

C A M B R I A

ENVIRONMENTAL
PROTECTION

July 20, 1998

98 JUL 29 AM 10:50

Ms. Susan Hugo
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Second Floor
Alameda, California 94502-6577

Re: **Second Quarter 1998 Monitoring Report**
Shell-branded Service Station
999 San Pablo Avenue
Albany, California
WIC #204-0079-0109
Cambria Project #24-314-298



Dear Ms. Hugo:

On behalf of Equilon Enterprises LLC (Equilon), Cambria Environmental Technology, Inc. (Cambria) is submitting this ground water monitoring report in accordance with the reporting requirements of 23 CCR 2652d.

SECOND QUARTER 1998 ACTIVITIES

Ground Water Monitoring: Blaine Tech Services, Inc. (Blaine) of San Jose, California gauged and sampled selected site wells. Cambria calculated ground water elevations (Table 1), compiled the analytical data (Table 2), and prepared a ground water elevation contour map (Figure 1). The Blaine report is included as Attachment A.

ANTICIPATED THIRD QUARTER 1998 ACTIVITIES


Ground Water Monitoring: Blaine will gauge and sample selected site wells. The data will be tabulated and a monitoring report will be prepared.

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

**Cambria
Environmental
Technology, Inc.**

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170



DISCUSSION

Monitoring well S-5 is located immediately adjacent to the Arco Service Station across Marin Avenue south of the Shell-branded station. This well has historically contained separate phase hydrocarbons (SPHs); however, wells S-3 and S-6, which are located along the southern property boundary of the Shell-branded station, have never contained SPHs. Therefore, it appears that the SPHs detected in well S-5 are originating from the Arco station and not the Shell-branded station. We request that Equilon be allowed to discontinue monitoring of well S-5 and either abandon the well or transfer ownership to the owner of the Arco station. As we mentioned in the *First Quarter 1998 Monitoring Report*, the well will no longer be sampled unless otherwise directed by your office.

CLOSING

We appreciate the opportunity to work with you on this project. Please call Paul Waite at (510) 420-3305 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

