CAMBRIA

May 15, 1997

Susan Hugo
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

LOP 3618

Re: **First Quarter 1997 Monitoring Report**
Shell Service Station
5755 Broadway
Oakland, California 94606
WIC #204-5510-0303
Cambria Project #240-314-106

Dear Ms. Hugo:

On behalf of Shell Oil Products Company (Shell), Cambria Environmental Technology, Inc. (Cambria) is submitting this monitoring report to satisfy the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d. Presented below are a hydrocarbon and ground water removal summary, the first quarter 1997 activities, and the anticipated second quarter 1997 activities.

HYDROCARBON AND GROUND WATER REMOVAL SUMMARY

Hydrocarbon Phase	This Quarter	Cumulative	
		(pounds)	(gallons)
Separate-Phase	0	0.55	-
Ground Water with Aqueous-Phase Hydrocarbons	Not Available	-	331,338

The table above summarizes removal of separate-phase hydrocarbons by manual bailing reported in pounds, and the removal of ground water with aqueous-phase hydrocarbons from the tank-pit area by vacuum truck reported in gallons. Although the tank-pit area was dewatered on several occasions during the first quarter of 1997, the total volume removed is currently not available and will be reported in the second quarter 1997 monitoring report.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
SUITE B
OAKLAND,
CA 94608
PH: (510) 420-0700
FAX: (510) 420-9170

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FIRST QUARTER 1997 ACTIVITIES

Quarterly Ground Water Sampling: On February 20, 1997, Blaine Tech Services, Inc. (Blaine) of San Jose, California measured ground water depths and collected water samples from the site wells (Figure 1). The Blaine report, describing these sampling activities and presenting the analytic results, is included as Attachment A. Cambria calculated ground water elevations (Table 1) and compiled the analytic data (Table 2) and prepared a ground water elevation contour map (Figure 1).

Tank-Pit Dewatering: Due to seasonal rains, Cambria coordinated dewatering of the tank-pit through tank backfill wells on five separate occasions. Because the first quarter 1997 tank-pit pumping data is not currently available, the total volume removed will be reported in the second quarter 1997 monitoring report.

ANTICIPATED SECOND QUARTER 1997 ACTIVITIES

Quarterly Ground Water Sampling: Blaine will continue to measure ground water depths and collect water samples from the wells. Cambria will tabulate the data and prepare a quarterly monitoring report.

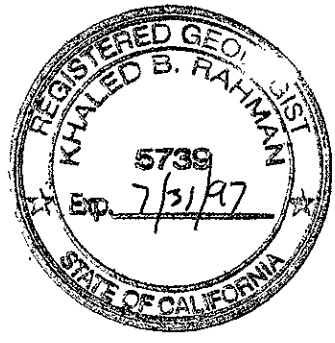
Tank-Pit Dewatering: Cambria will continue to monitor water levels and arrange dewatering of the tankpit when necessary.

CLOSING

We appreciate this opportunity to work with you on this project. Please call if you have any questions.

Sincerely,
Cambria Environmental Technology, Inc.

Khaled Rahman, R.G., C.H.G.
Senior Geologist



Attachments: A - Blaine Quarterly Ground Water Monitoring Report

cc: A. E. (Alex) Perez, Shell Oil Products Company, P.O. Box 4023, Concord, California 94524

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CAMBRIA
Environmental Technology, Inc.

