CAMBRIA

ENVIRONMENTAL PROTECTION
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SH
STID 3673

October 29, 1996

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

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

Dear Mr. Wistar:

On behalf of Shell Oil Products Company, Cambria Environmental Technology, Inc. (Cambria) is submitting this quarterly monitoring report for the site referenced above in accordance with the requirements specified in California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

Activities this Quarter

- Blaine Tech Services, Inc. (BTS) of San Jose, California, measured ground water depths and collected ground water samples from the site wells (Figure 1). The BTS report describing these activities and the analytic report for the ground water samples are included as Attachment A.
- Cambria calculated ground water elevations (Table 1), compiled the analytic data (Table 2), and prepared a ground water elevation contour map (Figure 1).

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

Discussion

This site has the characteristics of a low risk ground water site. Specifically:

- Ground water is shallow, about 14 to 15 feet deep.
- Hydrocarbons are detected in only one well, at low and steadily decreasing concentrations.
- There is no apparent risk to human health or the environment.

Because this site does not appear to pose a risk, we request that you review this site for closure. We would be glad to submit any documentation that you require for your review. Until we can close this site, we request that you approve annual sampling of well MW-4, during the fourth quarter each year. We also request permission to stop sampling clean wells MW-1, MW-2, and MW-3. We will implement the revised sampling plan unless otherwise directed by your office.

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

Sincerely,
Cambria Environmental Technology, Inc.

N. Scott MacLeod, R.G.
Principal Geologist

Attachments: A - Ground Water Monitoring Report

cc: R. Jeff Granberry, Shell Oil Products Company, P.O. Box 4023, Concord, CA 94524

