



ENVIRONMENTAL
PROTECTION

October 3, 1997
97 OCT 22 AM 8:47

Susan Hugo
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Third Quarter 1997 Monitoring Report**
Shell Service Station
3420 San Pablo Avenue
Oakland, California
WIC #204-5508-5306
Cambria Project #240-314-397

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.

THIRD QUARTER 1997 ACTIVITIES

Station Renovation: As discussed during your April 3, 1997 telephone conversation with Paul Waite of Cambria, the Shell service station at 3420 San Pablo Avenue, Oakland, California is undergoing building renovations. The facility is not currently operational, but it will be used as a service station when the renovations are completed. We will inform you when the renovations are completed or if the plans for this facility change.

Ground Water Monitoring: 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 summarized separate-phase hydrocarbon removal (Table 1), calculated ground water elevations (Table 2), compiled the analytic data (Table 3), 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

Susan Hugo
October 3, 1997

CAMBRIA

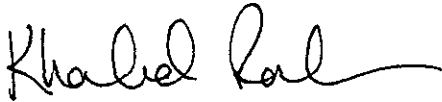
ANTICIPATED FOURTH QUARTER 1997 ACTIVITIES

Blaine will gauge ground water elevations, check for separate-phase hydrocarbons, and sample selected monitoring wells. Building renovations will continue. Cambria will submit a report presenting a summary of activities for the upcoming quarter.

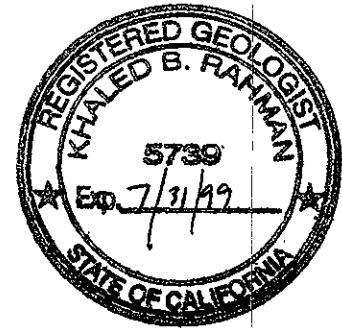
CLOSING

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

Sincerely,
Cambria Environmental Technology, Inc.



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



Attachments: A - Blaine Quarterly Ground Water Monitoring Report

cc: A.E.(Alex) Perez, Shell Oil Products Company, P.O. Box 8080, Martinez, California 94553

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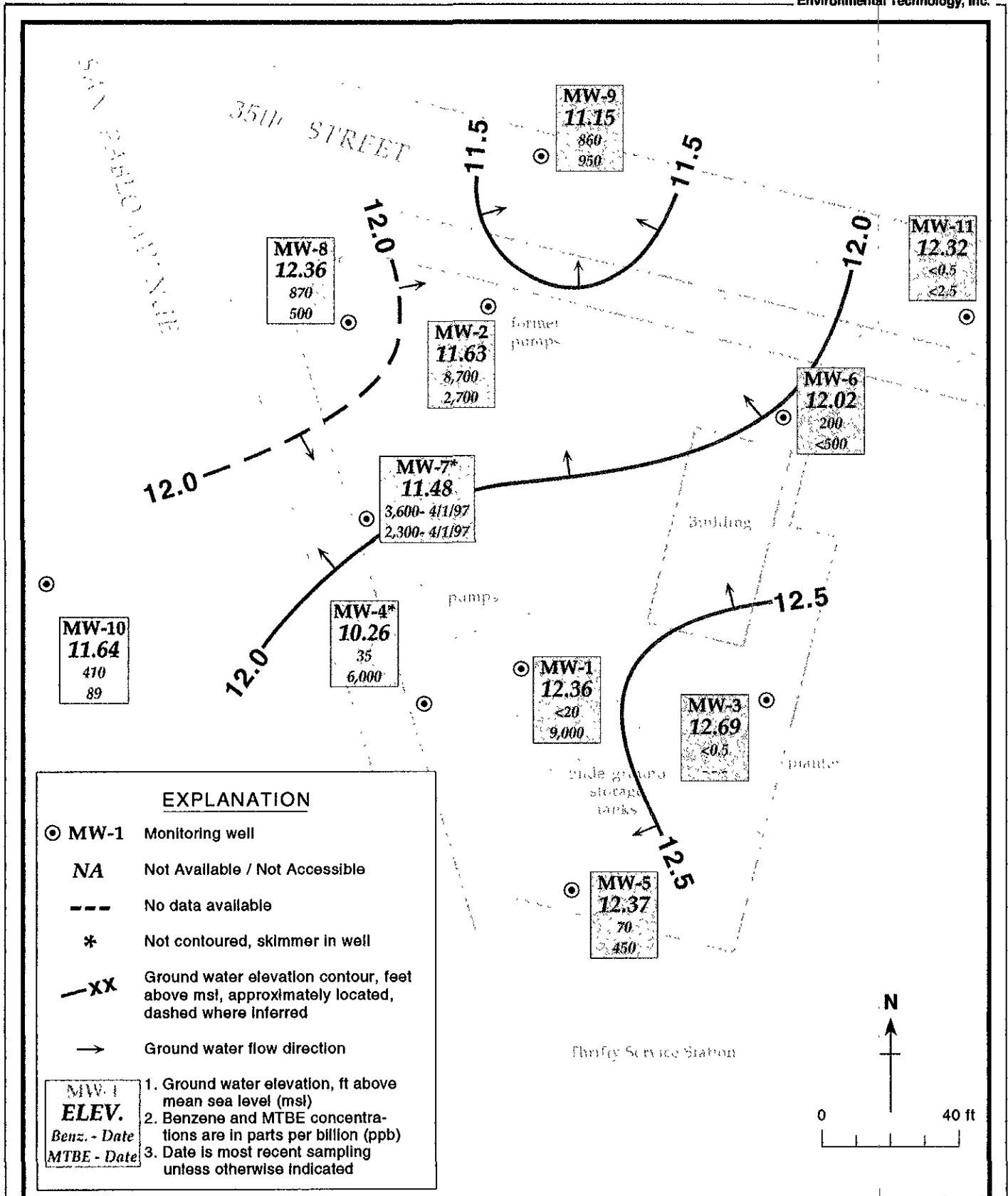


Figure 1. Ground Water Elevation Contours - July 14, 1997 - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California

Table 1. Separate-Phase Hydrocarbon Removal - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California

Well ID	Date	Separate-Phase Hydrocarbon Thickness (ft)	Separate-Phase Hydrocarbons Removed (lbs)	Cumulative Separate-Phase Hydrocarbons Removed (lbs)
MW-1	10/23/91	0.01	---	---
	05/04/92	<0.01	---	---
	10/12/92	0.09	---	---
	01/12/93	0.02	3.12	3.12
	04/06/93	<0.01	0.78	3.90
	07/12/93	0.01	0.18	4.08
	10/13/93	0.01	0.06	4.14
	01/20/94	0.01	0.03	4.17
	04/03/94	0.02	0.12	4.29
MW-2	10/12/92	0.03	---	---
	01/12/93	0.01	1.56	1.56
	04/06/93	<0.01	0.78	2.34
	04/03/94	<0.01	0.03	2.37
MW-4	10/12/92	0.78	---	---
	01/12/93	1.0	---	---
	04/06/93	0.95	---	---
	07/12/93	0.03	6.36	6.36
	10/13/93	0.12	0.78	7.14
	01/20/94	0.02	0.03	7.17
	04/13/94	0.01	0.12	7.29
	10/27/94	0.03	0.79	8.08
	01/03/95	0.01	0.16	8.24
	04/13/95	0.03	0.16	8.40
MW-5	10/12/92	0.01	---	---
	01/12/93	<0.01	---	---
	10/13/93	0.03	---	---
	01/20/94	0.01	---	---
	04/13/94	0.01	0.03	0.03
MW-6	10/12/92	0.48	---	---
	01/12/93	<0.01	---	---
	10/13/93	0.2	---	---
	01/20/94	0.02	---	---
	04/13/94	0.01	0.03	0.03
	07/19/94	0.07	0.03	0.06
	10/27/94	0.11	1.43	1.49
	01/03/95	0.02	0.12	1.61
	04/13/95	0.02	0.13	1.74

Table 1. Separate-Phase Hydrocarbon Removal - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California (continued)

