CAMBRIA

Erection to HEMTAL PROTECTION

99 OCT 13 PM 3: 18

October 7, 1999

Mr. Larry Seto Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Oakland, California 94502-6577

Re: Monitoring Well Installation Report

Shell-branded Service Station 105 Fifth Street Oakland, California Incident # 98995757



Dear Mr. Seto:

In accordance with Alameda County Health Care Services Agency (ACHCSA) correspondence dated April 8, 1999, Cambria Environmental Technology, Inc. (Cambria) is submitting this *Monitoring Well Installation Report* on behalf of Equiva Services LLC (Equiva). The scope of this investigation included the installation of three groundwater monitoring wells to determine the extent of hydrocarbons in soil and groundwater at the above-referenced site. The site background, summary of previous investigations, and investigation results are presented below.

SITE BACKGROUND

The site is an active Shell-branded service station located at the intersection of Fifth Street and Oak Street in Oakland, California.

On November 27, 1996, Cambria collected soil samples beneath the seven dispenser locations prior to replacement and beneath the inactive diesel fuel piping. The station was undergoing renovations at the time of sampling. Armer, Norman & Associates of Walnut Creek, California (Armer/Norman) removed and replaced five gasoline dispensers, two diesel dispensers, and associated piping. In addition, inactive piping to a former diesel fuel dispenser was found and removed.

Soil samples were analyzed by Sequoia Analytical of Redwood City, California (Sequoia) for total purgeable petroleum hydrocarbons as gasoline (TPPH) and total extractable petroleum hydrocarbons as diesel (TEPH) by modified EPA Method 8015 and for benzene, ethylbenzene, toluene and xylenes (BTEX) and methyl tert-butyl ether (MTBE) using EPA Method 8020.

Oakland, CA Sonoma, CA Portland, OR

Seattle, WA

Cambria Environmental Technology, inc.

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

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Soil samples D-3 and D-5, collected beneath the southwest dispenser area, contained the lowest petroleum hydrocarbon concentrations. Except for samples D-3 and D-5, the soil samples contained TPPH concentrations of more than 1,000 ppm. Individual BTEX constituent maximum concentrations were typically less than 100 ppm in the samples. MTBE concentrations in soil samples were less than 20 ppm, except for sample D-1, where MTBE was detected at 26 ppm. TEPH was detected in the three samples analyzed at concentrations ranging from 11 to 14,000 ppm. This results of this investigation were summarized in Cambria's *Dispenser Soil Sampling and Stockpile Disposal Report*, dated August 7, 1997.



In February 1998, Paradiso Mechanical of San Leandro, California installed secondary containment on the turbine sumps. Since secondary containment had previously been added to the dispensers, no additional dispenser upgrade activities were performed. Cambria inspected the tank pit on February 26, 1998 and no field indications of hydrocarbons, such as staining or odor, were observed.

To determine the extent of hydrocarbons in soil and groundwater beneath the site, on July 23, 1998, Cambria installed three borings in the assumed down gradient direction from existing dispensers and two borings in the assumed up gradient direction from the existing dispensers. Based on topography and the location of the nearby Oakland Inner Harbor, it was anticipated that groundwater flowed in a southeasterly to southwesterly direction (Figure 1).

The soil borings were installed to depths of 11.0 to 12.0 feet below ground surface and groundwater was encountered in the soil borings at depths ranging from approximately 6 to 9 ft bgs. The site subsurface consists of silty sand of high estimated permeability to the total explored depth of 12 ft bgs. Selected soil and groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and total petroleum hydrocarbons as diesel (TPHd) by modified EPA Method 8015, MTBE and BTEX by EPA Method 8020.

Soil boring SB-3 contained the maximum hydrocarbon concentrations in soil with 15 ppm TPHd and 2.8 ppm TPHg at 5.0 ft bgs. Soil boring SB-5 contained the highest concentration of MTBE with 0.48 ppm at 5.0 ft bgs. No benzene was detected in the soil samples. Water samples collected from borings SB-3 and SB-4 contained the highest hydrocarbon concentrations. SB-3 contained 90,000 ppb TPHg and 1,300 ppb benzene. SB-4 contained 27,000 ppb TPHd and 4,100 ppb MTBE. The results of this investigation were summarized in Cambria's *Subsurface Investigation Report*, dated November 18, 1998.

INVESTIGATION PROCEDURES

Using a hollow stem auger drill rig, Cambria installed three 4-inch diameter monitoring wells. The procedures for this subsurface investigation are described in Cambria's Additional Investigation Work Plan, dated March 18, 1999. Analytical results for soil samples are summarized in Table 1. Laboratory analytical reports are presented as Attachment A. Boring logs and Cambria's Standard Field Procedures for Monitoring Well Installation are presented as Attachments B and C, respectively.



Permits: Monitoring well installation permits were obtained from the County of Alameda Public Works Agency for the installation of three monitoring wells (Permit #99WR167).

Drilling Date: May 14, 1999.

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

Personnel Present: Tiltle: Company:

Troy Buggle Sr. Staff Scientist Cambria

Tim Akers Driller Gregg Drilling

Rich Nessinger Driller Gregg Drilling

Soil Lithology: The site is underlain primarily by sands and silty sands to a depth of 25 ft bgs, the maximum explored depth during this investigation.

Laboratory Analyses: Selected soil samples from each boring were analyzed for:

- TPHg by EPA Method 8015;
- BTEX and MTBE by EPA Method 8020;
- The highest MTBE (in soil) detected in each boring/monitoring well were confirmed using EPA Method 8260;
- Analytical results are summarized in Table 1.

Groundwater: Groundwater was encountered in MW-1 at 15.8 ft bgs, in MW-2 at 14.0 ft bgs, and in MW-3 at 12.5 ft bgs. The wells were scheduled to be developed by Blaine Technical Services, Inc., of San Jose, California (Blaine), in June, 1999. Blaine sampled the wells as part of the first quarterly monitoring well sampling event on July 23, 1999 (3rd Quarter, 1999).

Groundwater laboratory analytical results for this event were received by Cambria on September 8, 1999 and are summarized in Table 2. Laboratory analytical reports for groundwater samples are included in Attachment A. Groundwater monitoring results will be presented in future quarterly monitoring report(s), prepared by Cambria. During each sampling event Blaine will gauge and collect samples from each monitoring well and Sequoia Analytical Laboratories will analyze the samples for TPHg by modified EPA Method 8015, and BTEX and MTBE by EPA Method 8020. Well top of casing elevations were surveyed by Virgil Chavez Land Surveying on May 26, 1999. These elevations are included in Table 2 and were utilized to contour the groundwater elevation and flow direction on site based on measurements taken by Blaine on July, 23, 1999 (Figure 2). A copy of the survey report is included as Attachment D. Groundwater contour maps will also be included in the forthcoming quarterly monitoring reports.



Soil Disposal: Drill cuttings were disposed of at Forward Landfill in Manteca, California on June 16, 1999. The soil stockpile Laboratory Analytical Report is included as Attachment E and the Soil Disposal Confirmation report is included as Attachment F.

FINDINGS

Hydrocarbon Distribution in Groundwater: Petroleum hydrocarbon and MTBE contamination exists in groundwater on-site in the down-gradient direction near the UST complex. Groundwater sampled from MW-1, located in the up-gradient direction, was below detection limits for all analytes. Groundwater samples from MW-2 and MW-3, located in the down-gradient direction, indicate the presence of petroleum hydrocarbons and MTBE in groundwater. MW-2 had the highest concentrations of petroleum hydrocarbons on-site with 13,800 μg/L TPHg and 1790 μg/L benzene. The highest MTBE concentration on-site was in MW-3 at 324,000 μg/L (by EPA method 8260).

Hydrocarbon Distribution in Soil: Soil beneath the site does not appear to be impacted with the exception of MW-2 at 5.5 ft bgs. The maximum TPHg concentration detected in soil was 1700 ppm in soil sample MW-2-5.5'. The maximum benzene concentration detected in soil was 0.0369 ppm in soil sample MW-2-10.5'. The maximum MTBE concentration detected in soil was 13.2 ppm (by EPA method 8260) in soil sample MW-2-5.5'. The impacted soils are likely a result of groundwater contamination on-site as the depth to water in MW-2 was only 5.98 ft bgs on July 23, 1999. Cambria recommends quarterly monitoring well sampling and submittal of the findings in forthcoming quarterly monitoring reports.

Based on the findings, further subsurface characterization in the down-gradient direction appears warranted at this time.

CLOSING

Please call Darryk Ataide at (510) 420-3339 if you have any questions or comments.

Sincerely,

Cambria Environmental Technology, Inc.

Troy A. Buggle,

Senior Staff Scientist

Ailsa Le May, R.G.

Senior Geologist

Figures: 1 – Monitoring Well Location Map

2 - Groundwater Elevation Contour Map

Tables: 1 – Soil Analytical Data

2 - Groundwater Analytical Data

Attachments: A - Laboratory Analytical Report

B - Soil Boring Logs

C - Cambria's Standard Field Procedures for Monitoring Well Installation

NO. 6717

D - Well Top of Casing Elevation Survey Report

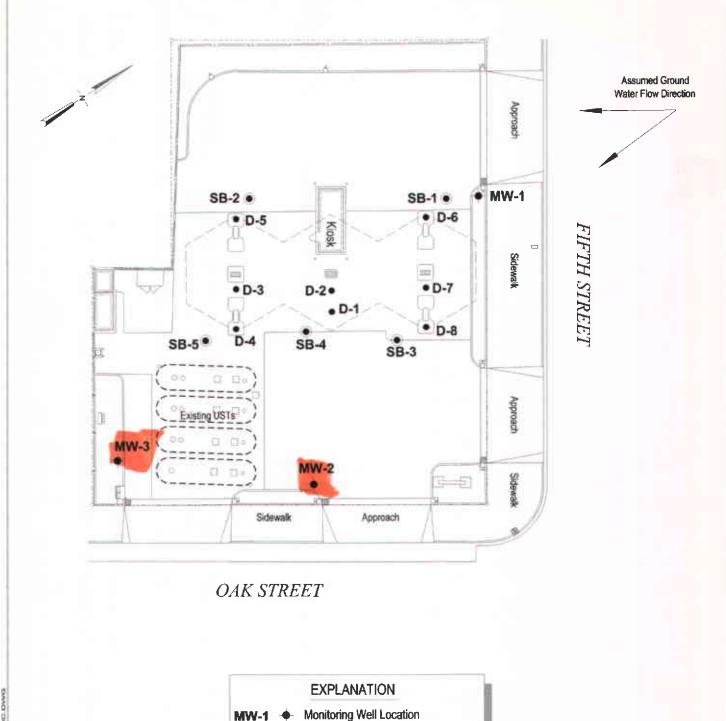
E - Soil Stockpile Laboratory Analytical Report

F - Soil Disposal Confirmation Report

cc: Ms. Karen Petryna, Equiva Services LLC, P.O. Box 6249, Carson, CA

90749-6249

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Shell-branded Service Station

105 Fifth Street Oakland, California Incident #98995757

15

Scale (ft)



1996 Dispenser Sample Location

Soil Boring Location

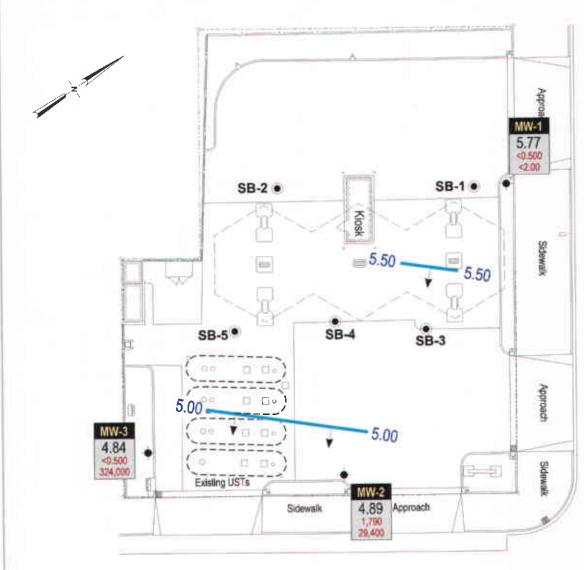
SB-1

CAMBRIA

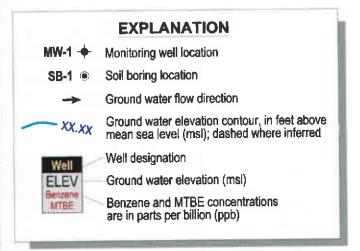
Monitoring Well Location Map

FIGURE





OAK STREET



0 15 30 Scale (ft) FIGURE

Shell-branded Service Station

105 Fifth Street Oakland, California Incident #98995757



CAMBRIA

Ground Water Elevation
Contour Map

FIFTH STREET

July 23, 1999

Table 1. Soil Analytical Data - Shell-branded Service Station, 105 Fifth Street, Oakland, California - Incident #98995757

Sample	Depth	Date	TPHg	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
D	(ft)	Sampled	-	(Cone	centrations reported i	n milligrams per kile	ogmm) —	-
MW1-5.5'	5.5'	5/14/99	<0.400	< 0.0100	< 0.00200	< 0.00200	< 0.00200	< 0.00400
MW1-10.5'	10.5	5/14/99	< 0.400	< 0.0100	< 0.00200	< 0.00200	< 0.00200	< 0.00400
MW1-15.5'	15.5'	5/14/99	< 0.400	< 0.0100	< 0.00200	< 0.00200	< 0.00200	< 0.00400
MW1-20.5	20.5	5/14/99	< 0.400	< 0.0100	< 0.00200	< 0.00200	< 0.00200	< 0.00400
MW1-25.5'	25.5'	5/14/99	< 0.400	< 0.0100	< 0.00200	< 0.00200	< 0.00200	< 0.00400
MW2-5:5	5.5'	5/14/99	1700	21.5 (13.2)	<2.0	<2.0	8.52	5.32
MW2-10.5°	10.5	5/14/99	<2.0	2.13	0.0369	<0.0100	< 0.0100	< 0.0200
MW2-15.5	15.5'	5/14/99	< 0.400	0.0219	< 0.00200	< 0.00200	< 0.00200	< 0.00400
MW2-20.5	20.5	5/14/99	< 0.400	0.0421	< 0.00200	< 0.00200	< 0.00200	< 0.00400
MW2-25.5	25.51	5/14/99	< 0.400	0.0254	< 0.00200	< 0.00200	< 0.00200	< 0.00400
MW3-6.5	6.5'	5/14/99	<20.0	19.2	< 0.100	< 0.100	< 0.100	< 0.200
MW3-11.5	115	5/14/99:	<20.0	20.4 (8.83)	< 0.100	< 0.100	< 0.100	< 0.200
MW3-16.5	16.5'	5/14/99	<20.0	9.14	< 0.100	< 0.100	< 0.100	< 0.200
MW3-21.5°	21.5'	5/14/99	<2.0	1.18	<0.0100	< 0.0100	< 0.0100	< 0.0200
MW3-25	25	5/14/99	< 0.400	0.201	< 0.00200	< 0.00200	< 0.00200	< 0.00400

Notes and Abbreviations:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

MTBE = Methyl tert-butyl ether by EPA Method 8020

(13.2) = MTBE concentration by EPA method 8260

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020

<n = Below detection limit of n mg/kg

Table 2. Groundwater Analytical Data - Shell Service Station, Incident # 98995757, 105 Fifth Street, Oakland, California

Sample ID	Date Sampled	TOC Elevation	Depth to Water	TPHg	MTBE (Conce	Benzene ntrations reported	Toluene I in micrograms	Ethylbenzene per liter)	Xylenes
MW-1	7/23/99	12.22'	6.45	<50.0	<2.50	<0.500	<0.500	<0.500	<0.500
MW-2	7/23/99	10.87'	5.98"	13,800	(29,400)	1790	<100	<100	682
MW-3	7/23/99	11.27'	6.43*	128	(324,000)	<0.500	<0.500	<0.500	<0.500

Abbreviations and Notes:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8020

MTBE = Methyl tert-butyl ether by EPA Method 8020

(MTBE) = MTBE by EPA Method 8260

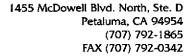
µg/L = Micrograms per liter

<n = Below detection limit of n µg/l.

TOC Elevation = Top of casing elevation above mean sea level (AMSL). Surveyed by Virgil Chavez Land Surveying - May 26, 1999

ATTACHMENT A

Laboratory Analytical Reports





June 3, 1999

Darryk Ataide Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608

RE: Shell Oil Co./P905601

Dear Darryk Ataide

Enclosed are the results of analyses for sample(s) received by the laboratory on May 17, 1999.

