



October 18, 1996

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

STID
988

Re: **Third Quarter 1996**
Shell Service Station
1285 Bancroft Avenue
San Leandro, California
WIC #204-6852-0703

Dear Mr. Kletke:

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

Activities This Quarter:

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

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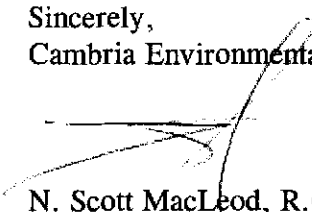
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ENVIRONMENTAL
PROTECTION

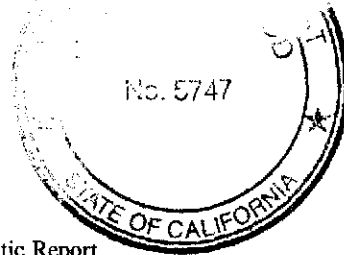
Anticipated Activities Next Quarter:

Cambria will submit a report presenting a summary of activities for the upcoming quarter. As we discussed on October 17, 1996, we will also meet with you next quarter regarding the increasing hydrocarbon concentrations in ground water.

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

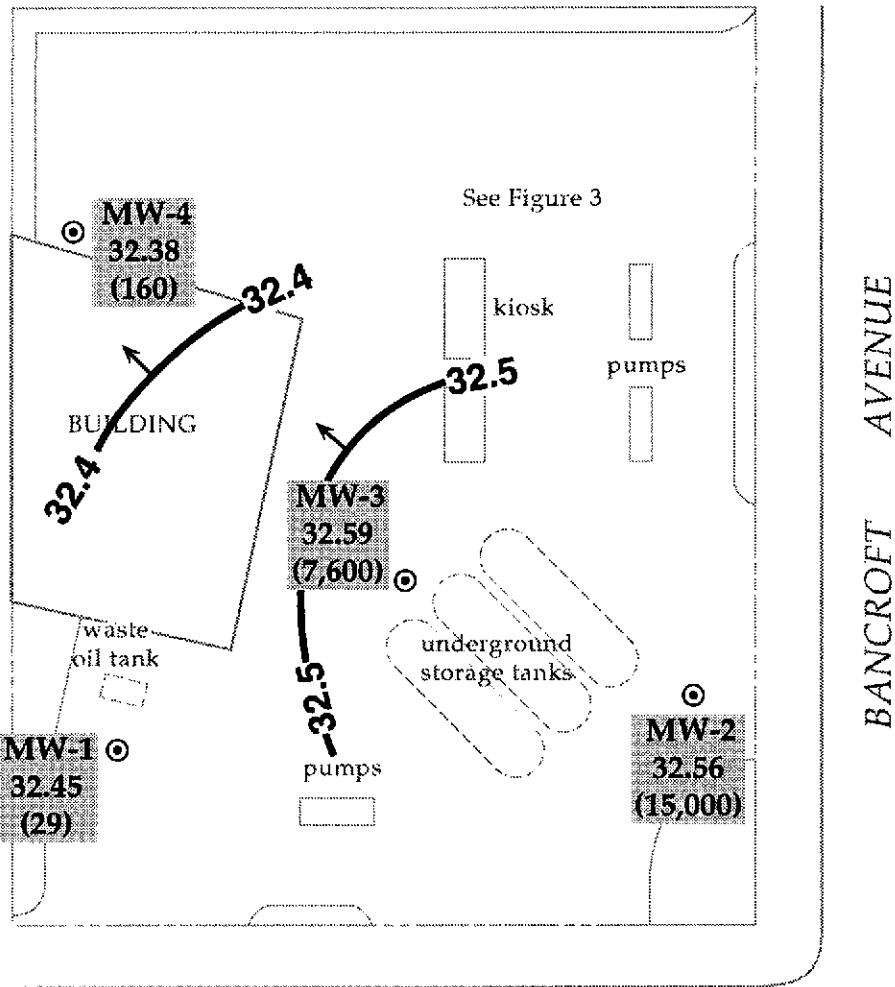
Sincerely,
Cambria Environmental Technology, Inc.