Well ID	Date	Separate-Phase Hydrocarbon Thickness (ft)	Separate-Phase Hydrocarbons Removed (lbs)	Cumulative Separate-Phase Hydrocarbons Removed (lbs)
MW-7	01/20/94	0.05	---	---
	04/13/94	0.16	0.66	0.66
	07/19/94	0.20	0.04	0.70
	10/27/94	0.04	1.11	1.81
	01/03/95	0.02	0.16	1.97
	04/13/95	0.02	0.16	2.13
	10/31/95	0.04	0.80	2.93
	01/17/96	0.04	0.09	3.02
	04/10/96	0.05	0.00	3.02
	07/03/96	0.03	0.00	3.02
	10/17/96	0.02	0.16	3.18
	07/14/97	0.03	0.16	3.34
Total Separate-Phase Hydrocarbons Removed				20.17

Notes and Abbreviations:

Ft = Feet

Lbs = pounds

--- = not measured

Weight of Separate-phase hydrocarbons (SPH) converted from volume to weight using the relation 1 liter gasoline = 1.61 pounds

**Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-5306,
3420 San Pablo Avenue, Oakland, California**

Well ID	Date	Top-of-Casing Elevation (ft. above msl)	Depth to Water (ft below TOC))	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
MW-1	08/06/91	21.28	10.86	---	10.43
	10/23/91		11.05	0.01	10.24
	01/28/92		10.84	---	10.44
	05/04/92		9.42	<0.01	11.86
	07/13/92		11.36	---	9.92
	10/12/92		13.14	0.09	8.21
	01/12/93		7.52	0.02	13.78
	04/06/93		7.13	<0.01	14.16
	07/12/93		11.02	0.01	10.27
	10/13/93		12.18	0.01	9.11
	01/20/94		9.18	0.01	12.10
	04/13/94		8.72	0.02	12.58
	07/19/94		8.76	---	12.52
	10/27/94		10.49	---	10.79
	01/03/95		6.15	---	15.13
	04/13/95		5.24	---	16.04
	06/30/95		7.24	---	14.04
	10/11/91		9.48	---	11.80
	01/17/96		6.48	---	14.80
	04/10/96		5.38	---	15.90
	07/30/96		7.61	---	13.67
	10/17/96		8.66	---	12.62
01/22/97	5.00	---	16.28		
04/01/97	6.42	---	14.86		
07/14/97	8.92	---	12.36		
MW-2	08/06/91	21.56	9.72	---	11.84
	10/23/91		10.03	---	11.53
	01/28/92		8.78	---	12.78
	05/04/92		7.58	---	13.98
	07/13/92		9.63	---	11.93
	10/12/92		11.66	0.03	9.92
	01/12/93		7.13	0.01	14.44
	04/06/93		6.40	<0.01	15.17
	07/12/93		8.75	---	12.81
	10/13/93		10.28	---	11.28
	01/20/94		---	---	---
	04/13/94		7.35	<0.01	14.22
	07/19/94		8.24	---	13.32
	10/27/94		10.26	---	13.32
	01/03/95		6.44	---	15.12
	04/13/95		5.89	---	15.67
06/30/95	7.41	---	14.15		

**Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-5306,
3420 San Pablo, Avenue, Oakland, California (continued)**

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft below TOC)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
	10/11/95		8.02	---	13.54
	01/17/96		7.42	---	14.14
	04/10/96		6.91	---	14.65
	07/30/96		7.63	---	13.93
	10/17/96		8.28	---	13.29
	01/22/97		7.09	---	14.47
	04/01/97		6.91	---	14.65
	07/14/97		9.93	---	11.63
MW-3	08/06/91	21.78	11.18	---	10.60
	10/23/91		11.69	---	10.09
	01/28/92		9.99	---	11.79
	05/04/92		9.46	---	12.32
	07/13/92		11.29	---	10.49
	10/12/92		13.10	---	8.68
	01/12/93		7.32	---	14.46
	04/06/93		7.44	---	14.34
	07/12/93		10.62	---	11.16
	10/13/93		12.05	---	9.73
	01/20/94		9.62	---	12.16
	04/13/94		9.15	---	12.63
	07/19/94		10.13	---	11.65
	10/27/94		11.66	---	10.12
	01/03/95		6.89	---	14.89
	04/13/95		6.79	---	14.99
	06/30/95		8.94	---	12.84
	10/11/95		10.62	---	11.16
	01/17/96		7.18	---	14.60
	04/10/96		6.76	---	15.02
	07/30/96		9.04	---	12.74
	10/17/96		9.04	---	12.74
	01/22/97		5.03	---	16.75
	04/01/97		8.23	---	13.55
	07/14/97		9.09	---	12.69
MW-4	08/06/91	20.31	10.57	---	9.74
	10/23/91		10.46	---	9.85
	01/28/92		9.54	---	10.77
	05/04/92		8.33	---	11.98
	07/13/92		9.87	---	10.44
	10/12/92		12.43	0.78	8.50
	01/12/93		7.12	1.0	13.99
	04/06/93		7.23	0.95	13.84

Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-5306, 3420 San Pablo, Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft below TOC)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
	07/12/93		10.08	0.03	10.25
	10/13/93		11.35	0.12	9.06
	01/20/94		9.06	0.02	11.26
	04/13/94		8.58	0.01	11.74
	07/19/94		9.71	---	10.60
	10/27/94		10.60	0.03	9.73
	01/03/95		5.49	0.01	14.83
	04/13/95		6.53	0.03	13.80
	06/30/95		9.57	---	10.74
	10/11/95		10.30	---	10.01
	01/17/96		6.68	---	13.63
	04/10/96		7.90	---	12.41
	07/30/96		8.73	---	11.58
	10/17/96		9.97	---	10.34
	01/22/97		5.26	---	15.05
	04/01/97		8.02	---	12.29
	07/14/97		10.05	---	10.26
MW-5	08/06/91	20.91	10.23	---	10.68
	10/23/91		10.89	---	10.02
	01/28/92		8.45	---	12.46
	05/04/92		8.05	---	12.86
	07/13/92		10.00	---	10.91
	10/12/92		11.83	0.01	9.09
	01/12/93		6.10	<0.01	14.81
	04/06/93		6.18	---	14.73
	07/12/93		9.59	---	11.32
	10/13/93		10.80	0.03	10.13
	01/20/94		7.42	0.01	13.49
	04/13/94		7.05	0.01	13.87
	07/19/94		8.57	---	12.34
	10/27/94		10.14	---	10.77
	01/03/95		5.84	---	15.07
	04/13/95		5.28	---	15.63
	06/30/95		7.43	---	13.48
	10/11/95		8.90	---	12.01
	01/17/96		6.40	---	14.51
	04/10/96		5.70	---	15.21
	07/30/96		7.71	---	13.20
	10/17/96		9.04	---	11.87
	01/22/97		4.85	---	16.06
	04/01/97		6.54	---	14.37
	07/14/97		8.54	---	12.37

Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-5306, 3420 San Pablo, Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft below TOC))	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
MW-6	08/06/91	22.32	10.61	---	11.71
	10/23/91		11.68	---	10.64
	01/28/92		8.90	---	13.42
	05/04/92		8.01	---	14.31
	07/13/92		10.77	---	11.55
	10/12/92		13.36	0.48	9.34
	01/12/93		6.40	<0.01	15.92
	04/06/93		5.93	---	16.39
	07/12/93		10.25	---	12.07
	10/13/93		12.28	0.2	10.20
	01/20/94		9.14	0.02	13.20
	04/13/94		7.67	0.01	14.66
	07/19/94		10.07	0.07	12.31
	10/27/94		11.84	0.11	10.57
	01/03/95		7.80	0.02	14.54
	04/13/95		5.77	0.02	16.57
	06/30/95		7.78	---	14.54
	10/11/95		10.06	---	12.26
	01/17/96		6.91	---	15.41
	04/10/96		5.92	---	16.40
	07/30/96		8.97	---	13.35
	10/17/96		9.87	---	12.45
	01/22/97		4.43	---	17.89
04/01/97	6.84	---	15.48		
07/14/97	10.30	---	12.02		
MW-7	08/06/91	20.36	8.00	---	12.36
	10/23/91		8.16	---	12.20
	01/28/92		7.11	---	13.25
	05/04/92		6.47	---	13.89
	07/13/92		7.73	---	12.63
	10/12/92		8.68	---	11.68
	01/12/93		6.26	---	14.10
	04/06/93		5.92	---	14.44
	07/12/93		7.27	---	13.09
	10/13/93		9.40	---	10.96
	01/20/94		7.03	0.05	13.37
	04/13/94		6.56	0.16	13.93
	07/19/94		6.91	0.20	13.61
	10/27/94		8.28	0.04	12.11
	01/03/95		6.48	0.02	13.90
04/13/95	6.54	0.02	13.84		

**Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-5306,
3420 San Pablo, Avenue, Oakland, California (continued)**

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft below TOC)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
	06/30/95		7.08	---	13.28
	10/11/95		7.88	0.04	12.51
	01/17/96		7.26	0.04	13.13
	04/10/96		6.98	0.05	13.42
	07/30/96		7.34	0.03	13.04
	10/17/96		7.63	0.02	12.75
	01/22/97		6.46	---	13.90
	04/01/97		6.97	---	13.39
	07/14/97		8.90	0.03	11.48
MW-8	08/06/91	20.95	9.60	---	11.35
	10/23/91		9.73	---	11.22
	01/28/92		7.72	---	13.23
	05/04/92		6.48	---	14.47
	07/13/92		8.55	---	12.40
	10/12/92		9.97	---	10.98
	01/12/93		6.94	---	14.01
	04/06/93		5.72	---	15.23
	07/12/93		7.65	---	13.30
	10/13/93		8.25	---	12.70
	01/20/94		7.25	---	13.70
	04/13/94		7.12	---	13.83
	07/19/94		7.43	---	13.52
	10/27/94		7.55	---	13.40
	01/03/95		6.04	---	14.91
	04/13/95		5.04	---	15.91
	06/30/95		5.72	---	15.23
	10/11/95		7.06	---	13.89
	01/17/96		5.84	---	15.11
	04/10/96		5.03	---	15.92
	07/30/96		6.36	---	14.59
	10/17/96		5.94	---	15.01
	01/22/97		5.93	---	15.02
	04/01/97		6.24	---	14.71
	07/14/97		8.59	---	12.36
MW-9	08/06/91	21.19	10.33		10.86
	10/23/91		11.13	---	10.06
	01/28/92		9.02	---	12.17
	05/04/92		7.67	---	13.52
	07/13/92		10.26	---	10.93
	10/12/92		12.19	---	9.0
	01/12/93 ^b		---	---	---

Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-5306, 3420 San Pablo, Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft below TOC)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
	04/06/93 ^b		---	---	---
	07/12/93 ^b		---	---	---
	10/13/92		11.17	---	10.02
	01/20/94		8.03	---	13.16
	04/13/94		7.81	---	13.38
	07/19/94		8.96	---	12.23
	10/27/94		11.00	---	10.19
	01/03/95		6.60	---	14.59
	04/13/95		6.73	---	14.46
	06/30/95		7.32	---	13.87
	10/11/95		8.10	---	13.09
	01/17/96		5.75	---	15.44
	04/10/96		5.17	---	16.02
	07/30/96		8.10	---	13.09
	10/17/96		9.12	---	12.07
	01/22/97		4.72	---	16.47
	04/01/97		6.86	---	14.33
	07/14/97		10.04	---	11.15
MW-10	10/23/91	19.74	8.57	---	11.17
	01/28/92		7.60	---	12.14
	05/04/92		7.54	---	12.20
	07/13/92		8.59	---	11.15
	10/12/92		10.23	---	9.51
	01/12/93 ^b		---	---	---
	04/06/93		6.70	---	13.04
	07/12/93 ^b		8.05	---	11.69
	10/13/93		8.25	---	11.49
	01/20/94		7.20	---	12.54
	04/13/94		7.57	---	12.17
	07/19/94		8.18	---	11.56
	10/27/94		8.68	---	11.06
	01/03/95		6.86	---	12.88
	04/13/95		6.91	---	12.83
	06/30/95		7.61	---	12.13
	10/11/95		---	---	---
	01/17/96		7.00	---	12.74
	07/30/96 ^b		---	---	---
	10/17/96		---	---	---
	01/22/97		6.68	---	13.06
	04/01/97		7.34	---	12.40
	07/14/97		8.10	---	11.64

**Table 2. Ground Water Elevations - Shell Service Station WIC #204-5508-5306,
3420 San Pablo, Avenue, Oakland, California (continued)**

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft below TOC)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation (ft above msl) ^a
MW-11	10/23/91	22.06	14.00	---	8.06
	01/28/92		8.74	---	3.32
	05/04/92		8.29	---	13.77
	07/13/92		10.50	---	11.56
	10/12/92		12.40	---	9.66
	01/12/93 ^b		---	---	---
	04/06/93 ^b		---	---	---
	07/12/93 ^b		---	---	---
	10/13/93		11.47	---	10.59
	01/20/94		9.09	---	12.97
	04/13/94		8.02	---	14.04
	07/19/94		9.82	---	12.24
	10/27/94		11.66	---	10.40
	01/03/95		6.15	---	15.91
	04/13/95		6.00	---	16.06
	06/30/95		8.31	---	13.75
	10/11/95		10.30	---	11.76
	01/17/96		6.45	---	15.61
	04/10/96		6.05	---	16.01
	07/30/96		8.92	---	13.14
	10/17/96		9.24	---	12.82
	01/22/97		5.12	---	16.94
	04/01/97		7.41	---	14.65
	07/14/97		9.74	---	12.32

Notes and Abbreviations:

a = When separate-phase hydrocarbons are present ground water elevation is adjusted using the relation: Ground Water Elevation = Top-of-casing elevation - depth to water + (0.8 x hydrocarbon thickness).

b = Well inaccessible, covered by construction debris.

--- = Not measured/not available.

msl = Mean sea level

TOC = Top of casing

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Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California (continued)