Aubrey K. Coal
FOR:
Paul D. Waite
Project Engineer

Diane M. Lundquist
Diane M. Lundquist, P.E.
Principal Engineer

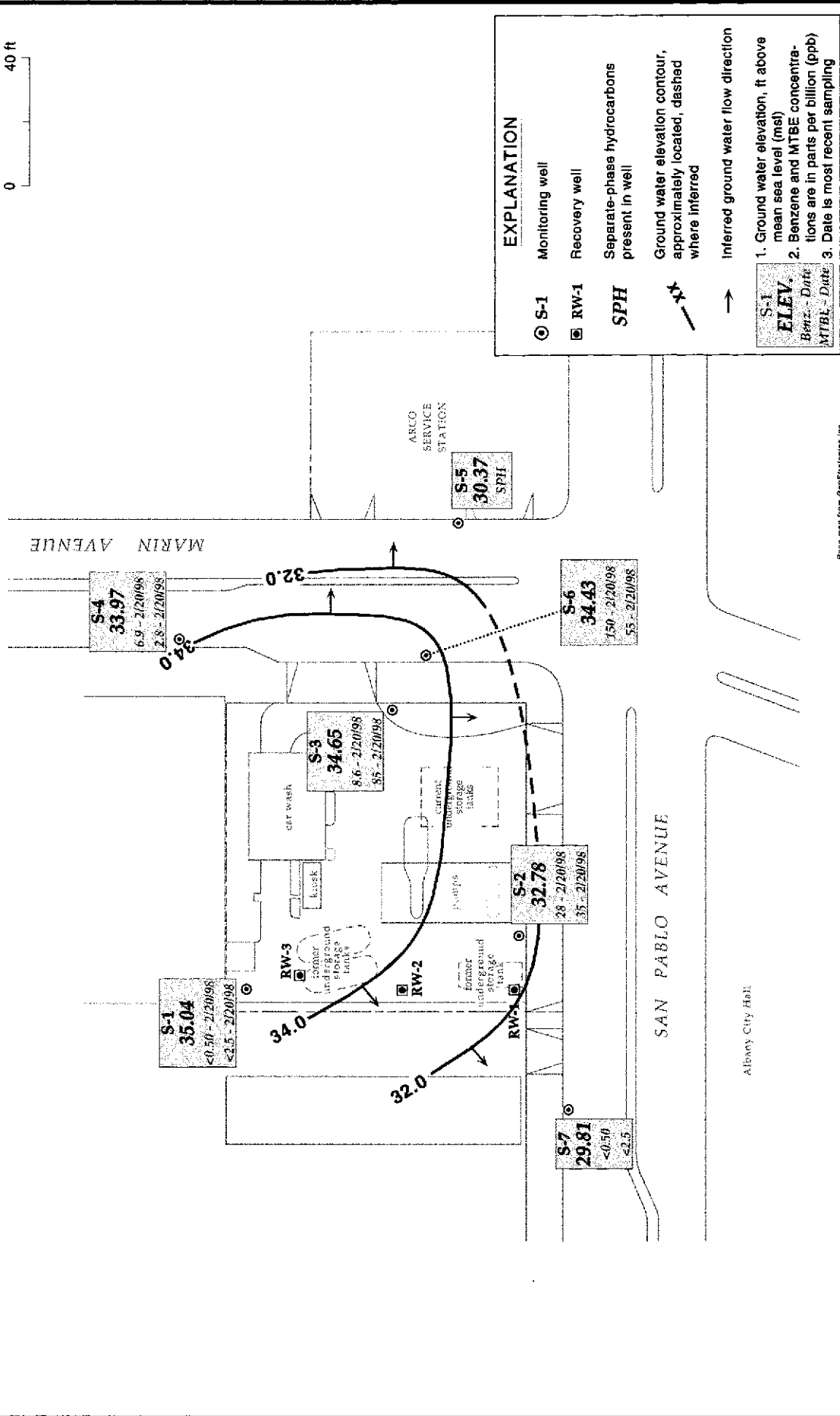


Attachment: A - Blaine Ground Water Monitoring Report

cc: Karen Petryna, Equilon Enterprises LLC, 108 Cutting Blvd., Richmond, California 94804

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Base map from GeoStrategies Inc.

Figure 1. Ground Water Elevation Contours - May 18, 1998 - Shell-branded Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California



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Table 1. Ground Water Elevations – Shell-branded Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Well ID	Date	Top-of-Vault Elevation (ft above msl)	Depth to Water (ft below TOV)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation ^a (ft above msl)
S-1	05/13/91	42.73	8.24	---	34.49
	08/23/91		8.37	---	34.36
	11/07/91		8.30	---	34.43
	01/28/92		7.84	---	34.89
	05/06/92		7.95	---	34.78
	08/26/92		8.24	---	34.49
	10/28/92		8.52	---	34.21
	01/19/93		6.54	---	36.19
	04/29/93		7.93	---	34.80
	07/22/93		8.09	---	34.64
	10/21/93		9.43	---	33.30
	01/04/94		8.25	---	34.48
	04/13/94		8.02	---	34.71
	07/25/94		8.22	---	34.51
	10/10/94		8.29	---	34.44
	01/26/95		6.88	---	35.85
	04/21/95		7.65	---	35.08
	07/28/95		7.90	---	34.83
	10/31/95		7.72	---	35.01
	01/10/96		8.24	---	34.49
	04/25/96		7.74	---	34.99
	07/23/96		7.92	---	34.81
	12/10/96		7.56	---	35.17
	02/20/97		7.95	---	34.78
	05/22/97		8.11	---	34.62
	08/22/97		7.86	---	34.87
11/03/97	8.35	---	34.38		
02/20/98	6.09	---	36.64		
05/18/98			7.69	---	35.04
S-2	05/13/91	40.73	8.50	---	32.23
	08/23/91		8.80	---	31.93
	11/07/91		8.61	---	32.12
	01/28/92		7.80	---	32.93
	05/06/92		8.10	---	32.63
	08/26/92		8.37	---	32.36
	10/28/92		8.64	---	32.09
	01/19/93		5.82	---	34.91
	04/29/93		7.70	---	33.03
	07/22/93		8.38	---	32.35
	10/21/93		8.58	---	32.15
	01/04/94		7.70	---	33.03
	04/13/94		7.62	---	33.11
	07/25/94		7.86	---	32.87
	10/10/94		8.12	---	32.61
	01/26/95		6.38	---	34.35



Table 1. Ground Water Elevations – Shell-branded Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Well ID	Date	Top-of-Vault Elevation (ft above msl)	Depth to Water (ft below TOV)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation ^a (ft above msl)
	04/21/95		7.01	---	33.72
	07/28/95		7.82	---	32.91
	10/31/95		7.57	---	33.16
	01/10/96		8.13	---	32.60
	04/25/96		7.72	---	33.01
	07/23/96		8.10	---	32.63
	12/10/96		8.57	---	32.16
	02/20/97		8.15	---	32.58
	05/22/97		8.79	---	31.94
	08/22/97		8.05	---	32.68
	11/03/97		8.75	---	31.98
	02/20/98		6.34	---	34.39
	05/18/98		7.95	---	32.78
S-3	05/13/91	41.46	7.90	---	33.56
	08/23/91		8.14	---	33.32
	11/07/91		7.91	---	33.55
	01/28/92		7.53	---	33.93
	05/06/92		7.55	---	33.91
	08/26/92		7.53	---	33.93
	10/28/92		7.95	---	33.51
	01/19/93		6.12	---	35.34
	04/29/93		7.27	---	34.19
	07/22/93		7.62	---	33.84
	10/21/93		7.81	---	33.65
	01/04/94		7.49	---	33.97
	04/13/94		7.32	---	34.14
	07/25/94		7.66	---	33.80
	10/10/94		7.49	---	33.97
	01/26/95		6.50	---	34.96
	04/21/95		6.79	---	34.67
	07/28/95		7.28	---	34.18
	10/31/95		6.74	---	34.72
	01/10/96		7.48	---	33.98
	04/25/96		6.90	---	34.56
	07/23/96		7.04	---	34.42
	12/10/96		7.96	---	33.50
	02/20/97		7.44	---	34.02
	05/22/97		7.13	---	34.33
	08/22/97		6.81	---	34.65
	11/03/97		7.40	---	34.06
	02/20/98		6.55	---	34.91
	05/18/98		6.81	---	34.65

