CAMBRIA

January 15, 1997

SH

Gil Wistar
Alameda County
Environmental Health Department
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Fourth Quarter 1996 Quarterly Monitoring Report**
Shell Service Station
230 West MacArthur Boulevard
Oakland, California
WIC #204-5508-0703

Dear Mr. Wistar:

On behalf of Shell Oil Products Company, Cambria Environmental Technology, Inc. (Cambria) is submitting this status report to satisfy the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

Fourth Quarter 1996 Activities

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 First Quarter 1997 Activities

As discussed in the third quarter 1996 monitoring report, no sampling activities will be conducted next quarter. Instead we will conduct annual monitoring only during the fourth quarter of each year. Cambria will submit a report presenting a summary of annual activities at that time.

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

CAMBRIA

We appreciate this 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: R. Jeff Granberry, Shell Oil Products Company, P.O. Box 4023 Concord, California 94524

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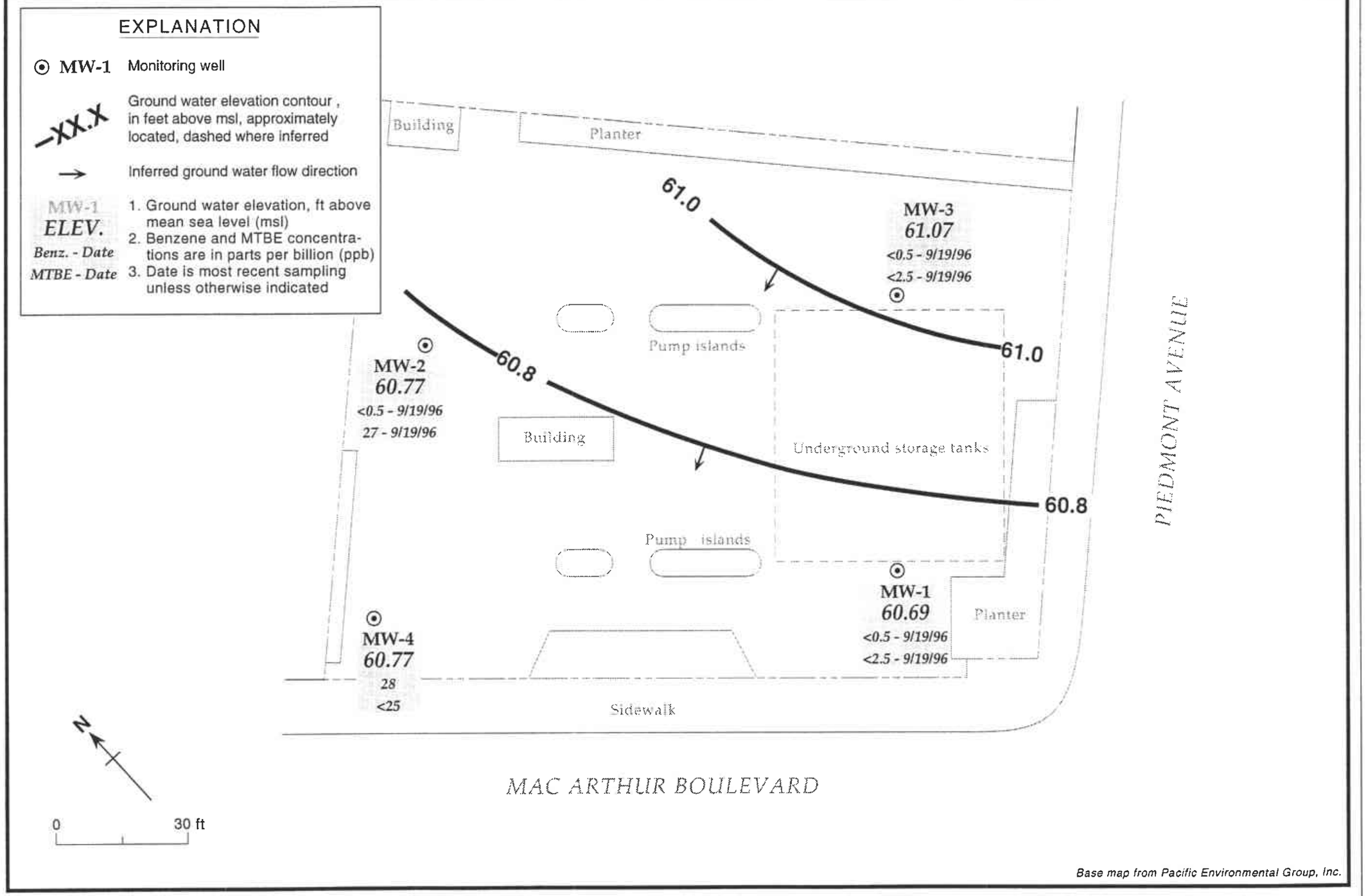

