

C A M B R I A

ENVIRONMENTAL
PROTECTION

April 22, 1999

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

99 APR 27 PM 1:47

Re: **Fourth Quarter 1998 Monitoring Report**
Former Shell Service Station
1230 14th Street
Oakland, California
Incident #97088250
Cambria Project# 24-314-498



Dear Mr. Seto:

On behalf of Equiva Services LLC, Cambria Environmental Technology, Inc. (Cambria) is submitting this ground water monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

FOURTH QUARTER 1998 ACTIVITIES

Ground Water Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged water levels, measured dissolved oxygen (DO) concentrations, and sampled selected site wells. Blaine calculated ground water elevations and compiled the analytical data. Cambria prepared a ground water elevation contour map (Figure 1). The Blaine report, presenting the laboratory report with supporting field notes, is included as Attachment A.

ANTICIPATED FIRST QUARTER 1999 ACTIVITIES

Ground Water Monitoring: Blaine will gauge water levels, measure DO concentrations, and tabulate the data. Cambria will prepare a monitoring report.

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

CLOSING

We appreciate the opportunity to work with you on this project. Please call Darryk Ataide at (510) 420-3339 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc



Darryk Ataide, REA I
Project Manager

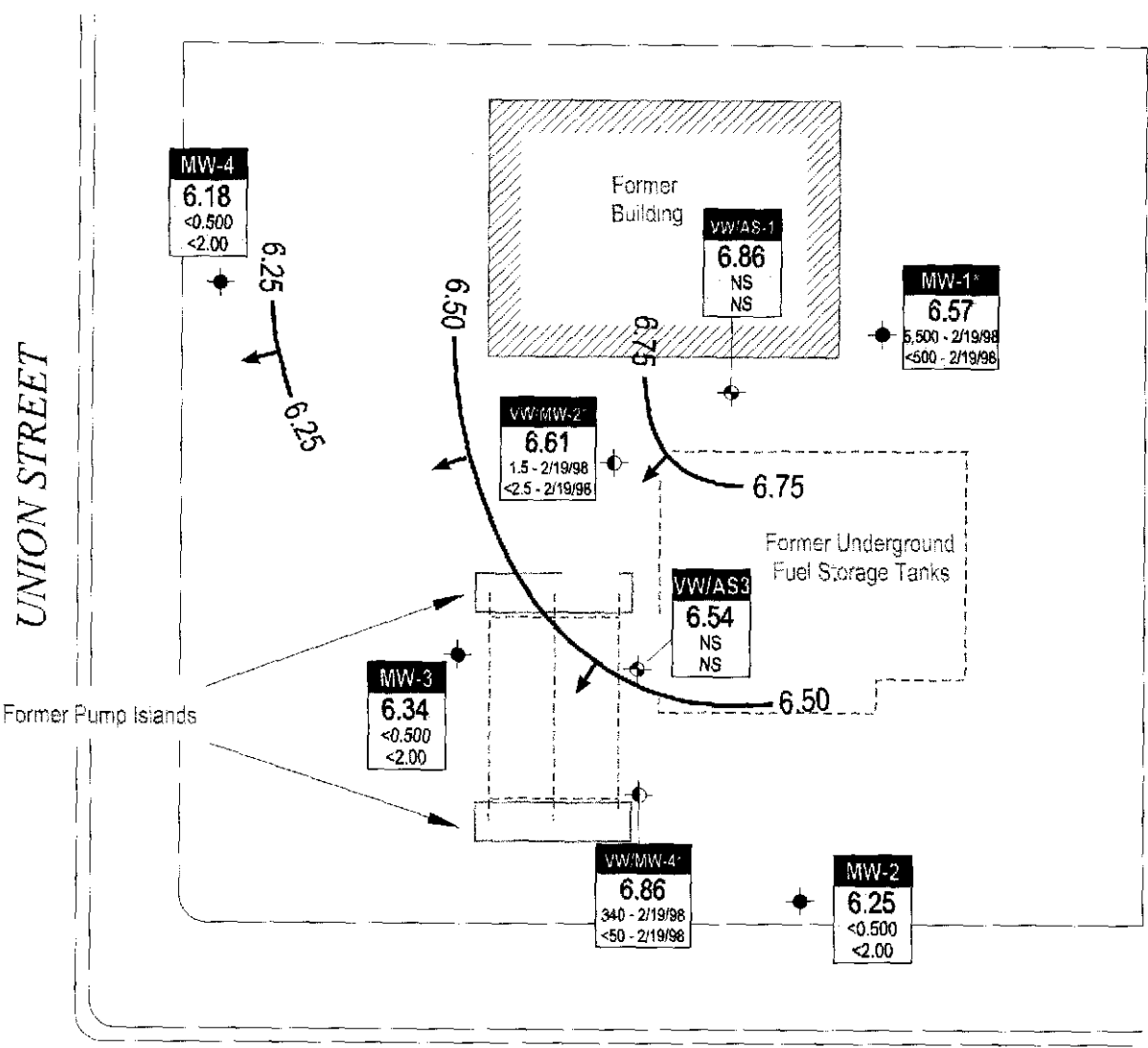
Ailsa S. Le May, R.G.
Senior Geologist



Figure 1: Ground Water Elevation Contours
Attachment: A - Blaine Ground Water Monitoring Report and Field Notes

cc: Karen Petryna, Equiva Services LLC, P.O. Box 6249, Carson, California 90749-6249
Tom Saberi, 1045 Airport Boulevard, Suite 12, South San Francisco, CA 94080

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EXPLANATION

- MW-1 Monitoring well location
 - VW/AS-3 Combination Air Sparge/Soil Vapor Extraction Well
 - VW/MW-4 Combination Soil Vapor Extraction Well/Monitoring Well
 - * Not contoured, ORCs in well
 - Ground water flow direction
 - Ground water elevation contour, in feet above mean sea level (msl), dashed where inferred
