



April 24, 1997

#988

Dale Klettke
Alameda County
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Re: **First Quarter 1997 Monitoring Report**
Shell Service Station
1285 Bancroft Avenue
San Leandro, California
WIC #204-6852-0703
Cambria Project #24-314-106

Dear Mr. Klettke:

On behalf of Shell Oil Products Company, 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.

First Quarter 1997 Activities

On January 9, 1997, Blaine Tech Services, Inc. (Blaine) of San Jose, California measured ground water depths and collected water samples from the site wells (Figure 1). The Blaine report, describing these sampling activities and presenting the analytic results is included as Attachment A.

Cambria calculated ground water elevations (Table 1), compiled the analytic data (Tables 2A and 2B) and prepared a ground water elevation contour map (Figure 1).

On January 27, 1997, Cambria submitted an *Interim Remedial Action Plan* to the Alameda County Department of Environmental Health which proposed placing oxygen releasing compounds (ORCs) into monitoring wells MW-2 and MW-3 as an appropriate, cost-effective method of reducing hydrocarbons in the source area. By oxygenating the ground water, the ORCs enhance natural hydrocarbon biodegradation and allow oxygenated water to flow down gradient across the site. On a quarterly basis, Cambria will coordinate dissolved oxygen (DO) measurement in the four site wells and hydrocarbon monitoring of wells MW-1 and MW-4. To avoid the removal of oxygen-laden water, purging and sampling of wells MW-2 and MW-3 will be postponed until the DO concentrations decrease to pre-ORC

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concentrations. Quarterly monitoring data will be used to evaluate the effectiveness of the ORCs and to recommend appropriate future actions. We will install the ORCs and implement the revised sampling program when we receive approval from your office.

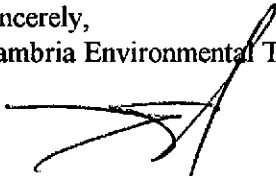
Anticipated Second Quarter 1997 Activities

Cambria will submit a report presenting a summary of activities for the upcoming quarter. Anticipated activities include groundwater monitoring by Blaine and implementing the *Interim Remedial Action Plan*.

Closing

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

Sincerely,
Cambria Environmental Technology, Inc.



N. Scott MacLeod, R.G.
Principal Geologist



Attachments: A - Blaine Quarterly Ground Water Monitoring Report

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

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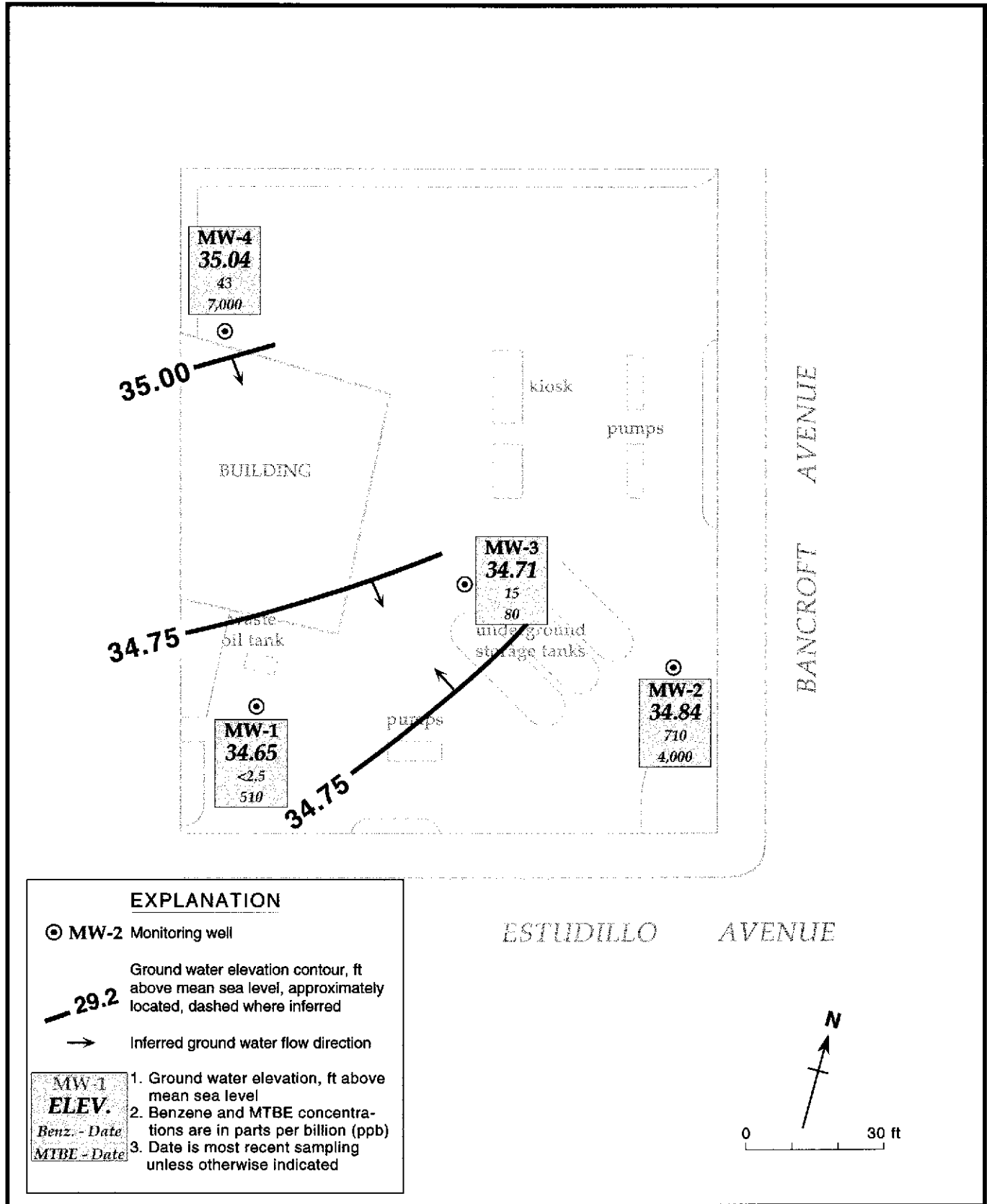