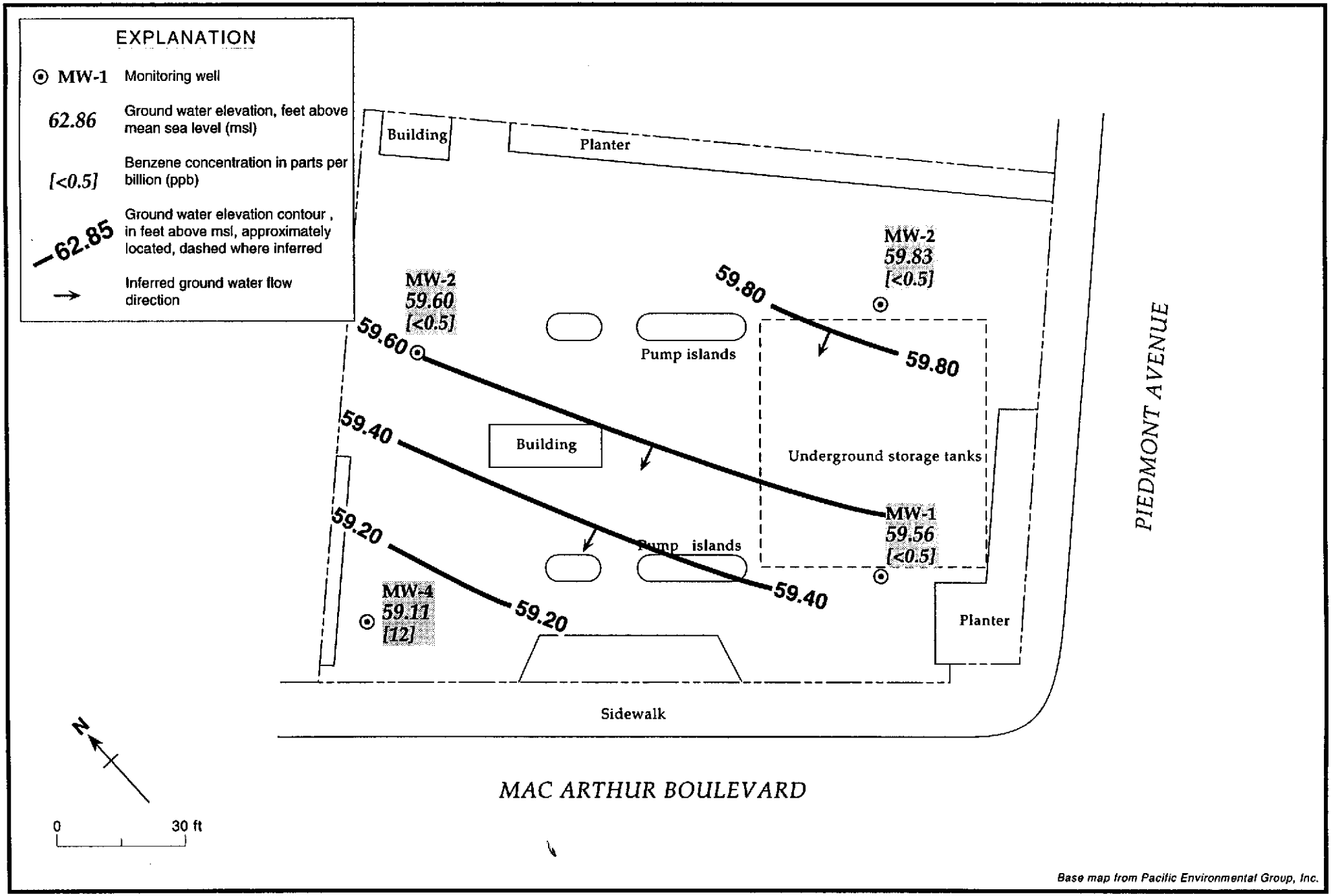

Figure 1. Monitoring Well Locations, Ground Water Elevation Contours, and Benzene Concentrations in Ground Water -September 19, 1996 - Shell Service Station WIC# 204-5508-0703, 230 West MacArthur Boulevard, Oakland, California

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**
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
	12/18/89		16.65	58.59

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)
	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**
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
	06/03/92		14.39	60.29
	08/19/92		15.08	59.60

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)
	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**
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**

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**
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**
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**
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]**

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.

ATTACHMENT A

BTS GROUND WATER MONITORING REPORT

BLAINE
TECH SERVICES INC.

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

October 11, 1996

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

3rd Quarter 1996

Quarterly Groundwater Monitoring Report 960919-D-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) 995-5535 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: Scott MacLeod

(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	9/19/96	TOC	--	NONE	--	--	14.33	29.38
MW-2	9/19/96	TOC	--	NONE	--	--	15.64	27.65
MW-3	9/19/96	TOC	--	NONE	--	--	14.85	28.10
MW-4 *	9/19/96	TOC	ODOR	NONE	--	--	14.72	23.96

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 960919-D2

Date: 9-19-96
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: MD

Printed Name: MIKE DILLOUGHERY

LAB: SEQ

9609C17

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 [X] (Normal)
- Other [ ]

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

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
1	MW-1	9-19			W		3						X	X						CONFIRM HIGHEST MTBE	
2	MW-2	↓			↓		3						X	X						BY EPA 8260	
3	MW-3	↓			↓		3						X	X							
4	MW-4	↓			↓		3						X	X							
5	EB	↓			↓		3						X	X							
6	DUP	↓			↓		3						X	(							

Relinquished By (signature):	Printed Name:	Date/Time	Received (signature):	Printed Name:	Date/Time
[signature]	MIKE DILLOUGHERY	Date: 9-20-96 Time: 1100	[signature]	M. Heid	Date: 9-20-96 Time: 1100
[signature]		Date: Time:			Date: Time:
		Date: Time:	[signature]	LDCardenas	Date: 9-20-96 Time: 1212

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

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
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Project: Shell Oakland/960919-D2

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

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9609C17 -01	LIQUID, MW-1	09/19/96	TPGBMW Purgeable TPH/BTEX
9609C17 -02	LIQUID, MW-2	09/19/96	TPGBMW Purgeable TPH/BTEX
9609C17 -03	LIQUID, MW-3	09/19/96	TPGBMW Purgeable TPH/BTEX
9609C17 -04	LIQUID, MW-4	09/19/96	TPGBMW Purgeable TPH/BTEX
9609C17 -05	LIQUID, EB	09/19/96	TPGBMW Purgeable TPH/BTEX
9609C17 -06	LIQUID, DUP	09/19/96	MTBEMW Methyl t-Butyl Ethe
9609C17 -06	LIQUID, DUP	09/19/96	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 Perner
Project Manager