- | | |
|-----------------|--|
| Well | Well designation |
| ELEV | Ground water elevation (msl) |
| Benzene
MTBE | Benzene and MTBE concentrations are in parts per billion (ppb) |

14TH STREET

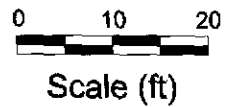


FIGURE 1

G:\NOAK1230\FIGURES\4Q1988-MP.DWG

Former Shell Service Station
 1230 14th Street
 Oakland, California
 Incident #97088250



C A M B R I A

Ground Water Elevation Contours

December 28, 1998

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. concentrates on objective data collection and does not participate in the interpretation of analytical results, the definition of geological or hydrological conditions, the formulation of recommendations, or the marketing of remedial systems.

Please call if you have any questions.

Yours truly,

A handwritten signature in cursive script, appearing to read "Deidre Kerwin".

Deidre Kerwin
Operations Manager

DK/ld

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Anni Kreml
Cambria Environmental Technology, Inc.
1144 65th Street, Ste. C
Oakland, CA 94608-2411

WELL CONCENTRATIONS
Shell-branded Service Station
1230 14th Street
Oakland, CA
Wic #204-5508-3103

Well ID	Date	TPHg (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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MW-1	03/25/1996	37,000	7,400	1,500	720	3,300	<500	NA	18.58	9.53	9.05	NA
MW-1	06/21/1996	35,000	9,900	460	340	3,500	890	NA	18.58	10.72	7.86	NA
MW-1	09/26/1996	19,000	8,200	510	780	790	<250	NA	18.58	12.88	5.70	NA
MW-1	12/19/1996	27,000	120	1,200	1,400	2,800	<100	NA	18.58	12.59	5.99	NA
MW-1	12/19/1996	32,000	12,000	1,300	1,600	3,100	830	NA	18.58	12.59	5.99	NA
MW-1	03/25/1997	39,000	13,000	1,600	840	3,100	730	NA	18.58	11.10	7.48	1.2
MW-1	06/26/1997	NA	NA	NA	NA	NA	NA	NA	18.58	12.42	6.16	NA
MW-1	09/26/1997	NA	NA	NA	NA	NA	NA	NA	18.58	13.31	5.27	0.8
MW-1	12/05/1997	NA	NA	NA	NA	NA	NA	NA	18.58	12.65	5.93	0.3
MW-1	02/19/1998	16,000	5,500	450	500	800	<500	NA	18.58	6.46	12.12	2.4
MW-1	06/08/1998	NA	NA	NA	NA	NA	NA	NA	18.58	6.62	11.96	1.2
MW-1	08/25/1998	NA	NA	NA	NA	NA	NA	NA	18.58	11.83	6.75	2.8
MW-1	12/28/1998	NA	NA	NA	NA	NA	NA	NA	18.58	12.01	6.57	2.6