Figure 1. Ground Water Elevation Contours - January 9, 1997 - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Table 1. Ground Water Elevation Data - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date	Top-of-Box Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)	
MW-1	03/13/90	66.29	42.65	23.64	
	06/12/90		43.14	23.15	
	09/13/90		44.71	21.58	
	12/18/90		45.23	21.06	
	03/07/91		43.32	22.97	
	06/07/91		42.18	24.11	
	09/17/91		44.85	21.44	
	03/01/92		41.56	24.73	
	06/03/92		40.74	25.55	
	09/01/92		43.05	23.24	
	12/07/92		44.19	22.10	
	03/01/93		34.96	31.33	
	06/22/93		36.75	29.54	
	09/09/93		39.36	26.93	
	12/13/93		40.74	25.55	
	03/03/94		38.40	27.89	
	07/27/94		66.90 ^a	40.49	26.41
	08/09/94			40.84	26.06
	10/05/94			41.98	24.92
	11/11/94	41.34		25.56	
	12/29/94	42.06		24.84	
	01/04/95	39.90		27.00	
	04/14/95	31.02		35.88	
	07/12/95	34.61		32.29	
	12/14/95	39.24		27.66	
	01/10/96	38.34		28.56	
	04/25/96	31.95		34.95	
	07/09/96	34.45	32.45		
	10/02/96	37.72	29.18		
	01/09/97		32.25	34.65	
MW-2	03/01/92	66.91	41.57	25.34	
	06/03/92		40.56	26.35	
	09/01/92		42.94	23.97	
	12/07/92		44.13	22.78	
	03/01/93		34.82	32.09	
	06/22/93		36.64	30.27	
	09/09/93		39.24	27.67	
	12/13/93		40.64	26.27	
	03/03/94		38.98	27.93	
	07/27/94	66.91 ^a	40.40	26.51	
	08/09/94		40.71	26.20	
	10/05/94		41.89	25.02	
11/11/94		41.22	25.69		

Table 1. Ground Water Elevation Data - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date	Top-of-Box Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	12/29/94		41.99	24.92
	01/04/95		39.81	27.10
	04/14/95		30.83	36.08
	07/12/95		34.50	32.41
	12/14/95		39.22	27.69
	01/10/96		38.22	28.69
	04/25/96		31.78	35.13
	07/09/96		34.35	32.56
	10/02/96		37.56	29.35
	01/09/97		32.07	34.84
MW-3	03/01/92	66.31	42.00	24.31
	06/03/92		44.30	22.01
	09/01/92		43.62	22.69
	12/07/92		44.77	21.54
	03/01/93		35.50	30.81
	06/22/93		37.30	29.01
	09/09/93		39.90	26.41
	12/13/93		41.30	25.01
	03/03/94		38.32	27.99
	07/27/94	67.52 ^a	41.07	26.45
	08/09/94		41.37	26.15
	10/05/94		42.55	24.97
	11/11/94		41.86	25.66
	12/29/94		42.59	24.93
	01/04/95		40.54	26.98
	04/14/95		31.50	36.02
	07/12/95		35.14	32.38
	12/14/95		39.86	27.66
	01/10/96		39.98	27.54
	04/25/96		32.38	35.14
	07/09/96		34.93	32.59
	10/02/96		38.20	29.32
	01/09/97		32.81	34.71
MW-4	07/27/94	68.08	41.78	26.30
	08/09/94		42.09	25.99
	10/05/94		43.25	24.83
	11/11/94		42.54	25.54
	12/29/94		43.34	24.74
	01/04/95		41.57	26.51
	04/14/95		32.24	35.84
	07/12/95		35.88	32.20
	12/14/95		40.54	27.54

