CAMBRIA

July 30, 1997

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

LOP 3618

Re: **Second Quarter 1997 Monitoring Report**
Shell Service Station
5755 Broadway
Oakland, California 94606
WIC #204-5510-0303
Cambria Project #240-314-297

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 second quarter 1997 activities, and the anticipated third 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	0	-	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. No water was pumped during the second quarter of 1997. Since the vacuum truck/water transporter is currently relocating their office, the total volume of water removed during the first quarter of 1997 is not available and will be reported in the third quarter 1997 monitoring report.

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
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PH: (510) 420-0700
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SECOND QUARTER 1997 ACTIVITIES

On May 30, 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).

ANTICIPATED THIRD QUARTER 1997 ACTIVITIES

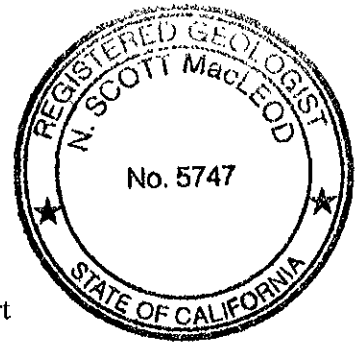
Quarterly Ground Water Sampling: Blaine will continue to measure ground water depths and collect water samples from the wells. Cambria will tabulate the data and prepare a quarterly monitoring report.

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

CLOSING

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

Sincerely,
Cambria Environmental Technology, Inc.



N. Scott MacLeod, R.G.
Principal 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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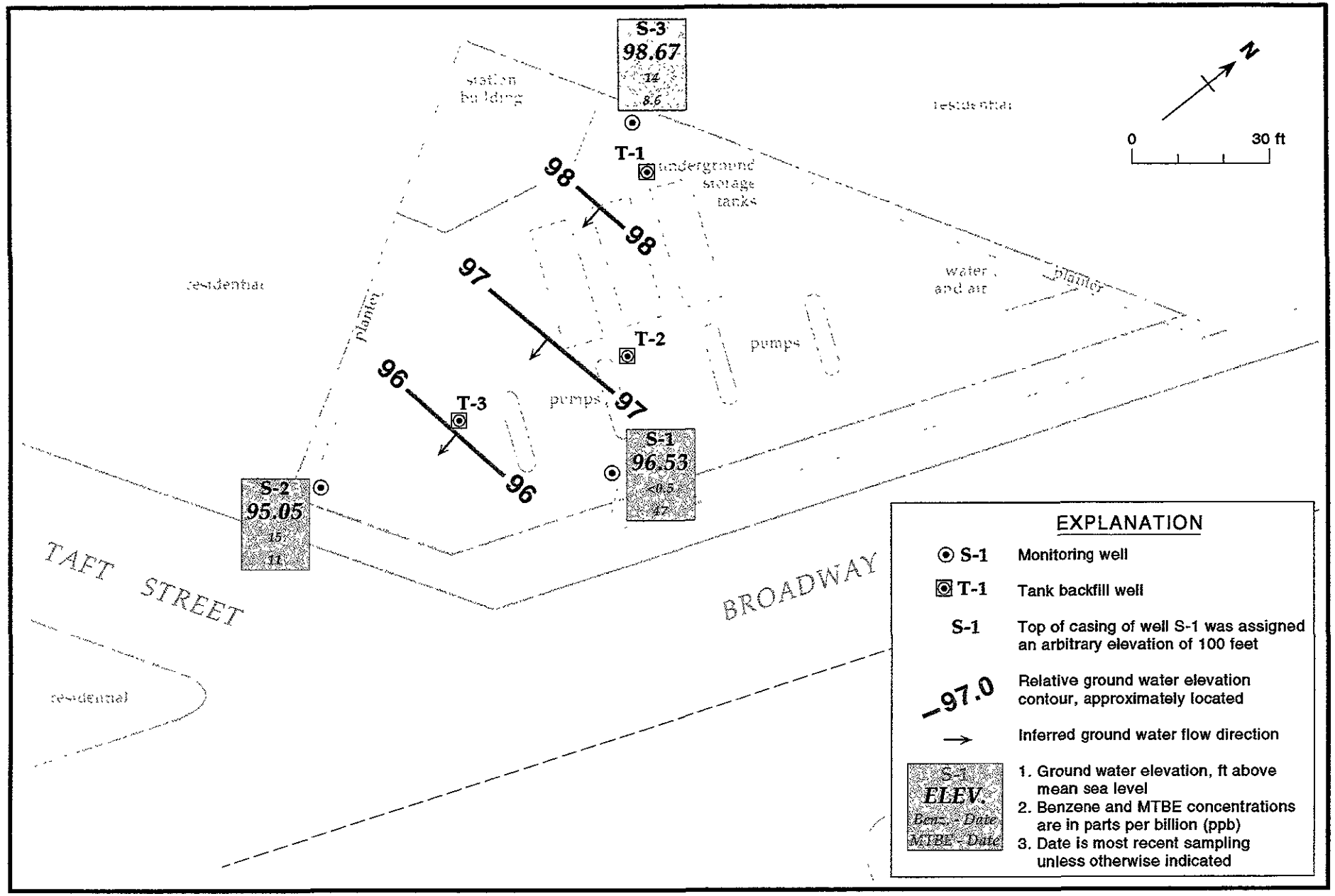