Figure 1. Ground Water Elevation Contours - D ecember 19, 1996 - Shell Service Station WIC# 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California

Table 1. **Ground Water Elevation Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California

Well Number	Date Sampled	Well Elevation (ft, MSL)	Depth to Water (ft, TOC)	Ground Water Elevation (ft, MSL)
MW-1	07/14/88	73.89	13.30	60.59
	10/04/88		13.65	60.24
	11/10/88		13.55	60.34
	12/09/88		13.22	60.67
	01/10/89		12.86	61.03
	01/20/89		12.91	60.98
	02/06/89		12.94	60.95
	03/10/89		12.59	61.30
	06/06/89		14.05	59.84
	09/07/89		14.92	58.97
	12/18/89		14.88	59.01
	03/08/90		14.08	59.81
	06/07/90		13.89	60.00
	09/05/90		14.83	59.06
	12/03/90		15.05	58.84
	03/01/91		14.34	59.55
	06/03/91		14.16	59.73
	09/04/91		14.60	59.29
	03/13/92		13.40	60.49
	06/03/92		13.76	60.13
	08/19/92		14.57	59.32
	11/16/92		14.78	59.11
	02/18/93		12.14	61.75
	06/01/93		13.30	60.59
	08/30/93		14.32	59.57
	12/13/93		14.06	59.83
	03/03/94		13.12	60.77
	06/06/94		14.20	59.69
	09/12/94		15.72	58.17
	12/15/94		12.98	60.91
	03/13/95		11.74	62.15
	06/26/95		13.00	60.89
	09/12/95		14.14	59.75
	03/21/96		11.03	62.86
	06/28/96		13.53	60.36
	09/19/96		14.33	59.56
	12/19/96		**13.20**	**60.69**
MW-2	07/14/88	75.24	15.18	60.06
	10/04/88		15.30	59.94
	11/10/88		15.17	60.07
	12/09/88		14.82	60.42
	01/20/89		14.54	60.70
	02/06/89		14.59	60.65
	03/10/89		14.88	60.36
	06/06/89		15.30	59.94
	09/07/89		16.76	58.48

Table 1. **Ground Water Elevation Data** - Shell Service Station WIC # 204-5508-0703, 2300 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	Well Elevation (ft, MSL)	Depth to Water (ft, TOC)	Ground Water Elevation (ft, MSL)
	12/18/89		16.65	58.59
	03/08/90		15.92	59.32
	06/07/90		16.10	59.14
	09/05/90		16.61	58.63
	12/03/90		17.06	58.18
	03/01/91		16.62	58.62
	06/03/91		16.65	58.59
	09/04/91		16.57	58.67
	03/13/92		14.66	60.58
	06/03/92		15.90	59.34
	08/19/92		16.72	58.52
	11/16/92		16.66	58.58
	02/18/93		13.88	61.36
	06/01/93		14.74	60.50
	08/30/93		15.85	59.39
	12/13/93		15.83	59.41
	03/03/94		14.80	60.44
	06/06/94		16.65	58.59
	09/12/94		16.72	58.52
	12/15/94		15.25	59.99
	03/13/95		15.32	59.92
	06/26/95		14.65	60.59
	09/12/95		15.78	59.46
	03/21/96		12.72	62.52
	06/28/96		14.95	60.29
	09/19/96		15.64	59.60
	12/19/96		**14.47**	**60.77**
MW-3	07/14/88	74.68	14.05	60.63
	10/04/88		14.60	60.08
	11/10/88		14.35	60.33
	12/09/88		14.04	60.64
	01/10/89		13.70	60.98
	01/20/89		13.72	60.96
	02/06/89		13.75	60.93
	03/10/89		13.42	61.26
	06/06/89		14.52	60.16
	09/07/89		15.52	59.16
	12/18/89		19.59	55.09
	03/08/90		14.72	59.96
	06/07/90		14.65	60.03
	09/05/90		15.51	59.17
	12/03/90		14.85	59.83
	03/01/91		14.92	59.76
	06/03/91		14.75	59.93
	09/04/91		15.14	59.54
	03/13/92		13.50	61.18