Sequoia Analytical

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Blaine Technical Services	Client Proj. ID: Shell Oakland/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: MW-1	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/27/96
Attention: Fran Thie	Lab Number: 9609C17-01	Reported: 10/09/96

QC Batch Number: GC092796BTEX18A
Instrument ID: GCHP18

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	96

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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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: MW-2	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/27/96
Attention: Fran Thie	Lab Number: 9609C17-02	Reported: 10/09/96

QC Batch Number: GC092796BTEX18A
Instrument ID: GCHP18

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**	**27**
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	97

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/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: MW-3	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/27/96
Attention: Fran Thie	Lab Number: 9609C17-03	Reported: 10/09/96

QC Batch Number: GC092796BTEX18A
Instrument ID: GCHP18

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	94

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/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: MW-4	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/01/96
Attention: Fran Thie	Lab Number: 9609C17-04	Reported: 10/09/96

QC Batch Number: GC100196BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**820**
Methyl t-Butyl Ether	**12**	**720**
Benzene	**2.5**	**12**
Toluene	2.5	N.D.
Ethyl Benzene	**2.5**	**2.8**
Xylenes (Total)	**2.5**	**4.3**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	83

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/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: EB	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/01/96
Attention: Fran Thie	Lab Number: 9609C17-05	Reported: 10/09/96

QC Batch Number: GC100196BTEX01A
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	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	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 Technical Services	Client Proj. ID: Shell Oakland/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: DUP	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 10/07/96
Attention: Fran Thie	Lab Number: 9609C17-06	Reported: 10/09/96

QC Batch Number: MS100496MTBEF3A
Instrument ID: F3

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	20	1200

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Renner
Project Manager

Sequoia Analytical

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Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 960919-D2
Matrix: Liquid
Work Order #: 9609C17 -01-03
Reported: Oct 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC092796BTEX18A	GC092796BTEX18A	GC092796BTEX18A	GC092796BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Arteaga	Y. Arteaga	Y. Arteaga	Y. Arteaga
MS/MSD #:	9609C1104	9609C1104	9609C1104	9609C1104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/27/96	9/27/96	9/27/96	9/27/96
Analyzed Date:	9/27/96	9/27/96	9/27/96	9/27/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	12	9.9	8.2	27
MS % Recovery:	120	99	82	90
Dup. Result:	12	10	8.2	26
MSD % Recov.:	120	100	82	87
RPD:	0.0	1.0	0.0	3.8
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK092796	BLK092796	BLK092796	BLK092796
Prepared Date:	9/27/96	9/27/96	9/27/96	9/27/96
Analyzed Date:	9/27/96	9/27/96	9/27/96	9/27/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.2	7.6	7.1	24
LCS % Recov.:	82	76	71	80
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

Sequoia Analytical

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Blaine Technical Services	Client Proj. ID: Shell Oakland/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: DUP	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/01/96
Attention: Fran Thie	Lab Number: 9609C17-06	Reported: 10/09/96

QC Batch Number: GC100196BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**580**
Methyl t-Butyl Ether	**12**	**760**
Benzene	**2.5**	**9.6**
Toluene	2.5	N.D.
Ethyl Benzene	2.5	N.D.
Xylenes (Total)	2.5	N.D.
Chromatogram Pattern:		C6-C12

Surrogates	**Control Limits %**		**% Recovery**
Trifluorotoluene	70	130	72

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.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell Oakland / 960919-D2
Matrix: Liquid
Work Order #: 9609C17 -01-03