N. Scott MacLeod, R.G.
Principal Geologist



Attachments: A - Ground Water Monitoring Report and Analytic Report

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



EXPLANATION

- ⊙ MW-2 Monitoring well
- xx.xx Ground water elevation, ft above mean sea level (msl)
- (xx.xx) Benzene concentration in parts per billion (ppb)
- X.X Ground water elevation contour, ft above mean sea level, approximately located, dashed where inferred
- Inferred ground water flow direction

ESTUDILLO AVENUE

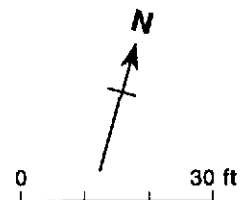


Figure 1. Monitoring Well Locations, Ground Water Elevation Contours, and Benzene Concentrations in Ground Water - July 9, 1996 - Shell Service Station WIC #204-6852-0703, 1285 Bancroft Avenue, San Leandro, California

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

Well ID	Date	Top-of-Casing 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		
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			

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

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	11/11/94		41.22	25.69
	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
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
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

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

Well ID	Date	Top-of-Casing 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

Notes:

a = Top-of-Casing Elevation resurveyed March 29, 1994

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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	parts per billion (µg/L)				MTBE
						E	T	X		
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	1,000		
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	---	
	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	---	

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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
	12/07/92 ^{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	52,000
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	---

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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
	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 ^c	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
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
Bailer	09/01/92		<50	---	<0.5	<0.5	<0.5	1	---
Blank	12/07/92		<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	B	E	T	X	MTBE
			←————— parts per billion (µg/L) —————→						
	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	---
Trip Blank	09/17/91		<50	---	<0.5	<0.5	<0.5	<0.5	---
	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	---
	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	680	100 ^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

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

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

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

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 (mg/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

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	parts per billion (mg/L)					
			TCE	TOG	PCE	Chloroform	cis-1,2-DCE	trans-1,2-DCE
	09/09/93	39.24	<0.5	---	12	7.3	1.1	<0.5
	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:

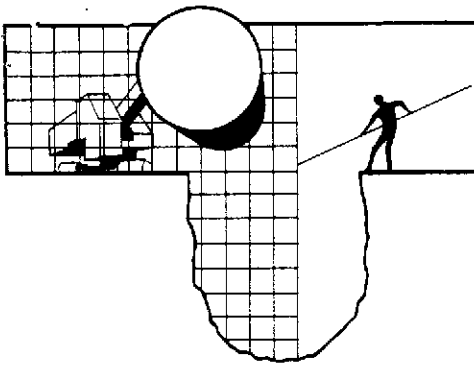
TCE = Trichloroethene by EPA Method 601
TOG = Total non-polar oil and grease by American Public Health Association Standard Methods 503A&E
PCE = Tetrachloroethene by EPA Method 601
Chloroform = Chloroform by EPA Method 601
cis-1,2-DCE = cis-1,2-Dichloroethene by EPA Method 601
trans-1,2-DCE = trans-1,2-Dichloroethene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

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT



BLAINE TECH SERVICES INC.

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

August 5, 1996

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

3rd Quarter 1996

Quarterly Groundwater Monitoring Report 960709-T-2

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

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 995-5535 ext. 201.

Yours truly,

A handwritten signature in cursive script, appearing to read 'Francis Thie'.

Francis Thie

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

cc: Weiss Associates
5500 Shellmound Street
Emeryville, CA 94608-2411
Attn: Grady Glasser

(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 IMMISCIBLE LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLE LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
MW-1	7/9/96	TOC	--	NONE	--	--	34.45	59.15
MW-2 *	7/9/96	TOC	ODOR	NONE	--	--	34.35	59.06
MW-3	7/9/96	TOC	ODOR	NONE	--	--	34.93	57.80
MW-4	7/9/96	TOC	--	NONE	--	--	35.70	54.61

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 960709-T2

Date: 7/9/96
 Page 1 of 1

Site Address: 1285 Bancroft Avenue, San Leandro

WIC#: 204-6852-0703

Shell Engineer: Don ~~Kirk~~ R. Jeff Grabeney Phone No.: (510) 675-6168
 Fax #: 675-6160

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

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

Comments:

Sampled by: m/lefall

Printed Name: Mike Tall

Analysis Required

LAB: SEQR

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	44 hours <input type="checkbox"/>
Soil Classfy/Disposal <input type="checkbox"/>	6442	16 days <input checked="" type="checkbox"/> (Normal)
Water Classfy/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6443	
Water Rem. or Sys. O & M <input type="checkbox"/>	6443	
Other <input type="checkbox"/>		

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

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 8015 & BTEX 8020	MTBE	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW1	7/9			X		3						X	X	1	A-C			9607697	
MW2	7/9			X		3						X	X	2					
MW3	7/9			X		3						X	X	3					
MW4	7/9			X		3						X	X	4					
EB	7/9			X		3						X	X	5					
DUP	7/9			X		3						X	X	6					

