

ID#: 0405332B-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

III Potanie de la companya della companya della companya de la companya della com	2052-118 Pate of 10-10 1-44 Date of 10-10	
Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.14	22
Oxygen Carbon Dioxide	0.014	1.2

SAMPLE NAME: Lab Blank

ID#: 0405332B-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Digescon — Σ	3052103 Bate of C 	olleeton: Na aalysis: 6/2/04/09:-15/20/
Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Oxygen Carbon Dioxide	0.010	Not Detected

Container Type: NA - Not Applicable

SAMPLE NAME: LCS

ID#: 0405332B-06A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Compound	%Recovery
Oxygen	98
Carbon Dioxide	98

Container Type: NA - Not Applicable

ATTACHMENT D ACPWA Well Permits



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. W04-0403

WATER RESOURCES SECTION GROUNDWATER PROTECTION ORDINANCE MW#2-GENERAL CONDITIONS: Vapor and Extraction wells

- 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 or agreements 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) The minimum surface seal thickness two inches of cement grout placed by tremic.
- 3) All vapor wells shall have a minimum surface cement seal depth of five (5) feet or the maximum depth practicable or twenty (20) feet. All extraction wells shall have a minimum surface seal depth of two (2) feet or the maximum depth practicable or twenty (20) feet.
- 4) Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
- 5) 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.
- 6) No changes in construction procedures or well type shall change, as described on this permit application. This permit may be voided if it contains incorrect information.
- 7) 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. Permit is valid from April 13 to April 13, 2004. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
- 8) Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including: permit number and site map.
- 9) 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.



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. W04-0404

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. Borcholes shall not be left open for a period of more than 24 hours. All borcholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All borcholes 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 borchole(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 work is being completed.
- 4. Permit is valid only for the purpose specified herein April 13 to April 13, 2004. 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 indennify, 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.