The analysis for soil physical test parameters was performed at CORE Laboratories.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Scott Forbes
Project Manager

Scott Jak

CA ELAP Certificate Number 2245



Cambria Environmental - Oakland 1144 65th St., Suite C

Oakland, CA 94608

Project: Shell Oil Co. Project Number:

Project Manager:

105 5th St., Oakland

Darryk Ataide

Sampled: 5/14/99

Received: 5/17/99 Reported: 6/3/99

ANALYTICAL REPORT FOR P905601

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW1-5.5'	P905601-02	Soil	5/14/99
MW1-10.5'	P905601-04	Soil	5/14/99
MW1-15.5'	P905601-06	Soil	5/14/99
MW1-20.5'	P905601-08	Soil	5/14/99
MW1-25.5'	P905601-10	Soil	5/14/99
MW2-5.5'	P905601-11	Soil	5/14/99
MW2-10.5'	P905601-13	Soil	5/14/99
MW2-15.5'	P905601-15	Soil	5/14/99
MW2-20.5'	P905601-17	Soil	5/14/99
MW2-25.5'	P905601-19	Soil	5/14/99
MW3-6.5'	P905601-21	Soil	5/14/99
MW3-11.5'	P905601-23	Soil	5/14/99
MW3-16.5'	P905601-25	Soil	5/14/99
MW3-21.5'	P905601-27	Soil	5/14/99
MW3-25'	P905601-29	Soil	5/14/99



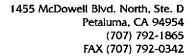


Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Darryk Ataide	Reported:	6/3/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
								
MW1-5.5'			P9056	<u>01-02</u>			<u>Soil</u>	
Gasoline	9050750	5/26/99	5/26/99		0.400	ND	mg/kg	
Benzene	IP.	**	н		0.00200	ND	II .	
Toluene	IF.	*1	н		0.00200	ND	II	
Ethylbenzene	0	H	п		0.00200	ND	П	
Xylenes (total)	10	*1	и		0.00400	ND	п	
Methyl tert-butyl ether	IF.	#1	н		0.0100	ND	н	
Surrogate: a,a,a-Trifluorotoluene	"	n	"	65.0-135		89.3	%	
Surrogate: 4-Bromofluorobenzene	tt	n	tt	65.0-135		74.7	II	
MW1-10.5'			P9056	<u>01-04</u>			<u>Soil</u>	
Gasoline	9050750	5/26/99	5/26/99		0.400	ND	mg/kg	
Benzene	It.	Ħ	и		0.00200	ND	"	
Toluene	IF.	#1	П		0.00200	ND	п	
Ethylbenzene	u .	**	п		0.00200	ND	п	
Xylenes (total)	lt.	**	п		0.00400	ND	п	
Methyl tert-butyl ether	If .	H	и		0.0100	ND	п	
Surrogate: a,a,a-Trifluorotoluene	и	"		65.0-135		87.0	%	*
Surrogate: 4-Bromofluorobenzene	"	n	"	65.0-135		75.0	"	
MW1-15.5'			P9056	<u>01-06</u>			<u>Soil</u>	
Gasoline	9050750	5/26/99	5/26/99		0.400	ND	mg/kg	
Benzene	t+	11	и		0.00200	ND	"	
Toluene	н	11	lt		0.00200	ND	II	
Ethylbenzene	н	41	IF.		0.00200	ND	П	
Xylenes (total)	M	11	II .		0.00400	ND	II	
Methyl tert-butyl ether	**	11	10		0.0100	ND	II .	
Surrogate: a,a,a-Trifluorotoluene	u u	II.	H	65.0-135		94.3	%	
Surrogate: 4-Bromofluorobenzene	"	п	Ħ	65.0-135		87.7	n .	
MW1-20.5'			P9056	<u>01-08</u>			<u>Soil</u>	
Gasoline	9050750	5/26/99	5/26/99		0.400	ND	mg/kg	
Benzene	н	ii .	IF.		0.00200	ND	II .	
Toluene	**	II	н		0.00200	ND	11	
Ethylbenzene	н	11	II.		0.00200	ND	19	
Xylenes (total)	н	II .	II.		0.00400	ND	It	
Methyl tert-butyl ether	н	ti .	10		0.0100	ND	If	•
Surrogate: a,a,a-Trifluorotoluene	"	II .	"	65.0-135		91.0	%	
Surrogate: 4-Bromofluorobenzene	"	п	"	65.0-135		82.3	"	
MW1-25.5'			P9056	01-10			<u>Soil</u>	
Gasoline	9050750	5/26/99	5/26/99		0.400	ND	mg/kg	

Sequoia Analytical - Petaluma





Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Darryk AtaideReported:6/3/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
			D005//	04 40			<u>Soil</u>	
MW1-25.5' (continued)	9050750	5/26/99	<u>P90569</u> 5/26/99	<u> </u>	0.00200	ND	mg/kg	
Benzene	9030730	3/20/99	3/20/99		0.00200	ND ND	mg/kg	
Toluene		" ¶				ND	н	
Ethylbenzene	"	11			0.00200 0.00400	ND ND	и	
Xylenes (total)	H	 Ji	u		0.0100	ND	ш	
Methyl tert-butyl ether	· · · · · · · · · · · · · · · · · · ·	"	"	65.0-135	0.0100	91.7	%	
Surrogate: a,a,a-Trifluorotoluene	,,		"			81.3	"	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		01.3		
MW2-5.5'			P90560	<u>01-11</u>			<u>Soil</u>	
Gasoline	9050595	5/26/99	5/26/99		400	1700	mg/kg	
Benzene	П	ur.	*1		2.00	ND	11	
Toluene	и	10	11		2.00	ND	н	
Ethylbenzene	If	н .	ш		2.00	8.52	Ħ	
Xylenes (total)	lt.	*1	и		4.00	5.32	11	
Methyl tert-butyl ether	н	11	It		10.0	21.5		
Surrogate: a,a,a-Trifluorotoluene	n n	н		65.0-135		102	%	
Surrogate: 4-Bromofluorobenzene	#	"	n	65.0-135		127	н	
P43310 10 61			P9056	01 12			Soil	
MW2-10.5'	9050750	5/26/99	5/26/99	<u>01-13</u>	2.00	ND	mg/kg	
Gasoline	9030730	3/20/99	3/20/99		0.0100	0.0369	"	
Benzene		tr .	**		0.0100	ND	17	
Toluene		11			0.0100	ND ND	n	
Ethylbenzene	11	0			0.0200	ND	H	
Xylenes (total)		11	11		0.0500	2.13	11	
Methyl tert-butyl ether	"	"	···	65.0-135	0.0300	91.3	%	
Surrogate: a,a,a-Trifluorotoluene	"	 H	n .	65.0-135		76.0	"	
Surrogate: 4-Bromofluorobenzene				05.0-155		70.0		
MW2-15.5'			P9056	01-15			Soil	
Gasoline	9050750	5/26/99	5/26/99		0.400	ND	mg/kg	
Benzene	r i	U.	TT .		0.00200	ND	н	
Toluene	Ħ	**	u		0.00200	ND	**	
Ethylbenzene	"	**	н		0.00200	ND	11	
Xylenes (total)	u .	**	н		0.00400	ND	11	
Methyl tert-butyl ether	И	•	11		0.0100	0.0219		
Surrogate: a,a,a-Trifluorotoluene	II	n	11	65.0-135		87.7	%	
Surrogate: 4-Bromofluorobenzene	#	n	11	65.0-135		78.7	н	
MW/2 20 E!			P9056	01-17			Soil	
MW2-20.5' Gasoline	9050750	5/26/99	5/26/99	<u></u>	0.400	ND	mg/kg	
*	9030730	3/20/99 II	3/20/ 93		0.00200	ND	"	
Benzene					0.00200	1,12		

Sequoia Analytical - Petaluma



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Darryk Ataide	Reported:	6/3/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
-				"-				
MW2-20.5' (continued)			P90560	<u>01-17</u>	•		<u>Soil</u>	
Toluene	9050750	5/26/99	5/26/99		0.00200	ND	mg/kg	
Ethylbenzene	41	н	**		0.00200	ND	**	
Xylenes (total)	11	*1	*1		0.00400	ND	17	
Methyl tert-butyl ether	п	11	ai .		0.0100	0.0421	11	
Surrogate: a,a,a-Trifluorotoluene	ır	"	11	65.0-135		89.7	%	
Surrogate: 4-Bromofluorobenzene	"	"	11	65.0-135		78.0	"	
MW2-25.5'			P90566	01-19			Soil	
Gasoline	9050750	5/26/99	5/26/99		0.400	ND	mg/kg	
Benzene	11	H	11		0.00200	ND	11	
Toluene	п	н	П		0.00200	ND	11	
Ethylbenzene	u .	н	п		0.00200	ND	II	
Xylenes (total)	10	*1	п		0.00400	ND	п	
Methyl tert-butyl ether	*	11	11-		0.0100	0.0254	и	
Surrogate: a,a,a-Trifluorotoluene	<u>n</u>	л		65.0-135	0.0100	91.3	%	
Surrogate: 4-Bromofluorobenzene	"	п	#	65.0-135		80.7	н	
Surrogale. 4-Dromojiuorovenzene				05.0-155		0017		
MW3-6.5'			P9056	<u>01-21</u>			<u>Soil</u>	
Gasoline	9050595	5/26/99	5/26/99		20.0	ND	mg/kg	
Benzene	11	If	н		0.100	ND	*	
Toluene	11	IF.	11		0.100	ND	H	
Ethylbenzene	**	D.	17		0.100	ND	**	
Xylenes (total)	n	10	16		0.200	ND	**	
Methyl tert-butyl ether	н	11	IF.		0.500	19.2	11	
Surrogate: a,a,a-Trifluorotoluene	11	"	<u>n</u>	65.0-135		96.3	%	
Surrogate: 4-Bromofluorobenzene	н	"	"	65.0-135		96.3	#	
NASS/2 11 E1			P9056	01_23			Soil	
MW3-11.5' Gasoline	9050595	5/26/99	5/26/99	<u>01-43</u>	20.0	ND	mg/kg	
Benzene	9030393	3/20/33	3120133 11		0.100	ND	"	
Toluene	II	H	п		0.100	ND	*1	
Ethylbenzene	п	1 1	п		0.100	ND	11	
			п		0.200	ND	II .	
Xylenes (total)	10	н	п		0.500	20.4	11	
Methyl tert-butyl ether				65.0-135	0.500	94.3	%	
Surrogate: a,a,a-Trifluorotoluene	"	ır	If	65.0-135		93.7	70 II	
Surrogate: 4-Bromofluorobenzene				00.0-100		73./		
MW3-16.5'			P9056	01-25			<u>Soil</u>	
Gasoline	9050595	5/26/99	5/26/99		20.0	ND	mg/kg	
Benzene	"	11	н		0.100	ND	" "	
Toluene	"	D.	**		0.100	ND	н	

Sequoia Analytical - Petaluma

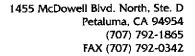




Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Darryk AtaideReported:6/3/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
MW3-16.5' (continued)			P90566	01-25			Soil	
Ethylbenzene	9050595	5/26/99	5/26/99		0.100	ND	mg/kg	
Xylenes (total)	"	"	11		0.200	ND	"	
Methyl tert-butyl ether	19	*1	IF		0.500	9.14	II	
Surrogate: a,a,a-Trifluorotoluene	#	- 11	#	65.0-135		94.7	%	
Surrogate: 4-Bromofluorobenzene	<i>tt</i>	n	u	65.0-135		95.3	"	
MW3-21.5'			P90569	01-27			<u>Soil</u>	
Gasoline	9050847	5/27/99	5/28/99		2.00	ND	mg/kg	
Benzene	н	v	11		0.0100	ND	u	
Toluene	п		н		0.0100	ND	11.	
Ethylbenzene	u ·	n	п		0.0100	ND	II .	
Xylenes (total)	10	11	ır		0.0200	ND	н	
Methyl tert-butyl ether	н	п	1+		0.0500	1.18	fr	
Surrogate: a,a,a-Trifluorotoluene	"	n .	"	65.0-135		96.0	%	
Surrogate: 4-Bromofluorobenzene	#	н	u	65.0-135		91.0		
MW3-25'			P9056	01-29			<u>Soil</u>	
Gasoline	9050847	5/27/99	5/28/99		0.400	ND	mg/kg	
Benzene	П	11	п		0.00200	ND	11	
Toluene	It	**	п		0.00200	ND	II	
Ethylbenzene	11	*1	tt.		0.00200	ND	JI.	
Xylenes (total)		п	II.		0.00400	ND	п	
Methyl tert-butyl ether	11	п	н		0.0100	0.201	II.	
Surrogate: a,a,a-Trifluorotoluene		TF		65.0-135		97.0	%	
Surrogate: 4-Bromofluorobenzene	**	"	"	65.0-135		79.0	"	





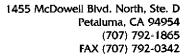
Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608 Project: Shell Oil Co.
Project Number: 105 5th St., Oakland
Project Manager: Darryk Ataide

Sampled: 5/14/99 Received: 5/17/99

Reported: 6/3/99

Volatile Organic Compounds by EPA Method 8260B Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW2-5.5'			P9056	01-1 <u>1</u>			<u>Soil</u>	<u>1</u>
Methyl tert-butyl ether	9050872	6/1/99	6/3/99	<u>_</u>	4.00	13.2	mg/kg	
Surrogate: Dibromofluoromethane	п	n	n'	80.0-120		98.0	%	
MW3-11.5'			P9056	01-23			<u>Soil</u>	<u>1</u>
Methyl tert-butyl ether	9050872	6/1/99	6/3/99		0.200	8.83	mg/kg	
Surrogate: Dibromofluoromethane	"	"	"	80.0-120		91.5	%	





Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sample	1: 5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received	1: 5/17/99
Oakland, CA 94608	Project Manager:	Darryk Ataide	Reported	1: 6/3/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control Sequoia Analytical - Petaluma

Batch: 9050595 Date Prepared: 5/21/99 Extraction Method: EPA 5030 soils MeOH Blank 9050595-BLK1 ND mg/kg 20.0 Gasoline 5/21/99 ND mg/kg 20.0 Benzene " ND " 0.100 Toluene " ND " 0.100 Ethylbenzene " ND " 0.100 Xylenes (total) " 0.200 " Methyl tert-butyl ether " 30.0 28.8 " 65.0-135 96.0		Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Date Prepared:	Analyte			•		Units			Limit	% N	otes*
Blank 9050595-BLK	Analyte	1 Hidiy Dou	20,10.								
Casoline 5/21/99 ND mg/kg 20.0	Batch: 9050595	Date Prepa	red: 5/21/9	<u>)9</u>		<u>Extrac</u>	tion Method: EP.	<u>A 5030 so</u>	ils MeQ	Ħ	
Benzene	Blank	9050595-B	LK1								
Service ND	Gasoline	5/21/99			ND						
Column C	Benzene	11			ND						
ND	Toluene	П			ND	"	0.100				
ND	Ethylbenzene	II			ND	11					
Methyl tert-butyl ether	•	R			NĐ	н					
Surrogate: a,a,a-Trifluorotoluene " 30.0 22.8 " 65.0-135 96.0		11			ND	**					
Surrogate: 4-Bromofluorobenzene		tt	30.0		28.8	л	65.0-135	96.0			
Casoline S/26/99 ND mg/kg 10.0	Surrogate: 4-Bromofluorobenzene	"	30.0		30.0	Ħ	65.0-135	100			
Casoline S/26/99 ND mg/kg 10.0	Blank	9050595-B	LK2								
Toluene " ND " 0.0500 Ethylbenzene " ND " 0.0500 Xylenes (total) " ND " 0.100 Methyl tert-butyl ether " ND " 0.250 Surrogate: a,a,a-Trifluorotoluene " 30.0 29.2 " 65.0-135 97.3 Surrogate: 4-Bromofluorobenzene " 30.0 30.2 " 65.0-135 101 LCS 905095-BSI Gasoline 5/21/99 100 101 mg/kg 65.0-135 100 LCS 905095-BS2 Benzene 5/21/99 10.0 10.6 mg/kg 65.0-135 106 Toluene " 10.0 10.5 " 65.0-135 105 Toluene " 10.0 9.73 " 65.0-135 105 Ethylbenzene " 10.0 9.73 " 65.0-135 105 Ethylbenzene " 10.0 9.73 " 65.0-135 105 Surrogate: a,a,a-Trifluorotoluene " 30.0 30.3 " 65.0-135 97.3 Xylenes (total) " 30.0 30.3 " 65.0-135 97.3 Xylenes (total) " 30.0 30.3 " 65.0-135 101 Surrogate: a,a,a-Trifluorotoluene " 30.0 30.0 " 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 103 Matrix Spike 905095-MSI 9905366-14 Gasoline 5/21/99 100 51.2 145 mg/kg 65.0-135 93.8 Surrogate: 4-Bromofluorobenzene " 30.0 32.2 " 65.0-135 107 Matrix Spike Dup 9050595-MSDI 9905366-14 Matrix Spike Dup 9050595-MSDI 9905366-14					ND	mg/kg					
Ethylbenzene "	=	11			ND	n	0.0500				
Ethylbenzene	Toluene	II .			ND	17	0.0500				
ND		IF			ND	н.	0.0500				
Methyl tert-butyl ether		II.			ND	*1					
Surrogate: a,a,a-Trifluorotoluene " 30.0 29.2 " 65.0-135 77.3 Surrogate: 4-Bromofluorobenzene " 30.0 30.2 " 65.0-135 101 LCS 9050595-BSI 5/21/99 100 101 mg/kg 65.0-135 101 Surrogate: 4-Bromofluorobenzene " 30.0 30.0 " 65.0-135 100 LCS 9050595-BS2 Benzene 5/21/99 10.0 10.6 mg/kg 65.0-135 105 Toluene " 10.0 10.5 " 65.0-135 105 Ethylbenzene " 10.0 9.73 " 65.0-135 101 Xylenes (total) " 30.0 30.3 " 65.0-135 101 Surrogate: a,a,a-Trifluorotoluene " 30.0 28.4 " 65.0-135 101 LCS 9050595-BS3 Gasoline 5/26/99 100 106 mg/kg 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 103 Matrix Spike 9050595-MS1 5/21/99 100 51.2 145 mg/kg 65.0-135 93.8 Surrogate: 4-Bromofluorobenzene " 30.0 32.2 " 65.0-135 107 Matrix Spike Dup 9050595-MSD1 905366-14 12 145 mg/kg 65.0-135 107		н			ND	11	0.250				
Surrogate: 4-Bromofluorobenzene		"	30.0		29.2	T/	65.0-135				
Gasoline S/21/99 100 101 mg/kg 65.0-135 101		"	30.0		30.2	"	65.0-135	101			
Gasoline S/21/99 100 101 mg/kg 65.0-135 101	LCS	9050595-B	<u>S1</u>								
Surrogate: 4-Bromofluorobenzene					101	mg/kg	65.0-135				
Benzene 5/21/99 10.0 10.6 mg/kg 65.0-135 106 Toluene " 10.0 10.5 " 65.0-135 105 Ethylbenzene " 10.0 9.73 " 65.0-135 97.3 Xylenes (total) " 30.0 30.3 " 65.0-135 101 Surrogate: a,a,a-Trifluorotoluene " 30.0 28.4 " 65.0-135 94.7 LCS		n .	30.0		30.0	#	65.0-135	100			-
Benzene 5/21/99 10.0 10.6 mg/kg 65.0-135 106 Toluene " 10.0 10.5 " 65.0-135 105 Ethylbenzene " 10.0 9.73 " 65.0-135 97.3 Xylenes (total) " 30.0 30.3 " 65.0-135 101 Surrogate: a,a,a-Trifluorotoluene " 30.0 28.4 " 65.0-135 94.7 LCS	LCS	9050595-B	<u>S2</u>								
Ethylbenzene " 10.0 9.73 " 65.0-135 97.3 Xylenes (total) " 30.0 30.3 " 65.0-135 101 Surrogate: a,a,a-Trifluorotoluene " 30.0 28.4 " 65.0-135 94.7 LCS 9050595-BS3 Gasoline 5/26/99 100 106 mg/kg 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 103 Matrix Spike 9050595-MS1 5/21/99 100 51.2 145 mg/kg 65.0-135 93.8 Surrogate: 4-Bromofluorobenzene " 30.0 32.2 " 65.0-135 107 Matrix Spike Dup 9050595-MSD1 P905366-14 Matrix Spike Dup 9050595-MSD1 P905366-14	- 	5/21/99	10.0				65.0-135				
Ethylbenzene 10.0 3.73 33.0 30.3 " 65.0-135 101 Surrogate: a,a,a-Trifluorotoluene " 30.0 28.4 " 65.0-135 94.7 LCS 9050595-BS3 94.7 Gasoline 5/26/99 100 106 mg/kg 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 103 Matrix Spike 9050595-MS1 P905366-14 P905366-14 93.8 65.0-135 107 Matrix Spike Dup 9050595-MSD1 P905366-14 122 65.0-135 107	Toluene	W.	10.0		10.5						
Xylenes (total) " 30.0 30.3 " 65.0-135 101 Surrogate: a,a,a-Trifluorotoluene " 30.0 28.4 " 65.0-135 94.7 LCS 9050595-BS3 Gasoline 5/26/99 100 106 mg/kg 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 103 Matrix Spike 9050595-MS1 P905366-14 P905366-14 Surrogate: 4-Bromofluorobenzene " 30.0 32.2 " 65.0-135 93.8 Matrix Spike Dup 9050595-MSD1 P905366-14 Matrix Spike Dup 9050595-MSD1 P905366-14	Ethylbenzene	11	10.0		9.73	I#					
Surrogate: a,a,a-Trifluorotoluene " 30.0 28.4 " 65.0-135 94.7 LCS 9050595-BS3 Gasoline 5/26/99 100 106 mg/kg 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 103 Matrix Spike 9050595-MS1 P905366-14 P905366-14 Gasoline 5/21/99 100 51.2 145 mg/kg 65.0-135 93.8 Surrogate: 4-Bromofluorobenzene " 30.0 32.2 " 65.0-135 107 Matrix Spike Dup 9050595-MSD1 P905366-14	=	. "	30.0		30.3						
Gasoline 5/26/99 100 106 mg/kg 65.0-135 mg/kg 106 mg/kg 65.0-135 mg/kg 106 mg/kg 65.0-135 mg/kg 106 mg/kg 65.0-135 mg/kg 103 mg/kg 65.0-135 mg/kg 103 mg/kg 65.0-135 mg/kg 103 mg/kg 65.0-135 mg/kg 65		11	30.0		28.4	" "	65.0-135	94.7			
Gasoline 5/26/99 100 106 mg/kg 65.0-135 106 Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 103 Matrix Spike 9050595-MS1 P905366-14 P905366-14 5/21/99 100 51.2 145 mg/kg 65.0-135 93.8 Surrogate: 4-Bromofluorobenzene " 30.0 32.2 " 65.0-135 107 Matrix Spike Dup 9050595-MSD1 P905366-14 P905366-14	L <u>CS</u>	<u>9050595-B</u>	<u>83</u>								
Surrogate: 4-Bromofluorobenzene " 30.0 31.0 " 65.0-135 103 Matrix Spike 9050595-MS1 P905366-14 P905366-14 P905366-14 P905366-14 Surrogate: 4-Bromofluorobenzene " 30.0 32.2 " 65.0-135 107 Matrix Spike Dup 9050595-MSD1 P905366-14 123 20.0 24.6 23		5/26/99	100			mg/kg	65.0-135				
Gasoline 5/21/99 100 51.2 145 mg/kg 65.0-135 93.8 Surrogate: 4-Bromofluorobenzene " 30.0 32.2 " 65.0-135 107 Matrix Spike Dup 9050595-MSD1 P905366-14		"	30.0		31.0	n	65.0-135	103			
Gastinie 3/21/9 100 31.2 100 30.0 32.2 65.0-135 107 Matrix Spike Dup 9050595-MSD1 P905366-14 100 <td>Matrix Spike</td> <td>9050595-<u>N</u></td> <td></td> <td></td> <td></td> <td>4-</td> <td> o</td> <td></td> <td></td> <td></td> <td></td>	Matrix Spike	9050595- <u>N</u>				4-	o				
Matrix Spike Dup 9050595-MSD1 P905366-14				51.2			65.0-135		 -		
	Surrogate: 4-Bromofluorobenzene	"	30.0		32.2		65.0-135	107			
Gasoline 5/21/99 100 51.2 184 mg/kg 65.0-135 133 20.0 34.6 2	Matrix Spike Dup					N	/E 0 125	100	30. 0	246	2
	Gasoline	5/21/99	100	51.2	184	mg/kg	65.0-135	133	20.0	54.0	2