Relinquished By (Signature): <u>m/lefall</u>	Printed Name: <u>Mike Tall</u>	Date: <u>7-10-96</u>	Time: <u>1100</u>	Received (Signature): <u>Michael Klein</u>	Printed Name: <u>M. Klein</u>	Date: <u>7-10-96</u>	Time: <u>1100</u>
Relinquished By (Signature): <u>Michael Klein</u>	Printed Name:	Date:	Time:	Received (Signature):	Printed Name:	Date:	Time:
Relinquished By (Signature):	Printed Name:	Date:	Time:	Received (Signature): <u>R. Herling</u>	Printed Name: <u>R. Herling</u>	Date: <u>7/10/96</u>	Time: <u>1310</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 Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Project: Shell San Leandro 960709-T2

Enclosed are the results from samples received at Sequoia Analytical on July 10, 1996.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9607697 -01	LIQUID, MW1	07/09/96	TPGBMW Purgeable TPH/BTEX
9607697 -02	LIQUID, MW2	07/09/96	TPGBMW Purgeable TPH/BTEX
9607697 -03	LIQUID, MW3	07/09/96	TPGBMW Purgeable TPH/BTEX
9607697 -04	LIQUID, MW4	07/09/96	TPGBMW Purgeable TPH/BTEX
9607697 -05	LIQUID, EB	07/09/96	TPGBMW Purgeable TPH/BTEX
9607697 -06	LIQUID, DUP	07/09/96	TPGBMW Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL


Peggy Penner
Project Manager



Blaine Technical Services	Client Proj. ID: Shell San Leandro 960709-T2	Sampled: 07/09/96
985 Timothy Drive	Sample Descript: MW1	Received: 07/10/96
San Jose, CA 95133	Matrix: LIQUID	
Attention: Jim Keller	Analysis Method: 8015Mod/8020	Analyzed: 07/17/96
	Lab Number: 9607697-01	Reported: 07/25/96

QC Batch Number: GC071796BTEX21A
Instrument ID: GCHP21

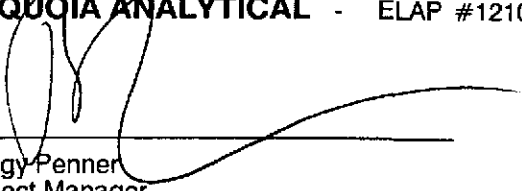
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	810
Methyl t-Butyl Ether	25	1800
Benzene	5.0	29
Toluene	5.0	7.3
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	11
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	103

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell San Leandro 960709-T2 Sample Descript: MW2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9607697-02	Sampled: 07/09/96 Received: 07/10/96 Analyzed: 07/17/96 Reported: 07/25/96
--	---	---

QC Batch Number: GC071796BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50000	100000
Methyl t-Butyl Ether	2500	70000
Benzene	500	15000
Toluene	500	24000
Ethyl Benzene	500	1700
Xylenes (Total)	500	9900
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 Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell San Leandro 960709-T2 Sample Descript: MW3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9607697-03	Sampled: 07/09/96 Received: 07/10/96 Analyzed: 07/17/96 Reported: 07/25/96
--	---	---

QC Batch Number: GC071796BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50000	72000
Methyl t-Butyl Ether	2500	59000
Benzene	500	7600
Toluene	500	14000
Ethyl Benzene	500	970
Xylenes (Total)	500	5900
Chromatogram Pattern:		C6-C12
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 Penner
Project Manager



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell San Leandro 960709-T2 Sample Descript: MW4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9607697-04	Sampled: 07/09/96 Received: 07/10/96 Analyzed: 07/18/96 Reported: 07/25/96
--	---	---

QC Batch Number: GC071896BTEX02A
Instrument ID: GCHP02

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	5300
Benzene	20	160
Toluene	20	N.D.
Ethyl Benzene	20	N.D.
Xylenes (Total)	20	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	107

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell San Leandro 960709-T2 Sample Descript: EB Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9607697-05	Sampled: 07/09/96 Received: 07/10/96 Analyzed: 07/17/96 Reported: 07/25/96
--	--	---


QC Batch Number: GC071796BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	94

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

SEQUOIA ANALYTICAL - ELAP #1210



Peggy Penner
Project Manager



Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell San Leandro 960709-T2 Sample Descript: DUP Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9607697-06	Sampled: 07/09/96 Received: 07/10/96 Analyzed: 07/17/96 Reported: 07/25/96
--	---	---