Table 1. Ground Water Elevation Data - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date	Top-of-Box Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	01/10/96		39.59	28.49
	04/25/96		33.22	34.86
	07/09/96		35.70	32.38
	10/02/96		38.95	29.13
	01/09/97		33.04	35.04

Notes:

a = Top-of-casing elevation resurveyed March 29, 1994
 msl = mean sea level

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Table 2A. Analytic Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	MTBE*
MW-1	09/17/91	44.85	50 ^a	160 ^b	<0.5	<0.5	<0.5	<0.5	---
	03/01/92	41.56	<50	<50	<0.5	<0.5	<0.5	<0.5	---
	06/03/92	40.74	<50	---	0.8	0.9	<0.5	<0.5	---
	09/01/92	43.05	<50	---	<0.5	5.3	5.8	7.2	---
	12/07/92	44.19	68	---	<0.5	<0.5	0.8	1.2	---
	03/01/93	34.96	<50	---	<0.5	<0.5	<0.5	<0.5	---
	03/01/93 ^{dup}	34.96	<50	---	<0.5	<0.5	<0.5	<0.5	---
	06/22/93	36.75	<50	---	<0.5	<0.5	<0.5	<0.5	---
	09/09/93	39.36	200 ^c	---	16	2.0	5.2	<0.5	---
	12/13/93	40.74	89 ^d	---	3.4	<0.5	<0.5	<0.5	---
	03/03/94	38.40	65 ^d	---	2.6	<0.5	<0.5	<0.5	---
	07/27/94	40.49	180	---	30	2.6	1.8	5.0	---
	07/27/94 ^{dup}	40.49	240	---	25	2.2	2.2	4.0	---
	10/05/94	41.98	<50	---	<0.3	<0.3	<0.3	<0.6	---
	01/04/95	39.90	<50	---	2.4	<0.5	<0.5	<0.5	---
	01/04/95 ^{dup}	39.90	<50	---	2.5	<0.5	<0.5	<0.5	---
	04/14/95	35.88	<50	---	<0.5	<0.5	0.5	<0.5	---
	04/14/95 ^{dup}	35.88	<50	---	<0.5	<0.5	<0.5	<0.5	---
	07/12/95	34.61	<50	---	1.2	<0.5	0.8	<0.5	---
	12/14/95	39.24	380	---	230	1.1	9.0	49	---
01/10/96	38.34	60	---	3.5	<0.5	<0.5	0.5	---	
04/25/96	31.95	<50	---	3.3	1.2	2.4	5.4	---	
07/09/96	34.45	810	---	29	<5.0	7.3	11	1,800	
10/02/96	37.72	<125	---	3.1	<1.2	<1.2	<1.2	960	
01/09/97	32.25	<250	---	<2.5	<2.5	<2.5	<2.5	510	
MW-2	03/01/92	41.57	910	<50	11	50	5.2	140	---
	06/03/92	40.56	1,400	---	33	150	16	240	---

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Table 2A. Analytic Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	MTBE*
	09/01/92	42.94	230	---	5.2	15	4.1	19	---
	09/01/92 ^{dup}	42.94	320	---	5.6	18	5	220	---
	12/07/92	44.13	240	---	1.5	9.5	1.3	9.9	---
	12/07/92 ^{dup}	44.13	<50	---	1.7	13	1	12	---
	03/01/93	34.82	230	---	260	27	310	66	---
	06/22/93	36.64	220	---	18	3.6	3.4	5.2	---
	06/22/93 ^{dup}	36.64	320	---	29	4.2	4.8	6.1	---
	09/09/93	39.24	260	---	18	16	4.6	12	---
	09/09/93 ^{dup}	39.24	210	---	16	14	3.9	9.1	---
	12/13/93	40.64	1,300 ^c	---	82	73	34	15	---
	12/13/93 ^{dup}	40.64	1,400 ^c	---	110	72	45	19	---
	03/03/94	38.98	9,600	---	1,200	390	600	710	---
	03/03/94 ^{dup}	38.98	10,000	---	930	330	500	590	---
	07/27/94	40.40	190	---	<0.5	<0.5	1.0	<0.5	---
	08/09/94	40.71	1,500	---	53.5	46.2	12.4	44.0	---
	10/05/94	41.89	<485	---	<0.3	<0.3	<0.3	<0.6	---
	01/04/95	39.81	1,300	---	150	23	35	51	---
	04/14/95	30.83	5,000	---	1,000	400	340	810	---
	07/12/95	34.50	4,500	---	440	170	170	290	---
	07/12/95 ^{dup}	34.50	4,300	---	430	160	160	280	---
	12/14/95	39.22	37,000	---	1,800	1,000	7,600	6,700	---
	12/14/95 ^{dup}	39.22	34,000	---	1,800	1,000	6,600	6,500	---
	01/10/96	38.22	69,000	---	1,000	510	3,200	3,300	---
	01/10/96 ^{dup}	38.22	78,000	---	1,100	560	3,500	3,600	---
	04/25/96	31.78	11,000	---	820	210	880	1,400	---
	04/25/96 ^{dup}	31.78	9,300	---	690	160	710	1,200	---
	07/09/96	34.35	100,000	---	15,000	1,700	24,000	9,900	70,000
	07/09/96 ^{dup}	34.35	86,000	---	12,000	1,400	19,000	7,500	32,000