Sequoia Analytical - Petaluma





Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Darryk Ataide	Reported:	6/3/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
	0050505 34	CD1 P	005266 14						
Matrix Spike Dup (continued)	9050595-M	<u> 30.0</u>	905366- <u>14</u>	34.7	mg/kg	65.0-135	116		
Surrogate: 4-Bromofluorobenzene	5/21/99	30.0		34./	mg/kg	05.0-155	110		
Batch: 9050750	Date Prepa	red: <u>5/25/</u> 9	<u>99</u>		Extrac	tion Method: EP.	A 5030 so	<u>oils</u>	
Blank	9050750-B	<u>LK1</u>							
Gasoline	5/25/99			ND	mg/kg	0.400			
Benzene	11			ND	+1	0.00200			
Toluene	11			ND	17	0.00200			
Ethylbenzene	п			ND	10	0.00200			
Xylenes (total)	1f			ND	11	0.00400			
Methyl tert-butyl ether	1+			ND	н	0.0100			
Surrogate: a,a,a-Trifluorotoluene	11	0.300		0.287	11	65.0-135	95.7		
Surrogate: 4-Bromofluorobenzene	n	0.300		0.275	#	65.0-135	91.7		
Blank	9050750-B	LK2							
Gasoline	5/26/99			ND	mg/kg	0.400			
Benzene	n			ND	"	0.00200			
Toluene	11			ND	н	0.00200			
Ethylbenzene	11			ND	H	0.00200			
Xylenes (total)	ш			ND	11	0.00400			
Methyl tert-butyl ether	п			ND	11	0.0100			
Surrogate: a,a,a-Trifluorotoluene		0.300		0.284		65.0-135	94.7		
Surrogate: 4-Bromofluorobenzene	u .	0.300		0.258	"	65.0-135	86.0		
1.00	9050750-B	D1							
LCS Gasoline	5/26/99	2.00		1.90	mg/kg	65.0-135	95.0		
	11	0.300		0.278	H H	65.0-135	92.7		
Surrogate: 4-Bromofluorobenzene		0.500		0.270		05.0-155	72.1		
LCS	9050750-B								
Gasoline	5/26/99	2.00		2.04	mg/kg	65.0-135			
Surrogate: 4-Bromofluorobenzene	н	0.300		0.262	"	65.0-135	87.3		
Matrix Spike	9050750-M	<u>IS1 P</u>	90555 <u>4-30</u>						
Gasoline	5/26/99	2.00	ND	1.75	mg/kg	65.0-135			
Surrogate: 4-Bromofluorobenzene	11	0.300	··-	0.251	"	65.0-135	83.7		
Matrix Spike Dup	9050750 <u>-M</u>	ISD1 P	905554-30						
Gasoline	5/26/99	2.00	ND	1.79	mg/kg	65.0-135	89.5	20.0	2.26
Surrogate: 4-Bromofluorobenzene	"	0.300		0.249	"	65.0-135	83.0		
Zar. Jane. I Zromojimorovenizene									



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Darryk Ataide	Reported:	6/3/99

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 9050847	Date Prepa	red: 5/27/9	9		Extract	ion Method: EPA	4 5030 sc	oil <u>s</u>		
Blank	9050847-B		_							
Gasoline	5/27/99			ND	mg/kg	0.400				
Benzene	PI .			ND	II	0.00200				
Toluene	**			ND	П	0.00200				
Ethylbenzene	19			ND	R	0.00200				
Xylenes (total)	н			ND	11	0.00400				
Methyl tert-butyl ether	н,			ND	+	0.0100				
Surrogate: a,a,a-Trifluorotoluene	· ·	0.300		0.295	er e	65.0-135	98.3			
Surrogate: 4-Bromosluorobenzene	ıı .	0.300		0.276	"	65.0-135	92.0			
<u>LCS</u>	9050847-B	S1								
Gasoline	5/27/99	2.00		2.08	mg/kg	65.0-135	104			
Surrogate: 4-Bromofluorobenzene	ff.	0.300		0.280	11	65.0-135	93.3			
Matrix Spike	9050847-M	IS1 P	905496-02							
Gasoline	5/28/99	2.00	ND	1.41	mg/kg	65.0-135	70.5			
Surrogate: 4-Bromofluorobenzene	"	0.300		0.211	"	65.0-135	70.3			
Matrix Spike Dup	9050847-M	ISD1 P	905496-02							
Gasoline	5/28/99	2.00	ND	1.56	mg/kg	65.0-135	78.0	20.0	10.1	
Surrogate: 4-Bromofluorobenzene	"	0.300		0.223	"	65.0-135	74.3			



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/ 9 9
Oakland, CA 94608	Project Manager:	Darryk Ataide	Reported:	6/3/99

Volatile Organic Compounds by EPA Method 8260B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%_	Limit	%	Notes*
Batch: 9050872	Date Prepa	red: 5/28/9	<u>99</u>		<u>Extract</u>	ion Method: EP	A 5030 sc	oil <u>s MeO</u>	<u>H</u>	
<u>Blank</u>	9050872-BI	<u>_K1</u>								
Methyl tert-butyl ether	6/1/99			ND	mg/kg	1.00				
Surrogate: Dibromofluoromethane	ff .	2.00		2.18	H	80.0-120	109			
Blank	9050872-BI	LK2								
Methyl tert-butyl ether	6/3/99			ND	mg/kg	0.200		,		
Surrogate: Dibromofluoromethane	"	2.00		1.92	н	80.0-120	96.0			
LCS	9050872-BS	<u>81</u>								
Methyl tert-butyl ether	6/1/99	2.00		1.91	mg/kg	75.8-124	95.5			
Surrogate: Dibromofluoromethane	p	2.00		2.13	#	80.0-120	107			
LCS	9050872-BS	<u>82</u>								
Methyl tert-butyl ether	6/3/99	2.00		1.81	mg/kg	75.8-124	90.5			
Surrogate: Dibromofluoromethane	n	2.00		1.99	"	80.0-120	99.5			
Matrix Spike	9050872-M	S1 P	905660-03							
Methyl tert-butyl ether	6/1/99	2.00	ND	1.85	mg/kg	75.8-124	92.5			
Surrogate: Dibromofluoromethane	н	2.00		2.05	п	80.0-120	102			
Matrix Spike Dup	9050872-M	SD1 P	905660-03							
Methyl tert-butyl ether	6/1/99	2.00	ND	1.77	mg/kg	75.8-124	88.5	35.0	4.42	
Surrogate: Dibromofluoromethane		2.00		1.88	п	80.0-120	94.0			





Cambria Environmental - Oakland

1144 65th St., Suite C Oakland, <u>CA</u> 94608 Project: Shell Oil Co.

Project Number: 105 5th St., Oakland

Project Manager: Darryk Ataide

Sampled: 5/14/99

Received: 5/17/99

Reported: 6/3/99

Notes and Definitions

#	Note
1	This sample was analyzed outside the EPA recommended holding time.
2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

CL Fife No.: 57111-99113

PHONE

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Sequoia Analytical

(Petaluma) P905601

Sample	Sample	Total	Bulk	Density	Matrix	Moisture	Frac.	Description
Name	Date	Porosity %	Dry q/cc	Natural g/cc	Density q/cc	Content %	Org. Carbon	
P9 05601- 01	5/14/99	31.6	1.84	2.09	2.68	14.0	0.116	Gray silty vf-fgr sand
P905601-03	5/14/99	29.0	1.91	2.20	2.69	15.1	i .	Gray silty vf-fgr sand
P905601-12	5/14/99	31.6	1.85	2.17	2.70	17.0		Gray silty vf-fgr sand
P905601-20	5/14/99	31.8	1.82	2.14	2.67	17.4	į.	Gray silty vf-fgr sand
P905601-22	5/14/99	33.0	1.81	2.14	2.71	18.2		Gray sifty vf-fgr sand

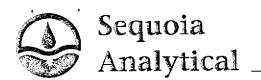
Grain and pore volumes were determined by Boyle's Law methods as per API RP-40. Sample densities and total porosity were calculated as per API RP-40. Moisture content was determined by ASTM D-2216. Fractional Organic Carbon Content was determined using Walkley-Black methods.

SHELL RETAIL E	OIL	CO	MP.	AN)	/ NEER	MG -	WE	ST		Y.	CH		1 O Ial N		UST	OD	Y	EC	O KID I JE I	age:	5/17/99
lle Address:	-			~ 4						And	dys	ls R	egu	lred	1				LAB: Sequera-	Redu	od City
NC#:	1	Gario	unit	CM.			-	-			ŕ		1	4	3				CHECK OHE (1) BOX OHEY C	1/01	PRII AROUND TIME
Incident # 98995	75 /	SAP:		570C					0				0	1366	9				rs.W. Monitoring	1461 24	hows []
rell Engliseer:			- 1	SST	145-	730,6			36				iore.	\$ 5	747				Site Investigation []	1441 40	hour [**]
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Sample ID	Date	Sludge	soli	Water	Alt	No. of	四古	也古	SIEX O	Voicille	Test for Disp	Combination IPH 2015 & STEX 8020	Physi		Asbes	Container	Preparation	Composite	MATERIAL DESCRIPTION	C	ONDITION/ OMMENTS
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nwl- 5.5'	5/14		X.	8			X		X										MTBE Conco	ita	ationat
niol- 10'.	5/14		Χ			1							X					_	jeach local	ion	(mwl;
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/	-			Albert Land	a service	PROVIDE	Timi	145	100000			1	-0	7		-		-			

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Silo Address: 105-544	21	Caklo	met.	CIT			-		_				- 2		3		1		CHICK ON (I) BOX ONLY	CI/DI	TURI AROUND BAR
Incident # 9899	575	/SAP=	135	5700		E			$I \setminus$				16	2	10	- 1	. 1		G.W. Monitoring	3 4461	24 hours []
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MW2 - 15,5 MW2 20' ollinguistiod By (algumin MWA Secretary	5/14	Print	od Han	A Br	1661	T I E	- Ilu	19: / 10: 5 19: /	1000 1000 535	7 110	colve	d (ol	nului	oh	L)	OOL	Print Print Print	ampenature pod Name 2:441	ples	Dale:5/1/59 Iling: 13 20 Dule: 5/16 Iling: 125
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SHELL RETAIL E	SHELL OIL COMPANY RETAIL ENVIRONMENTAL ENGINEERING - WEST Address: 105-5th St., Oakland CH														UST	OD	YE		P	aña,	5/17/99
							_			And	alys	ls Re	equi	red	١.	CHIEFT	787-111		LAB: Seguoia-	Redu	rood City
								-			Ė		Ť۱	4	1				CHECK OHE (1) BOX OHEY	:1/01	IURN AROUND THAT
Incident # 98995	75	SAP:	- 135	70C)				5				1.1	600	3.4				G.W. Montteday []	4461 2	thour []
holl Englineer: Kaven Petryn				S59 G	No.t	730,6			4				177	1003	12				Site Investigation []	441 4	hour []
onsultant Name & /	ddres	: CAME	NIST	ENVIR	onMi	ENTAL			2	10	- 5	8	50	1,	P. C.	83			toll Classify/Objects []	442 10	days [](Homal)
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Juled Name:				No. of	E E	E GEA	ě		Set for Ex	Combine	Aysu		bestos	Containe	Preparation Use	Societi	MATERIAL DESCRIPTION		SAMPLE CONDITION/		
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mw2-25'	5/14		X	11	9	1				. ,	+1	þ.	15	2_					MIBE Com	antra	eation at
mw2 - 25.5'	5/14		X		•	1	X		X					_					each local	700	<u> </u>
mw3-61	STIY	558	X.			1							×						(mw-1, mw	-2	or MW3)
mw3-6.5'	5/14		X			1	X		X										by EPA	mi	Shool
mw3 - 11'	5/14		X			1	Γ						X						· 6260°		
mw3 - 11.5'	5/14		X			1	>	{	X							,	OOLE	RCL	STODYSEALS INTACTO	NOTI	NTACT
mu316'	SIN	-	X	1	-		1	1	1	T	4	0	1	D			r,o	PLE	PTEMPERATURE /	1/10	and the state of t
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Rolling data och fly Colling of	wh	Print	od Hair	BI	1 GG	CC	_ Ilu	101	1013	2 10	celve	न (व	inului	0)1	h			Palit	lad Names A. A. La	-	Vule: 50
Rollnepulations By (signature	· for	Prini	ed Nar	ijet		-	_ Iln	1012	18	Re	oolve	तं (वं	malúr	0)1					led Name:	~	Dale; Dale; Iline;
G: IntAI			IE LABS	PATOR	LMUST	PROVID	LAC	DPY (DF.IIII	icii	AIN-SI	f-CV	HQDY	WIII	LINVS	DICE	AHD	RESU	LIS		Barting Peace.

SHELI RETAIL I			ing -	WE	ST .			CH		l Ol lal N		UST	OD	YF	EC	CORD	Dale Pag	= 18.8 CONDOM			
Sile Address:		Oakle		c 4						And	alys	ls R	equ	red	ı				LAB: Seguoja	a-Re	dissoil City
Tucident# 9899		1		5700)				h										CHECK OHE (1) SOX OHE	4441	24 hours []
hell Englneer: Kaven Petryn	2	× ====		Phone 557 Fax II:	No.:	5643			BE		•	я							Site investigation [] 4411	48 bates []
onsullant Name & 44 65% St. Sv Consullant Contact:	and,		460	8	In	Q	-m.	. (OF728		STEX 8020					8		Water Classify/Disposal] 440] 440	Other DV 10.0		
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Sampled by: TRO	Ē		********		3015 M	2013 Wk	8020/4	nganje	Dock	for 174				SZZB	on Used	N.Y. et	UST AGENCY		<u> </u>		
Sample ID	Solt	Woter	Alt	No. of	FH DA	Y SEE	SEX CO.A.	Voictile O	Test for Disp	Combine			Asbestos	Containe	Preparati	Composite	MATERIAL DESCRIPTION		SAMPLE CONDITION/ COMMENTS		
mw3-16.5	Sliy		χ.	-)	X	-	X	É		Ť	_			Ŭ.		Ť	Confirm		Hishat
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MW3-21.5	5/14		X			1	\geq	_	X	_		_	_	_		_	_	-	ateach		ocation
MW3-24.5	5/14	1/25	X	-		+	~	-	~	E	C	1	2	-	_	-	-	-	la FOA	W-R	100 MW-3)
mw3-25'	9/19		^	-	-			-	1	100	-	-	-			_	-		COOLER CUSTODY SE	ALNO	TOTAL COLOR
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scr tyri/44			IE LABS	PATORY	MUST	PROVIDE	AC	JPY C	1f.1111	S CII/	S-MI	F-CV	HODY	WIII	UNAC	ZICE	VHIST	KESUI	115		म्ब्युव साक्षक



August 12, 1999

W.R. Jones Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112

RE: 105 5th Street/M907957

Dear W.R. Jones

Enclosed are the results of analyses for sample(s) received by the laboratory on July 26, 1999. If you have any questions concerning this report, please feel free to contact me.

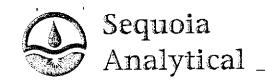
Sincerely,

Kayvan Kimyai

Project Manager D.M.