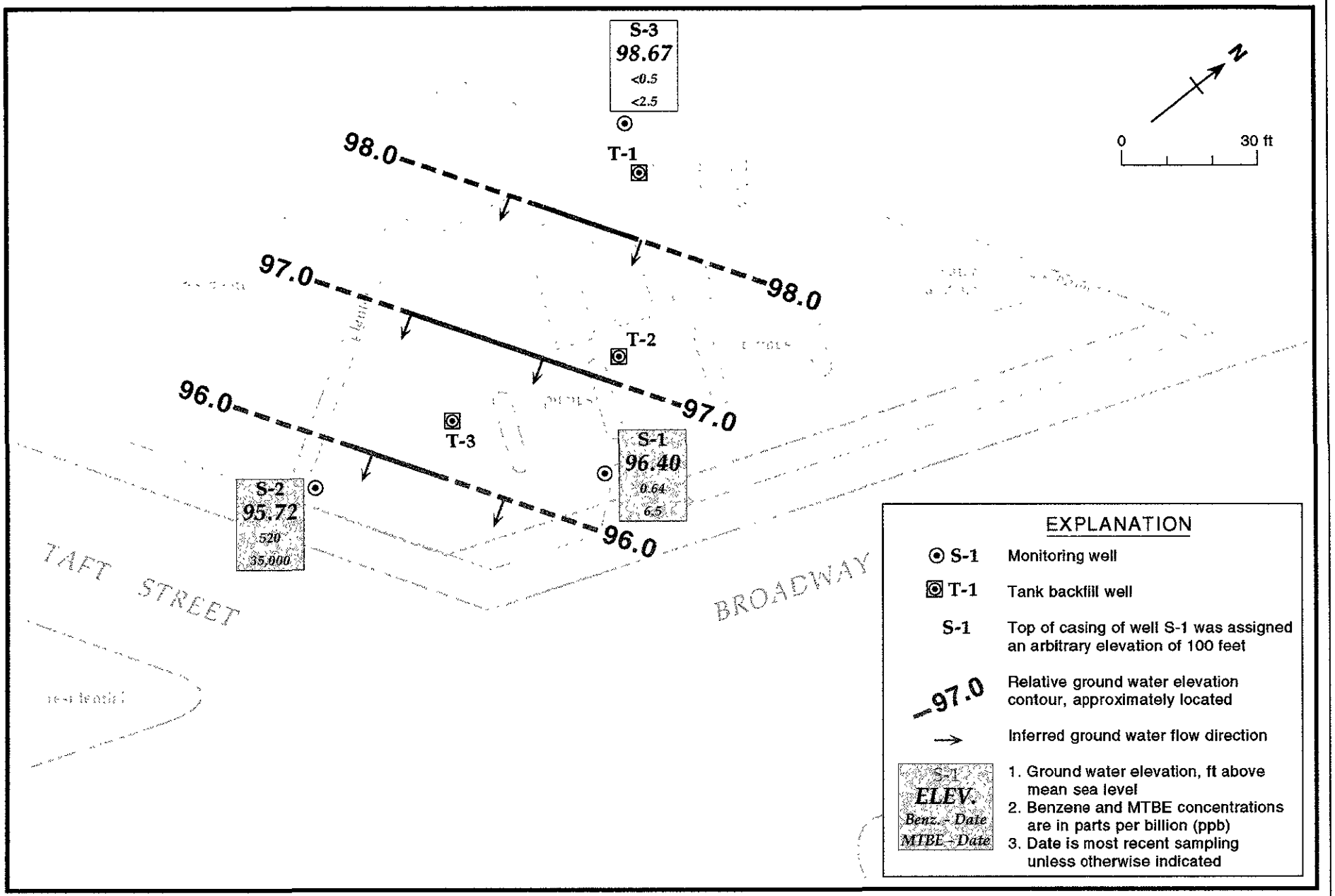

Figure 1. Ground Water Elevation Contours - February 20, 1997 - Shell Service Station WIC#204-2004-0204, 5755 Broadway, Oakland, California.

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03/31/97

Table 1. **Ground Water Elevations** - Shell Service Station WIC #504-5510-0303, 5755 Broadway, Oakland, California

Well ID	Date	Top-of-Casing Elevation[a]	Depth to Water (ft)	Ground Water Elevation (ft)
S-1	01/25/91	100.00	3.88	96.12
	06/03/91		3.51	96.49
	08/30/91		4.24	95.76
	11/22/91		4.29	95.71
	03/13/92		2.87	97.13
	05/28/92		3.79	96.21
	08/19/92		4.43	95.57
	11/18/92		4.34	95.66
	02/10/93		4.20	95.80
	06/11/93		3.39	96.61
	08/03/93		3.69	96.31
	11/02/93		4.26	95.74
	12/16/93		2.73	97.27
	02/01/94		3.38	96.62
	05/04/94		3.00	97.00
	08/18/94		3.70	96.30
	11/09/94		2.52	97.48
	02/22/95		4.08	95.92
	05/02/95		2.58	97.42
	08/30/95		3.48	96.52
	11/28/95		3.99	96.01
	02/02/96		2.00	98.00
	03/09/96		3.38	99.62
	08/22/96		3.43	96.57
	11/07/96		3.70	96.30
	02/20/97		**3.60**	**96.40**
S-2	01/25/91	98.92	4.52	94.40
	06/03/91		4.02	94.90
	08/30/91		4.70	94.22
	11/22/91		4.72	94.20
	03/13/92		3.47	95.45
	05/28/92		4.45	94.45
	08/19/92		4.84	94.08
	11/18/92		4.73	94.19
	02/10/93		4.83	94.09
	06/11/93		3.74	95.18
	08/03/93		4.23	94.69
	11/02/93		4.72	94.20
	12/16/93		3.00	95.92
	02/01/94		3.48	95.44
	05/04/94		3.26	95.66
	08/18/94		3.98	94.94