Well ID	Date Sampled	Depth to water (ft below TOC)	TPH-G	B	T	E	X	MTBE	DO (mg/l)
MW-1	08/06/91 ^{SPH}	10.86	---	---	---	---	---	---	---
	10/23/91	11.05	32,000	2,700	360	550	3,700	---	---
	01/28/92	10.84	14,000	1,000	106	450	1,600	---	---
	05/05/92	9.42	98,000	11,000	1,200	3,500	18,000	---	---
	07/13/92	11.36	11,000	1,100	130	740	1,300	---	---
	10/12/92 ^{SPH}	13.14	---	---	---	---	---	---	---
	01/12/93 ^{SPH}	7.52	---	---	---	---	---	---	---
	04/06/93 ^{SPH}	7.13	---	---	---	---	---	---	---
	07/12/93 ^{SPH}	11.02	---	---	---	---	---	---	---
	10/13/93 ^{SPH}	12.18	---	---	---	---	---	---	---
	01/20/94 ^{SPH}	9.18	---	---	---	---	---	---	---
	04/13/94 ^{SPH}	8.72	---	---	---	---	---	---	---
	07/19/94	8.76	17,000	420	140	530	1,300	---	---
	10/27/94	10.49	23,000	1,200	130	990	960	---	---
	01/03/95	6.15	31,000	610	160	1,200	5,000	---	---
	04/13/95	5.24	20,000	340	42	680	2,900	---	---
	06/30/95	7.24	16,000	450	62	460	1,200	---	---
	10/11/95	9.48	8,400	660	47	510	850	8,000	---
	10/13/95	---	7,400	730	54	490	1,100	8,200	---
	01/17/96	6.48	24,000	570	110	820	2,900	15,000	---
	04/10/96	5.38	20,000	120	11	420	1,400	15,000	---
	07/30/96	7.61	7,900	240	22	170	300	12,000	---
	10/17/96	8.66	6,600	1,000	20	120	130	10,000	1.4
	01/22/97	5.00	13,000	170	<50	330	1,200	18,000	1.6
	04/01/97	6.42	7,900	240	26	130	200	6,400	1.4
	07/14/97	8.92	5,000	<20	<20	59	61	9,000	1.9
MW-2	08/06/91	9.72	50,000	15,000	---	2,700	13,000	---	---
	10/23/91	10.03	120,000	11,000	1,400	3,500	19,000	---	---
	01/28/92	8.78	49,000	7,400	800	1,800	8,300	---	---
	05/05/92	7.58	52,000	12,000	1,100	2,200	12,000	---	---
	07/13/92	9.63	47,000	15,000	2,400	4,500	16,000	---	---
	10/12/92 ^{SPH}	11.66	---	---	---	---	---	---	---
	01/12/93 ^{SPH}	7.13	---	---	---	---	---	---	---
	04/06/93 ^{SPH}	6.40	---	---	---	---	---	---	---
	07/12/93	8.75	59,000	12,000	950	2,400	11,000	---	---
	10/13/93	10.28	54,000	14,000	1,200	3,700	22,000	---	---
	01/20/94	---	---	---	---	---	---	---	---
	04/13/94	7.35	79,000	9,400	740	2,100	12,000	---	---
	04/13/94 ^{dup}	7.35	110,000	11,000	710	2,400	13,000	---	---
	07/19/94	8.24	63,000	13,000	810	1,900	13,000	---	---
	07/19/94 ^{dup}	8.24	12,000	12,000	140	340	12,000	---	---
	10/27/94	10.26	64,000	8,800	480	2,100	10,000	---	---
	01/03/95	6.44	67,000	9,800	720	2,800	11,000	---	---
	01/03/95 ^{dup}	6.44	58,000	9,700	620	2,700	12,000	---	---
	04/13/95	5.89	83,000	10,000	490	2,600	13,000	---	---
	04/13/95 ^{dup}	5.89	74,000	9,500	350	2,100	11,000	---	---
	06/30/95	7.41	65,000	12,000	1,800	2,400	12,000	---	---
	10/11/95	8.02	68,000	8,800	840	3,000	13,000	1,400	---
	01/17/96	7.42	79,000	12,000	640	2,700	14,000	2,200	---

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Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California (continued)

Well ID	Date Sampled	Depth to water (ft below TOC)	TPH-G	(µg/L)					MTBE	DO (mg/l)
				B	T	E	X			
	01/17/96 ^{uup}	7.42	78,000	12,000	920	2,500	12,000	2,500	---	
	04/10/96	6.91	84,000	7,200	310	1,700	7,800	2,900	---	
	07/30/96	7.63	26,000	6,800	210	1,300	5,500	4,500	---	
	10/17/96	8.27	46,000	9,800	340	2,000	6,500	4,900	1.8	
	01/22/97	7.09	52,000	6,200	220	1,400	6,600	3,000	1.9	
	01/22/97 ^{uup}	7.09	54,000	6,100	230	1,400	6,500	2,600	1.9	
	04/01/97	6.91	69,000	6,000	380	2,400	11,000	3,800	2.0	
	07/14/97	9.93	53,000	7,700	260	1,600	5,200	2,400	1.2	
	07/14/97 ^{uup}	9.93	59,000	8,700	400	1,900	6,900	2,700	1.2	
MW-3	08/06/91	11.18	430	8	1	4	15	---	---	
	10/23/91	11.69	390	2.10	<0.3	0.48	2	---	---	
	01/28/92	9.99	190	<0.5	<0.5	<0.5	<0.5	---	---	
	05/04/92	9.46	190	<1	<1	<1	0.71	---	---	
	07/20/92	11.29	200 ^a	<0.5	<0.5	<0.5	<0.5	---	---	
	10/12/92	13.10	180 ^u	<0.5	<0.5	<0.5	<0.5	---	---	
	01/12/93	7.32	180	<0.5	2.3	0.9	5.6	---	---	
	01/12/93 ^{uup}	7.32	260	<0.5	<0.5	<0.5	<0.5	---	---	
	04/06/93	7.44	280	<0.5	<0.5	<0.5	<0.5	---	---	
	07/12/93	10.62	310 ^a	<0.5	<0.5	<0.5	<0.5	---	---	
	10/13/93	12.05	150	<0.5	<0.5	<0.5	<0.5	---	---	
	01/20/94	9.62	180	<0.5	<0.5	<0.5	<0.5	---	---	
	04/13/94	9.15	270	<0.5	<0.5	<0.5	<0.5	---	---	
	07/19/94	10.13	190*	<0.5	<0.5	<0.5	<0.5	---	---	
	10/27/94	11.66	160*	<0.5	<0.5	<0.5	<0.5	---	---	
	01/03/95	6.89	100*	<0.5	<0.5	<0.5	<0.5	---	---	
	04/13/95	6.79	120*	<0.5	<0.5	<0.5	<0.5	---	---	
	06/30/95	8.94	180*	<0.5	<0.5	<0.5	<0.5	---	---	
	10/11/95	10.62	150	2.2	<0.5	<0.5	<0.5	2.3	---	
	01/17/96	7.18	120	<0.5	<0.5	<0.5	<0.5	7.8	---	
	04/10/96	6.76	160	<0.5	<0.5	<0.5	<0.5	12	---	
	07/30/96	9.04	57	<0.5	<0.5	<0.5	<0.5	<2.5	---	
	10/17/96	9.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5	2.0	
	01/22/97	5.03	<50	<0.5	<0.5	<0.5	<0.5	3.7	2.4	
	04/01/97	8.23	71	<0.50	<0.50	<0.50	<0.50	---	1.6	
	07/14/97	9.09	<50	<0.50	<0.50	<0.50	1.5	---	1.9	
MW-4	08/06/91	10.57	1,300	28	18	68	150	---	---	
	10/23/91	10.46	1,900	97	6.10	38	77	---	---	
	01/28/92	9.54	200	7.60	<0.5	3	3.30	---	---	
	05/04/92	8.33	690	98	3	13	<1	---	---	
	07/13/92	9.87	1,500	140	2.90	17	12	---	---	
	07/13/92 ^{uup}	9.87	870	95	1.90	10	7.10	---	---	
	10/12/92 ^{SPH}	12.43	---	---	---	---	---	---	---	
	01/12/93 ^{SPH}	7.12	---	---	---	---	---	---	---	
	04/06/93 ^{SPH}	7.23	---	---	---	---	---	---	---	
	07/12/93 ^{SPH}	10.08	---	---	---	---	---	---	---	
	10/13/93 ^{SPH}	11.35	---	---	---	---	---	---	---	
	01/20/94 ^{SPH}	9.06	---	---	---	---	---	---	---	
	04/13/84 ^{SPH}	8.58	---	---	---	---	---	---	---	

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Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California (continued)