CA ELAP Certificate Number 1210

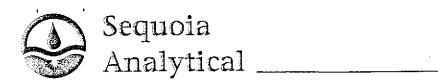




Blaine Tech Services	Project: Equi	va	Sampled:	7/23/99
1680 Rogers Ave	Project Number: 105 5	5th Street	Received:	7/26/99
San Jose, CA 95112	Project Manager: Ann	Pember	Reported:	8/12/99

ANALYTICAL REPORT FOR M907957

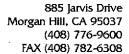
Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-1	M907957-01	Water	7/23/99
MW-2	M907957-02	Water	7/23/99
MW-3	M907957-03	Water	7/23/99

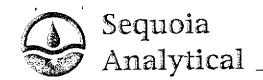


Blaine Tech Services	Project: Equiva	Sampled: 7/23/99
1680 Rogers Ave	Project Number: 105 5th Street	Received: 7/26/99
San Jose, CA 95112	Project Manager: Ann Pember	Reported: 8/12/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT Sequoia Analytical - Morgan Hill

	Batch	Date	Date	Surrogate	Reporting	•	- 041	
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
MW-1			M9079	E7 01			Water	
Purgeable Hydrocarbons	9080159	8/3/99	8/4/99	37-01	50.0	ND	ug/l	
Benzene	9000139	0/3/7 7	0/4/99		0.500	ND	ug/i	
Toluene	,,	II.	.,		0.500	ND ND	**	
	,	II.				ND ND	**	
Ethylbenzene		 It			0.500		,,	
Xylenes (total)			 		0.500	ND	10	
Methyl tert-butyl ether	"				2.50	ND		·
Surrogate: a,a,a-Trifluorotoluene	,,	"	"	70.0-130		90.2	%	
MW-2			M9079	57-02			Water	
Purgeable Hydrocarbons	9080150	8/3/99	8/3/99		10000	13800	ug/l	
Benzene	n	11	*		100	1790	"	
Toluene	"	17	**		100	ND		
Ethylbenzene	H	11	11		100	ND	•	
Xylenes (total)	Ħ	17	T#		100	682	•	
Methyl tert-butyl ether	R	11	8/5/99		500	29900	pp.	
Surrogate: a,a,a-Trifluorotoluene	"	n	8/3/99	70.0-130		131	%	1
MW-3			M9079	57_03			Water	
Purgeable Hydrocarbons	9080150	8/3/99	8/3/99	<u> </u>	50.0	128	ug/l	2
Benzene	11	11	"		0.500	ND	#	_
Toluene	n	II.	**		0.500	ND		
Ethylbenzene	n	11	11		0.500	ND		
Xylenes (total)	n	11	19		0.500	ND	10	
Methyl tert-butyl ether	H	11	8/9/99		5000	404000		
Surrogate: a,a,a-Trifluorotoluene	nt .	7	8/3/99	70.0-130	2000	ND	%	· 1
Surrogaie: a,a,a-irijiuoroiviuene			0/3/77	70.0-130		MD	70	1



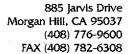


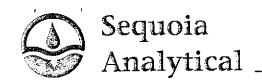
Blaine Tech Services	Project:	Equiva
1680 Rogers Ave	Project Number:	105 5th Street
San Jose, CA 95112	Project Manager:	Ann Pember

Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99

Total Metals by EPA 6000/7000 Series Methods Sequoia Analytical - Morgan Hill

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
MW-1 Ferrous Iron	9071022	7/30/99	<u>M9079:</u> 7/30/99	<u>57-01</u> EPA 6010A	0.0100	17.0	<u>Water</u> mg/l	
MW-2 Ferrous Iron	9071022	7/30/99	<u>M9079</u> 7/30/99	<u>57-02</u> EPA 6010A	0.0100	7.20	<u>Water</u> mg/l	
MW-3 Ferrous Iron	9071022	7/30/99	<u>M9079</u> 7/30/99	<u>57-03</u> EPA 6010A	0.0100	25.0	Water mg/l	





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112 Project: Equiva
Project Number: 105 5th Street

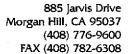
Project Manager: Ann Pember

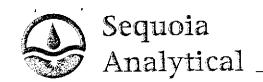
Sampled: 7/23/99

Received: 7/26/99 Reported: 8/12/99

Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Morgan Hill

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>MW-1</u> Total Alkalinity	9070960	7/28/99	<u>M9079:</u> 7/28/99	57-01 EPA 310.1	5.00	150	<u>Water</u> mg/l	
MW-2 Total Alkalinity	9070960	7/28/99	<u>M9079</u> 7/28/99	57-02 EPA 310.1	5.00	270	Water mg/l	
MW-3 Total Alkalinity	9070960	7/28/99	<u>M9079:</u> 7/28/99	57-03 EPA 310.1	5.00	530	<u>Water</u> mg/l	



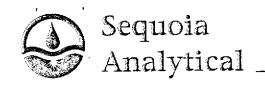


Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112 Project Number: Equiva
Project Number: 105 5th Street
Project Manager: Ann Pember

Sampled: 7/23/99 Received: 7/26/99 Reported: 8/12/99

Anions by EPA Method 300.0 Sequoia Analytical - Morgan Hill

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>MW-1</u>			M9079	57-01			<u>Water</u>	
Nitrate as NO3	9070943	7/27/99	7/27/99	EPA 300.0	1.00	ND	mg/l	
Sulfate as SO4	9070944	47	10	EPA 300.0	1.00	17.5	n	
MW-2			M9079	57-0 <u>2</u>			<u>Water</u>	
Nitrate as NO3	9070943	7/27/99	7/27/99	EPA 300.0	1.00	ND	mg/l	
Sulfate as SO4	9070944	**	n	EPA 300.0	1.00	9.97	н .	
MW-3			M9079:	57-03			<u>Water</u>	
Nitrate as NO3	9070943	7/27/99	7/27/99	EPA 300.0	1.00	ND	mg/l	
Sulfate as SO4	9070944	**	D	EPA 300.0	1.00	6.36	"	

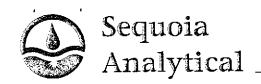


Blaine Tech Services Project: Equiva Sampled: 7/23/99
1680 Rogers Ave Project Number: 105 5th Street Received: 7/26/99
San Jose, CA 95112 Project Manager: Ann Pember Reported: 8/12/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control Sequoia Analytical - Morgan Hill

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit		Notes*
				-						
Batch: 9080150	Date Prepa	red: 8/3/99			Extract	tion Method: EPA	5030B	[P/T]		
<u>Blank</u>	9080150-BI	<u>LK1</u>								
Purgeable Hydrocarbons	8/3/99			ND	ug/l	50.0				
Benzene	n			ND	#	0.500				
Toluene	**			ND	H	0.500				
Ethylbenzene	н			ND	**	0.500				
Xylenes (total)	Ħ			ND	H	0.500				
Methyl tert-butyl ether	m			ND	Ħ	2.50				
Surrogate: a,a,a-Trifluorotoluene	"	10.0	-	11.0	"	70.0-130	110			
LCS	9080150-BS	<u>81</u>								
Benzene	8/3/99	10.0		10.9	ug/l	70.0-130	109			
Toluene	**	10.0		10.8	**	70.0-130	108			
Ethylbenzene	•	10.0		10.6	n	70.0-130	106			
Xylenes (total)	**	30.0		32.1	m	70.0-130	107			
Surrogate: a,a,a-Trifluorotoluene	n	10.0		10.1	"	70.0-130	101			
LCS Dup	9080150-BS	<u>SD1</u>								
Benzene	8/3/99	10.0		10.8	ug/l	70.0-130	108	25.0	0.922	
Toluene	•	10.0		10.6	"	70.0-130	106	25.0	1.87	
Ethylbenzene	"	10.0		10.3	**	70.0-130	103	25.0	2.87	
Xylenes (total)	"	30.0		31.4	11	70.0-130	105	25.0	1.89	
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.1	н	70.0-130	101	•		
Batch: 9080159	Date Prepa	red: 8/3/99			Extract	tion Method: EPA	4 5030B	[P/T]		
Blank .	9080159-BI	<u>LK1</u>								
Purgeable Hydrocarbons	8/3/99			ND	ug/l	50.0				
Benzene	**			ND	н	0.500				
Toluene	P			ND	H	0.500				
Ethylbenzene	n			ND	#	0.500				
Xylenes (total)	**			ND	н	0.500				
Methyl tert-butyl ether	*1			ND	"	2.50				
Surrogate: a,a,a-Trifluorotoluene	#	10.0		9.89	n	70.0-130	98.9			
LCS	9080159-BS	<u>81</u>								
Benzene	8/3/99	10.0		9.80	ug/l	70.0-130	98.0			
Toluene	"	10.0		10.4	#	70.0-130	104			
Ethylbenzene	н	10.0		9.52	IF	70.0-130	95.2			
Xylenes (total)	н	30.0		29.0	17	70.0-130	96.7			
Surrogate: a,a,a-Trifluorotoluene	H	10.0		10.6	"	70.0-130	106			-

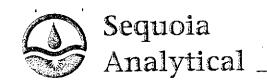
Sequoia Analytical - Morgan Hill



Blaine Tech Services	Project:	Equiva	Sampled:	7/23/99
1680 Rogers Ave	Project Number:	105 5th Street	Received:	7/26/99
San Jose, CA 95112	Project Manager:	Ann Pember	Reported:	8/12/99

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT/Quality Control Sequoia Analytical - Morgan Hill

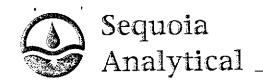
	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
LCS Dup	9080159-BS	5 <u>D1</u>							
Benzene	8/3/99	10.0		9.81	ug/l	70.0-130	98.1	25.0	0.102
Toluene	н	10.0		10.3	н	70.0-130	103	25.0	0.966
Ethylbenzene	11	10.0		9.59	н	70.0-130	95.9	25.0	0.733
Xylenes (total)	4	30.0		28.7	IT	70.0-130	95.7	25.0	1.04
Surrogate: a,a,a-Trifluorotoluene	"	10.0		10.6	"	70.0-130	106		



1	Blaine Tech Services	Project:	Equiva	Sampled:	7/23/99	
	1680 Rogers Ave	Project Number:	105 5th Street	Received:	7/26/99	
	San Jose, CA 95112	Project Manager:	Ann Pember	Reported:	8/12/99	

Total Metals by EPA 6000/7000 Series Methods/Quality Control Sequoia Analytical - Morgan Hill

	Date	Spike	Sample	QC	_	Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 9071022 Blank	<u>Date Prepared: 7/2/99</u> 9071022-BLK1				Extraction Method: EPA 3010A					
Ferrous Iron	7/30/99			ND	mg/l	0.0100				
LCS Ferrous Iron	9071022-BS1 7/30/99	1.00		1.04	mg/l	80.0-120	104			
Matrix Spike Ferrous Iron	9071022-MS1 7/30/99	1.00	07885-01 0.110	0.970	mg/l	80.0-120	86.0			
Matrix Spike Dup Ferrous Iron	9071022-MSI 7/30/99	<u>M9</u> 1.00	07885-01 0.110	1.10	mg/l	80.0-120	99,0	20.0	14.1	

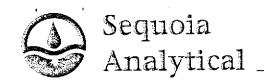


Blaine Tech Services Project: Equiva Sampled: 7/23/99
1680 Rogers Ave Project Number: 105 5th Street Received: 7/26/99
San Jose, CA 95112 Project Manager: Ann Pember Reported: 8/12/99

Conventional Chemistry Parameters by APHA/EPA Methods/Quality Control Sequoia Analytical - Morgan Hill

	Date	Spike	Sample	QC	•	Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 9070960 Blank	Date Prepared		2		Extrac	tion Method: Ger	neral Pre	paration		
Total Alkalinity	7/28/99	_		ND	mg/l	5.00				
LCS Total Alkalinity	9070960-BS1 7/28/99	100		98.0	mg/l	80.0-120	98.0			
Matrix Spike Total Alkalinity	9070960-MS1 7/28/99	M9 0 100	0 7957-01 150	240	mg/l	75.0-125	90.0			
Matrix Spike Dup Total Alkalinity	<u>9070960-MSD</u> 7/28/99	100 <u>M90</u>)7957-01 150	240	mg/l	75.0-125	90.0	20.0	0	





Blaine Tech Services 1680 Rogers Ave San Jose, CA 95112

Project: Equiva

Project Number: 105 5th Street

Received: 7/26/99

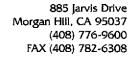
Sampled: 7/23/99

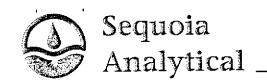
Project Manager: Ann Pember

Reported: 8/12/99

Anions by EPA Method 300.0/Quality Control Sequoia Analytical - Morgan Hill

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 9070943 Blank Nitrate as NO3	Date Prepared 9070943-BLK 7/27/99		<u>9</u>	ND	Extrac	ction Method: Gen	neral Pre	<u>paration</u>		
LCS Nitrate as NO3	9070943-BS1 7/27/99	100		92.2	mg/l	80.0-120	92.2			
Matrix Spike Nitrate as NO3	9070943-MS1 7/27/99	<u>M9</u> 100	07989-01 73.3	168	mg/l	75.0-125	94.7			
Matrix Spike Dup Nitrate as NO3	9070943-MSD 7/27/99	100	07989-01 73.3	165	mg/l	75.0-125	91.7	20.0	3.22	
Batch: 9070944	Date Prepared	1: 7/27/99	9		Extrac	tion Method: Ger	neral Pre	paration		
Blank Sulfate as SO4	9070944-BLK 7/27/99		_	ND	mg/l	1.00				
LCS Sulfate as SO4	9070944-BS1 7/27/99	100		99.7	mg/l	80.0-120	99.7			
Matrix Spike Sulfate as SO4	9070944-MS1 7/27/99	<u>M9</u> 100	07957-03 6.36	94.9	mg/l	75.0-125	88.5			
Matrix Spike Dup Sulfate as SO4	9070944-MSD 7/27/99	01 <u>M9</u> 100	07957-03 6.36	94.2	mg/l	75.0-125	87.8	20.0	0.794	

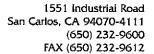


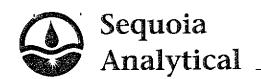


Blaine Tech Services	Project:	Equiva	Sampled:	7/23/99
1680 Rogers Ave	Project Number:	105 5th Street	Received:	7/26/99
San Jose, CA 95112	Project Manager:	Ann Pember	Reported:	8/12/99

Notes and Definitions

#	Note
1	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
2	Chromatogram Pattern: Weathered Gasoline C6-C12
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference





August 2, 1999

Kayvan Kimyai Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037

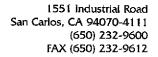
RE: 1/L907273

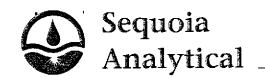
Dear Kayvan Kimyai

Enclosed are the results of analyses for sample(s) received by the laboratory on July 29, 1999. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wayne Stevenson Project Manager





Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037

Project: 1 Project Number: M907957

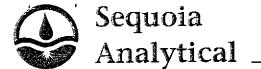
Sampled: 7/23/99 Received: 7/29/99

Reported: 8/2/99 12:00 Project Manager: Kayvan Kimyai

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
M907957-01/MW-1	L907273-01	Water	7/23/99
M907957-02/MW-2	L907273-02	Water	7/23/99
M907957-03/MW-3	L907273-03	Water	7/23/99





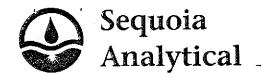
1551 Industrial Road San Carlos, CA 94070-4111 (650) 232-9600 FAX (650) 232-9612

Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037 Project: 1
Project Number: M907957
Project Manager: Kayvan Kimyai

Sampled: 7/23/99 Received: 7/29/99 Reported: 8/2/99 12:00

M907957-01/MW-1 [L907273-01]

	Batch	Date	Date	Specific Method/	Reporting			
Analyte	Number	Prepared	Analyzed	Surrogate Limits	Limit	Result	Units	Notes*
		_						
		Seque	oia Analytica	<u>i - San Carlos</u>				
MTBE by EPA Method 8260A								•
Methyl tert-butyl ether	9070118	7/29/99	7/29/99		2.00	NĎ	ug/l	
Surrogate: 1,2-Dichloroethane-d4	"	n	п	76.0-114	•	109	%	



1551 Industrial Road San Carlos, CA 94070-4111 (650) 232-9600 FAX (650) 232-9612

Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037 Project: 1

Project Number: M907957

Project Manager: Kayvan Kimyai

Sampled: 7/23/99

Received: 7/29/99

Reported: 8/2/99 12:00

M907957-02/MW-2 [L907273-02]

	Batch	Date	Date	Specific Method/	Reporting			
Analyte	Number	Prepared	Analyzed	Surrogate Limits	Limit	Result	Units	Notes*

Sequoia Analytical - San Carlos

MTBE by EPA Method 8260A Methyl tert-butyl ether Surrogate: 1,2-Dichloroethane-d4

9070122

7/30/99

7/30/99

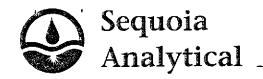
76.0-114

400 29400

ug/l

%

95.0



1551 Industriai Road San Carlos, CA 94070-4111 (650) 232-9600 FAX (650) 232-9612

Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037

Project: 1

Project Number: M907957

Project Manager: Kayvan Kimyai

Sampled: 7/23/99

Received: 7/29/99 Reported: 8/2/99 12:00

M907957-03/MW-3 [L907273-03]

Batch Date Specific Method/ Reporting Date Analyte Number Prepared Analyzed Surrogate Limits Limit Result Units Notes*

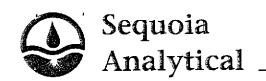
Sequoia Analytical - San Carlos

MTBE by EPA Method 8260A

Methyl tert-butyl ether 10000 324000 9070122 7/30/99 7/30/99 ug/l Surrogate: 1,2-Dichloroethane-d4

76.0-114 94.0





Sequoia - Morgan HillProject: 1Sampled: 7/23/99885 Jarvis DriveProject Number: M907957Received: 7/29/99Morgan Hill, CA 95037Project Manager: Kayvan KimyaiReported: 8/2/99 12:00

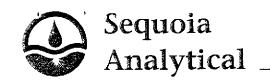
MTBE by EPA Method \$260A/Quality Control Security Analytical - San Carlos

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
			•11		•					
Batch: 9070118	Date Prepa	red: 7/23/9	<u>99</u>		Extract	tion Method: EPA	A 5030B	[P/T]		
<u>Blank</u>	<u>9070118-BI</u>	<u>LK1</u>								
Methyl tert-butyl ether	7/23/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		54.2	"	76.0-114	108			
Blank	9070118-BI	W2								
Methyl tert-butyl ether	7/29/99	JKE		ND	ug/l	0.500				
Surrogate: 1,2-Dichloroethane-d4	#	50.0		52.2	# TE/ I	76.0-114	104		-	
Barroguie. 1,2-Diemorochane-u-		50.0		32.2		70.0 117	10,			
<u>LCS</u>	9070118-BS	<u>81</u>								
Methyl tert-butyl ether	7/23/99	50.0		50.2	ug/l	70.0-130	100			
Surrogate: 1,2-Dichloroethane-d4	11	50.0		54.4	н	76.0-114	109			
LCS	9070118-BS	S2								
Methyl tert-butyl ether	7/29/99	50.0		56.8	ug/I	70.0-130	114			
Surrogate: 1,2-Dichloroethane-d4	rr	50.0		53.5	"	76.0-114	107			
2						,				
Matrix Spike	9070118-M		907212-01							
Methyl tert-butyl ether	7/23/99	50.0	11.0	60.1	ug/l	60.0-140	98.2			
Surrogate: 1,2-Dichloroethane-d4	и	50.0		55.1	Ħ	76.0-114	110			
Matrix Spike Dup	9070118-M	SD1 L9	907212-01							
Methyl tert-butyl ether	7/23/99	50.0	11.0	59.6	ug/l	60.0-140	97.2	25.0	1.02	
Surrogate: 1,2-Dichloroethane-d4	m	50.0	22.0	54.8	"	76.0-114	110			
2		• • • • • • • • • • • • • • • • • • • •		27.0		. 4.0				
Batch: 9070122	Date Prepa		<u>)9</u>		Extract	ion Method: EP	A 5030B	[P/T]		
<u>Blank</u>	<u>9070122-BI</u>	<u>LK1</u>								
Methyl tert-butyl ether	7/26/99		=	ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		46.0	"	76.0-114	92.0			
Blank	9070122-BI	LK2								
Methyl tert-butyl ether	7/27/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		45.8	"	76.0-114	91.6			
•										
Blank	<u>9070122-BI</u>	L <u>K3</u>								
Methyl tert-butyl ether	7/28/99		·	ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		45.6	"	76.0-114	91.2			
Blank	9070122-BI	LK4								
Methyl tert-butyl ether	7/29/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	#	50.0		45.6	"	76.0-114	91.2			
		- 5.0		- 22 - 12		. 472 22 .				