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Table 1. Ground Water Elevations – Shell-branded Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Well ID	Date	Top-of-Vault Elevation (ft above msl)	Depth to Water (ft below TOV)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation ^a (ft above msl)
S-4	05/13/91	41.10	7.44	---	33.66
	08/23/91		8.32	---	32.78
	11/07/91		8.32	---	32.78
	01/28/92		7.40	---	33.70
	05/06/92		7.21	---	33.89
	08/26/92		8.13	---	32.97
	10/28/92		8.73	---	32.37
	01/19/93		5.86	---	35.24
	04/29/93		7.02	---	34.08
	07/22/93		7.76	---	33.34
	10/21/93		8.53	---	32.57
	01/04/94		7.92	---	33.18
	04/13/94		7.71	---	33.39
	07/25/94		7.82	---	33.28
	10/10/94		8.15	---	32.95
	01/26/95		5.73	---	35.37
	04/21/95		6.26	---	34.84
	07/28/95		7.80	---	33.30
	10/31/95		8.45	---	32.65
	01/10/96		8.26	---	32.84
	04/25/96		7.14	---	33.96
	07/23/96		8.18	---	32.92
	12/10/96		7.04	---	34.06
	02/20/97		7.07	---	34.03
	05/22/97		6.63	---	34.47
	08/22/97		7.69	---	33.41
11/03/97	8.26	---	32.84		
02/20/98	5.57	---	35.53		
	05/18/98		7.13	---	33.97
S-5	05/13/91	39.99	14.60	6.48	30.57
	08/23/91		15.14	5.50	29.25
	11/07/91		15.10	5.35	29.17
	01/28/92		14.05	4.90	29.86
	05/06/92		14.31	5.66	30.21
	08/26/92		14.26	3.80	28.77
	10/28/92		14.22	3.81	28.82
	01/19/93		12.36	3.96	30.80
	04/29/93		9.64	0.90	31.07
	07/22/93		9.55	0.90	31.16
	10/21/93		11.23	0.73	29.34
	01/04/94		11.69	1.90	29.82
	04/13/94		11.42	1.62	29.87
	07/25/94		12.01	1.79	29.41
10/10/94	12.05	1.8	29.38		
01/26/95	8.42	1.72	32.95		

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Table 1. Ground Water Elevations – Shell-branded Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Well ID	Date	Top-of-Vault Elevation (ft above msl)	Depth to Water (ft below TOV)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation ^a (ft above msl)
	04/21/95		10.03	1.17	30.90
	07/28/95		11.42	1.87	30.07
	10/31/95		13.21	0.54	27.21
	01/10/96		12.05	0.13	28.04
	04/25/96		9.68	0.03	30.33
	07/23/96		9.82	0.04	30.20
	12/10/96		9.10	0.03	30.91
	02/20/97		8.93	---	31.06
	05/22/97		10.07	0.02	29.94
	08/22/97		10.24	0.02	29.77
	11/03/97		10.91	0.02	29.10
	02/20/98		7.81	0.03	32.20
	05/18/98		9.64	0.02	30.37
S-6	05/13/91	40.12	7.82	---	32.30
	08/23/91		9.58	---	30.54
	11/07/91		10.86	---	29.26
	01/28/92		8.97	---	31.15
	05/06/92		8.27	---	31.85
	08/26/92		9.57	---	31.55
	10/28/92		8.90	---	32.22
	01/19/93		4.84	---	35.28
	04/29/93		5.61	---	34.51
	07/22/93		6.56	---	33.56
	10/21/93		8.73	---	31.39
	01/04/94		7.14	---	32.98
	04/13/94		7.21	---	32.91
	07/25/94		6.85	---	33.27
	10/10/94		6.20	---	33.92
	01/26/95		4.89	---	35.23
	04/21/95		5.61	---	34.51
	07/28/95		5.30	---	34.82
	10/31/95		4.98	---	35.14
	01/10/96		5.67	---	34.45
	04/25/96		5.23	---	34.89
	07/23/96		5.40	---	34.72
	12/10/96		6.68	---	33.44
	02/20/97		5.70	---	34.42
	05/22/97		5.49	---	34.63
	08/22/97		5.71	---	34.41
	11/03/97		6.15	---	33.97
	02/20/98		5.25	---	34.87
	05/18/98		5.69	---	34.43
S-7	05/13/91	40.10	10.56	---	29.54
	08/23/91		11.16	---	28.94