QC Batch Number: GC071796BTEX02A
Instrument ID: GCHP02

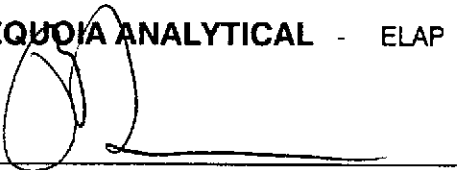
Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50000	86000
Methyl t-Butyl Ether	2500	32000
Benzene	500	12000
Toluene	500	19000
Ethyl Benzene	500	1400
Xylenes (Total)	500	7500
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	95

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager



Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services, Inc. Client Project ID: Shell San Leandro 960709-T2
 985 Timothy Drive Matrix: Liquid
 San Jose, CA 95133
 Attention: Jim Keller Work Order #: 9607697 -01, -03 Reported: Jul 25, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC071796BTEX21A	GC071796BTEX21A	GC071796BTEX21A	GC071796BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Vincent	R. Vincent	R. Vincent	R. Vincent
MS/MSD #:	GW9607328-03B	GW9607328-03B	GW9607328-03B	GW9607328-03B
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/17/96	7/17/96	7/17/96	7/17/96
Analyzed Date:	7/17/96	7/17/96	7/17/96	7/17/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	9.4	9.1	8.9	27
MS % Recovery:	94	91	89	90
Dup. Result:	10	10	11	22
MSD % Recov.:	100	100	110	73
RPD:	6.2	9.4	21	20
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	GWBLK071796A	GWBLK071796A	GWBLK071796A	GWBLK071796A
Prepared Date:	7/17/96	7/17/96	7/17/96	7/17/96
Analyzed Date:	7/17/96	7/17/96	7/17/96	7/17/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
LCS Result:	8.6	8.6	8.7	27
LCS % Recov.:	86	86	87	90

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

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Sequoia Analytical

680 Chesapeake Drive Redwood City, CA 94063 (415) 364-9600 FAX (415) 364-9233
 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673
 819 Striker Avenue, Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100

Blaine Tech Services, Inc.
 985 Timothy Drive
 San Jose, CA 95133
 Attention: Jim Keller

Client Project ID: Shell San Leandro 960709-T2
 Matrix: Liquid

Work Order #: 9607697 -02, 05-06

Reported: Jul 25, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC071796BTEX2A	GC071796BTEX2A	GC071796BTEX2A	GC071796BTEX2A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Vincent	R. Vincent	R. Vincent	R. Vincent
MS/MSD #:	GW9607328-03	GW9607328-03	GW9607328-03	GW9607328-03
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/17/96	7/17/96	7/17/96	7/17/96
Analyzed Date:	7/17/96	7/17/96	7/17/96	7/17/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	11	11	11	34
MS % Recovery:	110	110	110	113
Dup. Result:	11	11	11	34
MSD % Recov.:	110	110	110	113
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	GWBLK071796A	GWBLK071796A	GWBLK071796A	GWBLK071796A
Prepared Date:	7/17/96	7/17/96	7/17/96	7/17/96
Analyzed Date:	7/17/96	7/17/96	7/17/96	7/17/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
LCS Result:	10	10	10	31
LCS % Recov.:	100	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

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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, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Client Project ID: Shell San Leandro 960709-T2
Matrix: Liquid

Work Order #: 9607697 -04

Reported: Jul 25, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC071896BTEX2A	GC071896BTEX2A	GC071896BTEX2A	GC071896BTEX2A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Vincent	R. Vincent	R. Vincent	R. Vincent
MS/MSD #:	G9607530-07C	G9607530-07C	G9607530-07C	G9607530-07C
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/18/96	7/18/96	7/18/96	7/18/96
Analyzed Date:	7/18/96	7/18/96	7/18/96	7/18/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	9.8	9.4	9.6	27
MS % Recovery:	98	94	96	90
Dup. Result:	11	10	10	28
MSD % Recov.:	110	100	100	93
RPD:	12	6.2	4.1	3.6
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	GWBLK071896A	GWBLK071896A	GWBLK071896A	GWBLK071896A
Prepared Date:	7/18/96	7/18/96	7/18/96	7/18/96
Analyzed Date:	7/18/96	7/18/96	7/18/96	7/18/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
LCS Result:	9.7	9.8	10	28
LCS % Recov.:	97	98	100	93

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

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