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Table 2A. Analytic Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	MTBE*
	10/02/96	37.56	82,000	---	20,000	1,800	32,000	9,100	40,000
	10/02/96 ^{dup}	37.56	89,000	---	19,000	1,700	31,000	8,900	42,000
	01/09/97	32.07	17,000	---	710	350	2,300	2,200	4,000
	01/09/97 ^{dup}	32.07	12,000	---	490	260	1,300	1,800	2,800
MW-3	03/01/92	42.00	<50	<50	<0.5	<0.5	<0.5	<0.5	---
	06/03/92	44.30	<50	---	<0.5	<0.5	<0.5	<0.5	---
	09/01/92	43.62	<50	---	<0.5	1.1	<0.5	3.2	---
	12/07/92	44.77	52	---	<0.5	<0.5	<0.5	0.5	---
	03/01/93	35.50	<50	---	<0.5	<0.5	<0.5	<0.5	---
	06/22/93	37.30	<50	---	<0.5	<0.5	<0.5	<0.5	---
	09/09/93	39.90	50 ^c	---	5.0	<0.5	<0.5	<0.5	---
	12/13/93	41.30	120 ^d	---	7.5	1.6	<0.5	6.3	---
	03/03/94	38.32	<50	---	0.81	<0.5	<0.5	<0.5	---
	07/27/94	41.07	<50	---	3.5	<0.5	<0.5	<0.5	---
	10/05/94 ^e	42.55	<57	---	<0.3	<0.3	<0.3	<0.6	---
	01/04/95	40.54	<50	---	6.0	<0.5	<0.5	<0.5	---
	04/14/95	31.50	<50	---	<0.5	<0.5	<0.5	<0.5	---
	07/12/95	35.14	90	---	16	<0.5	<0.5	<0.5	---
	12/14/95	39.86	4,600	---	460	34	390	1,000	---
	01/10/96	39.98	11,000	---	470	68	460	670	---
	04/25/96	32.38	5,500	---	830	<50	910	460	---
	07/09/96	34.93	72,000	---	7,600	970	14,000	5,900	59,000
	10/02/96	38.20	77,000	---	15,000	2,000	24,000	9,600	94,000 (71,000)
	01/09/97	32.81	130	---	15	2.0	16	9.7	80

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Table 2A. Analytic Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	B	E	T	X	MTBE*
MW-4	07/27/94	41.78	120	---	3.4	0.6	3.9	4.9	---
	10/05/94 ^c	43.25	<50	---	<0.3	<0.3	<0.3	<0.6	---
	10/05/94 ^{dup}	43.25	<50	---	<0.3	<0.3	<0.3	<0.6	---
	01/04/95	41.57	<50	---	1.4	<0.5	<0.5	<0.5	---
	04/14/95	32.24	<50	---	<0.5	<0.5	<0.5	<0.5	---
	07/12/95	35.88	<50	---	<0.5	<0.5	<0.5	<0.5	---
	12/14/95	40.54	70	---	0.6	<0.5	<0.5	<0.5	---
	01/10/96	39.59	280	---	3.7	<0.5	1.0	0.8	---
	04/25/96	33.22	<500	---	63	<5.0	<5.0	<5.0	---
	07/09/96	35.70	<2000	---	160	<20	<20	<20	5,300
	10/02/96	38.95	<5,000	---	480	<50	<50	<50	19,000
01/09/97	33.04	<2,000	---	43	<20	<20	<20	7,000	
Equipment	09/01/92		<50	---	<0.5	<0.5	<0.5	1	---
Blank	12/07/92		<50	---	<0.5	<0.5	<0.5	<0.5	---
	01/04/95		<50	---	<0.5	<0.5	<0.5	<0.5	---
	07/12/95		<50	---	0.6	<0.5	0.7	<0.5	---
	12/14/95		<50	---	<0.5	<0.5	<0.5	<0.5	---
	01/09/97		<50	---	<0.50	<0.50	<0.50	<0.50	<2.5
Trip	09/17/91		<50	---	<0.5	<0.5	<0.5	<0.5	---
Blank	03/01/92		<50	---	<0.5	<0.5	<0.5	<0.5	---
	06/03/92		<50	---	<0.5	<0.5	<0.5	<0.5	---
	09/01/92		<50	---	<0.5	<0.5	<0.5	<0.5	---
	12/07/92		<50	---	<0.5	<0.5	<0.5	<0.5	---
	03/01/93		<50	---	<0.5	<0.5	<0.5	<0.5	---
	06/22/93		<50	---	<0.5	<0.5	<0.5	<0.5	---
	09/09/93		<50	---	<0.5	<0.5	<0.5	<0.5	---