Figure 1. Ground Water Elevation Contours - May 30, 1997 - Shell Service Station WIC#204-2004-0204, 5755 Broadway, Oakland, California.

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Environmental Technology, Inc.

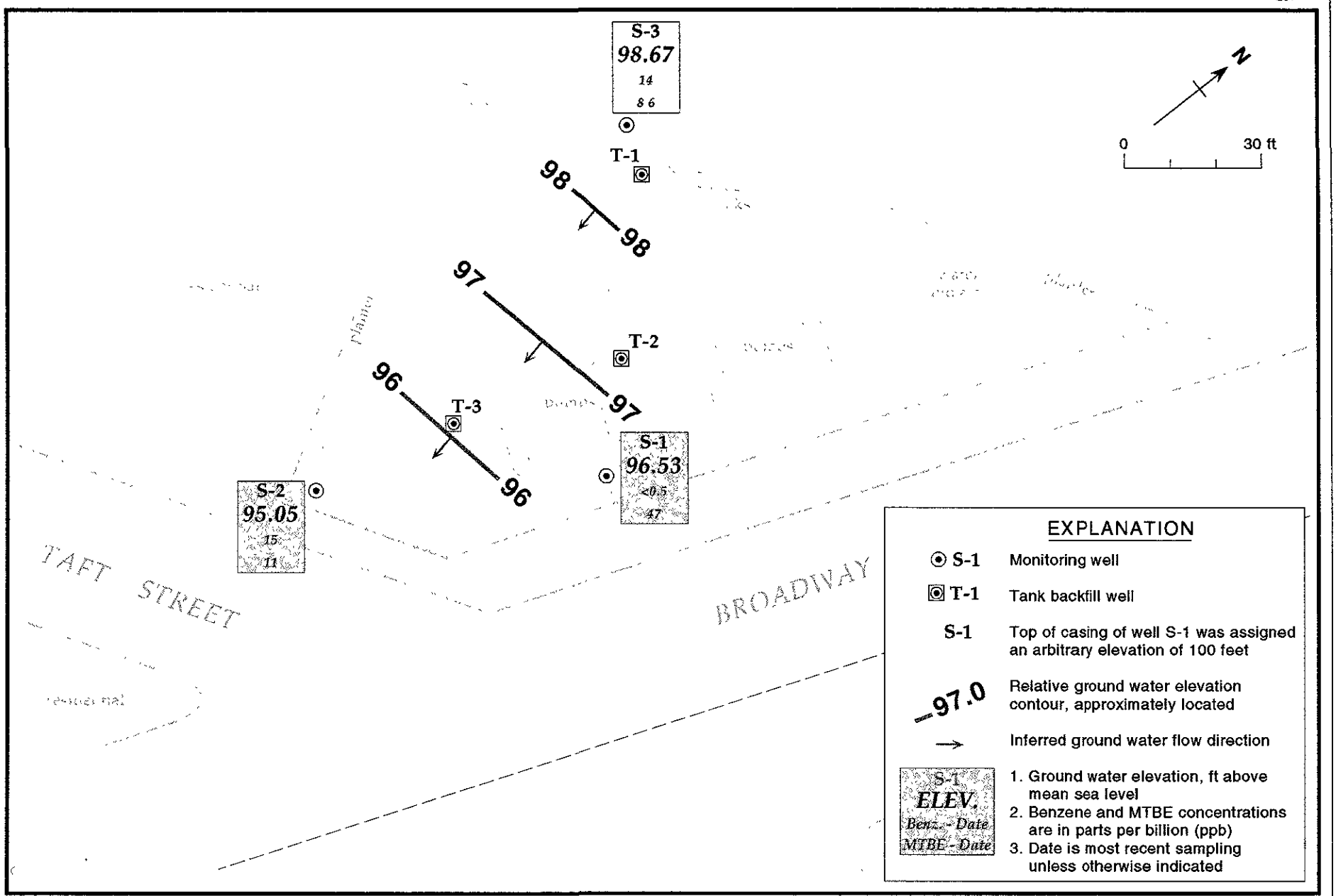

Figure 1. Ground Water Elevation Contours - May 30, 1997 - Shell Service Station WIC#204-2004-0204, 5755 Broadway, Oakland, California.