Reported: Oct 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC092796BTEX18A	GC092796BTEX18A	GC092796BTEX18A	GC092796BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Arteaga	Y. Arteaga	Y. Arteaga	Y. Arteaga
MS/MSD #:	9609C1104	9609C1104	9609C1104	9609C1104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/27/96	9/27/96	9/27/96	9/27/96
Analyzed Date:	9/27/96	9/27/96	9/27/96	9/27/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	12	9.9	8.2	27
MS % Recovery:	120	99	82	90
Dup. Result:	12	10	8.2	26
MSD % Recov.:	120	100	82	87
RPD:	0.0	1.0	0.0	3.8
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK092796	BLK092796	BLK092796	BLK092796
Prepared Date:	9/27/96	9/27/96	9/27/96	9/27/96
Analyzed Date:	9/27/96	9/27/96	9/27/96	9/27/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.2	7.6	7.1	24
LCS % Recov.:	82	76	71	80

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.

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Sequoia Analytical

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Blaine Technical Services	Client Proj. ID: Shell Oakland/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: DUP	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/01/96
Attention: Fran Thie	Lab Number: 9609C17-06	Reported: 10/09/96

QC Batch Number: GC100196BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**580**
Methyl t-Butyl Ether	**12**	**760**
Benzene	**2.5**	**9.6**
Toluene	2.5	N.D.
Ethyl Benzene	2.5	N.D.
Xylenes (Total)	2.5	N.D.
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	72

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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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.	Client Project ID:	Shell Oakland / 960919-D2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Fran Thie	Work Order #:	9609C17 -01-03	Reported: Oct 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC092796BTEX18A	GC092796BTEX18A	GC092796BTEX18A	GC092796BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Arteaga	Y. Arteaga	Y. Arteaga	Y. Arteaga
MS/MSD #:	9609C1104	9609C1104	9609C1104	9609C1104
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	9/27/96	9/27/96	9/27/96	9/27/96
Analyzed Date:	9/27/96	9/27/96	9/27/96	9/27/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	12	9.9	8.2	27
MS % Recovery:	120	99	82	90
Dup. Result:	12	10	8.2	26
MSD % Recov.:	120	100	82	87
RPD:	0.0	1.0	0.0	3.8
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK092796	BLK092796	BLK092796	BLK092796
Prepared Date:	9/27/96	9/27/96	9/27/96	9/27/96
Analyzed Date:	9/27/96	9/27/96	9/27/96	9/27/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.2	7.6	7.1	24
LCS % Recov.:	82	76	71	80

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

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Blaine Technical Services	Client Proj. ID: Shell Oakland/960919-D2	Sampled: 09/19/96
985 Timothy Drive	Sample Descript: DUP	Received: 09/20/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 10/01/96
Attention: Fran Thie	Lab Number: 9609C17-06	Reported: 10/09/96

QC Batch Number: GC100196BTEX18A
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**580**
Methyl t-Butyl Ether	**12**	**760**
Benzene	**2.5**	**9.6**
Toluene	2.5	N.D.
Ethyl Benzene	2.5	N.D.
Xylenes (Total)	2.5	N.D.
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	72