Table 1. **Ground Water Elevations** - Shell Service Station WIC #504-5510-0303, 5755 Broadway, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation[a]	Depth to Water (ft)	Ground Water Elevation (ft)
	11/09/94		3.10	95.82
	02/22/95		4.02	94.90
	05/02/95		2.86	96.06
	08/30/95		4.06	94.86
	11/28/95		4.48	94.44
	02/02/96		1.99	96.93
	03/09/96		3.27	95.65
	08/22/96		3.85	95.07
	11/07/96		4.00	94.92
	02/20/97		**3.20**	**95.72**
S-3	01/25/91	101.67	3.84	97.83
	06/03/91		3.25	98.42
	08/03/91		4.73	96.94
	11/22/91		4.81	96.86
	03/13/92		2.29	99.38
	05/28/92		3.62	98.05
	08/19/92		4.66	97.01
	11/18/92		4.51	97.16
	02/10/93		4.36	97.31
	06/11/93		2.91	98.76
	08/03/93		3.70	97.97
	11/02/93[b]		---	---
	12/16/93		2.12	99.55
	02/01/94		2.90	98.77
	05/04/94		2.54	99.13
	08/18/94		3.51	98.16
	11/09/94		2.44	99.23
	02/22/95		4.12	97.55
	05/02/95		2.83	98.84
	08/30/95		3.16	98.51
	11/28/95		3.87	97.80
	02/02/96		2.24	99.43
	03/09/96		3.05	98.62
	08/22/96		2.85	98.82
	11/07/96		3.35	98.32
	02/20/97		**3.00**	**98.67**

Notes:

a = Top of casing elevations referenced to arbitrary elevation of 100 ft
b = Well inaccessible
NA = Not available

Table 2. **Analytic Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X	MTBE*	DO (mg/L)
			← parts per billion (µg/L) →						
S-1	01/25/91	3.88	<30	<0.3	<0.3	<0.3	<0.3	---	---
	06/03/91	3.51	<30	<0.3	<0.3	<0.3	<0.3	---	---
	08/30/91	4.24	<30	<0.3	<0.3	<0.3	<0.3	---	---
	11/22/91	4.29	<30	2.3	0.3	<0.46	<0.65	---	---
	03/13/92	2.87	<30	<0.52	<0.3	<0.3	<0.3	---	---
	05/28/92	3.79	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92	4.43	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/18/92	4.34	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/10/93	4.20	51	1.4	<0.5	<0.5	<0.5	---	---
	02/10/93[dup]	4.20	<50	1.2	<0.5	<0.5	<0.5	---	---
	06/11/93	3.39	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/03/93	3.69	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/02/93	4.26	70[a]	<0.5	<0.5	<0.5	<0.5	---	---
	02/01/94	3.38	60[a]	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/94	3.00	<50	1.1	<0.5	<0.5	<0.5	---	---
	08/18/94	3.70	<50	0.6	<0.5	<0.5	<0.5	---	---
	08/18/94[dup]	3.70	60[b]	0.5	<0.5	<0.5	<0.5	---	---
	11/09/94	2.52	<50	4.0	<0.5	<0.5	<0.5	---	---
	02/22/95	4.08	50	0.8	<0.5	0.7	1.3	---	---
	05/02/95	2.58	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/30/95	3.48	<50	1.7	<0.5	<0.5	<0.5	---	---
	11/28/95	3.99	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/02/96	2.00	<50	11	0.9	<0.5	<0.5	---	---
	03/09/96	3.38	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/22/96	3.43	<50	1.5	<0.5	<0.5	<0.5	130	---
	11/07/96	3.70	<50	<0.5	<0.5	<0.5	<0.5	57	4.33
	02/20/97	**3.60**	**<50**	**0.64**	**<0.50**	**<0.50**	**1.6**	**6.5**	**2.0**
S-2	01/25/91	4.52	450	140	6.2	1.8	15	---	---
	06/03/91	4.02	490	150	8.2	2.7	7	---	---