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
	05/30/97		**3.47**	**96.53**
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
	05/30/97		**3.87**	**95.05**
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
	05/30/97		**3.00**	**98.67**
T-1	**05/30/97**	**Not Surveyed**	**2.65**	**---**
T-2	**05/30/97**	**Not Surveyed**	**1.81**	**---**

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)
T-3	05/30/97	Not Surveyed	2.31	---

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	T	E	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	<0.46	0.3	<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	0.7	<0.5	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	<0.5	0.9	<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
	05/30/97	**3.47**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**46**	**7.0**
	05/30/97	**3.47**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**47**	**7.0**

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	T	E	X	MTBE	DO (mg/L)
			← parts per billion (µg/L) →						
S-2	01/25/91	4.52	450	140	1.8	6.2	15	---	---
	06/03/91	4.02	490	150	2.7	8.2	7	---	---
	08/30/91	4.70	70	0.37	<0.3	<0.3	<0.3	---	---
	11/22/91	4.72	1,600	110	9.3	29	150	---	---
	03/13/92	3.47	1,300	210	5.7	34	79	---	---
	05/28/92	4.45	100	28	<0.5	<0.5	<0.5	---	---
	08/19/92	4.84	470	42	<0.5	8.3	4.0	---	---
	11/18/92	4.73	490	43	39	17	29	---	---
	02/10/93	4.83	19,000	710	760	80	370	---	---
	06/11/93	3.74	33,000	3,100	1,600	370	1,100	---	---
	08/03/93	4.23	18,000	1,400	130	81	130	---	---
	08/03/93[dup]	4.23	19,000	1,400	140	86	150	---	---
	11/02/93	4.72	12,000[a]	470	47	31	92	---	---
	11/02/93[dup]	4.72	13,000[a]	530	47	35	96	---	---
	02/01/94	3.48	31,000[a]	430	46	50	130	---	---
	02/01/94[dup]	3.48	31,000[a]	300	33	30	100	---	---
	05/04/94	3.26	3,900	1,200	31	53	71	---	---
	05/04/94[dup]	3.26	4,500	1,200	37	57	110	---	---
	08/18/94	3.98	24,000	600	8.3	15	27	---	---
	11/09/94	3.10	1,400[a]	240	9.3	13	20	---	---
	11/09/94[dup]	3.10	1,800	260	8.5	13	21	---	---
	02/22/95	4.02	29,000	550	18	12	63	---	---
	02/22/95[dup]	4.02	28,000	530	17	10	60	---	---
	05/02/95	2.86	4,400	1,000	25	38	77	---	---
	05/02/95[dup]	2.86	4,400	1,000	26	41	83	---	---
	08/30/95	4.06	800	350	20	6.7	16	---	---
	08/30/95[dup]	4.06	960	220	22	12	48	---	---
	11/28/95	4.48	2,000	230	220	50	230	---	---
	11/28/95[dup]	4.48	2,100	240	230	51	230	---	---
	02/02/96	2.00	18,000	540	18	12	22	---	---

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	T	E	X	MTBE	DO (mg/L)
			← parts per billion (µg/L) →						
	02/02/96[dup]	2.00	11,000	600	18	13	28	---	---
	03/09/96	3.27	3,800	1,500	27	30	58	---	---
	03/09/96[dup]	3.27	3,500	1,300	24	21	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
	05/30/97	**3.87**	**150**	**15**	**11**	**3.5**	**15**	**11**	**6.0**
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	3.2	2.4	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	---	---

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	T	E	X	MTBE	DO (mg/L)
			← parts per billion (µg/L) →						
	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	---	---
	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
	05/30/97	**3.00**	**140**	**14**	**10**	**3.3**	**14**	**8.6**	**8.0**
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	<0.5	1.0[d]	<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	---	---
MCLs			NE	1	150	700	1,750	NE	

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.
(x) indicates MTBE by EPA Method 8260
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 = Parts per billion
µg/L = Micrograms per liter
mg/L = Milligrams 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 gas chromatography/mass spectrometry analysis.

BLAINE
TECH SERVICES inc.