Well ID	Date Sampled	Depth to water (ft below TOC)	TPH-G	(µg/L)					MTBE	DO (mg/l)
				B	T	E	X			
	07/18/94	9.71	12,000	230	43	230	660	---	---	
	10/27/94 ^{SPH}	10.60	---	---	---	---	---	---	---	
	01/03/95 ^{SPH}	5.49	---	---	---	---	---	---	---	
	04/13/95 ^{SPH}	6.53	---	---	---	---	---	---	---	
	06/30/95	9.57	7,400	140	<0.5	160	350	---	---	
	10/11/95	10.30	3,000	29	10	100	82	9,700	---	
	01/17/96	6.68	9,700	190	<0.5	190	410	4,500	---	
	04/10/96	7.90	2,800	16	<0.5	22	50	6,100	---	
	07/30/96	8.73	1,600	68	<12	58	39	8,500	2.8	
	10/17/96	7.63	4,800	120	<25	150	96	11,000	2.8	
	01/22/97	5.26	12,000	83	<20	170	240	4,300	2.6	
	04/01/97	8.02	4,800	65	<5.0	81	93	3,200	2.4	
	07/14/97	10.05	2,400	35	<10	30	20	6,000	2.0	
MW-5	08/06/91	10.23	9,100	210	27	240	660	---	---	
	10/23/91	10.89	12,000	92	18	230	450	---	---	
	01/28/92	8.45	3,300	130	10	180	220	---	---	
	05/04/92	8.05	3,900	95	<12.5	260	120	---	---	
	07/13/92	10.00	4,100	180	12	250	73	---	---	
	10/12/92 ^{SPH}	11.83	---	---	---	---	---	---	---	
	01/12/93 ^{SPH}	6.10	---	---	---	---	---	---	---	
	04/06/93	6.18	6,200	71	<0.5	53	150	---	---	
	07/12/93	9.59	3,400	130	<0.5	170	130	---	---	
	10/13/93 ^{SPH}	10.80	---	---	---	---	---	---	---	
	01/20/94 ^{SPH}	7.42	---	---	---	---	---	---	---	
	04/13/94 ^{SPH}	7.05	---	---	---	---	---	---	---	
	07/19/94	8.57	11,000	180	13	180	260	---	---	
	10/27/94	10.14	6,900	82	<5	210	1110	---	---	
	01/03/95	5.84	12,000	110	46	790	510	---	---	
	04/13/95	5.28	10,000	61	<20	330	140	---	---	
	06/30/95	7.43	12,000	180	8.60	440	340	---	---	
	10/11/95	8.90	11,000	<50	<50	440	340	5,100	---	
	10/11/96 ^{dup}	8.90	11,000	95	<50	440	330	660	---	
	01/17/96	6.40	82,000	330	120	960	1,400	820	---	
	04/10/96	5.70	23,000	<50	<50	360	190	770	---	
	04/10/96 ^{dup}	5.70	19,000	84	<50	430	200	590	---	
	07/30/96	7.71	38,000	3,000	<100	1,100	2,600	560	---	
	10/17/96	9.04	13,000	36	<10	210	160	720	1.4	
	10/17/96 ^{dup}	9.04	11,000	75	<10	180	150	450	1.4	
	01/22/97	4.85	20,000	63	<50	380	390	650	1.6	
	04/01/97	6.54	16,000	110	<50	390	320	2,200	1.4	
	07/14/97	8.54	15,000	70	<20	220	170	450	1.8	
MW-6	08/06/91	10.61	28,000	1,400	200	1,300	4,200	---	---	
	10/23/91	11.68	53,000	1,400	230	1,800	6,700	---	---	
	01/28/92	8.90	87,000	1,200	470	2,000	6,600	---	---	
	05/05/92	8.01	230,000	<500	<500	3,200	11,000	---	---	
	07/13/92	10.77	2,700,000	<2,500	3,500	14,000	36,000	---	---	
	10/12/92 ^{SPH}	8.68	---	---	---	---	---	---	---	
	01/12/93 ^{SPH}	6.40	---	---	---	---	---	---	---	

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Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California (continued)

Well ID	Date Sampled	Depth to water (ft below TOC)	TPH-G	B T E X				MTBE	DO (mg/l)
				(µg/L)					
	04/06/93	5.93	320,000	2,500	14,000	980	14,000	---	---
	07/12/93	10.25	31,000	1,100	4,500	150	4,500	---	---
	07/12/93 ^{dup}	10.25	25,000	1,200	4,800	270	4,800	---	---
	10/13/93 ^{SPH}	12.28	---	---	---	---	---	---	---
	01/20/94 ^{SPH}	9.14	---	---	---	---	---	---	---
	04/13/94 ^{SPH}	7.67	---	---	---	---	---	---	---
	07/19/94 ^{SPH}	10.07	---	---	---	---	---	---	---
	10/27/94 ^{SPH}	11.84	---	---	---	---	---	---	---
	01/03/95 ^{SPH}	7.80	---	---	---	---	---	---	---
	04/13/95 ^{SPH}	5.77	---	---	---	---	---	---	---
	06/30/95	7.78	1,100,000	6,600	6,100	12,000	29,000	---	---
	10/11/95	10.06	30,000	130	<50	1,400	4,200	710	---
	01/17/96	6.91	450,000	510	1,400	2,700	11,000	630	---
	04/10/96	5.92	22,000	47	<10	350	860	<50	---
	07/30/96	8.97	38,000	3,000	<100	1,100	2,600	560	---
	07/30/96 ^{dup}	8.97	38,000	450	100	1,000	3,100	800	---
	10/17/96 ^{SPH}	9.87	34,000	470	<100	1,300	3,900	<500	1.0
	01/22/97	4.43	26,000	<100	<100	600	1,700	<500	1.3
	04/01/97	6.84	30,000	96	33	840	2,600	190	1.4
	07/14/97	10.30	29,000	200	<100	690	2,000	<500	2.3
MW-7	08/06/91	8.00	13,000	4,300	76	770	730	---	---
	10/23/91	8.16	18,000	3,200	31	660	770	---	---
	01/28/92	7.11	5,000	1,200	<10	220	54	---	---
	05/05/92	6.47	9,500	3,100	72	620	880	---	---
	07/13/92	7.73	20,000	4,200	130	1,600	1,100	---	---
	10/12/92	9.97	16,000	2,500	170	560	170	---	---
	01/12/93	6.26	15,000	2,300	<50	690	440	---	---
	04/06/93	5.92	26,000	5,400	<0.5	1,200	3,000	---	---
	04/06/93 ^{dup}	5.92	21,000	5,200	180	1,200	3,000	---	---
	07/12/93	7.27	10,000	3,000	100	510	530	---	---
	10/13/93	9.40	59,000	13,000	4,400	4,400	20,000	---	---
	01/20/94 ^{SPH}	7.03	---	---	---	---	---	---	---
	04/13/94 ^{SPH}	6.56	---	---	---	---	---	---	---
	07/19/94 ^{SPH}	6.91	---	---	---	---	---	---	---
	10/27/94 ^{SPH}	8.28	---	---	---	---	---	---	---
	01/03/95 ^{SPH}	6.48	---	---	---	---	---	---	---
	04/13/95 ^{SPH}	6.54	---	---	---	---	---	---	---
	06/30/95	7.08	900,000	11,000	8,500	14,000	52,000	---	---
	10/11/95 ^{SPH}	7.88	---	---	---	---	---	---	---
	01/17/96 ^{SPH}	7.26	---	---	---	---	---	---	---
	04/10/96 ^{SPH}	6.98	---	---	---	---	---	---	---
	07/30/96	7.34	---	---	---	---	---	---	---
	10/17/96 ^{SPH}	7.63	---	---	---	---	---	---	---
	01/22/97	6.46	56,000	2,000	520	1,400	8,400	1,800	0.5
	04/01/97	6.97	66,000	3,600	460	2,400	10,000	2,300	1.6
	07/14/97^{SPH}	8.90	---	---	---	---	---	---	---
MW-8	08/06/91	9.60	32,000	3,700	1,100	1,400	6,100	---	---
	10/23/91	9.73	63,000	4,800	1,300	1,300	6,900	---	---

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Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue , Oakland, California (continued)