Sequoia Analytical - San Carlos

*Refer to end of report for text of notes and definitions.

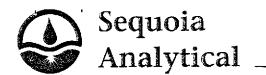




Sequoia - Morgan HillProject:1Sampled:7/23/99885 Jarvis DriveProject Number:M907957Received:7/29/99Morgan Hill, CA 95037Project Manager:Kayvan KimyaiReported:8/2/99 12:00

MTBE by EPA Method 8260A/Quality Control Sequoia Analytical - San Carlos

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
										<u> </u>
Blank	9070122-BL	<u>K5</u>				_				
Methyl tert-butyl ether	7/30/99			ND	ug/l	2.00				
Surrogate: 1,2-Dichloroethane-d4	"	50.0		46.0	st	76.0-114	92.0			
LCS	9070122-BS	1				•				
Methyl tert-butyl ether	7/26/99	50.0		40.1	ug/l	70.0-130	80.2			
Surrogate: 1,2-Dichloroethane-d4	ji	50.0		44.7	n	76.0-114	89.4	-		
LCS	9070122-BS	2								
Methyl tert-butyl ether	7/27/99	50.0		37.7	ug/l	70.0-130	75.4			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		43.8	n	76.0-114	87.6			
LCS	9070122-BS	<u>3</u>								
Methyl tert-butyl ether	7/28/99	50.0		38.8	ug/l	70.0-130	77.6			
Surrogate: 1,2-Dichloroethane-d4	п	50.0		45.9	rt	76.0-114	91.8			
LCS	9070122-BS	4								
Methyl tert-butyl ether	7/29/99	50.0		41.8	ug/i	70.0-130	83.6			
Surrogate: 1,2-Dichloroethane-d4	#	50.0		48.0	ff	76.0-114	96.0			
LCS	9070122-BS									
Methyl tert-butyl ether	7/30/99	50.0		40.9	ug/l	70.0-130	81.8			
Surrogate: 1,2-Dichloroethane-d4	<i>"</i> .	50.0		47.6	tt.	76.0-114	95.2			
Matrix Spike	9070122-MS	<u>S1 L9</u>	907232-01							
Methyl tert-butyl ether	7/26/99	50.0	ND	41.8	ug/l	60.0-140	83.6			
Surrogate: 1,2-Dichloroethane-d4	H	50.0		44.8	"	76.0-114	89.6			
Matrix Spike Dup	9070122-MS	SD1 L	907232-01							
Methyl tert-butyl ether	7/26/99	50.0	ND	40.6	ug/l	60.0-140	81.2	25.0	2.91	
Surrogate: 1,2-Dichloroethane-d4	n	50.0		47.0	H	76.0-114	94.0			



1551 Industrial Road San Carlos, CA 94070-4111 (650) 232-9600 FAX (650) 232-9612

Sequoia - Morgan Hill 885 Jarvis Drive Morgan Hill, CA 95037

Project: 1 Project Number: M907957 Project Manager: Kayvan Kimyai

Sampled: 7/23/99 Received: 7/29/99 Reported: 8/2/99 12:00

Notes and Definitions

Note

Analyte DETECTED

ND

DET

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

Recov.

Recovery

RPD

Relative Percent Difference

Sequoia Analytical - Morgan Hill Subcontract Order

M907957 LG07273

Sending Laboratory

Sequoia Analytical - Morgan Hill

885 Jarvis Drive

Morgan Hill, CA 95037

Phone: 408-776-9600 Fax: 408-782-6308

Project Manager: Kayvan Kimyai

Receiving Laboratory

Sequoia Analytical - San Carlos

1551 Industrial Road San Carlos, CA 94070

Phone: 650-232-9600 Fax: 650-232-9612

Subcontract Order Comments

7/26/99 11:19

	Sample/Analysis Information										
Sample Name	Matrix	Sampled/ Expires	Analysis R	equested	Due	Lab Number	Container		Comments		
M907957-01	Water	7/23/99		,			C				
		8/6/99	8260A MTBE	Н	8/9/99			San Carlos			
M907957-02	Water	7/23/99					С				
		8/6/99	8260A MTBE	Н	8/9/99			San Carlos			
M907957-03	Water	7/23/99					c				
		8/6/99	8260A MTBE	Н	8/9/99			San Carlos			

Released By	Date 7/13	Received By_	J. Com	Date 729/99	0800
Released By	Date	Received By		Date	Page 1 of 1

TECH SERVICES INC.	FAX (408) 573-77	771	1								
SAMPLE LD. Equiva - Karen Petro Equiva - Karen Petro STE 105 5th Street Oakland, GA	PHONE (408) 573-08 2 3 - P 3 yna ATRIX CONTAINERS OR TOTAL W 6	C = COMPOSITE ALL CONTAINERS	- X TPH - gas, BTEX	1 2	✓ X MTBE by 8260	TPH - diesel	T HOM	W:txte(300.	- X Ferrous from EPA 200.7	☐ EPA ☐ LIA ☐ OTHER SPECIAL INSTRUCTIONS Send invoice to E Incident #	98995757 aine Tech Services mber
mw-2- 12:35								1		MgA	2952
mw-3 13:02	V V	-	5	V	4			1	4	, , ,	
											= 26
				\rightarrow							
SAMPLING DATE TIME SA	AMPLING ERFORMED BY	لــــــــــــــــــــــــــــــــــــ	<u> </u>						1	RESULTS NEEDED NO LATER THAN	
HELEASED BY	DAT	E - 24 -	49	TIME	: 44	/ PR	ECEIVE	D BY	1	Me :	DATE OF TIME
RELEASED BY	AR			TIME		₽ ^R	ECEIVE	D84	7	L-MI	DATE TIME 119
RELEASED BY	DAT	Έ		TIME	<u> </u>	₽ HI	ECEIVE	D BY	7	7/14	DATE TIME
						_					

ATTACHMENT B

Soil Boring Logs

BORING/WELL LOG



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

MW-1 **BORING/WELL NAME CLIENT NAME** Equiva Services LLC **DRILLING STARTED** 14-May-99 JOB/SITE NAME oak105 DRILLING COMPLETED ___14-May-99 LOCATION 105 Fifth Street, Oakland, California WELL DEVELOPMENT DATE (YIELD) NA **PROJECT NUMBER** 240-0472 **GROUND SURFACE ELEVATION** Not Surveyed DRILLER **Gregg Drilling** TOP OF CASING ELEVATION 12.22' ft above msl DRILLING METHOD Hollow-stem auger SCREENED INTERVAL 4 to 24 ft bgs 10" **BORING DIAMETER** 15.8 ftNA T. Buggle DEPTH TO WATER (First Encountered) _ LOGGED BY NA REVIEWED BY Darryk Ataide **DEPTH TO WATER (Static)**

Hand augered to 5' bgs. REMARKS CONTACT DEPTH (ft bgs) (mg/kg) GRAPHIC BLOW (ft bgs) U.S.C.S. EXTENT SAMPLE WELL DIAGRAM LITHOLOGIC DESCRIPTION PH41 SAND; (SAND); brown; soft; 5% silt, 90% sand, 5% gravel; low plasticity; high estimated permeability. Portland Type 1/11 Bentonite Seal Monterey Sand #3 2 4' - 5% silt, 95% sand. < 0.400 MW-1@5.5 2 4' - 5% clay, 5% silt, 90% sand. 20 < 0.400 MW-1 @10.5 SP 4"-diam... @ 14' - color brown, orange, rust 0.010" Slotted NA Schedule 40 V PVC < 0.400 MVV-1 @15.5 20 < 0.400 MVV-1 DEFAULT GDT 9/9/99 @20.5 3/18 25 25.5 < 0.400 MVV-1 Bottom of @25.5 Boring @ 25.5

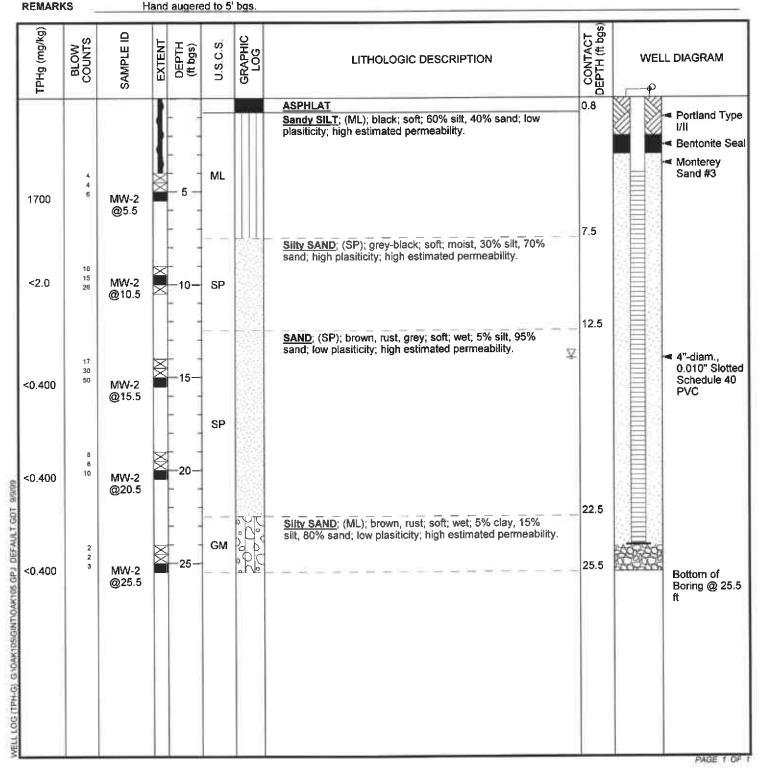
BORING/WELL LOG



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

Fax: (510) 420-9170

MW-2 Equiva Services LLC **BORING/WELL NAME CLIENT NAME** 14-May-99 **DRILLING STARTED** JOB/SITE NAME oak105 DRILLING COMPLETED ___14-May-99 105 Fifth Street, Oakland, California LOCATION WELL DEVELOPMENT DATE (YIELD) NA **PROJECT NUMBER** 240-0472 **GROUND SURFACE ELEVATION** Not Surveyed Gregg Drilling **DRILLER** TOP OF CASING ELEVATION 10.87' ft above ms! **DRILLING METHOD** Hollow-stem auger 10" SCREENED INTERVAL 4 to 24 ft bgs BORING DIAMETER DEPTH TO WATER (First Encountered) ____14.0 ftNA LOGGED BY T. Buggle REVIEWED BY Darryk Ataide **DEPTH TO WATER (Static)** NA



BORING/WELL LOG



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

Fax: (510) 420-9170

MW-3 **BORING/WELL NAME CLIENT NAME** Equiva Services LLC 14-May-99 **JOB/SITE NAME** oak105 **DRILLING STARTED** DRILLING COMPLETED 14-May-99 105 Fifth Street, Oakland, California LOCATION NA WELL DEVELOPMENT DATE (YIELD)_ PROJECT NUMBER 240-0472 Not Surveyed Grega Drilling **GROUND SURFACE ELEVATION** DRILLER Hollow-stem auger (Limited Access Rig) TOP OF CASING ELEVATION _ 11.27' ft above msl **DRILLING METHOD BORING DIAMETER** SCREENED INTERVAL 5 to 25 ft bgs DEPTH TO WATER (First Encountered) T. Buggle 12.5 ftNA LOGGED BY Darryk Ataide **DEPTH TO WATER (Static)** NA **REVIEWED BY** REMARKS Hand augered to 5' bgs.

CONTACT DEPTH (ft bgs) TPHg (mg/kg) SAMPLE ID GRAPHIC LOG BLOW U.S.C.S. DEPTH (ft bgs) EXTENT LITHOLOGIC DESCRIPTION WELL DIAGRAM 0.8 Silty SAND; (SM); black; soft; moist; 30% silt, 70% Portland Type sand; low plasiticity; high estimated permeability. Bentonite Seal SP Monterey 5 Sand #3 N/A N/A N/A <20.0 MW-3 @6.5 7.5 SAND; (SP); brown rust; soft; moist; 5% silt, 95% sand; low plasiticity; high estimated permeability. N/A N/A <20.0 MW-3 @11.5 ∇ 4"-diam. N/A @ 15' - brown, grey, rust; soft-medium; wet. 0.010" Slotted N/A Schedule 40 SP <20.0 MW-3 PVC @16.5 @ 17.5 - brown, grey, rust; medium; wet; 10% clay,10% silt, 80% sand; medium-high estimated permeability. N/A N/A VELL LOG (TPH-G) G JOAKHOS/GINTOAKIOS GPJ DEFAULT GDT 919199 N/A <2.0 MW-3 @21.5 N/A N/A 25.0 < 0.400 MW-3 Bottom of @25.0 Boring @ 25 ft

ATTACHMENT C Cambria's Standard Field Procedures for Monitoring Well Installation

STANDARD FIELD PROCEDURES FOR MONITORING WELL INSTALLATION

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

Well Construction and Surveying

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

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

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

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

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

Groundwater Sampling

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

ATTACHMENT D

Well Top of Casing Elevation Survey Report

Virgil Chavez Land Surveying

312 Georgia Street, Suite 200 Vallejo, California 94590-5907 (707) 553-2476 • Fax (707) 553-8698

June 9, 1999 Project No. 1703-18

Troy Bugle Cambria Environmental 1144 65th Street, Suite C Oakland, Ca. 94608

Subject: Monitoring Well Survey Shell Service Station 105 Fifth Street Oakland, Ca.

Dear Mr. Bugle:

This is to confirm that we have proceeded at your request to survey the monitoring wells located at the above referenced location. The survey was performed on May 26, 1999. The benchmark for the survey was a cut square in the top of curb, in mid-return at a over a curb inlet, at the northwest corner of 7th Fallon Street. Measurement locations were marked at approximate north side of top of box and top of casings. The stations and offsets are referenced to the back of sidewalk on Oak Street (BSW), looking southerly, beginning at the intersection (Intx.) with Fifth Street.

Benchmark Elevation = 19.29 MSL.

Monitoring Well No.	<u>Rim Elevation</u>	TOC Elevation
MW - 1	12.82′	12.22′
MW - 2	11.22′	10.87′
MW - 3	11.78′	11.27′
<u>Well No.</u>	<u>Station</u>	<u>Offset</u>
MW - 1	0+01.56	98.05(Rt.)
MW - 2	0+54.15	10.33(Rt.)
MW - 3	1+16.59	13.04(Rt.)
BSW Intx.	0+00.00	0.00
BSW Oak St.		0.00

No. 6323

Sup. 12-31-32

A CALIFORNIA

Sup. 12-31-32

Sincerely,

Virgil D. Chavez, PLS 6323

Virgil Chavez Land Surveying

312 Georgia Street, Suite 200 Vallejo, California 94590-5907 (707) 553-2476 • Fax (707) 553-8698

> June 10, 1999 Project No. 1703-18

Troy Bugle Cambria Environmental 1144 65th Street, Suite C Oakland, Ca. 94608

Re: Progress Billing

Monitoring Well Survey 105 Fifth Street Oakland, Ca.

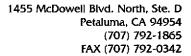
Description of Work

- 1. Perform Monitoring Well survey at the above referenced location, at the direction of Troy Bugle.
- 2. Prepare tables based on a field survey item referred to in (1.) above.

Total Amount Due \$ 280.00

ATTACHMENT E

Soil Stockpile Laboratory Analytical Report





May 27, 1999

Troy Buggle Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608

RE: Shell Oil Co./P905412

Dear Troy Buggle

Enclosed are the results of analyses for sample(s) received by the laboratory on May 17, 1999.

The analysis for organic lead was performed in our Sequoia Redwood City Laboratory.