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

June 16, 1997

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

Attn: Alex Perez

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

2nd Quarter 1997

Quarterly Groundwater Monitoring Report 970530-G-2

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*	5/30/97	TOC	--	NONE	--	--	3.47	11.63
S-2	5/30/97	TOC	--	NONE	--	--	3.87	9.50
S-3	5/30/97	TOC	--	NONE	--	--	3.00	9.60
T-1	5/30/97	TOC	--	NONE	--	--	2.65	13.40
T-2	5/30/97	TOC	--	NONE	--	--	1.81	13.05
T-3	5/30/97	TOC	--	NONE	--	--	2.31	8.65

* Sample DUP was a duplicate sample taken from well S-1.

970630

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 970530-62

Date:
Page 1 of 1

Site Address: 5755 Broadway, Oakland, CA

WIC#: 204-5510-0303

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:

Printed Name: Morgan Gillies

LAB: Sequoia

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	X	4461
Site Investigation		4441
Soil Classify/Disposal		4442
Water Classify/Disposal		4443
Soil/Air Rem. or Sys. O & M		4452
Water Rem. or Sys. O & M		4453
Other		

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days ☒ Normal TAT ☐ Other ☐

JUN 2 11 33

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

UST AGENCY:

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		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
S-1	5/30/97			X		3						X	X							
S-2	5/30/97			X		3						X	X							
S-3	5/30/97			X		3						X	X							
EB	5/30/97			X		3						X	X							
Dup	5/30/97			X		3						X	X							

	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature):	Morgan Gillies	6/2/97	1050		S. WRIGHT	6/2/97	1050
Relinquished By (signature):	S. WRIGHT	6/2/97	1105				
Relinquished By (signature):							
	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
					Abel	6/2/97	1133

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

Shell Chain of Custody

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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 Thie

Project: Shell Oakland/970530-G2

Enclosed are the results from samples received at Sequoia Analytical on June 2, 1997. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9706130 -01	LIQUID, S-1	05/30/97	TPGBMW Purgeable TPH/BTEX
9706130 -02	LIQUID, S-2	05/30/97	TPGBMW Purgeable TPH/BTEX
9706130 -03	LIQUID, S-3	05/30/97	TPGBMW Purgeable TPH/BTEX
9706130 -04	LIQUID, EB	05/30/97	TPGBMW Purgeable TPH/BTEX
9706130 -05	LIQUID, Dup	05/30/97	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/970530-G2	Sampled: 05/30/97
1680 Rogers Avenue	Sample Descript: S-1	Received: 06/02/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/09/97
Attention: Fran Thie	Lab Number: 9706130-01	Reported: 06/11/97

QC Batch Number: GC060997BTEX07A
Instrument ID: GCHP07

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**	**46**
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	106

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/970530-G2	Sampled: 05/30/97
1680 Rogers Avenue	Sample Descript: S-2	Received: 06/02/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/07/97
Attention: Fran Thle	Lab Number: 9706130-02	Reported: 06/11/97

QC Batch Number: GC060797BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**150**
Methyl t-Butyl Ether	**2.5**	**11**
Benzene	**0.50**	**15**
Toluene	**0.50**	**11**
Ethyl Benzene	**0.50**	**3.5**
Xylenes (Total)	**0.50**	**15**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	82

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/970530-G2	Sampled: 05/30/97
1680 Rogers Avenue	Sample Descript: S-3	Received: 06/02/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/11/97
Attention: Fran Thie	Lab Number: 9706130-03	Reported: 06/11/97

QC Batch Number: GC061197BTEX01A
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**140**
Methyl t-Butyl Ether	**2.5**	**8.6**
Benzene	**0.50**	**14**
Toluene	**0.50**	**10**
Ethyl Benzene	**0.50**	**3.3**
Xylenes (Total)	**0.50**	**14**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101

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/970530-G2	Sampled: 05/30/97
1680 Rogers Avenue	Sample Descript: EB	Received: 06/02/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/07/97
Attention: Fran Thie	Lab Number: 9706130-04	Reported: 06/11/97

QC Batch Number: GC060797BTEX06A
Instrument ID: GCHP06

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	92

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Blaine Tech Services	Client Proj. ID: Shell Oakland/970530-G2	Sampled: 05/30/97
1680 Rogers Avenue	Sample Descript: Dup	Received: 06/02/97
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 06/09/97
Attention: Fran Thie	Lab Number: 9706130-05	Reported: 06/11/97

QC Batch Number: GC060997BTEX07A
Instrument ID: GCHP07

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**	**47**
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	99

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, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thle