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Table 1. Ground Water Elevations – Shell-branded Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Well ID	Date	Top-of-Vault Elevation (ft above msl)	Depth to Water (ft below TOV)	Separate-Phase Hydrocarbon Thickness (ft)	Ground Water Elevation ^a (ft above msl)
	11/07/91		11.48	---	28.62
	01/28/92		10.72	---	29.38
	05/06/92		10.34	---	29.76
	08/26/92		11.13	---	28.97
	10/28/92		11.52	---	28.58
	01/19/93		8.68	---	31.42
	04/29/93		9.90	---	30.20
	07/22/93		---	---	---
	10/21/93		11.10	---	29.00
	01/04/94		10.40	---	29.70
	04/13/94		10.20	---	29.90
	07/25/94		10.48	---	29.62
	10/10/94		10.64	---	29.46
	01/26/95		7.75	---	32.35
	04/21/95		8.51	---	31.59
	07/28/95		10.20	---	29.90
	10/31/95		10.86	---	29.24
	01/10/96		10.33	---	29.77
	04/25/96		9.13	---	30.97
	07/23/96		10.18	---	29.92
	12/10/96		9.04	---	31.06
	02/20/97		9.60	---	30.50
	05/22/97		10.63	---	29.47
	08/22/97		10.95	---	29.15
	11/03/97		11.29	---	28.81
	02/20/98		7.73	---	32.37
	05/18/98		10.29	---	29.81

Notes and Abbreviations:

ft = Feet

msl = Mean sea level

TOV = Top of vault

a = When separate-phase hydrocarbons are present, ground water elevation is corrected using the following relation:

$$\text{Ground water elevation} = \text{top of casing elevation} - \text{depth to water} + (0.8 \times \text{hydrocarbon thickness})$$

--- = No hydrocarbons present in well

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Table 2. Analytical Results for Ground Water, Shell-branded Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

Well ID (Qtrs Sampled)	Date	Depth to Water (ft)	TPH-G ←	B	T (Concentrations in µg/L)	E	X	MTBE →	HDM Units (units/L)	DO (mg/L)
S-1 (1st & 3rd)	05/13/91	8.24	1,500	20	2.6	86	74	---	---	---
	08/23/91	8.37	2,900	27	<2.5	75	18	---	---	---
	11/07/91	8.30	2,900	8	2.5	46	26	---	---	---
	01/28/92	7.84	2,000	11	<2.5	60	20	---	---	---
	05/06/92	7.95	1,200	5.5	<2.5	80	36	---	---	---
	07/29/92	8.24	2,000	9.4	<2.5	130	<2.5	---	---	---
	10/28/92	8.52	1,300	27	3.2	72	13	---	---	---
	01/19/93	6.54	1,500	13	3	29	31	---	---	---
	04/29/93	7.93	2,000	15	<2.5	82	<65	---	---	---
	07/22/93	8.09	620	1.1	4.2	3.5	13	---	---	---
	10/21/93	9.43	1,200	34	25	15	9.5	---	---	---
	01/04/94	8.25	860	<2.5	<2.5	5.7	5.3	---	---	---
	07/25/94	8.22	1,200	8.3	7.4	15	20	---	---	---
	01/26/95	6.88	1,000	12	0.6	12	420	---	---	---
	07/28/95	7.90	660	7.2	1.0	11	8.9	---	---	4.0
	01/10/96	8.24	1,100	3.5	7.0	5.1	9.4	---	---	7.4
	07/23/96	7.92	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---	2.7
	12/10/96	7.56	---	---	---	---	---	---	---	0.6
	02/20/97	7.95	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	3.0
05/22/97	8.11	---	---	---	---	---	---	---	0.5	
08/22/97	7.86	810	18	<2.0	5.1	4.4	18	---	3.0	
11/03/97	8.35	---	---	---	---	---	---	---	1.1	
02/20/98	6.09	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	2.9	
05/18/98	7.69	---	---	---	---	---	---	---	1.1	
S-2 (1st & 3rd)	05/13/91	8.50	23,000	3,900	230	1,100	3,200	---	---	---
	08/23/91	8.80	23,000	4,400	260	1,900	2,400	---	---	---
	11/07/91	8.61	40,000	4,000	160	1,020	3,400	---	---	---
	01/28/92	7.80	22,000	1,600	70	420	1,700	---	---	---
	05/06/92	8.10	20,000	2,600	110	860	1,900	---	---	---
	07/29/92	8.37	42,000	5,000	160	1,100	3,500	---	---	---
	10/28/92	8.64	34,000	4,800	330	1,600	2,900	---	---	---

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Table 2. Analytical Results for Ground Water – Shell-branded Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California (continued)