Table 1. **Ground Water Elevation Data** - Shell Service Station WIC # 204-5508-0703, 2300 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	Well Elevation (ft, MSL)	Depth to Water (ft, TOC)	Ground Water Elevation (ft, MSL)
	06/03/92		14.39	60.29
	08/19/92		15.08	59.60
	11/16/92		15.43	59.25
	02/18/93		12.96	61.72
	06/01/93		13.98	60.70
	08/30/93		14.82	59.86
	12/13/93		14.70	59.98
	03/03/94		13.92	60.76
	06/06/94		14.73	59.95
	09/12/94		15.42	59.26
	12/15/94		13.80	60.88
	03/13/95		12.41	62.27
	06/26/95		13.79	60.89
	09/12/95		14.77	59.91
	03/21/96		11.80	62.88
	06/28/96		14.19	60.49
	09/19/96		14.85	59.83
	12/19/96		**13.61**	**61.07**
MW-4	01/23/90	73.83	14.68	59.15
	03/08/90		14.38	59.45
	06/07/90		14.27	59.56
	09/05/90		15.40	58.43
	12/03/90		15.90	57.93
	06/03/91		14.60	59.23
	09/04/91		15.25	58.58
	03/13/92		12.72	61.11
	06/03/92		14.33	59.50
	08/19/92		15.18	58.65
	11/16/92		15.39	58.44
	02/18/93		12.62	61.21
	06/01/93		13.68	60.15
	08/30/93		14.83	59.00
	12/13/93		14.50	59.33
	03/03/94		13.48	60.35
	06/06/94		14.26	59.57
	09/12/94		15.42	58.41
	12/15/94		13.43	60.40
	03/13/95		12.13	61.70
	06/25/95		13.26	60.57
	09/12/95		14.64	59.19
	03/21/96		11.55	62.28
	06/28/96		13.86	59.97
	09/19/96		14.72	59.11
	12/19/96		**13.06**	**60.77**

Table 1. **Ground Water Elevation Data** - Shell Service Station WIC # 204-5508-0703, 2300 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	Well Elevation (ft, MSL)	Depth to Water (ft, TOC)	Ground Water Elevation (ft, MSL)

Abbreviations:

TOC = Top of casing
MSL = Mean sea level

Table 2. **Ground Water Analytical Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California

Well Number	Date Sampled	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
		← parts per billion (ppb) →					
MW-1	07/14/88	ND	ND	ND	ND	ND	---
	10/04/88	ND	8	4.3	ND	9	---
	11/10/88	ND	ND	ND	ND	ND	---
	12/09/88	ND	ND	ND	ND	ND	---
	01/10/89	ND	ND	ND	ND	NA	---
	01/20/89	ND	ND	NA	NA	ND	---
	02/06/89	ND	ND	ND	ND	ND	---
	03/10/89	ND	ND	ND	ND	ND	---
	06/06/89	ND	ND	ND	ND	ND	---
	09/07/89	ND	ND	ND	ND	ND	---
	12/18/89	ND	ND	ND	ND	ND	---
	03/08/90	ND	ND	ND	ND	ND	---
	06/07/90	ND	ND	ND	ND	ND	---
	09/05/90	ND	ND	ND	ND	ND	---
	12/03/90	ND	ND	ND	ND	ND	---
	03/01/91	ND	ND	ND	ND	ND	---
	06/03/91	ND	ND	ND	ND	ND	---
	09/04/91	ND	ND	ND	ND	ND	---
	03/13/92	ND	ND	ND	ND	ND	---
	06/03/92	ND	ND	ND	ND	ND	---
	08/19/92	87	ND	ND	ND	ND	---
	11/16/92	ND	ND	ND	ND	ND	---
	02/18/93	59[a]	ND	ND	ND	ND	---
	06/01/93	ND	ND	ND	ND	ND	---
	08/30/93	ND	ND	ND	ND	ND	---
	12/13/93	ND	ND	ND	ND	ND	---
	03/03/94	100	ND	ND	ND	ND	---
	06/06/94	ND	ND	ND	ND	ND	---
	09/12/94	ND	ND	ND	ND	ND	---
	12/15/94	ND	ND	ND	ND	ND	---
	03/13/95[d]	60	4.7	9.8	ND	2.9	---
	04/21/95	ND	ND	ND	ND	ND	---
	06/26/95	ND	ND	ND	ND	ND	---
	09/12/95	ND	ND	ND	ND	ND	---
	03/21/96	<50	<0.5	<0.5	<0.5	<0.5	ND
	06/28/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	09/19/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	12/19/96	---	---	---	---	---	---
MW-2	07/14/88	ND	7.9	2.6	1.1	4	---
	10/04/88	90	ND	1.3	2.3	12	---
	11/10/88	ND	ND	ND	ND	2	---
	12/09/88	ND	ND	0.6	ND	3	---
	01/20/89	ND	ND	ND	ND	ND	---
	02/06/89	NA	ND	ND	ND	ND	---