MW-2	03/25/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	8.19	9.71	NA
MW-2	06/21/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	9.94	7.96	NA
MW-2	09/26/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	12.15	5.75	NA
MW-2	12/19/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	17.90	11.70	6.20	NA
MW-2	03/25/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	9.25	8.65	1.8
MW-2	06/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	11.36	6.54	2.4
MW-2	09/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	12.56	5.34	1.1
MW-2	09/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	12.56	5.34	1.1
MW-2	12/05/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	11.15	6.75	0.7
MW-2	02/19/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.90	5.61	12.29	2.7
MW-2	06/08/1998	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	17.90	5.58	12.32	3.2
MW-2	08/25/1998	NA	NA	NA	NA	NA	NA	NA	17.90	10.67	7.23	1.7
MW-2	12/28/1998	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	17.90	11.65	6.25	0.4/0.8

WELL CONCENTRATIONS
Shell-branded Service Station
1230 14th Street
Oakland, CA
Wlc #204-5508-3103

Well ID	Date	TPHg (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	DO Reading (ppm)
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MW-3	03/25/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	8.47	9.71	NA
MW-3	06/21/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	10.40	7.78	NA
MW-3	09/26/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	12.45	5.73	NA
MW-3	12/19/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	18.18	12.14	6.02	NA
MW-3	03/25/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	9.54	8.64	2.2
MW-3	06/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	11.66	6.52	3.6
MW-3	09/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	12.85	5.33	1.1
MW-3	12/05/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	11.44	6.74	0.6
MW-3	02/19/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.18	6.78	11.40	3.6
MW-3	06/08/1998	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	18.18	6.82	11.36	3.8
MW-3	06/08/1998	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	18.18	6.82	11.36	3.8
MW-3	08/25/1998	NA	NA	NA	NA	NA	NA	NA	18.18	11.09	7.09	1.2
MW-3	12/28/1998	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	18.18	11.84	6.34	0.9/0.6

MW-4	03/25/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	9.20	8.81	NA
MW-4	06/21/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	10.25	7.76	NA
MW-4	09/26/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	12.29	5.72	NA
MW-4	12/19/1996	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	18.01	12.47	5.54	NA
MW-4	03/25/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	9.44	8.57	1.8
MW-4	06/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	11.57	6.44	6.2
MW-4 (D)	06/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	11.57	6.44	6.2
MW-4	09/26/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	12.75	5.26	2.1
MW-4	12/05/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	11.37	6.64	1.0
MW-4 (D)	12/05/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	11.37	6.64	1.0
MW-4	02/19/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	18.01	5.59	12.42	6.5
MW-4	06/08/1998	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	18.01	5.65	12.36	2.6

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MW-4	08/25/1998	NA	NA	NA	NA	NA	NA	NA	18.01	10.98	7.03	2.4
MW-4	12/28/1998	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	18.01	11.83	6.18	1.3/1.2