Well ID	Date Sampled	Depth to water (ft below TOC)	← (µg/L) →					DO (mg/l)	
			TPH-G	B	T	E	X		MTBE
	01/28/92	7.72	32,000	1,900	750	1,400	6,300	---	---
	05/05/92	6.48	180,000	2,200	2,000	2,700	13,000	---	---
	07/13/92	8.55	56,000	4,500	1,500	2,700	9,100	---	---
	10/12/92	9.97	34,000	2,400	550	1,400	6,400	---	---
	10/12/92 ^{dup}	9.97	34,000	3,100	700	1,500	7,200	---	---
	01/12/93	6.94	110,000	2,100	1,200	2,400	12,000	---	---
	04/06/93	5.72	38,000	2,500	840	1,100	4,900	---	---
	07/12/93	7.65	27,000	2,800	990	1,200	5,300	---	---
	10/13/93	8.25	32,000	3,300	1,300	1,600	8,400	---	---
	10/13/93 ^{dup}	8.25	47,000	3,200	1,300	1,600	8,500	---	---
	01/20/94	7.25	78,000	1,900	670	1,300	6,600	---	---
	01/20/94 ^{dup}	7.25	60,000	1,700	680	1,100	5,500	---	---
	04/13/94	7.12	41,000	1,300	720	1,200	6,000	---	---
	07/19/94	7.43	140,000	1,800	1,400	2,000	9,000	---	---
	10/27/94	7.55	32,000	1,200	670	1,200	5,700	---	---
	10/27/94 ^{dup}	7.55	42,000	1,100	650	1,100	5,700	---	---
	01/03/95	6.04	38,000	1,000	700	1,500	7,500	---	---
	04/13/95	5.04	31,000	1,200	570	1,000	5,300	---	---
	06/30/95	5.72	110,000	2,000	1,500	2,000	9,700	---	---
	10/11/95	7.06	36,000	170	60	1,300	6,300	510	---
	01/17/96	5.84	38,000	1,000	520	1,100	6,200	950	---
	04/10/96	5.03	54,000	650	260	850	4,700	<250	---
	07/30/96	6.36	33,000	780	330	830	4,200	1,700	---
	10/17/96	5.94	35,000	750	300	1,100	5,000	1,200	1.6
	01/22/97	5.93	25,000	260	78	420	2,400	120	1.8
	04/01/97	6.24	22,000	680	180	550	2,500	260	1.8
	07/14/97	8.59	29,000	870	200	850	3,100	500	1.4
MW-9	08/06/91	10.33	11,000	1,700	95	520	1,400	---	---
	10/23/91	11.13	20,000	1,000	47	<0.3	940	---	---
	01/28/92	9.02	3,500	120	<10	280	36	---	---
	05/04/92	7.67	7,700	1,200	<50	380	630	---	---
	07/20/92	10.26	11,000	910	<50	220	1,200	---	---
	10/12/92	12.19	2,100	340	15	77	44	---	---
	01/12/93 ^D	---	---	---	---	---	---	---	---
	04/06/93 ^D	---	---	---	---	---	---	---	---
	07/12/93 ^D	---	---	---	---	---	---	---	---
	10/13/93	11.17	2,900	140	<5	<5	120	---	---
	01/20/94	8.03	1,700	380	6.90	150	400	---	---
	04/13/94	7.81	6,000	1,000	<20	450	420	---	---
	07/19/94	8.96	12,000	1,400	<5	740	1,200	---	---
	10/27/94	11.00	10,000	1,200	160	280	860	---	---
	01/03/95	6.60	4,400	680	7.70	180	370	---	---
	04/13/95	6.73	1,700	270	<10	69	170	---	---
	06/30/95	7.32	14,000	2,200	18	900	2,600	---	---
	06/30/95 ^{dup}	7.32	13,000	2,100	17	870	2,500	---	---
	10/11/95	8.10	9,600	35	12	360	980	590	---
	01/17/96	5.75	2,800	150	7.41	54	130	170	---
	04/10/96	5.17	5,200	290	<5	92	220	240	---
	07/30/96	8.1	5,100	960	<10	380	770	670	---

CAMBRIA

Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue , Oakland, California (continued)

Well ID	Date Sampled	Depth to water (ft below TOC)	TPH-G	B	T	(µg/L)			DO (mg/l)
						E	X	MTBE	
	10/17/96	9.12	15,000	2,100	<25	590	1,300	1,500	2.4
	01/22/97	4.72	5,600	690	<5.0	140	310	620	2.2
	04/01/97	6.86	4,000	590	<10	140	200	600	2.2
	04/01/97 ^{dup}	6.86	4,800	660	<25	160	230	810	2.2
	07/14/97	10.04	7,100	860	<10	51	230	950	3.8
MW-10	10/23/91	8.57	27,000	1,600	110	1,800	510	---	---
	01/28/92	7.60	3,800	360	14	170	39	---	---
	05/04/92	7.54	3,000	360	<12.5	140	26	---	---
	07/20/92	8.59	15,000	400	<25	180	67	---	---
	10/12/92	10.23	16,000	320	<50	360	100	---	---
	01/12/93 ^b	---	---	---	---	---	---	---	---
	04/06/93	6.70	14,000	370	<0.5	880	210	---	---
	07/12/93	8.05	10,000	440	58	890	220	---	---
	10/13/93	8.25	15,000	1,000	51	810	170	---	---
	01/20/94	7.20	12,000	820	56	1,100	350	---	---
	04/13/94	7.57	18,000	760	36	700	130	---	---
	07/19/94	8.18	24,000	400	2.30	800	22	---	---
	10/27/94	8.68	11,000	360	43	310	89	---	---
	01/03/95	6.86	17,000	770	38	690	160	---	---
	04/13/95	6.91	9,900	650	16	280	40	---	---
	06/30/95	7.61	12,000	750	20	480	130	---	---
	01/17/96	7.00	17,000	870	260	93	830	---	---
	04/10/96	6.80	14,000	470	38	110	370	---	---
	07/30/96	---	---	---	---	---	---	---	---
	10/17/96	---	---	---	---	---	---	---	---
	01/22/97	6.68	10,000	520	<20	64	32	180	3.1
	04/01/97	7.34	11,000	590	<20	53	32	210	2.8
	07/14/97	8.10	6,600	410	13	28	11	89	1.4
MW-11	10/23/91	8.06	140	<12	<0.3	0.37	0.56	---	---
	01/28/92	13.32	<50	<0.5	<0.5	<0.5	<0.5	---	---
	05/04/92	13.77	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/13/92	11.56	140	<0.5	<0.5	<0.5	<0.5	---	---
	10/12/92	12.40	75	<0.5	<0.5	<0.5	<0.5	---	---
	01/12/93 ^b	---	---	---	---	---	---	---	---
	04/06/93 ^b	---	---	---	---	---	---	---	---
	07/12/93 ^b	---	---	---	---	---	---	---	---
	10/13/93	11.47	<50	<0.5	<0.5	<0.5	<0.5	---	---
	01/20/94	9.09	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/13/94	8.02	<50	<0.5	<0.5	<0.5	<0.5	---	---
	07/19/94	9.82	50	<0.5	<0.5	<0.5	<0.5	---	---
	10/27/94	11.66	60*	<0.5	<0.5	<0.5	<0.5	---	---
	01/03/95	6.15	<50	<0.5	<0.5	<0.5	<0.5	---	---
	04/13/95	6.00	<50	<0.5	<0.5	<0.5	<0.5	---	---
	06/30/95	8.31	70	<0.5	<0.5	<0.5	<0.5	---	---
	10/11/95	10.30	60	53	<0.5	<0.5	0.80	3.0	---
	01/17/96	6.45	<50	<0.5	<0.5	<0.5	<0.5	<2	---
	04/10/96	6.05	<50	<0.5	<0.5	<0.5	<0.5	3.9	---
	07/30/96	8.92	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---

CAMBRIA

Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue, Oakland, California (continued)

Well ID	Date Sampled	Depth to water (ft below TOC)	TPH-G	B T E X MTBE					DO (mg/l)
				(µg/L)					
	10/17/96	9.24	3,000	28	23	29	210	76	—
	01/22/97	5.12	<50	<0.5	<0.5	<0.5	<0.5	<2.5	3.7
	04/01/97	7.41	<50	<0.50	<0.50	<0.50	<0.50	<2.5	2.8
	07/14/97	9.74	<50	<0.50	<0.50	<0.50	<0.50	<2.5	1.9
Equipment	07/13/92	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
Blank	07/20/92	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	10/12/92	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	04/13/94	—	<50	<0.5	0.67	<0.5	<0.5	—	—
	07/19/94	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	10/27/94	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	01/03/95	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	04/13/95	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	06/30/95	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	10/11/95	—	<50	<0.5	<0.5	<0.5	<0.5	<0.5	—
	01/17/96	—	<50	<0.5	<0.5	<0.5	<0.5	<2	—
Trip Blank	01/28/92	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	05/05/92	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	07/13/92	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	07/20/92	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	10/12/92	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	01/12/93	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	04/06/93	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	07/12/93	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	10/13/93	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	01/20/94	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	04/13/94	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	07/19/94	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	10/27/94	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	01/03/95	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	04/13/95	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	06/30/95	—	<50	<0.5	<0.5	<0.5	<0.5	—	—
	10/11/95	—	<50	<0.5	<0.5	<0.5	<0.5	<0.5	—
MCLs			NE	1	150	700	1,750	NE	—