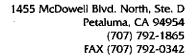
If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Scott Forbes Project Manager

Scott Falus

CA ELAP Certificate Number 2245





Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Troy Buggle	Reported:	5/27/99

ANALYTICAL REPORT FOR P905412

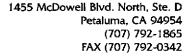
Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
SP-1	P905412-01	Soil	5/14/99
SP-2	P905412-02	Soil	5/14/99
SP-3	P905412-03	Soil	5/14/99
SP-4	P905412-04	Soil	5/14/99
Comp of SP-(1-4)	P905412-05	Soil	5/14/99



Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Troy BuggleReported:5/27/99

Total Petroleum Hydrocarbons as Gasoline by EPA 8015M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>SP-1</u>			P9054	<u>12-01</u>			<u>Soil</u>	
Gasoline	9050598	5/21/99	5/21/99		0.400	6.21	mg/kg	
Surrogate: 4-Bromofluorobenzene	"	11	"	65.0-135		102	%	
<u>SP-2</u>			P9054	12-02			<u>Soil</u>	
Gasoline	9050598	5/21/99	5/21/99		0.400	ND	mg/kg	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		86.3	%	
<u>SP-3</u>			P9054	<u>12-03</u>			Soil	
Gasoline	9050598	5/21/99	5/21/99		0.400	ND	mg/kg	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		73.7	%	
<u>SP-4</u>			P9054	<u>12-04</u>			Soil	
Gasoline	9050598	5/21/99	5/21/99		2.00	ND	mg/kg	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		89.7	%	





Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Troy BuggleReported:5/27/99

BTEX by 8020M Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
Comp of SP-(1-4)			P9054	<u>12-05</u>			<u>Soil</u>	
Benzene	9050545	5/20/99	5/20/99		0.00500	ND	mg/kg	
Toluene	11	II.	TP.		0.00500	ND	R	
Ethylbenzene	n .	lf.	#T		0.00500	0.0457	II .	
Xylenes (total)	н	10	п		0.0100	0.213	ш	
Methyl tert-butyl ether	н	111	11		0.0250	0.436	It	
Surrogate: a,a,a-Trifluorotoluene	"	11	"	65.0-135		92.7	%	



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Troy Buggle	Reported:	5/27/99

Total Metals by EPA 6000/7000 Series Methods Sequoia Analytical - Petaluma

	Batch	Date	Date	Specific	Reporting			
Analyte	Number	Prepared	Analyzed	Method	Limit	Result	Units	Notes*
Comp of SP-(1-4)			P9054	12-05			Soil	
Antimony	9050556	5/20/99	5/20/99	EPA 6010A	6.00	ND	mg/kg	
Arsenic	**	Д	o o	EPA 6010A	10.0	ND	it .	
Barium	**	Д	**	EPA 6010A	0.400	47.2	11	
Beryllium	er er	п	M	EPA 6010A	0.100	0.263	If	
Cadmium	11	II .	**	EPA 6010A	1.00	ND	II .	
Chromium	11	II.	**	EPA 6010A	1.00	35.6	IF	
Cobalt	u	н	**	EPA 6010A	0.700	4.59	P	
Copper	11	IF	•	EPA 6010A	1.00	11.5	l#	
Lead	10	II:	**	EPA 6010A	7.50	17.3	IF	
Molybdenum	**	u	**	EPA 6010A	2.00	ND	IF.	
Nickel	н	11	W.	EPA 6010A	3.00	25.2	11	
Selenium	n	10	11	EPA 6010A	10.0	ND	10	
Silver	н	U	11	EPA 6010A	0.700	ND	u ,	
Thallium	н	u	44	EPA 6010A	10.0	ND		
Vanadium	**	#	10	EPA 6010A	1.00	25.8	н	
Zinc	н	н	11	EPA 6010A	2.00	27.6	н	
Mercury	9050557	n	5/21/99	EPA 7471A	0.0500	ND	н	



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Troy Buggle	Reported:	5/27/99

STLC CAM Metals by EPA 6000/7000 Series Methods Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
Comp of SP-(1-4)			P9054	12-0 <u>5</u>			<u>Soil</u>	
Antimony	9050552	5/22/99	5/25/99	EPA 6010A	300	ND	ug/l	
Arsenic	It	н	ш	EPA 6010A	500	ND		
Barium	U	н	п	EPA 6010A	20.0	2250	•	AF-B
Beryllium	U	ei .	ш	EPA 6010A	5.00	ND	11	
Cadmium	н	*1	It	EPA 6010A	50.0	ND	n	
Chromium	**	11	IF.	EPA 6010A	50.0	190	11	
Cobalt	н	п	II.	EPA 6010A	35.0	194	н	
Copper	tf .	п	H	EPA 6010A	50.0	245	и	
Lead	11	If	н	EPA 6010A	375	ND	P	
Molybdenum	10	μ	н	EPA 6010A	100	ND	I !	
Nickel	41	It	ır	EPA 6010A	150	238	н	
Selenium	н	10	11	EPA 6010A	500	ND	n	
Silver	H	U	11.	EPA 6010A	35.0	ND	н	
Thallium	и	"	18	EPA 6010A	500	ND	н	
Vanadium	*1	н	tt.	EPA 6010A	50.0	382	47	
Zinc	11	**	н	EPA 6010A	100	562	11	AF-B
Mercury	9050561	5/26/99	5/26/99	EPA 7470A	2.00	ND	н	

*Refer to end of report for text of notes and definitions.



Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Troy BuggleReported:5/27/99

TCLP Metals by EPA 1311/6000/7000 Series Methods Sequoia Analytical - Petaluma

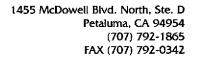
	Batch	Date	Date	Specific	Reporting			
Analyte	Number	Prepared	Analyzed	Method	Limit	Result	Units	Notes*
C 600 /4 A			B00=4	13.05			Catl	
Comp of SP-(1-4)			<u>P9054</u>				<u>Soil</u>	
Antimony	9050550	5/21/99	5/25/99	EPA 6010A	60.0	ND	ug/l	
Arsenic	н	11	It	EPA 6010A	100	ND	**	
Barium	n	11	II.	EPA 6010A	4.00	382	11	AF-B
Beryllium	**	11	10	EPA 6010A	1.00	ND	п	
Cadmium	11	Л	II.	EPA 6010A	10.0	ND	II.	
Chromium	u	Л	н	EPA 6010A	10.0	ND	II	
Cobalt	11	IF	**	EPA 6010A	7.00	42.4	н	
Copper	11	10	H	EPA 6010A	10.0	ND	п	
Lead	н	II.	11	EPA 6010A	75.0	ND	ц	
Molybdenum	н	u ·	3t	EPA 6010A	20.0	ND	II .	
Nickel	#	#	11	EPA 6010A	30.0	35.4	II.	
Selenium	H	н	n	EPA 6010A	100	ND	u	
Silver	11	н ,	10	EPA 6010A	7.00	ND	II.	
Thallium	11	*1	ti	EPA 6010A	100	ND	н	
Vanadium	11	H	н	EPA 6010A	10.0	ND	н	
Zinc	П	n	u	EPA 6010A	20.0	80.0	н	AF-B
Mercury	9050560	u	5/21/99	EPA 7470A	2.00	ND	Ħ	



Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Troy BuggleReported:5/27/99

TCLP Volatile Organic Compounds by EPA Method 1311/8260B Sequoia Analytical - Petaluma

4 1 .	Batch	Date	Date	Surrogate	Reporting	7)14	Units	Notes*
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes
Comp of SP-(1-4)			P9054	<u>12-05</u>			<u>Soil</u>	
Benzene	9050635	5/20/99	5/24/99		10.0	ND	ug/l	
2-Butanone	11	IP .	H		100	ND	н	
Carbon tetrachloride	11	If	*1		10.0	ND	н	
Chlorobenzene	11	IF	*1		10.0	ND	lf	
Chloroform	11	11	Ħ		10.0	ND	ц	
1,2-Dichloroethane	н	IP.	11		10.0	ND	II .	
1,1-Dichloroethene	п	10	*r		10.0	ND	11	
Tetrachloroethene	н	10	11		10.0	26.7	IF	
Trichloroethene	н	10	11		10.0	ND	R	
Vinyl chloride	н	II .	•		10.0	ND	"	•
Surrogate: Dibromofluoromethane	"	"	"	86.0-118		98.0	%	
Surrogate: 1,2-Dichloroethane-d4	n	H	H	80.0-120		99.4	H	
Surrogate: Toluene-d8	n	rr .	"	88.0-110		97.4	"	
Surrogate: 4-Bromofluorobenzene	"	n	"	86.0-115		96 .8	"	





Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608 Project: Shell Oil Co.
Project Number: 105 5th St., Oakland
Project Manager: Troy Buggle

Sampled: 5/14/99 Received: 5/17/99 Reported: 5/27/99

TCLP Semivolatiles by EPA Method 1311/8270B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
Comp of SP-(1-4)			P9054	<u>12-05</u>			<u>Soil</u>	
1,4-Dichlorobenzene	9050529	5/19/99	5/25/99		40.0	ND	ug/l	
2,4-Dinitrotoluene	Ħ	н	10		40.0	ND	n	
Hexachlorobenzene	er e	н	11		40.0	ND	н	
Hexachlorobutadiene	11	**	п		40.0	ND	Ħ	
Hexachloroethane	Ħ	**	11		40.0	ND	н	
2-Methylphenol	#1	н	11		40.0	ND		
4-Methylphenol	11	**	**		40.0	ND	#	
Nitrobenzene	*11	н	11		40.0	ND	н	
Pentachlorophenol	#1	н	н		200	ND		
Pyridine	11	11	н		40.0	ND	#	
2,4,5-Trichlorophenol	u	н	н		40.0	ND	н	
2,4,6-Trichlorophenol	11	н	н		40.0	ND		
Surrogate: 2-Fluorophenol	н	"	<i>n</i>	-		60.2	%	
Surrogate: Phenol-d6	n	"	"	_		66.2	rr	
Surrogate: Nitrobenzene-d5	н	n	"	_		62.8	"	
Surrogate: 2-Fluorobiphenyl	n .	"	"	-		70.5	н	
Surrogate: 2,4,6-Tribromophenol	и	"	n	_		62.3	"	
Surrogate: Terphenyl-d14	п	n	"	_		87.3	er e	



Cambria Environmental - Oakland	Project: S	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Troy Buggle	Reported:	5/27/99

Total Petroleum Hydrocarbons as Gasoline by EPA 8015M/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 9050598	Date Prepa	red: 5/21/9	99		<u>Extrac</u>	tion Method: EP.	<u>A 5030 sc</u>	<u>oils</u>		
<u>Blank</u>	<u>9050598-BI</u>	<u>LK1</u>								
Gasoline	5/21/99			ND	mg/kg	0.400				
Surrogate: 4-Bromofluorobenzene	<i>"</i>	0.300		0.247	"	65.0-135	82.3	,		
Matrix Spike	9050598-M	<u>S1 P</u>	905339-01							
Gasoline	5/21/99	2.00	ND	1.42	mg/kg	65.0-135	71.0			
Surrogate: 4-Bromofluorobenzene	n	0.300		0.201	"	65.0-135	67.0			
Matrix Spike Dup	9050598-M	<u>SD1 P</u>	905339-01							
Gasoline	5/21/99	2.00	ND	1.42	mg/kg	65.0-135	71.0	20.0	0	
Surrogate: 4-Bromofluorobenzene	,,	0.300		0.200	"	65.0-135	66.7			



Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Troy BuggleReported:5/27/99

BTEX by 8020M/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 9050545	Date Prepa	red: 5/20/9	99		Extract	tion Method: EP.	A 5030 se	oil <u>s</u>		
Blank	9050545-B1									
Benzene	5/20/99			ND	mg/kg	0.00200				
Toluene	11			ND	"	0.00200				
Ethylbenzene	н			ND	IF	0.00200				
Xylenes (total)	и			ND	P	0.00400				
Methyl tert-butyl ether	н			ND	10	0.0100				
Surrogate: a,a,a-Trifluorotoluene	n	0.300		0.279	#	65.0-135	93.0			
LCS	9050545-B5	<u>S1</u>								
Benzene	5/20/99	0.200		0.199	mg/kg	65.0-135	99.5			
Toluene	11	0.200		0.193	11	65.0-135	96.5			
Ethylbenzene	II	0.200		0.190	ur .	65.0-135	95.0			
Xylenes (total)	It	0.600		0.573	**	65.0-135	95.5			
Surrogate: a,a,a-Trifluorotoluene	<u></u>	0.300		0.308	"	65.0-135	103			
Matrix Spike	9050545-M	<u>S1</u> P	905336-01							
Benzene	5/20/99	0.200	ND	0.220	mg/kg	65.0-135	110			
Toluene	н	0.200	ND	0.207	н	65.0-135	103			
Ethylbenzene	н	0.200	ND	0.196	н	65.0-135	98.0			
Xylenes (total)	H	0.600	ND	0.605	44	65.0-135	101			
Surrogate: a,a,a-Trifluorotoluene	u	0.300		0.333	и	65.0-135	111			
Matrix Spike Dup	9050545-M	SD1 P	905336-01							
Benzene	5/20/99	0.200	ND	0.211	mg/kg	65.0-135	105	20.0	4.65	
Toluene	11	0.200	ND	0.199	" -	65.0-135	99.5	20.0	3.46	
Ethylbenzene	11	0.200	ND	0.192	II .	65.0-135	96.0	20.0	2.06	
Xylenes (total)	**	0.600	ND	0.585	II	65.0-135	97.5	20.0	3.53	
Methyl tert-butyl ether	н	0.200	ND	0.240	It	65.0-135	120	20.0		
Surrogate: a,a,a-Trifluorotoluene	n n	0.300		0.323	H	65.0-135	108			



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Troy Buggle	Reported:	5/27/99

Total Metals by EPA 6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 9050556	Date Prepar	red: 5/20/0	10		Extract	ion Method: EPA	1 3050R			
Blank	9050556-BL		<u>, </u>		EAHALL	ion Memour Ed P	LUCUCE			
Antimony	5/20/99	<u> </u>		ND	mg/kg	6.00				
Arsenic	J/20/JJ			ND	III G IN G	10.0				
Barium	н			ND	D)	0.400				
Beryllium	н			ND	" ,	0.100				
Cadmium	u u			ND	H	1.00				
Chromium	11			ND	н	1.00				
Cobalt	11			ND	н	0.700				
Copper	11			ND	н	1.00				
Lead	11			ND	H	7.50				
Molybdenum	11			ND	H	2.00				
Nickel	11			ND	н	3.00				
Selenium	11			ND	**	10.0				
Silver	II			ND	**	0.700				
Thallium	II			ND		10.0				
Vanadium	Ц			ND	**	1.00				
Zinc	It			ND	10	2.00				
<u>LCS</u>	9050556-BS				_					
Antimony	5/20/99	50.0		46.6	mg/kg	80.0-120	93.2			
Arsenic	II .	50.0		46.5	н	80.0-120	93.0			
Barium	U.	50.0		46.3	н	80.0-120	92.6			
Beryllium	II	5.00		4.81	H	80.0-120	96.2			
Cadmium	н	5.00		5.13	Ħ	80.0-120	103			
Chromium	n	50.0		45.9	11	80.0-120	91.8			
Cobalt	H	50.0		47.5	11	80.0-120	95.0			
Copper	И	50.0		47.5	11	80.0-120	95.0			
Lead	n	50.0		46.4	11	80.0-120	92.8			
Molybdenum	Ħ	50.0		48.5	11	80.0-120	97.0			
Nickel	17	50.0		47.7	11	80.0-120	95.4			
Selenium	11	50.0		45.5	П	80.0-120	91.0			
Silver	11	5.00		4.44	II	80.0-120	88.8			
Thallium	11	50.0		46.2	II	80.0-120	92.4			
Vanadium	11	50.0		47.3	II	80.0-120	94.6			
Zinc	t #	50.0		46.6	и	80.0-120	93.2			
Matrix Spike	9050556-M	S1 P9	905412-05							
Antimony	5/20/99	44.6	ND	29.6	mg/kg	75.0-125	66.4			1
Arsenic	н	44.6	ND	42.6	"	75.0-125	95.5			
Barium	11	44.6	47.2	86.3	11	75.0-125	87.7			
Beryllium	*1	4.46	0.263	4.34	H	75.0-125	91.4			

Sequoia Analytical - Petaluma

*Refer to end of report for text of notes and definitions.





Cambria Environmental - Oakland 1144 65th St., Suite C Oakland, CA 94608 Project Number: Shell Oil Co.
Project Number: 105 5th St., Oakland
Project Manager: Troy Buggle

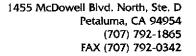
Sampled: 5/14/99 Received: 5/17/99 Reported: 5/27/99

Total Metals by EPA 6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC]	Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Matrix Spike (continued)	<u>9050556-MS</u>		<u>905412-05</u>		_					
Cadmium	5/20/99	4.46	ND	4.00	mg/kg	75.0-125	89.7			
Chromium	11	44.6	35.6	76.3	11	75.0-125	91.3			
Cobalt	**	44.6	4.59	44.0	11	75.0-125	88.4			
Copper	**	44.6	11.5	50.4	11	75.0-125	87.2			
Lead	er e	44.6	17.3	47.0	11	75.0-125	66.6			1
Molybdenum	"	44.6	ND	39.6	11	75.0-125	88.8			
Nickel	11	44.6	25.2	64.9	11	75.0-125	89.0			
Selenium	11	44.6	ND	39.9	II	75.0-125	89.5			
Silver	#	4.46	ND	3.59	н	75.0-125	80.5			
Thallium	11	44.6	ND	37.2	11	75.0-125	83.4			
Vanadium	11	44.6	25.8	66.7	II .	75.0-125	91.7			
Zinc	11	44.6	27.6	64.8	II	75.0-125	83.4			
Matrix Spike Dup	9050556-MS	:D1 P	905412-05							
Antimony	5/20/99	47.2	ND	28.3	mg/kg	75.0-125	60.0	20.0	10.1	1
Arsenic	H	47.2	ND	40.1	11.0.1.0	75.0-125	85.0	20.0	11.6	_
Barium	н	47.2	47.2	80.7	If	75.0-125	71.0	20.0	21.0	1
Beryllium	н	4.72	0.263	4.37	10 -	75.0-125	87.0	20.0	4.93	•
Cadmium		4.72	ND	4.41	IP	75.0-125	93,4	20.0	4.04	
Chromium	11	47.2	35.6	71.7	10	75.0-125	76.5	20.0	17.6	
Cobalt	11	47.2	4.59	44.4	Iŧ.	75.0-125	84.3	20.0	4.75	
Copper	11	47.2	11.5	50.4	H	75.0-125	82.4	20.0	5.66	
Lead	11	47.2	17.3	47.0	u	75.0-125	62.9	20.0	5.71	l
Molybdenum	11	47.2	ND	40.3	. #	75.0-125	85.4	20.0	3.90	
Nickel	11	47.2	25.2	63.3	t t	75.0-125	80.7	20.0	9.78	
Selenium	11	47.2	ND	38.3	H	75.0-125	81.1	20.0	9.85	
Silver	+1	4.72	ND	3.52	17	75.0-125	74.6	20.0	7.61	1
Thallium	91	47.2	ND ND	36.8	н	75.0-125	78.0	20.0	6.69	1
Vanadium	11	47.2 47.2	25.8	64.3	н	75.0-125	81.6	20.0	11.7	
	11	47.2 47.2		61.6		75.0-125	72.0	20.0	14.7	1
Zinc	,	47.2	27.6	01.0		/3.0-123	/ 2.0	20.0	14./	1
Batch: 9050557	Date Prepare		<u>99</u>		<u>Extract</u>	ion Method: EP.	<u> 4 7471 A</u>			
<u>Blank</u>	9050557-BL	<u>K1</u>								
Mercury	5/21/99			ND	mg/kg	0.0500				
LCS	9050557-BS1	<u>l</u>								
Mercury	5/21/99	0.133		0.123	mg/kg	80.0-120	92.5			
Matrix Spike	9050557-MS	1 P	905412-05							
Mercury	5/21/99	0.119	ND	0.137	mg/kg	75.0-125	115			
•										

Sequoia Analytical - Petaluma

*Refer to end of report for text of notes and definitions.