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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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, Inc.	Client Project ID:	Shell Oakland / 960919-D2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Fran Thie	Work Order #:	9609C17-04, 06	Reported: Oct 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC100196BTEX18A	GC100196BTEX18A	GC100196BTEX18A	GC100196BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Arteaga	Y. Arteaga	Y. Arteaga	Y. Arteaga
MS/MSD #:	9609C9302	9609C9302	9609C9302	9609C9302
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/1/96	10/1/96	10/1/96	10/1/96
Analyzed Date:	10/1/96	10/1/96	10/1/96	10/1/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	8.5	8.0	7.5	25
MS % Recovery:	85	80	75	83
Dup. Result:	8.6	8.2	7.5	26
MSD % Recov.:	86	82	75	87
RPD:	1.2	2.5	0.0	3.9
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK100296	BLK100296	BLK100296	BLK100296
Prepared Date:	10/1/96	10/1/96	10/1/96	10/1/96
Analyzed Date:	10/1/96	10/1/96	10/1/96	10/1/96
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.3	7.3	7.4	25
LCS % Recov.:	83	73	74	83
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.	Client Project ID:	Shell Oakland / 960919-D2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Fran Thie	Work Order #:	9609C17-05	Reported: Oct 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC100196BTEX01A	GC100196BTEX01A	GC100196BTEX01A	GC100196BTEX01A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	Y. Arteaga	Y. Arteaga	Y. Arteaga	Y. Arteaga
MS/MSD #:	9609C9302	9609C9302	9609C9302	9609C9302
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	10/1/96	10/1/96	10/1/96	10/1/96
Analyzed Date:	10/1/96	10/1/96	10/1/96	10/1/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.8	9.2	9.1	27
MS % Recovery:	98	92	91	90
Dup. Result:	1.9	1.5	1.5	4.0
MSD % Recov.:	19	15	15	13
RPD:	135	144	143	148
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK100196	BLK100196	BLK100196	BLK100196
Prepared Date:	10/1/96	10/1/96	10/1/96	10/1/96
Analyzed Date:	10/1/96	10/1/96	10/1/96	10/1/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.6	8.8	8.9	27
LCS % Recov.:	96	88	89	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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** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Blaine Tech Services, Inc.	Client Project ID:	Shell Oakland / 960919-D2	
985 Timothy Drive	Matrix:	Liquid	
San Jose, CA 95133			
Attention: Fran Thie	Work Order #:	9609C17-06	Reported: Oct 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS1007968260
Analy. Method:	EPA 8260
Prep. Method:	N/A
Analyst:	M. Williams
MS/MSD #:	-
Sample Conc.:	-
Prepared Date:	-
Analyzed Date:	-
Instrument I.D.#:	-
Conc. Spiked:	-
Result:	-
MS % Recovery:	-
Dup. Result:	-
MSD % Recov.:	-
RPD:	-
RPD Limit:	-

LCS #:	VDB100796
Prepared Date:	-
Analyzed Date:	10/7/96
Instrument I.D.#:	F3
Conc. Spiked:	50 µg/L
LCS Result:	49
LCS % Recov.:	98

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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

WELL GAUGING DATA

Project # 960919-D2 Date 9-19-96 Client SHELL

Site 230 W. MACARTHUR BLVD., OAKLAND

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (feet)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Survey Point: TOB or TOC
MW-1	4					14.33	29.38	TOC
MW-2	4					15.64	27.65	
MW-3	4					14.85	28.10	
MW-4	4					14.72	23.96	

SHELL WELL MONITORING DATA SHEET

Project #: 960919-D2	WIC #: 204-5508-0203
Sampler: MD	Date: 9-19-96
Well I.D.: MW-1	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 29.38	Depth to Water: 14.33
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: Bailer / Middleburg / Electric Submersible X / Extraction Pump / Other: ___

Sampling Method: Bailer X / Extraction Port / Other: ___

9.8 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 29.3 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1124	71.0	7.4	800	168.2	10	
1126	70.2	7.0	500	36.2	20	
1128	70.2	7.0	480	96.4	30	

Did well dewater? Yes (No)	Gallons actually evacuated: 30.0
Sampling Time: 1135	Sampling Date: 9-19
Sample I.D.: MW-1	Laboratory: (Sequoia) Crosby
Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D	Other:
Equipment Blank I.D.: @ Time	Duplicate I.D.:
Analyzed for: TPH-G BTEX MTBE TPH-D	Other:
D.O. (if req'd): Pre-purge: ___ mg/L	Post-purge: ___ mg/L

SHELL WELL MONITORING DATA SHEET

Project #: 960919-D2	WIC #: 204-5508-0703
Sampler: MD	Date: 9-19-96
Well I.D.: MW-2	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth: 27.65	Depth to Water: 15.64
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: Bailer / Middleburg / Electric Submersible X / Extraction Pump / Other: ____

Sampling Method: Bailer X / Extraction Port / Other: ____

7.8 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 23.4 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1215	71.6	7.0	550	184.2	8	
1217	71.6	6.8	600	>200	16	
1219	70.4	6.8	540	>200	23.5	