VW/MW-2	03/25/1996	13,000	900	920	180	1,500	<250	NA	18.30	9.04	9.26	NA
VW/MW-2	06/21/1996	27,000	4,100	1,100	1,400	3,200	700	NA	18.30	10.48	7.82	NA
VW/MW-2	09/26/1996	27,000	5,300	1,900	980	2,200	<500	NA	18.30	12.52	5.78	NA
VW/MW-2 (D)	09/26/1996	29,000	5,800	2,200	1,100	2,500	<250	NA	18.30	12.52	5.78	NA
VW/MW-2	12/19/1996	50,000	6,200	5,100	1,700	5,600	590	NA	18.30	12.42	5.88	NA
VW/MW-2	03/25/1997	210	5.6	<0.50	0.52	<0.50	14	NA	18.30	9.83	8.47	2.0
VW/MW-2 (D)	03/25/1997	250	1.7	0.58	0.51	<0.50	4.7	NA	18.30	9.83	8.47	2.0
VW/MW-2	06/26/1997	NA	NA	NA	NA	NA	NA	NA	18.30	12.43	5.87	NA
VW/MW-2	09/26/1997	NA	NA	NA	NA	NA	NA	NA	18.30	12.98	5.32	0.9
VW/MW-2	12/05/1997	NA	NA	NA	NA	NA	NA	NA	18.30	12.20	6.10	0.4
VW/MW-2	02/19/1998	<50	1.5	<0.50	<0.50	0.71	<2.5	NA	18.30	5.83	12.47	3.6
VW/MW-2	06/08/1998	NA	NA	NA	NA	NA	NA	NA	18.30	5.80	12.50	1.0
VW/MW-2	08/25/1998	NA	NA	NA	NA	NA	NA	NA	18.30	11.72	6.58	4.8
VW/MW-2	12/28/1998	NA	NA	NA	NA	NA	NA	NA	18.30	11.69	6.61	2.7

VW/MW-4	03/25/1996	83,000	6,500	7,000	2,000	11,000	<250	NA	18.14	8.45	9.69	NA
VW/MW-4 (D)	03/25/1996	84,000	6,400	7,000	2,100	12,000	<250	NA	18.14	8.45	9.69	NA
VW/MW-4	06/21/1996	110,000	14,000	15,000	3,700	17,000	1,700	NA	18.14	10.38	7.76	NA
VW/MW-4 (D)	06/21/1996	100,000	12,000	12,000	2,900	13,000	<1,000	NA	18.14	10.38	7.76	NA
VW/MW-4	09/26/1996	52,000	13,000	2,700	2,100	3,200	<500	NA	18.14	12.43	5.71	NA
VW/MW-4	12/19/1996	75,000	15,000	6,600	3,000	7,600	<1,250	NA	18.14	11.87	6.27	NA
VW/MW-4	03/25/1997	56,000	4,700	1,500	2,500	6,300	580	NA	18.14	9.60	8.54	2.4
VW/MW-4	06/26/1997	NA	NA	NA	NA	NA	NA	NA	18.14	12.36	5.78	NA
VW/MW-4	09/26/1997	NA	NA	NA	NA	NA	NA	NA	18.14	12.82	5.32	0.4

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VW/MW-4	12/05/1997	NA	NA	NA	NA	NA	NA	NA	18.14	12.15	5.99	0.3
VW/MW-4	02/19/1998	4,100	320	40	44	520	<50	NA	18.14	5.85	12.29	1.8
VW/MW-4 (D)	02/19/98	4,300	340	44	47	540	<50	NA	18.14	5.85	12.29	1.8
VW/MW-4	06/08/1998	NA	NA	NA	NA	NA	NA	NA	18.14	5.87	12.27	1.8
VW/MW-4	08/25/1998	NA	NA	NA	NA	NA	NA	NA	18.14	10.96	7.18	2.5
VW/MW-4	12/28/1998	NA	NA	NA	NA	NA	NA	NA	18.14	11.28	6.86	0.9

VW/AS-1	03/25/1996	NA	NA	NA	NA	NA	NA	NA	18.60	8.98	9.62	NA
VW/AS-1	06/21/1996	NA	NA	NA	NA	NA	NA	NA	18.60	10.95	7.65	NA
VW/AS-1	09/26/1996	NA	NA	NA	NA	NA	NA	NA	18.60	12.98	5.62	NA
VW/AS-1	12/19/1996	NA	NA	NA	NA	NA	NA	NA	18.60	12.67	5.93	NA
VW/AS-1	03/25/1997	NA	NA	NA	NA	NA	NA	NA	18.60	10.12	8.48	NA
VW/AS-1	06/26/1997	NA	NA	NA	NA	NA	NA	NA	18.60	12.34	6.26	NA
VW/AS-1	09/26/1997	NA	NA	NA	NA	NA	NA	NA	18.60	13.40	5.20	NA
VW/AS-1	12/05/1997	NA	NA	NA	NA	NA	NA	NA	18.60	11.96	6.64	5.2
VW/AS-1	02/19/1998	NA	NA	NA	NA	NA	NA	NA	18.60	6.22	12.38	1.3
VW/AS-1	06/08/1998	NA	NA	NA	NA	NA	NA	NA	18.60	6.20	12.40	1.0
VW/AS-1	08/25/1998	NA	NA	NA	NA	NA	NA	NA	18.60	11.59	7.01	1.6
VW/AS-1	12/28/1998	NA	NA	NA	NA	NA	NA	NA	18.60	11.74	6.86	1.3