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Table 2A. Analytic Results for Ground Water - Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	parts per billion (µg/L)				
					B	E	T	X	MTBE*
	12/13/93		<50	---	<0.5	<0.5	<0.5	<0.5	---
	03/03/94		<50	---	<0.5	<0.5	<0.5	<0.5	---
	07/27/94		<50	---	<0.5	<0.5	<0.5	<0.5	---
	08/09/94		<500	---	<0.3	<0.3	<0.3	<0.6	---
	10/05/94		<50	---	<0.3	<0.3	<0.3	<0.6	---
	01/04/95		<50	---	<0.5	<0.5	<0.5	<0.5	---
	04/14/95		<50	---	<0.5	<0.5	<0.5	<0.5	---
	07/12/95		<50	---	<0.5	<0.5	<0.5	<0.5	---
	12/14/95		<50	---	<0.5	<0.5	<0.5	<0.5	---
DTSC MCLs			NE	NE	1	700	150 ^b	1,750	NE

Abbreviations:

- TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
- TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
- MTBE = Methyl t-butyl ether by EPA Method 8020
- B = Benzene by EPA Method 8020
- E = Ethylbenzene by EPA Method 8020
- T = Toluene by EPA Method 8020
- X = Xylenes by EPA Method 8020
- dup = Duplicate sample
- NE = Not established
- DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
- = Not analyzed
- <n = Not detected at detection limits of n ppb

Notes:

- a = Result due to a non-gasoline hydrocarbon compound
- b = Result due to a non-diesel hydrocarbon compound
- c = The concentrations reported as gasoline are primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
- d = The concentrations reported as gasoline are primarily due to the presence of a discrete peak not indicative of gasoline
- e = DTSC recommended action level; MCL not established
- * = (x) indicates MTBE by EPA Method 8260.

Table 2B. Analytic Reports for Ground Water - Non-Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water	TCE	TOG	PCE	Chloroform	cis-1,2-DCE	trans-1,2-DCE
			← parts per billion (µg/L) →					
MW-1	03/08/90	42.65	---	<10,000	35	6.3	---	---
	06/12/90	43.14	---	<10,000	1.9	63	---	---
	09/13/90	44.71	---	<10,000	26	9	---	---
	12/18/90	45.23	---	<10,000	<0.4	5.3	---	---
	03/07/91	43.32	---	---	23	3.7	---	---
	06/07/91	42.18	---	---	21	6.6	---	---
	09/17/91	44.85	---	---	23	7.4	---	---
	03/01/92	41.56	<0.4	---	21	6.3	---	<0.4
	06/03/92	40.74	17	---	<0.5	6.7	<0.5	<0.5
	09/01/92	43.05	12	---	<0.5	5.8	<0.5	<0.5
	12/07/92	44.19	<0.5	---	17	9	<0.5	<0.5
	03/01/93	34.96	<0.5	---	22	13	<0.5	<0.5
	03/01/93 ^{dup}	34.96	<0.5	---	22	13	<0.5	<0.5
	06/23/93	36.75	<0.5	---	18	8	<0.5	<0.5
	09/09/93	39.36	<0.5	---	17	6.5	<0.5	<0.5
	12/13/93	40.74	---	---	---	---	---	---
	04/14/95	31.02	---	---	---	---	---	---
MW-2	03/01/92	41.57	<0.4	---	11	8.9	---	<0.4
	06/03/92	40.56	7.4	---	<0.5	<0.5	0.76	6.3
	09/01/92	42.94	8.4	---	<0.5	9.1	<0.5	<0.5
	09/01/92 ^{dup}	42.94	8.4	---	<0.5	8.1	<0.5	<0.5
	12/07/92	44.13	<0.5	---	10	10	<0.5	<0.5
	12/07/92 ^{dup}	44.13	<0.5	---	10	9	<0.5	<0.5
	03/01/93	34.82	<0.5	---	<0.5	<0.5	<0.5	<0.5
	06/22/93	36.64	<0.5	---	13	7.9	<0.5	<0.5
	06/22/93 ^{dup}	36.64	<0.5	---	12	6.9	<0.5	<0.5
	09/09/93	39.24	<0.5	---	11	5.9	1.9	<0.5
	09/09/93	39.24	<0.5	---	12	7.3	1.1	<0.5