Cambria Environmental - Oakland Project: Shell Oil Co. Sampled: 5/14/99
1144 65th St., Suite C Project Number: 105 5th St., Oakland Received: 5/17/99
Oakland, CA 94608 Project Manager: Troy Buggle Reported: 5/27/99

Total Metals by EPA 6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits		RPD Limit	RPD %	Notes*
Matrix Spike Dup Mercury	9050557-M 5/21/99	<u>SD1</u> <u>P</u> 9	905412-05 ND	0.157	mg/kg	75.0-125	122	20.0	5.91	

Sequoia Analytical - Petaluma



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99	
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99	
Oakland, CA 94608	Project Manager:	Troy Buggle	Reported:	5/27/99	

STLC CAM Metals by EPA 6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
								_		
Batch: 9050552	Date Prepa	red: 5/22/9	9		Extrac	tion Method: EPA	<u> 3010A</u>			
<u>Blank</u>	9050552-B	<u>LK1</u>								
Antimony	5/25/99			ND	ug/l	300				
Arsenic	l#			ND	n	500				
Barium	U			47.3	**	20.0				
Beryllium	H			ND	11	5.00				
Cadmium	H			ND	11	50.0				
Chromium	"			ND	11	50.0				
Cobalt	Ħ			ND	11	35.0				
Copper	11			ND	11	50.0				
Lead	**			ND	II	375				
Molybdenum	11			ND	И	100				
Nickel	**			ND	и	150				
Selenium	11			ND	II	500				
Silver	II.			ND	It	35.0				
Thallium	71			ND	11	500				
Vanadium	n			ND	n	50.0				
Zinc	н			105	н	100				
1.00	0050553 D	61								
LCS	9050552-B			2400	A	80.0-120	99.6			
Antimony	5/25/99 "	2500		2490	ug/l "	80.0-120 80.0-120	104			
Arsenic	п	2500		2590	11	80.0-120	92.8			
Barium	"	2500		2320	11		95.2			
Beryllium		250		238	11	80.0-120 80.0-120	93.2			
Cadmium	n	250		229	19		91.0			
Chromium	11	2500		2310	**	80.0-120				
Cobalt		2500		2350		80.0-120	94.0			
Copper	u u	2500		2340	" H	80.0-120	93.6			
Lead		2500		2370	*1	80.0-120	94.8			
Molybdenum	20 20	2500		2490	*1	80.0-120	99.6			
Nickel		2500		2370		80.0-120	94.8			
Selenium	n	2500		2990	11	80.0-120	120			
Silver		250		229	11	80.0-120	91.6			
Thallium	17	2500		2390	11	80.0-120	95.6			
Vanadium	**	2500		2360	11	80.0-120	94.4			
Zinc	u	2500		2430	II	80.0-120	97.2			
Matrix Spike	9050552-M	<u>1S1 P</u>	905063-02							
Antimony	5/25/99	2500	ND	2430	ug/l	75.0-125	97.2			
Arsenic	11	2500	ND	2590	w T	75.0-125	104			
Barium	н	2500	2850	4610	н	75.0-125	70.4			1
Beryllium	11	250	ND	245	н	75.0-125	98.0			

Sequoia Analytical - Petaluma





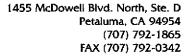
Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Troy BuggleReported:5/27/99

STLC CAM Metals by EPA 6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	•
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
M (159 (4)	0050550 35	G4 B	0050/2 02							
Matrix Spike (continued)	9050552-M	<u>51 P</u> 250	905063-02	226	/1	75.0-125	94.4			
Cadmium	5/25/99	2500 2500	ND 700	236 2850	ug/l "	75.0-125	86.0			
Chromium	It				11	75.0-125	91.4			
Cobalt	n.	2500	134 ND	2420	T [‡]	75.0-125 75.0-125	91.4			
Copper	0	2500	ND	2310	11		90.4			
Lead		2500	ND	2260		75.0-125				
Molybdenum		2500	ND	2410	,,	75.0-125	96.4			
Nickel	H	2500	504	2700	н	75.0-125	87.8			1
Selenium	0	2500	ND	1720	7 H	75.0-125	68.8			1
Silver		250	ND	213	н	75.0-125	85.2			
Thallium)' H	2500	ND	1940		75.0-125	77.6			
Vanadium		2500	399	2670	n 	75.0-125	90.8			
Zinç	n	2500	ND	2350	*	75.0-125	94.0			٠
Matrix Spike Dup	9050552-M	SD1 P	905063-02							
Antimony	5/25/99	2500	ND	2500	ug/l	75.0-125	100	20.0	2.84	
Arsenic	н	2500	ND	2660	"	75.0-125	106	20.0	1.90	
Barium	и	2500	2850	5030	*1	75.0-125	87.2	20.0	21.3	1
Beryllium	н	250	ND	247	*1	75.0-125	98.8	20.0	0.813	
Cadmium	н	250	ND	236	n	75.0-125	94.4	20.0	0	
Chromium	н	2500	700	2930	9	75.0-125	89.2	20.0	3.65	
Cobalt	**	2500	134	2440	11	75.0-125	92.2	20.0	0.871	
Copper	н	2500	ND	2240	11	75.0-125	89.6	20.0	3.08	
Lead	**	2500	ND	2290	11	75.0-125	91.6	20.0	1.32	
Molybdenum	#	2500	ND	2330	11	75.0-125	93.2	20.0	3.38	
Nickel	,,	2500	504	2780	11	75.0-125	91.0	20.0	3.58	
Selenium	**	2500	ND	1820	П	75.0-125	72.8	20.0	5.65	1
Silver	11	250	ND	206	Ш	75.0-125	82.4	20.0	3.34	•
Thallium	11	2500	ND	2100	Ш	75.0-125	84.0	20.0	7.92	
Vanadium	11	2500	399	2740	Ш	75.0-125	93.6	20.0	3.04	
Zinc	11	2500	ND	2360	п	75.0-125 75.0-125	94.4	20.0	0.425	
						•				
Batch: 9050561	Date Prepar		<u>99</u>		Extrac	tion Method: EP.	<u>A 7470A</u>			
Blank Mercury	<u>9050561-BI</u> 5/26/99	<u> K1</u>		ND	ug/l	2.00				
ivicioniy	2120197			1112	ug;	2.00			÷	
<u>LCS</u>	9050561-BS	_								
Mercury	5/26/99	16.0		16.5	ug/l	80.0-120	103			
Matrix Spike	9050561-M	S1 P	905412-05							
Mercury	5/26/99	16.0	ND	18.1	ug/l	75.0-125	113			

Sequoia Analytical - Petaluma







Cambria Environmental - Oakland 1144 65th St., Suite C

Project: Project Number: 105 5th St., Oakland

Shell Oil Co.

Sampled: 5/14/99

Oakland, CA 94608

Project Manager: Troy Buggle

Received: 5/17/99 Reported: 5/27/99

STLC CAM Metals by EPA 6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov.	RPD Limit	RPD %	Notes*
Matrix Spike Dup Mercury	9050561-MS 5/26/99	<u>SD1 P</u> 16.0	905412-05 ND	18.9	ug/l	75.0-125	118	20.0	4.33	



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Troy Buggle	Reported:	5/27/99

TCLP Metals by EPA 1311/6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit		Notes*
					-					
Batch: 9050550	Date Prepa	red: 5/21/9	9		Extrac	tion Method: EPA	3010A	TCLP		
Blank	9050550-B									
Antimony	5/25/99			ND	ug/l	60.0				
Arsenic	11			ND	II T	100				
Barium	19			8.79	It	4.00				
Beryllium	TÎ.			ND	И	1.00				
Cadmium	t1			ND	ц	10.0				
Chromium	79			ND	II	10.0				
Cobalt	ti			ND	IP	7.00				
Copper	t†			ND	П	10.0				
Lead	11			ND	п	75.0				
Molybdenum	19			ND	и	20.0				
Nickel	**			ND	и .	30.0				
Selenium	11			ND	н	100				
Silver	11			ND	II	7.00				
Thallium	11			ND	II	100				
Vanadium	11			ND	И	10.0				
Zinc	17			42.4	п	20.0				
LCS	9050550-B	21								
Antimony	5/25/99	500		516	ug/l	80.0-120	103			
Arsenic	11 23/99	500		529	11	80.0-120	106			
Barium	11	500		495	1I	80.0-120	99.0			
Beryllium	11	50.0		51.3	н	80.0-120	103			
Cadmium	lf	50.0		47.8	11	80.0-120	95.6			
Chromium	11	500		482	11	80.0-120	96.4			
Cobalt	**	500		494	JI.	80.0-120	98.8			
Copper	11	500		502	11	80.0-120	100			
Lead	Nr.	500		499	11	80.0-120	99.8			
Molybdenum	11	500		518	11	80.0-120	104			
Nickel	11	500		505	11	80.0-120	104			
Selenium	17	500		564	11	80.0-120	113			
Silver	11	50.0		47.0	1I	80.0-120	94.0			
Thallium	n	500		493	н	80.0-120	98.6		-	
Vanadium	11	500		495 495	11	80.0-120	99.0			
Zinc	•	500		554	11	80.0-120	111			
Zilic		300		JJ4		80.0-120	111			
Matrix Spike	<u>9050550-M</u>		005412-05							
Antimony	5/25/99	500	ND	524	ug/l	75.0-125	105			
Arsenic	41	500	ND	523	11	75.0-125	105			
Barium	11	500	382	855	н	75.0-125	94.6			
Beryllium	W.	50.0	ND	50.3	II	75.0-125	101			

Sequoia Analytical - Petaluma





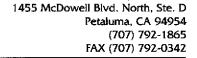
Cambria Environmental - OaklandProject:Shell Oil Co.Sampled:5/14/991144 65th St., Suite CProject Number:105 5th St., OaklandReceived:5/17/99Oakland, CA 94608Project Manager:Troy BuggleReported:5/27/99

TCLP Metals by EPA 1311/6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
	004044									
Matrix Spike (continued)	9050550-M		905412-05	40.6		75.0.125	07.3			
Cadmium	5/25/99	50.0	ND	48.6	ug/l "	75.0-125	97.2 94.6			
Chromium		500	ND	473	и	75.0-125	94.6 95.5			
Cobalt	 H	500	42.4	520	и	75.0-125				
Соррег	u u	500	ND	492	··	75.0-125	98.4			
Lead		500	ND	491	"	75.0-125	98.2			
Molybdenum		500	ND	496	"	75.0-125	99.2			
Nickel	H	500	35.4	506	"	75.0-125	94.1		٠	
Selenium		500	ND	534		75.0-125	107			
Silver		50.0	ND	45.6	11	75.0-125	91.2			
Thallium	"	500	ND	438	11	75.0-125	87.6			
Vanadium	н	500	ND	490	11	75.0-125	98.0			
Zinc	11	500	80.0	563	11	75.0-125	96.6			
Matrix Spike Dup	9050550-M	SD1 P	905412-05							
Antimony	5/25/99	 500	ND	517	ug/l	75.0-125	103	20.0	1.92	
Arsenic	11	500	ND	530	II.	75.0-125	106	20.0	0.948	
Barium	11	500	382	881	11	75.0-125	99.8	20.0	5.35	
Beryllium	11	50.0	ND	51.1	0	75.0-125	102	20.0	0.985	
Cadmium	Ħ	50.0	ND	47.8	14	75.0-125	95.6	20.0	1.66	
Chromium	н	500	ND	485	н	75.0-125	97.0	20.0	2.51	
Cobalt	#	500	42.4	530	H	75.0-125	97.5	20.0	2.07	
Copper	+1	500	ND	506	н	75.0-125	101	20.0	2.61	
Lead	11	500	ND	491	н	75.0-125	98.2	20.0	0	
Molybdenum	#1	500	ND	507	н	75.0-125	101	20.0	1.80	
Nickel	11	500	35.4	505	H .	75.0-125	93.9	20.0	0.213	
Selenium	ŧı	500	ND	564	н	75.0-125	113	20.0	5,45	
Silver	11	50.0	ND	47.6	Ħ	75.0-125	95.2	20.0	4.29	
Thallium	. 11	500	ND	476	17	75.0-125	95.2	20.0	8.32	
Vanadium	II	500	ND	500	11	75.0-125	100	20.0	2.02	-
Zinc	. п	500	80.0	579	10	75.0-125	99.8	20.0	3.26	
Batch: 9050560	<u>Date Prepa</u> 9050560-BI		99		<u>Extrac</u>	ction Method: EP.	<u>A 7470A</u>			
Blank Mercury	<u>9050560-61</u> 5/21/99	<u>LKI</u>		ND	ug/l	2.00				
•					_					
LCS	9050560-B									
Mercury	5/21/99	16.0		17.1	ug/l	80.0-120	107			
Matrix Spike	9050560-M	<u>S1</u> P	905357-01							
Mercury	5/21/99	16.0	ND	17.0	ug/l	75.0-125	106			

Sequoia Analytical - Petaluma







Cambria Environmental - Oakland 1144 65th St., Suite C

Oakland, CA 94608

Project:

Shell Oil Co. Project Number: 105 5th St., Oakland

5/14/99 Sampled: Received: 5/17/99

Project Manager: Troy Buggle

Reported: 5/27/99

TCLP Metals by EPA 1311/6000/7000 Series Methods/Quality Control Sequoia Analytical - Petaluma

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov.	RPD Limit	RPD %	Notes*
Matrix Spike Dup Mercury	9050560-MS 5/21/99	8 <u>D1</u> <u>P</u> 16.0	905357-01 ND	16.5	ug/l	75.0-125	103	20.0	2.87	

Sequoia Analytical - Petaluma



Cambria Environmental - Oakland	Project:	Shell Oil Co.	Sampled:	5/14/99
1144 65th St., Suite C	Project Number:	105 5th St., Oakland	Received:	5/17/99
Oakland, CA 94608	Project Manager:	Troy Buggle	Reported:	5/27/99

TCLP Volatile Organic Compounds by EPA Method 1311/8260B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Note
D / 1 0050/25	n . n	1 #1657					14111	ш	
Batch: 9050635	Date Prepa		<u> </u>		Extract	tion Method: EPA	1311/Z	HE	
Blank B	9050635-BI	<u>JKI</u>		NE	м	10.0		-	
Benzene	5/24/99			ND	ug/l "	10.0			
2-Butanone				ND		100			
Carbon tetrachloride	11			ND	11	10.0			
Chlorobenzene	**			ND	II	10.0			
Chloroform	**			ND	II .	10.0			
1,2-Dichloroethane	· ·			ND	II	10.0			
1,1-Dichloroethene	11			ND	II	10.0			
Tetrachloroethene	#			ND	П	10.0			
Trichloroethene	17			ND	11	10.0			
Vinyl chloride	10			ND	11	10.0			
Surrogate: Dibromofluoromethane	#	50.0		48.4	н	86.0-118	96.8		
Surrogate: 1,2-Dichloroethane-d4	"	50.0		49.3	#	80.0-120	98.6		
Surrogate: Toluene-d8	"	50.0		47.9	11	88.0-110	95.8		
Surrogate: 4-Bromofluorobenzene	n	50.0		50.5	n	86.0-115	101		
Matrix Spike	9050635-M	S1 P	005412-05						
Benzene	5/24/99	125	ND	128	ug/l	70.0-130	102		
2-Butanone	u .	250	ND	271	ıı ¯	70.0-130	108		
Carbon tetrachloride	11	125	ND	124	п	70.0-130	99.2		
Chlorobenzene	17	125	ND	127	II	70.0-130	102		
Chloroform	11	125	ND	129	Ц	70.0-130	103		
1.2-Dichloroethane	11	125	ND	124	Д	70.0-130	99.2		
1,1-Dichloroethene	11	125	ND	128	п	70.0-130	102		
Tetrachloroethene	10	125	26.7	150	lf .	70.0-130	98.6		
Trichloroethene	10	125	ND	125	Ц	70.0-130	100		
Vinyl chloride	11	125	ND	120	ц	70.0-130	96.0		
Surrogate: Dibromofluoromethane	н	50.0	.,_	49.1	n .	86.0-118	98.2		
Surrogate: 1,2-Dichloroethane-d4	"	50.0		48.7	"	80.0-120	97.4		
Surrogate: Toluene-d8	"	50.0	•	48.1	"	88.0-110	96.2		
Surrogate: 4-Bromofluorobenzene	n	50.0		48.6	rr	86.0-115	97.2		
Surroguie. 4-Diomojiuorobenzene		50.0		40.0		00.0 113	, , . 		