VW/AS-3	03/25/1996	NA	NA	NA	NA	NA	NA	NA	18.17	8.50	9.67	NA
VW/AS-3	06/21/1996	NA	NA	NA	NA	NA	NA	NA	18.17	10.42	7.75	NA
VW/AS-3	09/26/1996	NA	NA	NA	NA	NA	NA	NA	18.17	12.49	5.68	NA
VW/AS-3	12/19/1996	NA	NA	NA	NA	NA	NA	NA	18.17	12.28	5.89	NA
VW/AS-3	03/25/1997	NA	NA	NA	NA	NA	NA	NA	18.17	9.61	8.56	NA
VW/AS-3	06/26/1997	NA	NA	NA	NA	NA	NA	NA	18.17	11.80	6.37	NA
VW/AS-3	09/26/1997	NA	NA	NA	NA	NA	NA	NA	18.17	12.89	5.28	NA

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VW/AS-3	12/05/1997	NA	NA	NA	NA	NA	NA	NA	18.17	11.38	6.79	1.8
VW/AS-3	02/19/1998	NA	NA	NA	NA	NA	NA	NA	18.17	6.24	11.93	1.3
VW/AS-3	06/08/1998	NA	NA	NA	NA	NA	NA	NA	18.17	6.25	11.92	1.2
VW/AS-3	08/25/1998	NA	NA	NA	NA	NA	NA	NA	18.17	11.43	6.74	1.3
VW/AS-3	12/28/1998	NA	NA	NA	NA	NA	NA	NA	18.17	11.63	6.54	1.7

Abbreviations:

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

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl ether by EPA Method 8020

TOC = Top of Casing Elevation

GW = Groundwater

DO = Dissolved Oxygen

ug/L = parts per billion

msl = Mean sea level

ft = Feet

<n = Below detection limit

D = Duplicate sample

0.4/0.8 = Pre-purge DO/Post-purge DO



Sequoia
Analytical

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

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

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(707) 792-1865

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FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

January 14, 1999

Fran Thie
Blaine Technical Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112

RE: Shell Oil Co./P812425

Dear Fran Thie

Enclosed are the results of analyses for sample(s) received by the laboratory on December 30, 1998. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Scott Forbes
Project Manager

CA ELAP Certificate Number 2245





**Sequoia
Analytical**

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
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Blaine Technical Services, Inc. 1680 Rogers Ave. San Jose, CA 95112	Project: Shell Oil Co. Project Number: 1230 14th St. Oakland Project Manager: Fran Thie	Sampled: 12/28/98 Received: 12/30/98 Reported: 1/14/99
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ANALYTICAL REPORT FOR P812425

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW 2	P812425-01	Water	12/28/98
MW 3	P812425-02	Water	12/28/98
MW 4	P812425-03	Water	12/28/98





**Sequoia
Analytical**

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Blaine Technical Services, Inc. 1680 Rogers Ave. San Jose, CA 95112	Project: Shell Oil Co. Project Number: 1230 14th St. Oakland Project Manager: Fran Thic	Sampled: 12/28/98 Received: 12/30/98 Reported: 1/14/99
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**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma**

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW 2				<u>P812425-01</u>			<u>Water</u>	
Gasoline	9010055	1/6/99	1/6/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		117	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		102	"	
MW 3				<u>P812425-02</u>			<u>Water</u>	
Gasoline	9010055	1/6/99	1/6/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		117	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		101	"	
MW 4				<u>P812425-03</u>			<u>Water</u>	
Gasoline	9010055	1/6/99	1/6/99		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		0.500	ND	"	
Methyl tert-butyl ether	"	"	"		2.00	ND	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	65.0-135		114	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	65.0-135		105	"	