Table 2. **Ground Water Analytical Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
		← parts per billion (ppb) →					
	03/10/89	ND	ND	ND	ND	ND	---
	06/06/89	ND	ND	0.5	ND	ND	---
	09/07/89	ND	ND	ND	ND	ND	---
	12/18/89	ND	ND	ND	ND	ND	---
	03/08/90	ND	ND	ND	ND	ND	---
	06/07/90	ND	ND	ND	ND	ND	---
	09/05/90	ND	ND	ND	ND	ND	---
	12/03/90	ND	ND	ND	ND	ND	---
	03/01/91	ND	ND	ND	ND	ND	---
	06/03/91	ND	ND	ND	ND	ND	---
	09/04/91	ND	ND	ND	ND	ND	---
	03/13/92	ND	ND	ND	ND	ND	---
	06/03/92	ND	ND	ND	ND	ND	---
	08/19/92	67	ND	ND	ND	ND	---
	11/16/92	50	ND	ND	ND	1.2	---
	02/18/93	52[a]	ND	ND	ND	ND	---
	02/18/93[dup]	52[a]	ND	ND	ND	ND	---
	06/01/93	ND	ND	ND	ND	ND	---
	08/30/93	70[a]	ND	ND	ND	ND	---
	12/13/93	68[a]	ND	ND	ND	ND	---
	03/03/94	280[a]	ND	ND	ND	ND	---
	06/06/94	ND	ND	ND	ND	ND	---
	09/12/94	ND	ND	ND	ND	ND	---
	12/15/94	230[a]	ND	ND	ND	ND	---
	03/13/95	ND	2.9	6.3	ND	2.7	---
	04/21/95	ND	ND	ND	ND	ND	---
	06/26/95	ND	ND	ND	ND	ND	---
	09/12/95	ND	ND	ND	ND	ND	---
	03/21/96	<50	<0.5	<0.5	<0.5	<0.5	ND
	06/28/96	<50	<0.5	<0.5	<0.5	<0.5	160
	09/19/96	<50	<0.5	<0.5	<0.5	<0.5	27
	12/19/96	---	---	---	---	---	---
MW-3	07/14/88	ND	ND	ND	ND	ND	---
	10/04/88	ND	ND	ND	ND	5	---
	11/10/88	ND	ND	ND	ND	ND	---
	12/09/88	ND	ND	ND	ND	ND	---
	01/10/89	ND	ND	ND	ND	NA	---
	01/20/89	NA	NA	ND	ND	ND	---
	02/06/89	70	ND	ND	ND	ND	---
	03/10/89	150	ND	ND	ND	ND	---
	06/06/89	ND	ND	ND	ND	ND	---
	09/07/89	ND	0.65	ND	ND	ND	---
	12/06/89	46	1.3	ND	0.44	0.66	---
	03/08/90	ND	ND	ND	ND	ND	---