CAMBRIA

Table 3. Analytic Results for Ground Water - Shell Service Station WIC #204-5508-5306, 3420 San Pablo Avenue , Oakland, California (continued)

Well ID	Date Sampled	Depth to water (ft below TOC)	TPH-G	B	T	E	X	MTBE	DO	
			←----- (µg/L) -----→							(mg/l)

Abbreviations:

- TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
- B = Benzene by EPA Method 8020
- T = Toluene by EPA Method 8020
- E = Ethylbenzene by EPA Method 8020
- X = Xylenes by EPA Method 8020
- MTBE = Methyl tert-Butyl Ether by EPA Method 8020
- DO = Dissolved oxygen
- NE = Not established
- MCLs = California Primary maximum contaminant levels for drinking water (22 CCR 64444)
- = Not analyzed
- < n = Not detected at detection limits of n µg/L
- dup = Duplicate sample
- SPH = Not sampled, separate-phase hydrocarbons detected in well
- µg/L = Micrograms per liter
- mg/L = Milligrams per liter
- TOC = Top of casing

Notes:

- a = Concentration reported as gasoline is due to the presence of a discrete hydrocarbon peak that is not indicative of gasoline
- b = Not sampled. Well inaccessible
- c = Analytic Laboratory noted that MTBE could not be quantified for this sample due to co-eluting compounds.
- * = The result for gasoline is an unknown hydrocarbon which consists of a single peak as confirmed by NET Laboratory

ATTACHMENT A

Blaine Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

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



August 4, 1997

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

Attn: Alex Perez

Shell WIC #204-5508-5306
3420 San Pablo Avenue
Oakland, California

3rd Quarter 1997

Quarterly Groundwater Monitoring Report 970714-J-1

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)
MW-1	07/14/97	TOC	-	NONE	-	-	8.92	25.00
MW-2 *	07/14/97	TOC	ODOR	NONE	-	-	9.93	19.24
MW-3	07/14/97	TOC	-	NONE	-	-	9.09	27.47
MW-4	07/14/97	TOC	ODOR	NONE	-	-	10.05	25.18
MW-5	07/14/97	TOC	SHEEN/ODOR	NONE	-	-	8.54	24.85
MW-6	07/14/97	TOC	ODOR	NONE	-	-	10.30	19.90
MW-7	07/14/97	FREE PRODUCT	-	8.87	0.03	100	8.90	-
MW-8	07/14/97	TOC	ODOR	NONE	-	-	8.59	19.97
MW-9	07/14/97	TOC	-	NONE	-	-	10.04	19.63
MW-10	07/14/97	TOC	-	NONE	-	-	8.10	18.64
MW-11	07/14/97	TOC	-	NONE	-	-	9.74	18.87

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 970714-J1

Date:

Page 1 of 2

Site Address: 3420 San Pablo Ave., Oakland, CA

WIC#: 204-5506-5306

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: Michael Lowrie

Analysis Required

LAB: SEQUOIA

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

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

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 + BTEX	Asbestos	Container Size	Preparation Used	Composite Y/N
					X				
					X				
					X				
					X				
					X				
					X				
					X				
					X				

UST AGENCY:

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.
MW1	7/14			X		3
MW2				X		3
MW3				X		3
MW4				X		3
MW5				X		3
MW6				X		3
MW8				X		3
MW9				X		3

9707879

Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
	<u>Michael Lowrie</u>	<u>7/15/97</u>	<u>1115</u>		<u>Damon Ames</u>	<u>7/15/97</u>	<u>1115</u>
	<u>Damon Ames</u>	<u>7/15/97</u>	<u>1100</u>				
	<u>Mara Grigulis</u>				<u>Mara Grigulis</u>	<u>7/15/97</u>	<u>1155</u>

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 970714-J1

Date:

Page 2 of 2

Site Address: 3420 San Pablo Ave., Oakland, CA

WIC#: 204-5506-5306

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: MICHAEL LUDWIG

Analysis Required

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
G.W. Monitoring <input checked="" type="checkbox"/>	4441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classfy/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classfy/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY:

Sample ID	Date	Sludge	Soil	Water	Air	No. of confs.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/802)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 & MIBE	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE 15 CONDITION/COMMENTS	
1 MW10	7/4			X		3						X							
2 MW11				X		3						X							
1 EB				X		3						X							
2 DUP				X		3						X							

970714

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Damon Armas</u>	Date: <u>7/15/97</u>	Time: <u>1115</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>Damon Armas</u>	Date: <u>7/15/97</u>	Time: <u>1115</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Damon Armas</u>	Date: <u>7/15/97</u>	Time: <u>1100</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>Damon Armas</u>	Date: <u>7/15/97</u>	Time: <u>1100</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Damon Armas</u>	Date: <u>7/15/97</u>	Time: <u>1100</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>Damon Armas</u>	Date: <u>7/15/97</u>	Time: <u>1100</u>

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



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

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

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

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

Project: Shell Oakland/970714-J1

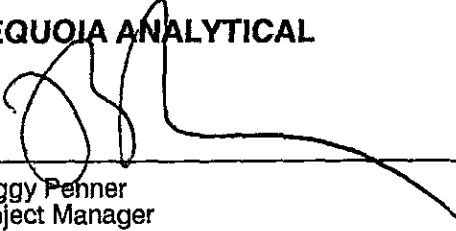
Enclosed are the results from samples received at Sequoia Analytical on July 15, 1997.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9707879 -01	LIQUID, MW1	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -02	LIQUID, MW2	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -03	LIQUID, MW3	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -04	LIQUID, MW4	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -05	LIQUID, MW5	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -06	LIQUID, MW6	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -07	LIQUID, MW8	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -08	LIQUID, MW9	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -09	LIQUID, MW10	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -10	LIQUID, MW11	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -11	LIQUID, EB	07/14/97	TPGBMW Purgeable TPH/BTEX
9707879 -12	LIQUID, DUP	07/14/97	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





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970714-J1 Sample Descript: MW1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9707879-01	Sampled: 07/14/97 Received: 07/15/97 Analyzed: 07/21/97 Reported: 07/28/97
--	---	---

QC Batch Number: GC072197BTEX01A
Instrument ID: GCHP01

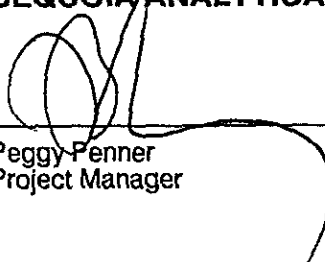
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2000	5000
Methyl t-Butyl Ether	100	9000
Benzene	20	N.D.
Toluene	20	N.D.
Ethyl Benzene	20	59
Xylenes (Total)	20	61
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 Fenner
Project Manager





Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Client Proj. ID: Shell Oakland/970714-J1
Sample Descript: MW2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9707879-02

Sampled: 07/14/97
Received: 07/15/97
Analyzed: 07/21/97
Reported: 07/28/97

Attention: Fran Thie

QC Batch Number: GC072197BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	53000
Methyl t-Butyl Ether	500	2400
Benzene	100	7700
Toluene	100	260
Ethyl Benzene	100	1600
Xylenes (Total)	100	5200
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	93

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970714-J1 Sample Descript: MW3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9707879-03	Sampled: 07/14/97 Received: 07/15/97 Analyzed: 07/18/97 Reported: 07/28/97
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QC Batch Number: GC071897BTEX06A
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	-
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	1.5
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	113

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Client Proj. ID: Shell Oakland/970714-J1
Sample Descript: MW4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9707879-04

Sampled: 07/14/97
Received: 07/15/97
Analyzed: 07/18/97
Reported: 07/28/97

Attention: Fran Thie

QC Batch Number: GC071897BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	2400
Methyl t-Butyl Ether	50	6000
Benzene	10	35
Toluene	10	N.D.
Ethyl Benzene	10	30
Xylenes (Total)	10	20
Chromatogram Pattern:		C6-C12
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