Table 2B. Analytic Reports for Ground Water - Non-Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water	TCE	TOG	PCE	Chloroform	cis-1,2-DCE	trans-1,2-DCE
			parts per billion (µg/L)					
	12/13/93	40.64	---	---	---	---	---	---
	07/27/94	40.40	<0.4	---	<0.4	7.5	---	<0.4
	08/09/94	40.71	<0.1	---	10.1	5.8	<0.1	<0.3
	10/05/94 ^a	41.89	<5	---	9	5	<5	<5
	01/04/95	39.81	<0.4	---	12	3.8	---	<0.4
	04/14/95	30.83	<0.4	---	8.4	2.3	<0.4	---
MW-3	03/01/92	42.00	<0.4	---	8.8	2.4	---	<0.4
	06/03/92	44.30	3	---	<0.5	1.5	<0.5	<0.5
	09/01/92	43.62	8.8	---	<0.5	2.3	<0.5	<0.5
	12/07/92	44.77	<0.5	---	10	3	<0.5	<0.5
	03/01/93	35.50	<0.5	---	9.2	9.4	<0.5	<0.5
	06/22/93	37.30	<0.5	---	7.8	9.6	<0.5	<0.5
	09/09/93	39.90	<0.5	---	7.9	7.3	<0.5	<0.5
	12/13/93	41.30	---	---	---	---	---	---
Bailer	09/01/92		<0.5	---	<0.5	<0.5	<0.5	<0.5
Blank	12/07/92		<0.5	---	<0.5	<0.5	<0.5	<0.5
Trip	09/01/92		<0.5	---	<0.5	<0.5	<0.5	<0.5
Blank	12/07/92 ^b		<0.5	---	<0.5	<0.5	<0.5	<0.5
	03/01/93		<0.5	---	<0.5	<0.5	<0.5	<0.5
	06/22/93 ^c		<0.5	---	<0.5	<0.5	<0.5	<0.5
DTSC MCLs			5	NE	5	NE	6	10

Table 2B. Analytic Reports for Ground Water - Non-Fuel Compounds - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California (continued)

Abbreviations:

TCE	=	Trichloroethene by EPA Method 601
TOG	=	Total non-polar oil and grease by American Public Health Association Standard Methods 503A&E
PCE	=	Tetrachloroethene by EPA Method 601
Chloroform	=	Chloroform by EPA Method 601
cis-1,2-DCE	=	cis-1,2-Dichloroethene by EPA Method 601
trans-1,2-DCE	=	trans-1,2-Dichloroethene by EPA Method 601
---	=	Not analyzed
dup	=	Duplicate sample
DTSC MCLs	=	Department of Toxic Substances Control Maximum Contaminant Levels for drinking water (22 CCR 64444)
NE	=	DTSC MCL not established

Notes:

- a = Results this date represent 3rd month of 3rd quarter 1994
- b = Sample contained 0.014 mg/L of 1,3-Dichlorobenzene
- c = Although 1.4 ppb methylene chloride was detected in one of the ground water samples from well MW-2, the laboratory indicated that this was within normal laboratory background concentrations.

CAMBRIA

ATTACHMENT A

Blaine Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.



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

January 29, 1997

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

Attn: R. Jeff Granberry

Shell WIC #204-6852-0703
1285 Bancroft Avenue
San Leandro, California

1st Quarter 1997

Quarterly Groundwater Monitoring Report 970109-C-2

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

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

Yours truly,

Francis Thie

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

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

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

TABLE OF WELL GAUGING DATA

WELL I.D.	DATA COLLECTION DATE	MEASUREMENT REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1	1/9/97	TOC	--	NONE	--	--	32.25	59.13
MW-2 *	1/9/97	TOC	--	NONE	--	--	32.07	59.01
MW-3	1/9/97	TOC	--	NONE	--	--	32.81	57.79
MW-4	1/9/97	TOC	--	NONE	--	--	33.04	54.63

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 970109-C-2

Date: 1-9-97

Page 1 of 1

Silo Address: 1285 Bancroft Ave., San Leandro, CA

WIC#: 204-6852-0703

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: Kevin Carlin
 Printed Name: KEVIN CARLIN

Analysis Required

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 6015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
					<u>MTBE</u>				

LAB: Seq

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 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: 9701556

Sample ID	Date	Sludge	Soil	Water	Air	No. of conls.	TPH (EPA 8015 Mod. Gas)		TPH (EPA 8015 Mod. Diesel)		BTEX (EPA 8020/602)		Volatile Organics (EPA 8240)		Test for Disposal		Combination TPH 6015 & BTEX 8020		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
<u>MW-1</u>	<u>1-9</u>			<u>x</u>		<u>3</u>																		
<u>MW-2</u>	<u>1-9</u>			<u>x</u>		<u>3</u>																		
<u>MW-3</u>	<u>1-9</u>			<u>x</u>		<u>3</u>																		
<u>MW-4</u>	<u>1-9</u>			<u>x</u>		<u>3</u>																		
<u>EB</u>	<u>1-9</u>			<u>x</u>		<u>3</u>																		
<u>DGP</u>	<u>1-9</u>			<u>x</u>		<u>3</u>																		