Cambria Environmental - Oakland Project: Shell Oil Co. Sampled: 5/14/99
1144 65th St., Suite C Project Number: 105 5th St., Oakland Received: 5/17/99
Oakland, CA 94608 Project Manager: Troy Buggle Reported: 5/27/99

TCLP Semivolatiles by EPA Method 1311/8270B/Quality Control Sequoia Analytical - Petaluma

Batch: 9050529 Date Prepared: 5/19/99 System Propared: 5/19/99 System System		Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Description	Analyte	Analyzed	_			Units	Recov. Limits	%	Limit	%	Notes*
Description						_					
14-Dichlorobenzene	Batch: 9050529			<u>99</u>		<u>Extrac</u>	tion Method: EPA	13520B/	Leachate	<u>es</u>	
2,4-Dinitrotoluene	Blank		LK1								
Hexachlorobusadiene	•	5/25/99									
Hexachlorothane	*	н									
Hexachloroethane											
2-Methylphenol	Hexachlorobutadiene	,,									
A-Methylphenol	Hexachloroethane	11			ND						
ND	2-Methylphenol	II			ND						
ND	4-Methylphenol	II									
Pentantintropientol Pyridine " ND " 40.0 2,4,5-Trichlorophenol " ND " 40.0 2,4,5-Trichlorophenol " 150 " 76.5 " 51.0 Surrogate: 2-Fluorophenol " 150 " 87.7 " 58.5 Surrogate: Nitrobenzene-d5 " 100 " 55.1 " 55.1 Surrogate: 2-Fluorophenol " 150 " 87.7 " 58.5 Surrogate: 2-Fluorophenol " 100 " 64.6 " 64.6 Surrogate: 2-Fluorophenol " 150 " 94.1 " 62.7 Surrogate: 1-Fluorophenol " 150 " 94.1 " 62.7 Surrogate: Terphenyl-d14 " 100 " 95.3 " 95.3 LCS " 9050529-BSI 1,4-Dichlorobenzene 5/25/99 100 " 76.6 ug/l " 76.6 2,4-Dinitrotoluene " 100 " 80.5 " 80.5 Hexachlorobenzene " 100 " 102 " 102 Hexachlorobenzene " 100 " 79.3 " 79.3 Hexachlorobenzene " 100 " 79.3 " 79.3 Hexachlorobethane " 100 " 73.2 " 73.2 2-Methylphenol " 118 " Nitrobenzene " 100 " 78.6 " 78.6 Pentachlorophenol " 100 " 78.6 " 78.6 Pentachlorophenol " 100 " 72.2 " 72.2 2,4,5-Trichlorophenol " 100 " 80.5 " 80.5 Surrogate: 2-Fluorophenol " 150 " 98.7 " 65.8 Surrogate: 2-Fluorophenol " 150 " 98.7 " 65.8 Surrogate: Phenol-d6 " 150 " 98.7 " 65.8 Surrogate: Phenol-d6 " 150 " 98.7 " 65.8 Surrogate: 2-Fluorophenol " 150 " 96.5 " 64.3	Nitrobenzene	11			ND						
Variable Variable	Pentachlorophenol	IF			ND		200				
2,4,6-Trichlorophenol	Pyridine	R			ND						
150 76.5	2,4,5-Trichlorophenol	11			ND		40.0				
Surrogate: Phenol-d6 " 150 87.7 " 58.5 Surrogate: Nitrobenzene-d5 " 100 55.1 " 55.1 Surrogate: 2-Fluorobiphenyl " 100 64.6 " 62.7 Surrogate: 2-J,6-Tribromophenol " 150 94.1 " 62.7 Surrogate: Terphenyl-d14 " 100 95.3 " 95.3 LCS Surrogate: Terphenyl-d14 " 100 95.3 " 95.3 LCS Surrogate: Terphenyl-d14 " 100 76.6 ug/l 76.6 LCS Surrogate: Terphenyl-d14 " 100 76.6 ug/l 76.6 LCS Surrogate: Terphenyl-d14 " 100 80.5 " 80.5 \$80.5 LCS Surrogate: Debate " 100 80.5 " 80.5 \$80.5 LCS Surrogate: Phenol " 100 78.6 " 79.3 \$80.5 Hexachlorobenzene " 100 79.3 " 79.3 79.3 Hexachlorobenale " 100 78.6 " 78.6 " 78.6 Hexachlorobenale " 100 78.6	2,4,6-Trichlorophenol	H			ND	41	40.0				
Surrogate: Phenol-d6 " 150 87.7 " 58.5 Surrogate: Nitrobenzene-d5 " 100 55.1 " 55.1 Surrogate: 2.4.6-Tribromophenol " 100 64.6 " 64.6 Surrogate: 2.4.6-Tribromophenol " 150 94.1 " 62.7 Surrogate: Terphenyl-d14 " 100 95.3 " 95.3 LCS 9050529-BS1 " 100 80.5 " 80.5 1,4-Dichlorobenzene 5/25/99 100 76.6 ug/l 76.6 2,4-Dinitrotoluene " 100 80.5 " 80.5 Hexachlorobenzene " 100 102 " 102 Hexachlorobenzene " 100 79.3 " 79.3 Hexachlorobendane " 100 73.2 " 73.2 2-Methylphenol " 78.8 " 4-Methylphenol " 18 " Nitrobenzene " 100 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pyridine " 100 78.6 " 72.2 2,4,5-Trichlorophenol " 100 80.5 " 80.5 2,4,6-Trichlorophenol " 150 98.7 " 65.8 <tr< td=""><td>Surrogate: 2-Fluorophenol</td><td>"</td><td>150</td><td></td><td>76.5</td><td>11</td><td></td><td></td><td></td><td></td><td></td></tr<>	Surrogate: 2-Fluorophenol	"	150		76.5	11					
Surrogate: 2-Fluorobiphenyl " 100 64.6 " 64.6 Surrogate: 2,4,6-Tribromophenol " 150 94.1 " 62.7 Surrogate: Terphenyl-d14 " 100 95.3 " 95.3 LCS 9050529-BS1 " 95.3 " 95.3 LCS 9050529-BS1 " 80.5 ** 80.5 4-Dichlorobenzene 5/25/99 100 76.6 ug/l 76.6 98.5 4-Exachlorobenzene " 100 102 " 102 102 102 102 102 102 102 102 103 104 104 104 104 104 104 104 104 104 104 104 104 104 104 104	Surrogate: Phenol-d6	"	150		<i>87.7</i>	II		58.5			
Surrogate: 2-Fluorobiphenyl " 100 64.6 " 64.6 Surrogate: 2,4,6-Tribromophenol " 150 94.1 " 62.7 Surrogate: Terphenyl-d14 " 100 95.3 " 95.3 LCS 9050529-BS1 " 95.3 " 95.3 LCS 9050529-BS1 " 76.6 Ug/l 76.6 2,4-Dinitrotoluene " 100 80.5 " 80.5 Hexachlorobenzene " 100 102 " 102 Hexachlorobtadiene " 100 79.3 " 79.3 Hexachlorobtadiene " 100 73.2 " 79.3 Hexachlorobtane " 100 73.2 " 73.2 2-Methylphenol " 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pentachlorophenol " 100 80.5	Surrogate: Nitrobenzene-d5	tt .	100		55.1	n .					
Surrogate: 2,4,6-Tribromophenol " 150 94.1 " 62.7 Surrogate: Terphenyl-d14 " 100 95.3 " 95.3 LCS 9050529-BS1 " Surrogate: Ug/l 76.6 76.6 2,4-Dinitrotoluene " 100 80.5 " 80.5 Hexachlorobenzene " 100 102 " 102 Hexachlorobutadiene " 100 79.3 " 79.3 Hexachlorobutadiene " 100 79.3 " 79.3 Hexachlorobutadiene " 100 73.2 " 79.3 Hexachlorobutadiene " 100 73.2 " 79.3 Hexachlorobutadiene " 100 73.2 " 79.3 Hexachlorobutadiene " 100 78.6 " 78.6 Pentachlorobutadiene " 100 78.6 " 78.6 Pentachlorophenol "		#	100		64.6	н					
Surrogate: Terphenyl-d14		n	150		94.1	"		62.7			
1,4-Dichlorobenzene 5/25/99 100 76.6 ug/l 76.6 2,4-Dinitrotoluene "100 80.5 "80.5 Hexachlorobenzene "100 102 "102 Hexachlorobutadiene "100 79.3 "79.3 Hexachloroethane "100 73.2 "73.2 2-Methylphenol "18 "78.8 "78.6 4-Methylphenol "100 78.6 "78.6 Pentachlorophenol "100 78.6 "78.6 Pyridine "100 72.2 "72.2 2,4,5-Trichlorophenol "100 80.5 "80.5 2,4,6-Trichlorophenol "150 98.7 83.6 Surrogate: 2-Fluorophenol "150 98.7 "65.8 Surrogate: Nitrobenzene-d5 "100 61.7 70.7 Surrogate: 2-Fluorobiphenyl "100 66.6 "66.6 Surrogate: 2-Fluorobiphenyl "100 66.6 "66.6 Surrogate: 2-4,6-Tribromophenol "150 96.5 "64.3	Surrogate: Terphenyl-d14	p	100		95.3	11		95.3			
1,4-Dichlorobenzene 5/25/99 100 76.6 ug/l 76.6 2,4-Dinitrotoluene "100 80.5 "80.5 Hexachlorobenzene "100 102 "102 Hexachlorobutadiene "100 79.3 "79.3 Hexachloroethane "100 73.2 "73.2 2-Methylphenol "18 "78.8 "78.6 4-Methylphenol "100 78.6 "78.6 Pentachlorophenol "100 78.6 "78.6 Pyridine "100 72.2 "72.2 2,4,5-Trichlorophenol "100 80.5 "80.5 2,4,6-Trichlorophenol "150 98.7 83.6 Surrogate: 2-Fluorophenol "150 98.7 "65.8 Surrogate: Nitrobenzene-d5 "100 61.7 70.7 Surrogate: 2-Fluorobiphenyl "100 66.6 "66.6 Surrogate: 2-Fluorobiphenyl "100 66.6 "66.6 Surrogate: 2-4,6-Tribromophenol "150 96.5 "64.3	LCS	9050529-B	S1								
2,4-Dinitrotoluene " 100 80.5 " 80.5 Hexachlorobenzene " 100 102 " 102 Hexachlorobutadiene " 100 79.3 " 79.3 Hexachlorobutadiene " 100 73.2 " 79.3 Hexachlorobethane " 100 73.2 " 73.2 2-Methylphenol " 118 " " 4-Methylphenol " 100 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pyridine " 100 72.2 " 72.2 2,4,5-Trichlorophenol " 100 80.5 " 80.5 2,4,6-Trichlorophenol " 150 98.7 " 65.8 Surrogate: 2-Fluorophenol " 150 98.7 " 65.8 Surrogate: Nitrobenzene-d5 " 100 61.7 " 61.7		5/25/99	100		76.6	ug/l		76.6			
Hexachlorobenzene " 100 102 " 102 Hexachlorobutadiene " 100 79.3 " 79.3 Hexachloroethane " 100 73.2 " 73.2 2-Methylphenol " 78.8 " * 4-Methylphenol " 100 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pyridine " 100 72.2 " 72.2 2,4,5-Trichlorophenol " 100 80.5 " 80.5 2,4,6-Trichlorophenol " 150 98.7 " 65.8 Surrogate: 2-Fluorophenol " 150 98.7 " 65.8 Surrogate: Nitrobenzene-d5 " 100 61.7 " 61.7 Surrogate: 2-Fluorobiphenyl " 100 66.6 " 66.6 Surrogate: 2,4,6-Tribromophenol " 150 96.5 " 64.3	,	11	100		80.5	n		80.5			
Hexachlorobutadiene " 100 79.3 " 79.3 Hexachloroethane " 100 73.2 " 73.2 2-Methylphenol " 78.8 " 4-Methylphenol " 118 " Nitrobenzene " 100 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pyridine " 100 72.2 " 72.2 2,4,5-Trichlorophenol " 100 80.5 " 80.5 2,4,6-Trichlorophenol " 100 83.6 " 83.6 Surrogate: 2-Fluorophenol " 150 98.7 " 65.8 Surrogate: Phenol-d6 " 150 106 " 70.7 Surrogate: Nitrobenzene-d5 " 100 61.7 " 61.7 Surrogate: 2-Fluorobiphenyl " 100 66.6 " 66.6 Surrogate: 2-Fluorobiphenyl " 150 96.5 " 64.3	•	11	100		102	Ħ		102			
Hexachloroethane		н	100		79.3	**		79.3			
2-Methylphenol " 78.8 " 4-Methylphenol " 118 " Nitrobenzene " 100 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pyridine " 100 72.2 " 72.2 2,4,5-Trichlorophenol " 100 80.5 " 80.5 2,4,6-Trichlorophenol " 100 83.6 " 83.6 Surrogate: 2-Fluorophenol " 150 98.7 " 65.8 Surrogate: Phenol-d6 " 150 106 " 70.7 Surrogate: Nitrobenzene-d5 " 100 61.7 " 61.7 Surrogate: 2-Fluorobiphenyl " 100 66.6 " 66.6 Surrogate: 2,4,6-Tribromophenol " 150 96.5 " 64.3		п			73.2	11		73.2			
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Nitrobenzene " 100 78.6 " 78.6 Pentachlorophenol " 100 78.6 " 78.6 Pyridine " 100 72.2 " 72.2 2,4,5-Trichlorophenol " 100 80.5 " 80.5 2,4,6-Trichlorophenol " 100 83.6 " 83.6 Surrogate: 2-Fluorophenol " 150 98.7 " 65.8 Surrogate: Phenol-d6 " 150 106 " 70.7 Surrogate: Nitrobenzene-d5 " 100 61.7 " 61.7 Surrogate: 2-Fluorobiphenyl " 100 66.6 " 66.6 Surrogate: 2,4,6-Tribromophenol " 150 96.5 " 64.3		II			118	19					
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Sequoia Analytical - Petaluma





Cambria Environmental - Oakland

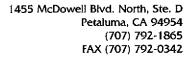
1144 65th St., Suite C Oakland, CA 94608 Project: Shell Oil Co.

Sampled: 5/14/99

Project Number: 105 5th St., Oakland Project Manager: Troy Buggle Received: 5/17/99 Reported: 5/27/99

TCLP Semivolatiles by EPA Method 1311/8270B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit Recov.	RPD RI	PD Q
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits %	Limit	% Notes*
LCS Dup	9050529-BS	<u>SD1</u>						
1,4-Dichlorobenzene	5/25/99	100		84.0	ug/l	84.0	9.	22
2,4-Dinitrotoluene	н	100		90.7	**	90.7	1	.9
Hexachlorobenzene	н	100		102	*1	102		0
Hexachlorobutadiene	н	100		89.9	•1	89.9	13	2.5
Hexachloroethane	Ħ	100		82.4	11	82.4	1	1.8
2-Methylphenol	"			86.4	11 '			
4-Methylphenol	10			128	II			
Nitrobenzene	н	100		84.2	IF	. 84.2	6	88
Pentachlorophenol	H	100		82.5	17	82.5	4.	84
Pyridine	**	100		81.0	10	81.0	1	1.5
2,4,5-Trichlorophenol	11	100		94.0	**	94.0	1.	5.5
2,4,6-Trichlorophenol	11	100		96.5	н	96.5	1	1.3
Surrogate: 2-Fluorophenol	11	150		112	"	74.7		
Surrogate: Phenol-d6	11	150		124	**	82.7		
Surrogate: Nitrobenzene-d5	11	100		67.7	"	67.7		
Surrogate: 2-Fluorobiphenyl	H	100		72.0	H	72.0		
Surrogate: 2,4,6-Tribromophenol	H	150		106	"	70.7		
Surrogate: Terphenyl-d14	"	100		91.5	"	91.5		





Cambria Environmental - Oakland 1144 65th St., Suite C

Oakland, CA 94608

Project: Shell Oil Co.
Project Number: 105 5th St., Oakland

Sampled: 5/14/99 Received: 5/17/99

Project Manager: Troy Buggle

Reported: 5/27/99

Notes and Definitions

#	Note
AF-B	The analyte was found in an associated blank as well as in the sample.
1	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference



Sequola Analytical, Petaluma 1455 N. McDowell Blvd., Ste. D. Petaluma, CA 94954 Attention: Scott Forbes

SP-(1-4)

906-0734

680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8 1455 McDowell Blvd. North, Ste. D. 1551 Industrial Road

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 San Carlos, CA 94070-4111 Weresta State of the first and the first of the first of

(650) 364-9600 FAX (650) 364-9233 (925) 988-9600 FAX (925) 988-9673 (916) 921-9600 FAX (916) 921-0100 (707) 792-1865 FAX (707) 797-0342 (650) 232-9600 FAX (650) 232-9612

Client Project ID: P905412 Sample Descript: Soil. Analysis for: Organic Lead First Sample #: 906-0734

2.5

May 14, 1999 Sampled: Received: Jun 8, 1999 Extracted: Jun 8, 1999 Analyzed: Jun 8, 1999 Reported: Jun 9, 1999

	LABORATO	PRY ANALYSIS I	FOR:	Organic Lead					
Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg	QC Batch Number	Instrument ID				

Ň.D.

ME060899LUFTMDA MV-1

Analytes reported as N.D. were not present above the stated limit of detection,

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager Use for SPI - SP4 105 5th St. Oakland, CA.

WASTE MANAGEMENT PROCEDURES

Page 4B-18

ISSUED DATE: 05/23/97 CANCELS ISSUE: 03/05/97 ISSUED BY: RLG

MATERIAL: SOIL CONTAMINATED WITH GASOLINE, DIESEL OR CRUDE (NOT FROM A LEAKING UNDERGROUND STORAGE TANK)

USE FOR ARIZONA, CALIFORNIA AND NEVADA WASTE ONLY!!!

MINIMUM REQUIRED TESTING

TPH = TOTAL PETROLEUM HYDROCARBONS, DHS GC-FID MOD 8015 GASOLINE OR DIESEL AS REQUIRED.

BTXE = EPA 8020

CAM METALS = TTLC ALL:

STLC ON ALL TTLC METALS 10 X STLC MAXIMUM: TTLC LEAD => 13 MG/KG REQUIRES ORGANIC ANALYSIS

TCLP EXTRACTION = EPA 1311 AND

VOC ON EXTRACT = EPA 8240 SVOC ON EXTRACT = EPA 8270 METALS ON EXTRACT = EPA 6010, (USE 7470 FOR Hg)

NOTE: IF PESTICIDES = EPA 8080 (ON EXTRACT)
IF HERBICIDES = EPA 8150 (ON EXTRACT)

AQUATIC BIOASSAY (FISH TOX) IS ONLY TO BE RUN ON SAMPLES WITH GREATER THAN 5000 PPM TPH. COMPOSITE A MAXIMUM OF 4 SAMPLES.

AQUATIC BIOASSAY (FISH TOX) = PART 800 OF "STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER (15TH EDITION)"

<u>LABORATORY INSTRUCTIONS</u> (MINIMUM GUIDELINES ONLY)

- TPH REQUIRED FOR ALL SAMPLES.
- ALL OTHER TESTS REQUIRED TO BE RUN ON COMPOSITE(S). MAXIMUM 4 SAMPLES PER COMPOSITE.
- STLC REQUIRED FOR METALS WITH TTLC VALUE 10 X STLC MAXIMUM.
- ORGANIC ANALYSIS REQUIRED FOR TTLC LEAD OF 13 MG/KG OR GREATER.
- LABORATORY IS TO SUPPLY QA/QC INFO. WITH ALL ANALYTICAL REPORTS.
- MAIL OR FAX ALL ANALYSIS TO PERSON REQUESTING ANALYSIS.

PROCEDURE ORIGINAL DATE: 07/10/90 PROCEDURE REVISED DATE: 03/05/97

SHELL OIL COMPANY RETAIL ENVIRONMENTAL ENGINEERING - WE							VEST CHAIN OF CUSTODY RECORD Serial Not									Date: 5 17 99 Page of						
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SP-3	5/14		X		•	1	-					0	3					1/2	linste	Ma	nagement	
SP-4	5/14	, ,	文		-							0	4						Procedu			
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ATTACHMENT F

Soil Disposal Confirmation Report

DISPOSAL CONFIRMATION

Consultant:	CAMBRIA ENVIRONMENTAL
Contact:	TROY BUGGLE
Phone/Fax:	(510) 420-3333 FAX (510) 420-9170
Client:	EOUIVA SERVICES - KAREN PETRYNA
Station #/Wic #:	204-5511-0402 SAP 135700 INCIDENT 98995757
Site Address:	105 5TH STREET @ OAK
City/State:	OAKLAND, CA
Estimated YD/Ton:	5-7 YARDS
Actual YD/Ton:	2.79 TONS
Disposal Facility:	FORWARD LANDFILL
Disposal Date:	JUNE 16, 1999
Contact:	BRAD BONNER
Phone #:	(800) 204-4242
Hauler:	MANLEY & SONS TRUCKING, INC.
Contact:	TIM A. MANLEY
Phone #:	(916) 381-6864
Fax #:	(916) 381-1573
	Date & Time Faxed
9019	