Table 2. **Analytic Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X	MTBE*	DO
			← parts per billion (µg/L) →						(mg/L)
	08/30/91	4.70	70	0.37	<0.3	<0.3	<0.3	---	---
	11/22/91	4.72	1,600	110	29	9.3	150	---	---
	03/13/92	3.47	1,300	210	34	5.7	79	---	---
	05/28/92	4.45	100	28	<0.5	<0.5	<0.5	---	---
	08/19/92	4.84	470	42	8.3	<0.5	4.0	---	---
	11/18/92	4.73	490	43	17	39	29	---	---
	02/10/93	4.83	19,000	710	80	760	370	---	---
	06/11/93	3.74	33,000	3,100	370	1,600	1,100	---	---
	08/03/93	4.23	18,000	1,400	81	130	130	---	---
	08/03/93^{dup}	4.23	19,000	1,400	86	140	150	---	---
	11/02/93	4.72	12,000[a]	470	31	47	92	---	---
	11/02/93^{dup}	4.72	13,000[a]	530	35	47	96	---	---
	02/01/94	3.48	31,000[a]	430	50	46	130	---	---
	02/01/94^{dup}	3.48	31,000[a]	300	30	33	100	---	---
	05/04/94	3.26	3,900	1,200	53	31	71	---	---
	05/04/94^{dup}	3.26	4,500	1,200	57	37	110	---	---
	08/18/94	3.98	24,000	600	15	8.3	27	---	---
	11/09/94	3.10	1,400[a]	240	13	9.3	20	---	---
	11/09/94^{dup}	3.10	1,800	260	13	8.5	21	---	---
	02/22/95	4.02	29,000	550	12	18	63	---	---
	02/22/95^{dup}	4.02	28,000	530	10	17	60	---	---
	05/02/95	2.86	4,400	1,000	38	25	77	---	---
	05/02/95^{dup}	2.86	4,400	1,000	41	26	83	---	---
	08/30/95	4.06	800	350	6.7	20	16	---	---
	08/30/95^{dup}	4.06	960	220	12	22	48	---	---
	11/28/95	4.48	2,000	230	50	220	230	---	---
	11/28/95^{dup}	4.48	2,100	240	51	230	230	---	---
	02/02/96	2.00	18,000	540	12	18	22	---	---
	02/02/96^{dup}	2.00	11,000	600	13	18	28	---	---
	03/09/96	3.27	3,800	1,500	30	27	58	---	---

Table 2. **Analytic Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X	MTBE*	DO (mg/L)
			← parts per billion (µg/L) →						
	03/09/96[dup]	3.27	3,500	1,300	21	24	53	---	---
	08/22/96	3.85	<20,000	490	<200	<200	<200	43,000	---
	08/22/96[dup]	3.85	<20,000	570	<200	<200	<200	59,000 (51,000)	---
	11/07/96	4.00	<5,000	290	<50	<50	<50	32,000	3.51
	11/07/96[dup]	4.00	<5,000	290	<50	<50	<50	32,000	3.51
	02/20/97	**3.20**	**<10,000**	**520**	**<100**	**<100**	**<100**	**28,000**	**1.0**
	02/20/97[dup]	**3.20**	**<10,000**	**520**	**<100**	**<100**	**<100**	**35,000**	**1.0**
S-3	01/25/91	NA	<30	<0.3	<0.3	<0.3	<0.3	---	---
	06/03/91	3.25	<30	<0.3	0.3	0.3	0.3	---	---
	08/30/91	4.73	<30	<0.3	<0.3	<0.3	<0.3	---	---
	11/22/91	4.81	<30	<0.3	<0.3	<0.3	<0.3	---	---
	03/13/92	2.29	<30	<0.3	0.3	0.3	0.3	---	---
	05/28/92	3.62	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92	4.66	<50	<0.5	<0.5	<0.5	0.5	---	---
	11/18/92	4.51	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/10/93	4.36	30	1.9	2.4	3.2	5.6	---	---
	06/11/93	2.91	<50	<0.5	<0.5	<0.5	<0.5	---	---
	06/11/93[dup]	2.91	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/03/93	3.70	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/02/93[c]	---	---	---	---	---	---	---	---
	02/01/94	2.90	<50	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/94	2.54	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/18/94	3.51	<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/09/94	2.44	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/22/95	4.12	80	<0.5	<0.5	0.5	0.5	---	---
	05/02/95	2.83	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/30/95	3.16	<50	0.5	<0.5	<0.5	<0.5	---	---
	11/28/95	3.87	<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/02/96	2.24	<50	<0.5	<0.5	<0.5	<0.5	---	---