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>KEVIN CARLIN</u>	Date: <u>1-9-97</u> Time: <u>10:30</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>SWRIGHT</u>	Date: <u>1/10/97</u> Time: <u>10:30</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>SWRIGHT</u>	Date: <u>1/10/97</u> Time: <u>1:53</u>	Received (signature): <u>[Signature]</u>	Printed Name:	Date:
Relinquished By (signature): <u>[Signature]</u>	Printed Name:	Date:	Received (signature): <u>[Signature]</u>	Printed Name: <u>L Kim</u>	Date: <u>1/10/97</u> Time: <u>1:30</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 San Leandro/970109-C-2

Enclosed are the results from samples received at Sequoia Analytical on January 10, 1997.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9701556 -01	LIQUID, MW-1	01/09/97	TPGBMW Purgeable TPH/BTEX
9701556 -02	LIQUID, MW-2	01/09/97	TPGBMW Purgeable TPH/BTEX
9701556 -03	LIQUID, MW-3	01/09/97	TPGBMW Purgeable TPH/BTEX
9701556 -04	LIQUID, MW-4	01/09/97	TPGBMW Purgeable TPH/BTEX
9701556 -05	LIQUID, EB	01/09/97	TPGBMW Purgeable TPH/BTEX
9701556 -06	LIQUID, DUP	01/09/97	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 San Leandro/970109-C-2 Sample Descript: MW-1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9701556-01	Sampled: 01/09/97 Received: 01/10/97 Analyzed: 01/17/97 Reported: 01/22/97
--	---	---

QC Batch Number: GC011697BTEX18B
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	N.D.
Methyl t-Butyl Ether	12	510
Benzene	2.5	N.D.
Toluene	2.5	N.D.
Ethyl Benzene	2.5	N.D.
Xylenes (Total)	2.5	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	104

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	Client Proj. ID: Shell San Leandro/970109-C-2	Sampled: 01/09/97
1680 Rogers Avenue	Sample Descript: MW-2	Received: 01/10/97
San Jose, CA 95112	Matrix: LIQUID	
Attention: Fran Thie	Analysis Method: 8015Mod/8020	Analyzed: 01/16/97
	Lab Number: 9701556-02	Reported: 01/22/97

QC Batch Number: GC011597BTEX22A
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2500	17000
Methyl t-Butyl Ether	125	4000
Benzene	25	710
Toluene	25	2300
Ethyl Benzene	25	350
Xylenes (Total)	25	2200
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	133 Q

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 San Leandro/970109-C-2 Sample Descript: MW-3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9701556-03	Sampled: 01/09/97 Received: 01/10/97 Analyzed: 01/15/97 Reported: 01/22/97
Attention: Fran Thie		

QC Batch Number: GC011597BTEX18A
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	130
Methyl t-Butyl Ether	2.5	80
Benzene	0.50	15
Toluene	0.50	16
Ethyl Benzene	0.50	2.0
Xylenes (Total)	0.50	9.7
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	109

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 San Leandro/970109-C-2 Sample Descript: MW-4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9701556-04	Sampled: 01/09/97 Received: 01/10/97 Analyzed: 01/17/97 Reported: 01/22/97
Attention: Fran Thie		

QC Batch Number: GC011697BTEX18B
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2000	N.D.
Methyl t-Butyl Ether	100	7000
Benzene	20	43
Toluene	20	N.D.
Ethyl Benzene	20	N.D.
Xylenes (Total)	20	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	131 Q

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 San Leandro/970109-C-2 Sample Descript: EB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9701556-05	Sampled: 01/09/97 Received: 01/10/97 Analyzed: 01/16/97 Reported: 01/22/97
--	---	---

QC Batch Number: GC011597BTEX07B
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas:	50	N.D.
Methyl t-Butyl Ether	2.5	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	115

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 San Leandro/970109-C-2 Sample Descript: DUP Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9701556-06	Sampled: 01/09/97 Received: 01/10/97 Analyzed: 01/16/97 Reported: 01/22/97
--	--	---

QC Batch Number: GC011597BTEX22A
Instrument ID: GCHP22

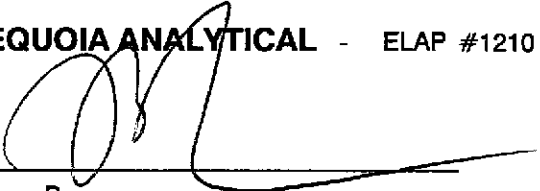
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	12000
Methyl t-Butyl Ether	50	2800
Benzene	10	490
Toluene	10	1300
Ethyl Benzene	10	260
Xylenes (Total)	10	1800
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	133 Q

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

SEQUOIA ANALYTICAL - ELAP #1210



Peggy Penner
Project Manager





Sequoia
Analytical

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

Redwood City, CA 94063
Walnut Creek, CA 94598
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(415) 364-9600
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FAX (510) 988-9673
FAX (916) 921-0100