Well ID (Qtrs Sampled)	Date	Depth to Water (ft)	TPH-G ←	B	T (Concentrations in µg/L)	E	X	MTBE →	HDM Units (units/L)	DO (mg/L)
	01/19/93	5.82	20,000	2,300	370	660	1,300	---	---	---
	04/29/93	7.70	40,000	2,000	67	900	1,900	---	---	---
	07/22/93	8.38	22,000	3,000	120	1,000	1,600	---	---	---
	07/22/93 ^{dup}	8.38	17,000	3,000	110	1,000	1,500	---	---	---
	10/21/93	8.58	14,000	2,800	74	870	1,100	---	---	---
	10/21/93 ^{dup}	8.58	13,000	3,200	53	960	820	---	---	---
	01/04/94	7.70	21,000	2,100	67	990	770	---	---	---
	01/04/94 ^{dup}	7.70	22,000	2,000	64	910	750	---	---	---
	07/25/94	7.86	43,000	2,600	490	990	1,300	---	10 ⁴ to 10 ⁵ a, b	---
	01/26/95	6.38	21,000	790	12	290	570	---	---	5.5
	07/28/95	7.82	14,000	2,400	360	960	370	---	---	4.0
	01/10/96	8.13	17,000	1,400	<50	480	170	---	---	7.2
	07/23/96	8.10	16,000	2,700	69	1,100	110	9,500	---	2.2
	07/23/96 ^{dup}	8.10	11,000	2,600	68	1,000	96	10,000(11,000)	10 ⁵ f	2.2
	12/10/96	8.57	---	---	---	---	---	---	---	0.5
	02/20/97	8.15	10,000	500	<10	90	130	6,400	---	4.0
	05/22/97	8.79	---	---	---	---	---	---	---	1.1
	08/22/97	8.05	23,000	1,300	65	740	290	4,500	---	3.2
	08/22/97 ^{dup}	8.05	20,000	1,200	<100	630	250	3,900	---	3.2
	11/03/97	8.75	---	---	---	---	---	---	---	1.2
	02/20/98	6.34	450	28	1.3	7.4	12	35	---	0.4
	05/18/98	7.95	---	---	---	---	---	---	---	0.8
S-3	05/13/91	7.90	3,300	30	3.6	26	13	---	---	---
(1st & 3rd)	08/23/91	8.14	2,000	25	4	9.3	4.5	---	---	---
	11/07/91	7.91	4,000	20	3.9	5	4.9	---	---	---
	01/28/92	7.53	2,100	21	7.6	6.7	15	---	---	---
	01/28/92 ^{dup}	7.53	2,100	18	6.1	7.1	14	---	---	---
	05/06/92	7.55	6,600	38	51	45	65	---	---	---
	07/29/92	7.53	5,800	18	12	29	60	---	---	---
	10/28/92	7.95	3,000	55	11	16	32	---	---	---
	01/19/93	6.12	3,100	<5	5.1	11	16	---	---	---

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Table 2. Analytical Results for Ground Water – Shell-branded Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California (continued)

Well ID (Qtrs Sampled)	Date	Depth to Water (ft)	TPH-G ←	B	T	E (Concentrations in µg/L)	X	MTBE →	HDM Units (units/L)	DO (mg/L)
	04/29/93	7.27	3,000	31	22	<5	14	---	---	---
	07/22/93	7.62	2,600	3.1	43	23	53	---	---	---
	10/21/93	7.81	2,500	73	14	16	32	---	---	---
	01/04/94	7.49	4,800	13	21	<12.5	33	---	---	---
	07/25/94	7.66	2,600	6.1	4.0	3.8	12	---	---	---
	01/26/95	6.50	3,600	30	6.8	5.6	19	---	---	---
	01/26/95 ^{dup}	6.50	2,200	9.9	15	14	22	---	---	---
	07/28/95	7.28	3,700	27	9.3	20	34	---	---	4.0
	01/10/96	7.48	4,000	10	<0.5	13	28	---	---	6.1
	07/23/96	7.04	2,100	20	<0.5	<0.5	<0.5	<25	---	2.1
	12/10/96	7.56	---	---	---	---	---	---	---	0.7
	02/20/97	7.44	3,500	83	<5.0	18	16	130	---	3.0
	02/20/97 ^{dup}	7.44	3,000	69	<5.0	14	12	70	---	3.0
	05/22/97	7.13	---	---	---	---	---	---	---	0.6
	08/22/97	6.81	4,700	60	12	19	21	40	---	2.9
	11/03/97	7.40	---	---	---	---	---	---	---	0.9
	02/20/98	6.55	3,400	<10	<10	14	18	85	---	0.8
	02/20/98 ^{dup}	6.55	3,100	8.6	7.8	12	16	57	---	0.8
	05/18/98	6.81	---	---	---	---	---	---	---	0.7
S-4 (1st)	05/13/91	7.44	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/23/91	8.32	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/07/91	8.32	260	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/28/92	7.40	110 ^f	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/06/92	7.21	54	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/29/92	8.13	67	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/28/92	8.73	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/19/93	5.86	86	1.2	0.7	2.7	15	---	---	---
	04/29/93	7.02	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/29/93 ^{dup}	7.02	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/22/93	7.76	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/21/93	8.53	<50	<0.5	<0.5	<0.5	<0.5	---	---	---

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Table 2. Analytical Results for Ground Water – Shell-branded Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California (continued)