Table 2. **Ground Water Analytical Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
		← parts per billion (ppb) →					
	06/07/90	ND	ND	ND	ND	ND	---
	09/05/91	ND	ND	ND	ND	ND	---
	12/03/90	ND	ND	ND	ND	ND	---
	03/01/91	1.9	59	ND	22	ND	---
	06/03/91	ND	ND	ND	ND	ND	---
	09/04/91	ND	ND	ND	ND	ND	---
	03/13/92	ND	ND	ND	ND	ND	---
	06/03/92	ND	ND	ND	ND	ND	---
	08/19/92	92	ND	ND	ND	ND	---
	08/19/92[dup]	76	ND	ND	ND	ND	---
	11/16/92	200[a]	ND	ND	ND	ND	---
	11/16/92[dup]	140[a]	ND	ND	ND	ND	---
	02/18/93	680[a]	ND	ND	ND	ND	---
	06/01/93	160[a]	ND	ND	ND	ND	---
	06/01/93[dup]	150[a]	ND	ND	ND	ND	---
	08/30/93	110[a]	ND	ND	ND	ND	---
	12/13/93	140[a]	ND	ND	ND	ND	---
	12/13/93[dup]	110[a]	ND	ND	ND	ND	---
	03/03/94	61[a]	ND	ND	ND	ND	---
	06/06/94	ND	ND	ND	ND	ND	---
	09/12/94	ND	ND	ND	ND	ND	---
	12/15/94	ND	ND	0.9	ND	0.6	---
	03/13/95	100[b]	7.9	17	0.7	6.1	---
	04/21/95	60	0.9	1.1	ND	1.0	---
	06/26/95	ND	ND	ND	ND	ND	---
	09/12/95[d]	ND	ND	ND	ND	ND	---
	03/21/96	<50	<0.5	<0.5	<0.5	<0.5	17
	06/28/96	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	09/19/96	<50	<0.5	<0.5	<0.5	<0.5	<2.5
	12/19/96	---	---	---	---	---	---
MW-4	01/23/90	1,600	100	10	30	20	---
	03/08/90	4,200	260	18	88	39	---
	06/07/90	2,000	150	6.9	14	17	---
	09/05/90	1,700	130	10	7.2	19	---
	12/03/90	2,600	108	41	17	59	---
	06/03/91	2,800	160	15	8.8	32	---
	09/04/91	← Separate-Phase Hydrocarbon Sheen →					
	03/13/92	2,700	180	70	5.9	29	---
	06/03/92	1,700	190	ND	30	23	---
	08/19/92	170	4.2	ND	0.6	1.0	---
	11/16/92	2,600	92	49	50	81	---
	02/18/93	7,400	120	38	51	87	---
	06/01/93	7,000	1,800	1,700	1,600	1,700	---
	08/30/93	2,100	80	11	ND	11	---

Table 2. **Ground Water Analytical Data** - Shell Service Station WIC # 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California (continued)

Well Number	Date Sampled	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
		← parts per billion (ppb) →					
	08/30/93[dup]	2,100	77	5.6	ND	5.5	---
	12/13/93	2,000[a]	20	ND	21	52	---
	03/03/94	3,500	150	86	85	90	---
	03/03/94[dup]	3,200	130	73	74	76	---
	06/06/94	590	25	ND	ND	ND	---
	06/06/94[dup]	400	16	ND	ND	ND	---
	09/12/94	1,800	42	ND	3.7	4.7	---
	09/12/94[dup]	2,000	40	ND	5.7	8.0	---
	12/15/94	2,900	78	14	94	17	---
	12/15/94[dup]	2,900	90	7	96	18	---
	03/13/95[c]	2,700	240	24	99	34	---
	03/13/95[dup,c]	2,500	300	24	140	28	---
	06/26/95	2,100	87	10	67	25	---
	06/26/95[dup]	2,300	92	12	74	26	---
	09/12/95[d]	1,300	33	13	9.3	15	---
	09/12/95[dup,d]	1,500	2.1	16	11	17	---
	03/21/96	2,100	50	3.2	40	5.4	ND
	03/21/96[dup]	1,700	24	<0.5	39	7.2	740
	06/28/96	1,300	61	6.2	53	11	1,000
	06/28/96[dup]	1,200	29	6.2	50	8.3	1,000
	09/19/96	820	12	<2.5	2.8	4.3	720
	09/19/96[dup]	580	9.6	<2.5	<2.5	<2.5	760[e]
	12/19/96	**1,200**	**28**	**<5.0**	**<5.0**	**<5.0**	**<25**

Abbreviations:

TPH-G = Total purgeable petroleum hydrocarbons as gasoline
MTBE = Methyl-tertiary-butyl-ether
NA = Not analyzed
ND = Not detected
dup = Duplicate sample

Notes:

a = The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline
b = The laboratory noted result to have an atypical gasoline pattern
c = The laboratory noted sample was analyzed within hold time but further dilution was required and done out of hold time. The laboratory suggests these to be minimum concentrations
d = The laboratory noted the sampled was analyzed after the method specified holding time.See certified analytical reports for detection limits
Prior to June 1995, TPPH was reported as TPH calculated as gasoline
e = MTBE confirmed by method 8260; results were 1,200 ppb.