Did well dewater? Yes / (No)

Gallons actually evacuated: 23.5

Sampling Time: 1230

Sampling Date: 9-19-96

Sample I.D.: MW-2

Laboratory: (Sequoia) Crosby

Analyzed for: (TPH-G) (BTEX) (MTBE) TPH-D Other:

Equipment Blank I.D.: @ Time

Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: ____ mg/L

Post-purge: ____ mg/L

SHELL WELL MONITORING DATA SHEET

Project #: 960919-D2	WIC #: 204 5508 0203
Sampler: MD	Date: 9-19-96
Well I.D.: MW-3	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 28.10	Depth to Water: 14.85
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: Bailer / Middleburg / Electric Submersible X / Extraction Pump / Other: _____

Sampling Method: Bailer X / Extraction Port / Other: _____

8.6 (1 Case Volume (Gals.)) x 3 (Specified Volumes) = 25.8 Gals. (Calculated Volume)

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1150	72.2	7.0	450	110.0	9	
1152	71.0	6.8	400	67.3	18	
1154	71.4	6.8	400	62.6	26	

Did well dewater? Yes (No) Gallons actually evacuated: 26.0

Sampling Time: 1200 Sampling Date: 9-19-96

Sample I.D.: MW-3 Laboratory: (Sequoia) Crosby

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

Equipment Blank I.D.: EB @ Time 11:45 Duplicate I.D.:

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: ___ mg/L Post-purge: ___ mg/L

SHELL WELL MONITORING DATA SHEET

Project #: 960919-D2	WIC #: 204-5508-0703
Sampler: MD	Date: 9-19-96
Well I.D.: MW-4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 23.96	Depth to Water: 14.72
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH

Well Diameter	Multiplier	Well Diameter	Multiplier
2"	0.16	5"	1.02
3"	0.37	6"	1.47
4"	0.65	Other	radius² * 0.163

Purge Method: Bailer / Middleburg / Electric Submersible X / Extraction Pump / Other: ___

Sampling Method: Bailer X / Extraction Port / Other: ___

6-0 (1 Case Volume (Gals.)) X 3 (Specified Volumes) = 18-0 (Calculated Volume) Gals.

Time	Temp (°F)	pH	Cond.	Turbidity	Gals. Removed	Observations
1240	70.8	7.0	520	>200	6	ODOR
1242	71.0	7.0	560	>200	12	
1244	71.0	6.9	580	>200	18	

Did well dewater? Yes (No) Gallons actually evacuated: 18.0

Sampling Time: 1250 Sampling Date: 9-19

Sample I.D.: MW-4 Laboratory: (Sequoia) Crosby

Analyzed for: (TPH-G BTEX MTBE) TPH-D Other:

Equipment Blank I.D.: @ Time Duplicate I.D.: DUP @ 1255

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd): Pre-purge: ___ mg/L Post-purge: ___ mg/L

WELL HEAD INSPECTION CHECKLIST AND REPAIR ORDER

Client SHELL Site # 204-5508-0703 Inspection date: 9-19-96

Site address 230 W. MACARTHUR Inspected by: MD

OAKLAND, CA BTS Event # 960919-D2

1. Lid on the box? Yes No	5. Water standing in the well box?	7. Can cap be pulled loose?
2. Lid whole?	5a. Standing above well top?	8. Can cap seal out water?
3. Lid secure?	5b. Standing below well top?	9. Padlock present?
4. Lid seal intact?	5c. Water even with top of well cap?	10. Padlock found locked?
	6. Well cap/plug present?	11. Padlock functional?

☑ Check box if *no deficiences* were found. Note below deficiencies you were able to correct.

Well I.D.	Deficiency	Corrective Action Taken

Note below all deficiences that could not be corrected and *still need to be corrected.*

Well I.D.	Persisting Deficiency	BTS Office assigns or defers Correction to:	Date assigned	Date corrected

Office review and assignments made by _____ date _____