Well ID (Qtrs Sampled)	Date	Depth to Water (ft)	TPH-G	B	T	E	X	MTBE	HDM Units (units/L)	DO (mg/L)
(Concentrations in µg/L)										
	01/04/94	7.92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/26/95	5.73	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/28/95	7.80	---	---	---	---	---	---	---	---
	01/10/96	8.26	<50	1.0	2.8	<0.5	2.1	---	---	2.8
	07/23/96	8.18	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---	3.8
	12/10/96	7.04	---	---	---	---	---	---	---	3.9
	02/20/97	7.07	<50	<0.50	<0.50	<0.50	<0.50	6.7	---	5.0
	05/22/97	6.63	---	---	---	---	---	---	---	0.8
	08/22/97	7.69	---	---	---	---	---	---	---	3.7
	11/03/97	8.26	---	---	---	---	---	---	---	1.3
	02/20/98	5.57	130	6.9	4.6	5.2	17	2.8	---	1.8
	05/18/98	7.13	---	---	---	---	---	---	---	1.4
S-5 (All)	05/13/91 ^{SPH}	14.60	---	---	---	---	---	---	---	---
	08/23/91 ^{SPH}	15.14	---	---	---	---	---	---	---	---
	11/07/91 ^{SPH}	15.10	---	---	---	---	---	---	---	---
	01/28/92 ^{SPH}	14.05	---	---	---	---	---	---	---	---
	05/06/92 ^{SPH}	14.31	---	---	---	---	---	---	---	---
	07/29/92 ^{SPH}	14.26	---	---	---	---	---	---	---	---
	10/28/92 ^{SPH}	14.22	---	---	---	---	---	---	---	---
	01/19/93 ^{SPH}	12.36	---	---	---	---	---	---	---	---
	04/29/93 ^{SPH}	9.64	---	---	---	---	---	---	---	---
	07/22/93 ^{SPH}	9.55	---	---	---	---	---	---	---	---
	10/21/93 ^{SPH}	11.23	---	---	---	---	---	---	---	---
	01/04/94 ^{SPH}	11.69	---	---	---	---	---	---	---	---
	07/25/94 ^{SPH}	12.01	---	---	---	---	---	---	---	---
	10/10/94 ^{SPH}	12.05	---	---	---	---	---	---	---	---
	01/26/95 ^{SPH}	9.80	---	---	---	---	---	---	---	---
	04/21/95 ^{SPH}	10.03	---	---	---	---	---	---	---	---
	07/28/95 ^{SPH}	11.42	---	---	---	---	---	---	---	---
	10/31/95 ^{SPH}	---	---	---	---	---	---	---	---	---
	01/10/96 ^{SPH}	12.05	---	---	---	---	---	---	---	---

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Table 2. Analytical Results for Ground Water – Shell-branded Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California (continued)

Well ID (Qtrs Sampled)	Date	Depth to Water (ft)	TPH-G ←	B	T (Concentrations in µg/L)	E	X	MTBE →	HDM Units (units/L)	DO (mg/L)
	04/25/96 ^{SPH}	9.68	---	---	---	---	---	---	---	---
	07/23/96	9.82	---	---	---	---	---	---	---	---
	12/10/96	9.10	270,000	8,800	29,000	5,200	37,000	<2,500	---	---
	12/10/96 ^{dup}	9.10	400,000	9,200	32,000	7,200	50,000	<2,500	---	---
	05/22/97 ^{SPH}	---	---	---	---	---	---	---	---	---
	02/20/97	8.93	88,000	2,000	11,000	1,600	19,000	<500	---	5.0
	08/22/97 ^{SPH}	10.24	---	---	---	---	---	---	---	---
	11/03/97 ^{SPH}	10.91	---	---	---	---	---	---	---	---
	02/20/98 ^{SPH}	7.81	---	---	---	---	---	---	---	---
	05/18/98 ^{SPH}	9.64	---	---	---	---	---	---	---	---
S-6 (1st & 3rd)	05/13/91	7.82	13,000	600	140	210	310	---	---	---
	08/23/91	9.58	9,800	480	80	120	150	---	---	---
	11/07/91	10.86	6,200	240	23	25	27	---	---	---
	01/28/92	8.97	5,600	250	15	41	36	---	---	---
	05/06/92	8.27	7,100	330	29	110	210	---	---	---
	07/29/92	9.57	13,000	240	<50	56	780	---	---	---
	10/28/92	8.90	10,000	470	210	67	170	---	---	---
	01/19/93	4.84	4,800	100	26	27	45	---	---	---
	04/29/93	5.61	7,000	430	20	<12.5	42	---	---	---
	07/22/93	6.56	5,800	260	120	65	150	---	---	---
	10/21/93	8.73	5,500	270	69	120	140	---	---	---
	01/04/94	7.14	7,100	180	58	63	62	---	---	---
	07/25/94	6.85	12,000	190	52	30	39	---	---	---
	07/25/94 ^{dup}	6.85	7,200	170	32	31	34	---	---	---
	01/26/95	4.89	5,800	120	23	24	44	---	---	---
	07/28/95	5.30	4,400	210	23	34	60	---	---	3.0
	07/28/95 ^{dup}	5.30	6,100	230	20	38	59	---	---	3.0
	01/10/96	5.67	6,800	170	87	35	105	---	---	2.2
	01/10/96 ^{dup}	5.67	7,800	230	120	50	210	---	---	2.2
	07/23/96	5.40	2,600	170	<0.5	<0.5	8.5	<25	---	1.4*
	12/10/96	6.68	---	---	---	---	---	---	---	0.7