CAMBRIA

ATTACHMENT A

Blaine Quarterly Ground Water Monitoring Report

BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE
SAN JOSE, CA 95133
(408) 995-5535
FAX (408) 293-8773

January 8, 1997

Shell Oil Company
P.O. Box 4023
Concord, CA 94524

Attn: R. Jeff Granberry

Shell WIC #204-5508-0703
230 West MacArthur Blvd.
Oakland, California

4th Quarter 1996

Quarterly Groundwater Monitoring Report 961219-F-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: Paul Waite

(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)
MW-1	12/19/96	TOC	--	NONE	--	--	13.20	29.36
MW-2	12/19/96	TOC	--	NONE	--	--	14.47	27.60
MW-3	12/19/96	TOC	--	NONE	--	--	13.61	28.10
MW-4	12/19/96	TOC	--	NONE	--	--	13.06	23.98

* Sample DUP was a duplicate sample taken from welll MW-4.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 961219-F3

Date: 12/19/96
Page 1 of 1

Site Address: 230 W. MacArthur Blvd., Oakland, CA

WIC#: 204-5508-0703

Shell Engineer: R. Jeff Granberry
Phone No.: (510) 675-6168
Fax #: 675-6172

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

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

Comments:

Sampled by: TG

Printed Name: Tim Greaf

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	X	4441
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 (X) (Normal)
- Other

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
96/2025

UST AGENCY:

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	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
01 MW-4	12/19			W		3						X	X						

Relinquished By (signature): Tim Greaf
Printed Name: Tim Greaf
Date: 12/20/96
Time: 955

Relinquished By (signature): S. Wright
Printed Name: S. WRIGHT
Date: 12/20/96
Time: 1134

Relinquished By (signature):
Printed Name:
Date:
Time:

Received (signature): S. Wright
Printed Name: S. Wright
Date: 12/20/96
Time: 955

Received (signature):
Printed Name:
Date:
Time:

Received (signature): R. Herring
Printed Name: R. Herring
Date: 12/20/96
Time: 1138

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

Shell Oil Co. 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 Technical Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran Thie

Project: Shell Oakland/961219-F3

Enclosed are the results from samples received at Sequoia Analytical on December 20, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9612D25 -01	LIQUID, MW-4	12/19/96	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 Technical Services	Client Proj. ID: Shell Oakland/961219-F3	Sampled: 12/19/96
1680 Rogers Avenue	Sample Descript: MW-4	Received: 12/20/96
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 12/27/96
Attention: Fran Thie	Lab Number: 9612D25-01	Reported: 01/03/97

QC Batch Number: GC122696BTEX21B
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**1200**
Methyl t-Butyl Ether	25	N.D.
Benzene	**5.0**	**28**
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		**C6-C9**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105

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 Technical Services	Client Proj. ID: Shell Oakland/961219-F3	Received: 12/20/96
1680 Rogers Avenue		
San Jose, CA 95112	Lab Proj. ID: 9612D25	Reported: 01/03/97
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 4 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 / 961219-F3
Matrix: Liquid
Work Order #: 9612D25 -01

Reported: Jan 7, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC122696BTEX21B	GC122696BTEX21B	GC122696BTEX21B	GC122696BTEX21B
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	G. Fish	G. Fish	G. Fish	G. Fish
MS/MSD #:	9612A4302	9612A4302	9612A4302	9612A4302
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/26/96	12/26/96	12/26/96	12/26/96
Analyzed Date:	12/26/96	12/26/96	12/26/96	12/26/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.7	9.3	9.8	30
MS % Recovery:	97	93	98	100
Dup. Result:	11	11	12	36
MSD % Recov.:	110	110	120	120
RPD:	13	17	20	18
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK122696	BLK122696	BLK122696	BLK122696
Prepared Date:	12/26/96	12/26/96	12/26/96	12/26/96
Analyzed Date:	12/26/96	12/26/96	12/26/96	12/26/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	9.9	10	31
LCS % Recov.:	100	99	100	103

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

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