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970714-J1 Sample Descript: MW5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9707879-05	Sampled: 07/14/97 Received: 07/15/97 Analyzed: 07/18/97 Reported: 07/28/97
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QC Batch Number: GC071897BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2000	15000
Methyl t-Butyl Ether	100	450
Benzene	20	70
Toluene	20	N.D.
Ethyl Benzene	20	220
Xylenes (Total)	20	170
Chromatogram Pattern:		C6-C12
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 Pedner
Project Manager





Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Client Proj. ID: Shell Oakland/970714-J1
Sample Descript: MW6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9707879-06

Sampled: 07/14/97
Received: 07/15/97
Analyzed: 07/18/97
Reported: 07/28/97

Attention: Fran Thie


QC Batch Number: GC071897BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	29000
Methyl t-Butyl Ether	500	N.D.
Benzene	100	200
Toluene	100	N.D.
Ethyl Benzene	100	690
Xylenes (Total)	100	2000
Chromatogram Pattern:		C6-C12
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





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970714-J1 Sample Descript: MWW Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9707879-07	Sampled: 07/14/97 Received: 07/15/97 Analyzed: 07/18/97 Reported: 07/28/97
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QC Batch Number: GC071897BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2500	29000
Methyl t-Butyl Ether	125	500
Benzene	25	870
Toluene	25	200
Ethyl Benzene	25	850
Xylenes (Total)	25	3100
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





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970714-J1 Sample Descript: MW9 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9707879-08	Sampled: 07/14/97 Received: 07/15/97 Analyzed: 07/22/97 Reported: 07/28/97
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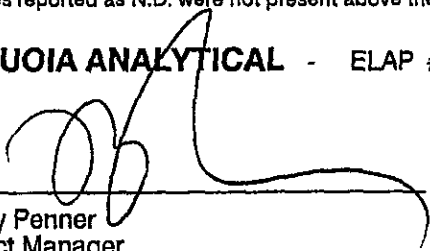
QC Batch Number: GC072297BTEX06A
Instrument ID: GCHP6

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	7100
Methyl t-Butyl Ether	50	950
Benzene	10	860
Toluene	10	N.D.
Ethyl Benzene	10	51
Xylenes (Total)	10	230
Chromatogram Pattern:		C6-C12
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





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970714-J1 Sample Descript: MW10 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9707879-09	Sampled: 07/14/97 Received: 07/15/97 Analyzed: 07/18/97 Reported: 07/28/97
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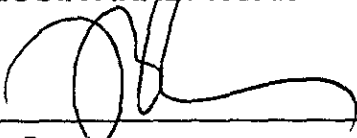
QC Batch Number: GC071897BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	6600
Methyl t-Butyl Ether	25	89
Benzene	5.0	410
Toluene	5.0	13
Ethyl Benzene	5.0	28
Xylenes (Total)	5.0	11
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





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970714-J1 Sample Descript: MW11 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9707879-10	Sampled: 07/14/97 Received: 07/15/97 Analyzed: 07/21/97 Reported: 07/28/97
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QC Batch Number: GC072197BTEX06A
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	102

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager





Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell Oakland/970714-J1 Sample Descript: EB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9707879-11	Sampled: 07/14/97 Received: 07/15/97 Analyzed: 07/18/97 Reported: 07/28/97
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QC Batch Number: GC071897BTEX06A
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	91

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Client Proj. ID: Shell Oakland/970714-J1
Sample Descript: DUP
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9707879-12

Sampled: 07/14/97
Received: 07/15/97
Analyzed: 07/21/97
Reported: 07/28/97

Attention: Fran Thie

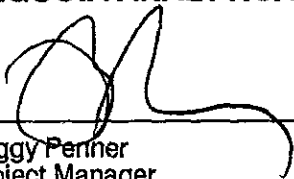
QC Batch Number: GC072197BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	10000	59000
Methyl t-Butyl Ether	500	2700
Benzene	100	8700
Toluene	100	400
Ethyl Benzene	100	1900
Xylenes (Total)	100	6900
Chromatogram Pattern:		C6-C12
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





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

Client Project ID: Shell Oakland / 970714-J1
Matrix: Liquid

Work Order #: 9707879 -01-02

Reported: Jul 31, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC072197BTEX01A	GC072197BTEX01A	GC072197BTEX01A	GC072197BTEX01A	GC072197BTEX01A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
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 #:	970774402	970774402	970774402	970774402	970774402
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Analyzed Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	10	9.4	9.5	28	70
MS % Recovery:	100	94	95	93	117
Dup. Result:	9.5	9.1	9.1	26	67
MSD % Recov.:	95	91	91	87	112
RPD:	5.1	3.2	4.3	7.4	4.4
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK072197	BLK072197	BLK072197	BLK072197	BLK072197
Prepared Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Analyzed Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.8	9.2	9.5	27	69
LCS % Recov.:	98	92	95	90	115

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

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

9707879.BLA <1>

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager





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

Client Project ID: Shell Oakland / 970714-J1
Matrix: Liquid

Work Order #: 9707879-08

Reported: Jul 31, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC072297BTEX06A	GC072297BTEX06A	GC072297BTEX06A	GC072297BTEX06A	GC072297BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
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 #:	970796001	970796001	970796001	970796001	970796001
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Analyzed Date:	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.4	8.9	8.9	26	62
MS % Recovery:	94	89	89	87	103
Dup. Result:	9.1	8.7	8.9	26	62
MSD % Recov.:	91	87	89	87	103
RPD:	3.2	2.3	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK072297	BLK072297	BLK072297	BLK072297	BLK072297
Prepared Date:	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Analyzed Date:	7/22/97	7/22/97	7/22/97	7/22/97	7/22/97
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	8.7	8.4	8.4	24	58
LCS % Recov.:	87	84	84	80	97

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

SEQUOIA ANALYTICAL

Reggy Renner
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

9707879.BLA <3>





Blaine Tech Services, Inc. 1680 Rogers Avenue San Jose, CA 95112 Attention: Fran Thie	Client Project ID: Shell Oakland / 970714-J1 Matrix: Liquid	Work Order #: 9707879-10, 12	Reported: Jul 31, 1997
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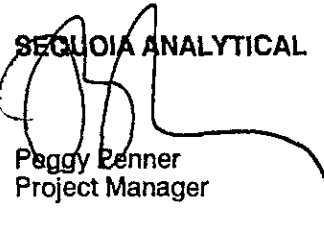
QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC072197BTEX06A	GC072197BTEX06A	GC072197BTEX06A	GC072197BTEX06A	GC072197BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
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 #:	970776917	970776917	970776917	970776917	970776917
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Analyzed Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	9.7	9.3	9.4	27	66
MS % Recovery:	97	93	94	90	110
Dup. Result:	8.3	8.0	8.3	24	58
MSD % Recov.:	83	80	83	80	97
RPD:	16	15	12	12	13
RPD Limit:	0-25	0-25	0-25	0-25	0-25

LCS #:	BLK072197	BLK072197	BLK072197	BLK072197	BLK072197
Prepared Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Analyzed Date:	7/21/97	7/21/97	7/21/97	7/21/97	7/21/97
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	9.1	8.7	8.7	25	61
LCS % Recov.:	91	87	87	83	102

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

SEQUOIA ANALYTICAL



Peggy Renner
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.





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

Client Proj. ID: Shell Oakland/970714-J1
Lab Proj. ID: 9707879

Received: 07/15/97
Reported: 07/28/97

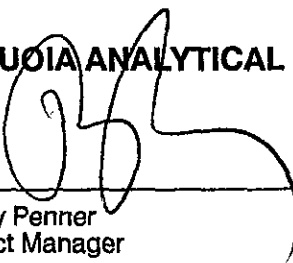
LABORATORY NARRATIVE

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

Please note: MTBE could not be determined for sample 9707879-03 due to co-eluting compounds.

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SEQUOIA ANALYTICAL



Peggy Penner
Project Manager