Table 2. **Analytic Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X	MTBE*	DO
			← parts per billion (µg/L) →						(mg/L)
	03/09/96	3.05	<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/22/96	2.85	<50	0.80	<0.5	<0.5	<0.5	<2.5	4.6
	11/07/96	3.35	<50	<0.5	<0.5	<0.5	<0.5	<2.5	4.6
	02/20/97	**3.00**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	**1.0**
Bailer Blank	08/19/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/22/91		<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/22/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
Trip Blank	03/13/92		<50	<0.3	<0.3	<0.3	<0.3	---	---
	05/28/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/19/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/18/92		<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/10/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/03/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/02/93		<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/01/94		<50	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/94		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/09/94		<50	<0.5	<0.5	<0.5	<0.5	---	---
	02/22/95		<50	<0.5	1.0[d]	<0.5	<0.5	---	---
	05/02/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
	08/30/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
	11/28/95		<50	<0.5	<0.5	<0.5	<0.5	---	---
California Primary MCLs			NE	1	700	150	1,750		

Table 2. **Analytic Results for Ground Water** - Shell Service Station, WIC #204-5510-0303, 5755 Broadway, Oakland, California (continued)

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 602 or 8020
MTBE = Methyl tert-Butyl Ether by EPA Method 8020
DO = Dissolved Oxygen
--- = Not analyzed
MCLs = California Primary maximum contaminant levels for drinking water (22 CCR 64444)
NA = Not available
NE = Not established
<n = Not detected at detection limits of n ppb
dup = Duplicate sample
ppb = part per billion
µg/L = Microgram per liter
mg/L = Milligram per liter

Notes:

a = Concentrations reported as gasoline are primarily due to presence of a discrete peak not indicative of gasoline.
b = This positive result has an atypical pattern for gasoline
c = Well inaccessible.
d = Positive result confirmed by secondary column or GC/MS analysis.
* = (x) indicates MTBE result confirmed by EPA method 8260.

CAMBRIA

ATTACHMENT A

Blaine Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112
(408) 573-7771 FAX
(408) 573-0555 PHONE

March 17, 1997

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Alex Perez

Shell WIC #204-5510-0303
5755 Broadway
Oakland, California

1st Quarter 1997

Quarterly Groundwater Monitoring Report 970220-L-3

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. Copies of our Sampling Report along with the laboratory's Certified Analytical Report are forwarded to the consultant overseeing work at this site. Submission of the assembled documents to interested regulatory agencies will be made by the designated consultant.

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 573-0555 ext. 201.

Yours truly,

Francis Thie

attachments: Table of Well Gauging Data
Chain of Custody
Field Data Sheets
Certified Analytical Report

cc: Cambria Environmental Technology, Inc.
1144 65th Street, Suite C
Oakland, CA 94608
Attn: Josh Bergstrom

(Any professional evaluations or recommendations will be made by the consultant under separate cover.)

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1	2/20/97	TOC	–	NONE	–	–	3.60	11.59
S-2 *	2/20/97	TOC	–	NONE	–	–	3.20	9.40
S-3	2/20/97	TOC	–	NONE	–	–	3.00	9.49
T-1	2/20/97	TOC	–	NONE	–	–	2.87	13.40
T-2	2/20/97	TOC	–	NONE	–	–	2.00	12.90
T-3	2/20/97	TOC	–	NONE	–	–	2.26	8.72

* Sample DUP was a duplicate sample taken from well S-2.