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

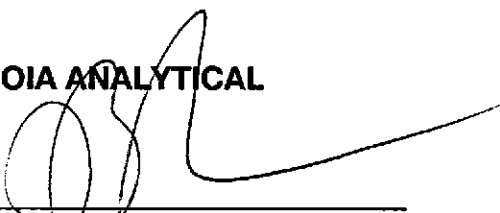
Client Proj. ID: Shell San Leandro/970109-C-2
Lab Proj. ID: 9701556

Received: 01/10/97
Reported: 01/22/97

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 12 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL


Peggy Penner
Project Manager





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

Client Project ID: Shell San Leandro / 970109-C-2
Matrix: Liquid

Work Order #: 9701556 -01, 04

Reported: Jan 24, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011697BTEX18B	GC011697BTEX18B	GC011697BTEX18B	GC011697BTEX18B
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	970152702	970152702	970152702	970152702
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/16/97	1/16/97	1/16/97	1/16/97
Analyzed Date:	1/16/97	1/16/97	1/16/97	1/16/97
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	11	10	31
MS % Recovery:	100	110	100	103
Dup. Result:	9.9	10	9.8	30
MSD % Recov.:	99	100	98	100
RPD:	1.0	9.5	2.0	3.3
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK011697	BLK011697	BLK011697	BLK011697
Prepared Date:	1/16/97	1/16/97	1/16/97	1/16/97
Analyzed Date:	1/16/97	1/16/97	1/16/97	1/16/97
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	30
LCS % Recov.:	100	100	100	100

MS/MSD	60-140	60-140	60-140	60-140
LCS	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

9701556.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 San Leandro / 970109-C-2
Matrix: Liquid

Work Order #: 9701556-02, 06

Reported: Jan 24, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011597BTEX22A	GC011597BTEX22A	GC011597BTEX22A	GC011597BTEX22A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	970138004	970138004	970138004	970138004
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/16/97	1/16/97	1/16/97	1/16/97
Analyzed Date:	1/16/97	1/16/97	1/16/97	1/16/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.8	9.5	9.5	27
MS % Recovery:	98	95	95	90
Dup. Result:	9.8	9.6	9.7	28
MSD % Recov.:	98	96	97	93
RPD:	0.0	1.0	2.1	3.6
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK011597	BLK011597	BLK011597	BLK011597
Prepared Date:	1/16/97	1/16/97	1/16/97	1/16/97
Analyzed Date:	1/16/97	1/16/97	1/16/97	1/16/97
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.8	9.8	10	30
LCS % Recov.:	98	98	100	100

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

SEQUOIA ANALYTICAL

Peggy Fenner
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

9701556.BLA <2>





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

Client Project ID: Shell San Leandro / 970109-C-2
Matrix: Liquid

Work Order #: 9701556-03

Reported: Jan 24, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011597BTEX18A	GC011597BTEX18A	GC011597BTEX18A	GC011597BTEX18A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	970152701	970152701	970152701	970152701
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/15/97	1/15/97	1/15/97	1/15/97
Analyzed Date:	1/15/97	1/15/97	1/15/97	1/15/97
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	11	11	33
MS % Recovery:	110	110	110	110
Dup. Result:	11	11	11	34
MSD % Recov.:	110	110	110	113
RPD:	0.0	0.0	0.0	3.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK011597	BLK011597	BLK011597	BLK011597
Prepared Date:	1/15/97	1/15/97	1/15/97	1/15/97
Analyzed Date:	1/15/97	1/15/97	1/15/97	1/15/97
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	11	11	33
LCS % Recov.:	110	110	110	110

MS/MSD	60-140	60-140	60-140	60-140
LCS	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.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

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

9701556.BLA <3>





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

Client Project ID: Shell San Leandro / 970109-C-2
Matrix: Liquid

Work Order #: 9701556-05

Reported: Jan 24, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011597BTEX07B	GC011597BTEX07B	GC011597BTEX07B	GC011597BTEX07B
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Heider	J. Heider	J. Heider	J. Heider
MS/MSD #:	970138004	970138004	970138004	970138004
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/16/97	1/16/97	1/16/97	1/16/97
Analyzed Date:	1/16/97	1/16/97	1/16/97	1/16/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.6	9.6	9.9	30
MS % Recovery:	96	96	99	100
Dup. Result:	10	10	10	31
MSD % Recov.:	100	100	100	103
RPD:	4.1	4.1	1.0	3.3
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK011597	BLK011597	BLK011597	BLK011597
Prepared Date:	1/16/97	1/16/97	1/16/97	1/16/97
Analyzed Date:	1/16/97	1/16/97	1/16/97	1/16/97
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.8	10	10	31
LCS % Recov.:	98	100	100	103

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

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:

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

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

9701556.BLA <4>