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Table 2. Analytical Results for Ground Water – Shell-branded Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California (continued)

Well ID (Qtrs Sampled)	Date	Depth to Water (ft)	TPH-G ←	B	T (Concentrations in µg/L)	E	X	MTBE →	HDM Units (units/L)	DO (mg/L)
	02/20/97	5.70	6,300	160	7.7	14	31	77	---	2.0
	05/22/97	5.49	---	---	---	---	---	---	---	0.9
	08/22/97	5.71	6,200	160	26	15	27	49	---	2.8
	11/03/97	6.15	---	---	---	---	---	---	---	1.4
	02/20/98	5.25	4,100	150	<10	<10	15	55	---	0.4
	05/18/98	5.69	---	---	---	---	---	---	---	0.4
S-7 (All)	05/13/91	10.56	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	08/23/91	11.16	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	11/07/91	11.48	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/28/92	10.72	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	05/06/92	10.34	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/29/92	11.13	160	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/28/92	11.52	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/19/93	8.68	50	1.1	0.6	1.9	9.2	---	---	---
	04/29/93	9.90	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/22/93 ^d	---	---	---	---	---	---	---	---	---
	10/21/93	11.10	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/04/94	10.40	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/13/94	10.20	<50	1.4	0.61	<0.5	0.64	---	---	---
	04/13/94 ^{dup}	10.20	<50	1.4	0.61	<0.5	0.66	---	---	---
	07/25/94	10.48	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/10/94 ^e	10.64	<50	<0.5	<0.5	<0.5	<0.5	---	10 ³ to 10 ⁵ ^{a, b}	4.6
	01/26/95	7.75	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/21/95	8.51	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/28/95	10.20	<50	<0.5	<0.5	<0.5	<0.5	---	---	3.0
	10/31/95	10.86	<50	<0.5	<0.5	<0.5	<0.5	---	---	4.9
	01/10/96	10.33	<50	<0.5	2.0	<0.5	2.6	---	---	7.6
	04/25/96	9.13	<50	<0.5	<0.5	<0.5	<0.5	<2.5	10 ⁰ to 10 ⁵ ^{a, b}	6.2
	07/23/96	10.18	<50	<0.5	<0.5	<0.5	<0.5	14	10 ⁰ ^f	3.7
	12/10/96	9.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---	4.6 [*]
	02/20/97	9.60	<50	<0.5	<0.5	<0.5	<0.5	<2.5	---	5.0

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Table 2. Analytical Results for Ground Water – Shell-branded Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California (continued)

Well ID (Qtrs Sampled)	Date	Depth to Water (ft)	TPH-G ←	B	T	E	X	MTBE →	HDM Units (units/L)	DO (mg/L)
(Concentrations in µg/L)										
	05/22/97	10.63	<50	1.3	<0.50	<0.50	<0.50	5.5	---	0.8
	08/22/97	10.95	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	2.6
	11/03/97	11.29	<50	2.2	1.7	0.58	3.4	<2.5	---	2.6
	02/20/98	7.73	350	23	13	14	42	3.8	---	4.6
	05/18/98	10.29	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	4.4
Trip Blank	01/28/92		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/29/93		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/22/93		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/21/93		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/04/94		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/13/94		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/25/94		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/10/94		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/26/95		<50	<0.5	0.7	<0.5	<0.5	---	---	---
	04/21/95		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/28/95		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/31/95		<50	<0.5	<0.5	<0.5	<0.5	---	---	---
MCLs			NE	1	150	700	1,750	NE		

Table 2. Analytical Results for Ground Water – Shell-branded Service Station, WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California (continued)

Abbreviations:

ft = Feet
 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 Method 8020. Results in parentheses indicates MTBE by EPA Method 8260
 HDM = Hydrocarbon degrading microbes
 µg/L = Micrograms per liter
 mg/L = Milligrams per liter
 DO = Dissolved oxygen
 dup = Duplicate sample
 SPH = Separate-phase hydrocarbons detected, no sample collected
 MCL = California primary maximum contaminant level for drinking water (22 CCR 64444)
 NE = MCL not established

Notes:

a = Simple method
 b = Estimated number
 c = Compounds detected and calculated as TPH-G are not characteristic of the standard gasoline chromatographic pattern
 d = Well inaccessible
 e = Sample analyzed for total dissolved solids (450 mg/L)
 f = Estimated BTEX degrading units per liter
 <u = Below detection limits of n µg/L
 --- = Data not available/Not analyzed

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ATTACHMENT A

Blaine Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.