**Sequoia
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**Conventional Chemistry Parameters by APHA/EPA Methods
Sequoia Analytical - Petaluma**

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>MW 2</u> TRPH	9010029	1/5/99	1/5/99	<u>P812425-01</u> SM 5520C&F	1.00	ND	<u>Water</u> mg/l	
<u>MW 3</u> TRPH	9010029	1/5/99	1/5/99	<u>P812425-02</u> SM 5520C&F	1.00	ND	<u>Water</u> mg/l	
<u>MW 4</u> TRPH	9010029	1/5/99	1/5/99	<u>P812425-03</u> SM 5520C&F	1.00	ND	<u>Water</u> mg/l	





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

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 9010055			Date Prepared: 1/5/98			Extraction Method: EPA 5030 waters				
Blank			9010055-BLK1							
Gasoline	1/5/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: a,a,a-Trifluorotoluene	"	300		348	"	65.0-135	116			
Surrogate: 4-Bromofluorobenzene	"	300		293	"	65.0-135	97.7			
Blank			9010055-BLK2							
Gasoline	1/6/99			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	0.500				
Methyl tert-butyl ether	"			ND	"	2.00				
Surrogate: a,a,a-Trifluorotoluene	"	300		340	"	65.0-135	113			
Surrogate: 4-Bromofluorobenzene	"	300		301	"	65.0-135	100			
LCS			9010055-BS1							
Benzene	1/5/99	100		98.0	ug/l	65.0-135	98.0			
Toluene	"	100		98.1	"	65.0-135	98.1			
Ethylbenzene	"	100		95.1	"	65.0-135	95.1			
Xylenes (total)	"	300		295	"	65.0-135	98.3			
Surrogate: a,a,a-Trifluorotoluene	"	300		331	"	65.0-135	110			
LCS			9010055-BS2							
Benzene	1/6/99	100		110	ug/l	65.0-135	110			
Toluene	"	100		108	"	65.0-135	108			
Ethylbenzene	"	100		104	"	65.0-135	104			
Xylenes (total)	"	300		322	"	65.0-135	107			
Surrogate: a,a,a-Trifluorotoluene	"	300		341	"	65.0-135	114			
Matrix Spike			9010055-MS1			P812419-02				
Benzene	1/6/99	100	0.894	103	ug/l	65.0-135	102			
Toluene	"	100	ND	103	"	65.0-135	103			
Ethylbenzene	"	100	ND	99.9	"	65.0-135	99.9			
Xylenes (total)	"	300	ND	310	"	65.0-135	103			
Surrogate: a,a,a-Trifluorotoluene	"	300		327	"	65.0-135	109			





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Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/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	9010055-MSD1	P812419-02								
Benzene	1/6/99	100	0.894	106	ug/l	65.0-135	105	20.0	2.90	
Toluene	"	100	ND	106	"	65.0-135	106	20.0	2.87	
Ethylbenzene	"	100	ND	103	"	65.0-135	103	20.0	3.06	
Xylenes (total)	"	300	ND	319	"	65.0-135	106	20.0	2.87	
Surrogate: <i>a,a,a-Trifluorotoluene</i>	"	300		332	"	65.0-135	111			





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**Conventional Chemistry Parameters by APHA/EPA 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*
<u>Batch: 9010029</u>	<u>Date Prepared: 1/5/99</u>					<u>Extraction Method: 418.1 / 5520C&F Mod.</u>				
<u>Blank</u>	<u>9010029-BLK1</u>									
TRPH	1/5/99			ND	mg/l	1.00				
<u>LCS</u>	<u>9010029-BS1</u>									
TRPH	1/5/99	20.0		19.1	mg/l	80.0-120	95.5			
<u>LCS Dup</u>	<u>9010029-BSD1</u>									
TRPH	1/5/99	20.0		18.2	mg/l	80.0-120	91.0	20.0	4.83	





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Blaine Technical Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112

Project: Shell Oil Co.
Project Number: 1230 14th St. Oakland
Project Manager: Fran Thie

Sampled: 12/28/98
Received: 12/30/98
Reported: 1/14/99

Notes and Definitions

#	Note
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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
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Recov.	Recovery
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RPD	Relative Percent Difference
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SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 981225 Y3