9702C55

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 970220-L3

Date: 2-20-97
Page 1 of 1

Site Address: 5755 Broadway, Oakland

WIC#: 204-5510-0303

Shell Engineer: R. Jeff Granberry — Phone No.: (510) 675-6168 Fax #: 675-6160

Consultant Name & Address: Blaine Tech Services, Inc. 985 Timothy Drive San Jose, CA 95133

Consultant Contact: Fran Thie — Phone No.: (408) 995-5535 ext 201 Fax #: 293-8773

Comments:

Sampled by: Ted Gilchrist

Printed Name: LAD GILCHRIST

LAB: SEQUOIA

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	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 8020	MTBE BY 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	2/20			X		3						X	X						01
S-2	"			X		3						X	X						02
S-3	"			X		3						X	X						03
EB	"			X		3						X	X						04
DUP	"			X		3						X	X						05

CHECK ONE (1) BOX ONLY — C1/D1

Quarterly Monitoring	X	6441
Site Investigation		6441
Soil Closure/Disposal		6442
Water Closure/Disposal		6443
Soil/Air Rem. or Sys. O & M		6452
Water Rem. or Sys. O & M		6453
Other		

TURN AROUND TIME

- 24 hours
- 48 hours
- 96 hours (Normal) X
- Other

NOTE: Notify Lab as soon as possible of 24/48 hr. TAT.

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Ted Gilchrist	LAD GILCHRIST	2/21/97	1030				
	JOHN HOWE	2/21/97			JOHN HOWE	2/21/97	1638
				Kathy	R. Herling	2/21/97	1758

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

White Copy Goes with Sample

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thle

Project: Shell Oakland/970220-L3

Enclosed are the results from samples received at Sequoia Analytical on February 21, 1997. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9702C55 -01	LIQUID, S-1	02/20/97	TPGBMW Purgeable TPH/BTEX
9702C55 -02	LIQUID, S-2	02/20/97	TPGBMW Purgeable TPH/BTEX
9702C55 -03	LIQUID, S-3	02/20/97	TPGBMW Purgeable TPH/BTEX
9702C55 -04	LIQUID, EB	02/20/97	TPGBMW Purgeable TPH/BTEX
9702C55 -05	LIQUID, DUP	02/20/97	TPGBMW Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell Oakland/970220-L3	Sampled: 02/20/97
1680 Rogers Avenue	Sample Descript: S-1	Received: 02/21/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/28/97
Attention: Fran Thle	Lab Number: 9702C55-01	Reported: 03/06/97

QC Batch Number: GC022897BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**6.5**
Benzene	**0.50**	**0.64**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**1.6**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell Oakland/970220-L3	Sampled: 02/20/97
1680 Rogers Avenue	Sample Descript: S-2	Received: 02/21/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/03/97
Attention: Fran Thie	Lab Number: 9702C55-02	Reported: 03/06/97

QC Batch Number: GC030397BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	N.D.
Methyl t-Butyl Ether	**500**	**28000**
Benzene	**100**	**520**
Toluene	100	N.D.
Ethyl Benzene	100	N.D.
Xylenes (Total)	100	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell Oakland/970220-L3	Sampled: 02/20/97
1680 Rogers Avenue	Sample Descript: S-3	Received: 02/21/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 02/28/97
Attention: Fran Thle	Lab Number: 9702C55-03	Reported: 03/06/97

QC Batch Number: GC022897BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Rennet
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell Oakland/970220-L3	Sampled: 02/20/97
1680 Rogers Avenue	Sample Descript: EB	Received: 02/21/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/03/97
Attention: Fran Thie	Lab Number: 9702C55-04	Reported: 03/06/97

QC Batch Number: GC030397BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	74

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell Oakland/970220-L3	Sampled: 02/20/97
1680 Rogers Avenue	Sample Descript: DUP	Received: 02/21/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 03/03/97
Attention: Fran Thie	Lab Number: 9702C55-05	Reported: 03/06/97