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

June 16, 1998

Shell Oil Company
P.O. Box 8080
Martinez, CA 94553

Attn: Alex Perez

Shell WIC #204-0079-0109
999 San Pablo Avenue
Albany, California

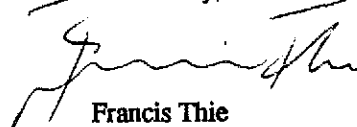
2nd Quarter 1998

Groundwater Monitoring Report 980518-K-3

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

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

Yours truly,



Francis Thie

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

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

(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 (sheet)	DEPTH TO FIRST IMMISCIBLE LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLE LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (mil)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1	05/18/98	TOB	-	NONE	-	-	7.69	11.74
S-2	05/18/98	TOB	-	NONE	-	-	7.95	12.03
S-3	05/18/98	TOB	-	NONE	-	-	6.81	12.11
S-4	05/18/98	TOB	-	NONE	-	-	7.13	14.13
S-5	05/18/98	TOB	FREE PRODUCT	9.62	0.02	-	9.64	-
S-6	05/18/98	TOB	-	NONE	-	-	5.69	15.04
S-7	05/18/98	TOB	-	NONE	-	-	10.29	14.96



SHELL OIL COMPANY

RETAIL ENVIRONMENTAL ENGINEERING - WEST

Serial No: 88518-43 Date: 5/19/88 Page 1 of 1

CHAIN OF CUSTODY RECORD

LAB: Sevens

Site Address: 999 San Pablo Ave., Albany, CA

WIC#: 204-0079-0109

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: [Signature]

Printed Name: Mark Spaulder

Sample ID	Date	Sludge	Soil	Water	Air	No. of conis.
<u>5-57</u>	<u>5/16/88</u>		<u>3</u>			<u>3</u>

Analysis Required 9805045

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	Asbestos	Container Size	Preparation Used	Composite Y/N
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			

UST AGENCY:

CHECK ONE () 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		16 days <input checked="" type="checkbox"/> (Normal)
Water <input type="checkbox"/> 4443		Other <input type="checkbox"/>
Classfy/Disposal <input type="checkbox"/> 4443		
Soil/Air Rem. or Sys. <input type="checkbox"/> 4452		
O & M <input type="checkbox"/> 4452		
Water Rem. or Sys. <input type="checkbox"/> 4453		
O & M <input type="checkbox"/> 4453		
Other <input type="checkbox"/>		

NOTE: Notify Lab as soon as Possible of 24/48 hr. FAT.

MATERIAL DESCRIPTION

SAMPLE CONDITION/ COMMENTS

Sample ID	Date	Sludge	Soil	Water	Air	No. of conis.	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	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS	
<u>5-57</u>	<u>5/16/88</u>		<u>3</u>			<u>3</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<u>1</u>	

Acquired By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
<u>[Signature]</u>	<u>Mark Spaulder</u>	<u>5/19/88</u>	<u>11:15</u>	<u>[Signature]</u>	<u>FUTCHER</u>	<u>5/19/88</u>	<u>12:10</u>
<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>
<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</u>	<u>[Signature]</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
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
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(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

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

Project: Shell 999 San Pablo Ave.

Enclosed are the results from samples received at Sequoia Analytical on May 19, 1998.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9805C45 -01	LIQUID, S-7	05/18/98	Purgeable TPH/BTEX/MTBE

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





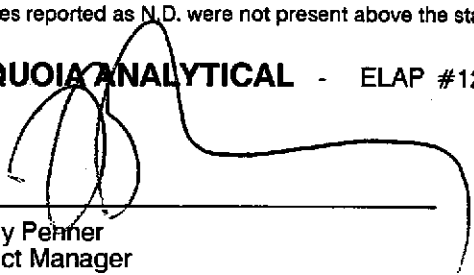
Blaine Tech Services 1680 Rogers Avenue San Jose, CA 95112	Client Proj. ID: Shell 999 San Pablo Ave. Sample Descript: S-7 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9805C45-01	Sampled: 05/18/98 Received: 05/19/98 Analyzed: 05/30/98 Reported: 06/11/98
Attention: Fran Thie		

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	113

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





**Sequoia
Analytical**

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

Client Project ID: Shell 999 San Pablo Ave.
Matrix: Liquid

Work Order #: 9805C45 -01

Reported: Jun 12, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Gasoline
Analy. Method:	EPA 8015M
Prep. Method:	EPA 5030

MS/MSD #: 701368405
Sample Conc.: N.D.
Prepared Date: 5/30/98
Analyzed Date: 5/30/98

MS % Recovery: 53

MSD % Recov.: 51

RPD: 3.8
RPD Limit: 0-30

LCS #: BLK053098

Prepared Date: 5/30/98
Analyzed Date: 5/30/98

LCS % Recov.: 105

MS/MSD	70-130
LCS	80-120
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.

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

9805C45.BLA <1>





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

Client Proj. ID: Shell 999 San Pablo Ave.

Received: 05/19/98

Lab Proj. ID: 9805C45

Reported: 06/11/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of _____ 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