Date: _____
Page 1 of 1

Site Address: 1230 14th St., Oakland, CA

WIC#: 204-5508-3103

Shell Engineer: Alex Perez
Phone No.: (510) 675-6168
Fax #: 675-6172

Consultant Name & Address: Blaine Tech Services, Inc.
1680 Rogers Ave., San Jose, CA 95112

Consultant Contact: Fran Thie
Phone No.: (408) 573-0555
Fax #: 573-7771

Comments:

Sampled by: *[Signature]*

Printed Name: BROOKS TAYLOR

Analysis Required

TPH (EPA 8015 Mod. Gas)	
TPH (EPA 8015 Mod. Diesel)	
BTEX (EPA 8020/602)	
Volatile Organics (EPA 8240)	
Test for Disposal	
Combination TPH 8015 & BTEX 6020	<u>1 MTR</u>
TOTAL OIL & GREASE	
Asbestos	
Container Size	
Preparation Used	
Composite Y/N	

LAB: SEQ

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input checked="" type="checkbox"/> 4461		24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/> 4441		48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/> 4442		16 days <input type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/> 4443		Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/> 4452		
Water Rem. or Sys. O & M <input type="checkbox"/> 4453		
Other <input type="checkbox"/>		

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY: _____

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 6020	TOTAL OIL & GREASE	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
MW2	12/28			X		5						X	X							FS12425-01
MW3	1			X		5						X	X							02
MW4	1			X		5						X	X							03

COOLER CUSTODY SEALS INTACT NOT INTACT
COOLER TEMPERATURE _____ °C

Relinquished By (signature): <i>[Signature]</i>	Printed Name: <u>BROOKS TAYLOR</u>	Date: <u>12-29-98</u> Time: <u>11:00</u>	Received (signature): <i>[Signature]</i>	Printed Name: <u>LANCE A. DAVIDSON</u>	Date: <u>12-29-98</u> Time: <u>11:00</u>
Relinquished By (signature): <i>[Signature]</i>	Printed Name: <u>LANCE A. DAVIDSON</u>	Date: <u>12-29-98</u> Time: _____	Received (signature): <i>[Signature]</i>	Printed Name: <u>[Signature]</u>	Date: <u>12-29</u> Time: <u>13:30</u>
Relinquished By (signature): <i>[Signature]</i>	Printed Name: _____	Date: <u>12-30</u> Time: <u>15:40</u>	Received (signature): <i>[Signature]</i>	Printed Name: <u>E.C. BLANCO</u>	Date: <u>12-29</u> Time: <u>13:23</u>

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Wain
 REC. BY (PRINT) E.B.

WORKORDER: _____
 DATE OF LOG-IN: _____

ESTIMATED ANALYSIS
 COLLECTION _____

CIRCLE THE APPROPRIATE RESPONSE		LAB	CONTAINER	SAMPLE	DATE	REMARKS:
1. Custody Seal(s)	Present / Absent* Intact / Broken*	SAMPLE #	DESCRIPTION	MATRIX	SAMP.	CONDITION (ETC.)
2. Custody Seal #:	Put in Remarks Section					
3. Chain-of-Custody	Present / Absent*					
4. Traffic Reports or Packing List:	Present / Absent*					
5. Airbill:	Airbill / Sticker Present / Absent*					
6. Airbill #:	_____					
7. Sample Tags:	Present / Absent					
Sample Tags #s:	Listed / Not Listed on Chain-of-Custody					
8. Sample Condition:	Intact / Broken* / Leaking*					
9. Does information on custody reports, traffic reports and sample tags agree?	Yes / No*					
10. Proper Preservatives used:	Yes / No*					
11. Date Rec. at Lab:	<u>12-29-98</u>					
12. Time Rec. at Lab:	<u>1323</u>					
13. Temp Rec. at Lab:	<u>8°C</u>					

MW - 2
 ↓
 MW - 3
 ↓ 4
 3X VOA
 2X HCC Amber
 20me
 L
 12-28
 ↓
 ↓
 ↓
 12-29-98
 E.B.

*If Circled, contact Project Manager and attach record of resolution.