Client Project ID: Shell Oakland, 970530-G2
Matrix: Liquid
Work Order #: 9706130 -01, 05
Reported: Jun 12, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC060997BTEX07A	GC060997BTEX07A	GC060997BTEX07A	GC060997BTEX07A	GC060997BTEX07A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	A. Porter	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9706010-03	9706010-03	9706010-03	9706010-03	9706010-03
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	6/9/97	6/9/97	6/9/97	6/9/97	6/9/97
Analyzed Date:	6/9/97	6/9/97	6/9/97	6/9/97	6/9/97
Instrument I.D.#:	GCHP-07	GCHP-07	GCHP-07	GCHP-07	GCHP-07
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	11	11	11	33	71
MS % Recovery:	110	110	110	110	118
Dup. Result:	11	11	11	32	67
MSD % Recov.:	110	110	110	107	112
RPD:	0	0	0	3.1	5.8
RPD Limit:	0-25	0-25	0-25	0-25	0-50
LCS #:	BLK060997	BLK060997	BLK060997	BLK060997	BLK060997
Prepared Date:	6/9/97	6/9/97	6/9/97	6/9/97	6/9/97
Analyzed Date:	6/9/97	6/9/97	6/9/97	6/9/97	6/9/97
Instrument I.D.#:	GCHP-07	GCHP-07	GCHP-07	GCHP-07	GCHP-07
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	11	11	11	32	68
LCS % Recov.:	110	110	110	107	113
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	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 Ave.
San Jose, CA 95112
Attention: Fran Thle

Client Project ID: Shell Oakland, 970530-G2
Matrix: Liquid
Work Order #: 9706130-02, 04

Reported: Jun 12, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC060797BTEX06A	GC060797BTEX06A	GC060797BTEX06A	GC060797BTEX06A	GC060797BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Heider	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	9706010-01	9706010-01	9706010-01	9706010-01	9706010-01
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	6/7/97	6/7/97	6/7/97	6/7/97	6/7/97
Analyzed Date:	6/7/97	6/7/97	6/7/97	6/7/97	6/7/97
Instrument I.D.#:	GCHP-06	GCHP-06	GCHP-06	GCHP-06	GCHP-06
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	9.7	9.7	28	67
MS % Recovery:	100	97	97	93	112
Dup. Result:	10	9.7	9.8	28	66
MSD % Recov.:	100	97	98	93	110
RPD:	0	0	1.0	0.0	1.5
RPD Limit:	0-25	0-25	0-25	0-25	0-50
LCS #:	BLK060797	BLK060797	BLK060797	BLK060797	BLK060797
Prepared Date:	6/7/97	6/7/97	6/7/97	6/7/97	6/7/97
Analyzed Date:	6/7/97	6/7/97	6/7/97	6/7/97	6/7/97
Instrument I.D.#:	GCHP-06	GCHP-06	GCHP-06	GCHP-06	GCHP-06
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	11	10	10	30	70
LCS % Recov.:	110	100	100	100	117
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	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 Ave.
San Jose, CA 95112
Attention: Fran Thle

Client Project ID: Shell Oakland, 970530-G2
Matrix: Liquid
Work Order #: 9706130-03
Reported: Jun 12, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC061197BTEX01A	GC061197BTEX01A	GC061197BTEX01A	GC061197BTEX01A	GC061197BTEX01A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	9706174-02	9706174-02	9706174-02	9706174-02	9706174-02
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	6/11/97	6/11/97	6/11/97	6/11/97	6/11/97
Analyzed Date:	6/11/97	6/11/97	6/11/97	6/11/97	6/11/97
Instrument I.D.#:	GCHP-01	GCHP-01	GCHP-01	GCHP-01	GCHP-01
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	11	11	11	31	77
MS % Recovery:	110	110	110	103	128
Dup. Result:	11	10	10	30	75
MSD % Recov.:	110	100	100	100	125
RPD:	0	9.5	9.5	3.3	2.6
RPD Limit:	0-25	0-25	0-25	0-25	0-50
LCS #:	BLK061197	BLK061197	BLK061197	BLK061197	BLK061197
Prepared Date:	6/11/97	6/11/97	6/11/97	6/11/97	6/11/97
Analyzed Date:	6/11/97	6/11/97	6/11/97	6/11/97	6/11/97
Instrument I.D.#:	GCHP-01	GCHP-01	GCHP-01	GCHP-01	GCHP-01
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	11	10	10	30	73
LCS % Recov.:	110	100	100	100	122
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

Client Proj. ID: Shell Oakland/970530-G2

Lab Proj. ID: 9706130

Received: 06/02/97

Reported: 06/11/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 9 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