QC Batch Number: GC030397BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	N.D.
Methyl t-Butyl Ether	**500**	**35000**
Benzene	**100**	**520**
Toluene	100	N.D.
Ethyl Benzene	100	N.D.
Xylenes (Total)	100	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services	Client Proj. ID: Shell Oakland/970220-L3	Received: 02/21/97
1680 Rogers Avenue		
San Jose, CA 95112	Lab Proj. ID: 9702C55	Reported: 03/06/97
Attention: Fran Thie		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 10 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

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Blaine Tech Services, Inc.
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell Oakland/970220-L3
Matrix: Liquid
Work Order #: 9702C55 01,03
Reported: Mar 13, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC022897BTEX21A	GC022897BTEX21A	GC022897BTEX21A	GC022897BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	GW9702A3305C	GW9702A3305C	GW9702A3305C	GW9702A3305C
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/28/97	2/28/97	2/28/97	2/28/97
Analyzed Date:	2/28/97	2/28/97	2/28/97	2/28/97
Instrument I.D.#:	GCHP-21	GCHP-21	GCHP-21	GCHP-21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.2	9.1	9.6	29
MS % Recovery:	92	91	96	97
Dup. Result:	9.5	9.4	9.3	29
MSD % Recov.:	95	94	93	97
RPD:	3.2	3.2	3.2	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK022897	BLK022897	BLK022897	BLK022897
Prepared Date:	2/28/97	2/28/97	2/28/97	2/28/97
Analyzed Date:	2/28/97	2/28/97	2/28/97	2/28/97
Instrument I.D.#:	GCHP-21	GCHP-21	GCHP-21	GCHP-21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.2	9.2	9.2	28
LCS % Recov.:	92	92	92	93
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

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Blaine Tech Services, Inc.
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Shell Oakland/970220-L3
Matrix: Liquid
Work Order #: 9702C55 02,05

Reported: Mar 13, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC030397BTEX21A	GC030397BTEX21A	GC030397BTEX21A	GC030397BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	C3603C	C3603C	C3603C	C3603C
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/3/97	3/3/97	3/3/97	3/3/97
Analyzed Date:	3/3/97	3/3/97	3/3/97	3/3/97
Instrument I.D.#:	GCHP-21	GCHP-21	GCHP-21	GCHP-21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.1	8.9	9	27
MS % Recovery:	91	89	90	90
Dup. Result:	9.6	9.4	9.4	29
MSD % Recov.:	96	94	94	97
RPD:	5.3	5.5	4.3	7.1
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK030397	BLK030397	BLK030397	BLK030397
Prepared Date:	3/3/97	3/3/97	3/3/97	3/3/97
Analyzed Date:	3/3/97	3/3/97	3/3/97	3/3/97
Instrument I.D.#:	GCHP-21	GCHP-21	GCHP-21	GCHP-21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.1	9.1	9.1	28
LCS % Recov.:	91	91	91	93

MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

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Blaine Tech Services, Inc.
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thle

Client Project ID: Shell Oakland/970220-L3
Matrix: Liquid
Work Order #: 9702C55 04

Reported: Mar 13, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC030397BTEX02A	GC030397BTEX02A	GC030397BTEX02A	GC030397BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
MS/MSD #:	W9702C3603B	W9702C3603B	W9702C3603B	W9702C3603B
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/3/97	3/3/97	3/3/97	3/3/97
Analyzed Date:	3/3/97	3/3/97	3/3/97	3/3/97
Instrument I.D.#:	GCHP-02	GCHP-02	GCHP-02	GCHP-02
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.3	8.6	8.6	27
MS % Recovery:	93	86	86	90
Dup. Result:	9.6	8.9	9.0	29
MSD % Recov.:	96	89	90	97
RPD:	3.2	3.4	4.5	7.1
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK030397	BLK030397	BLK030397	BLK030397
Prepared Date:	3/3/97	3/3/97	3/3/97	3/3/97
Analyzed Date:	3/3/97	3/3/97	3/3/97	3/3/97
Instrument I.D.#:	GCHP-02	GCHP-02	GCHP-02	GCHP-02
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.5	8.4	8.5	27
LCS % Recov.:	85	84	85	90
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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