



September 14, 1995

Jennifer Eberle  
Alameda County Department  
of Environmental Health  
Hazardous Materials Division  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

ENVIRONMENTAL  
PROTECTION  
95 OCT -4 PM 2:42

Re: Third Quarter 1995  
ACDEH STID #1107  
Shell Service Station  
WIC #204-6001-0109  
29 Wildwood Avenue  
Piedmont, California  
WA Job #81-0463-205

Dear Ms. Eberle:

This status report satisfies the quarterly reporting requirements prescribed by California Administrative Code Title 23 Waters, Division 3, Chapter 16, Article 5, Section 2652.d.

**Third Quarter 1995 Activities:**

- Blaine Tech Services, Inc. (BTS) San Jose, California measured ground water depths and collected water samples from the site wells (Figures 1 and 2). BTS' report describing these activities and the analytic report for the ground water samples are included as Attachment A.
- Weiss Associates (WA) compiled the ground water elevation and analytic data (Tables 1 and 2, respectively), contoured ground water elevations and plotted benzene concentrations in ground water (Figure 2).

**Anticipated Fourth Quarter 1995 Activities:**

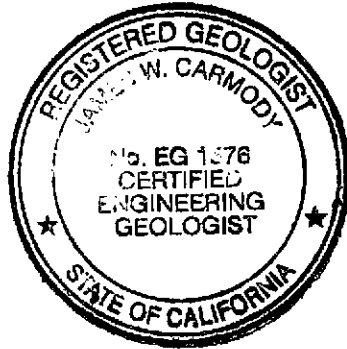
- WA will submit a Calwater report for the fourth quarter 1995.

Jennifer Eberle  
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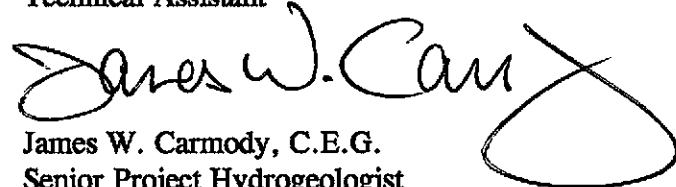
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Please call if you have any questions.

Sincerely,  
Weiss Associates



  
Grady Glasser  
Technical Assistant

  
James W. Carmody, C.E.G.  
Senior Project Hydrogeologist

Attachments: A - BTS' Ground Water Monitoring Report  
B - Sampling Frequency Modifications

cc: Jeff Granberry, Shell Oil Products Company, P.O. Box 4023 Concord, California 94524  
John Jang, Regional Water Quality Control Board - San Francisco Bay, 2101  
Webster Street, Suite 500, Oakland, California 94612

GSG/JWC:all  
1:SHR111065YQ2159Q799Q3R.DOC

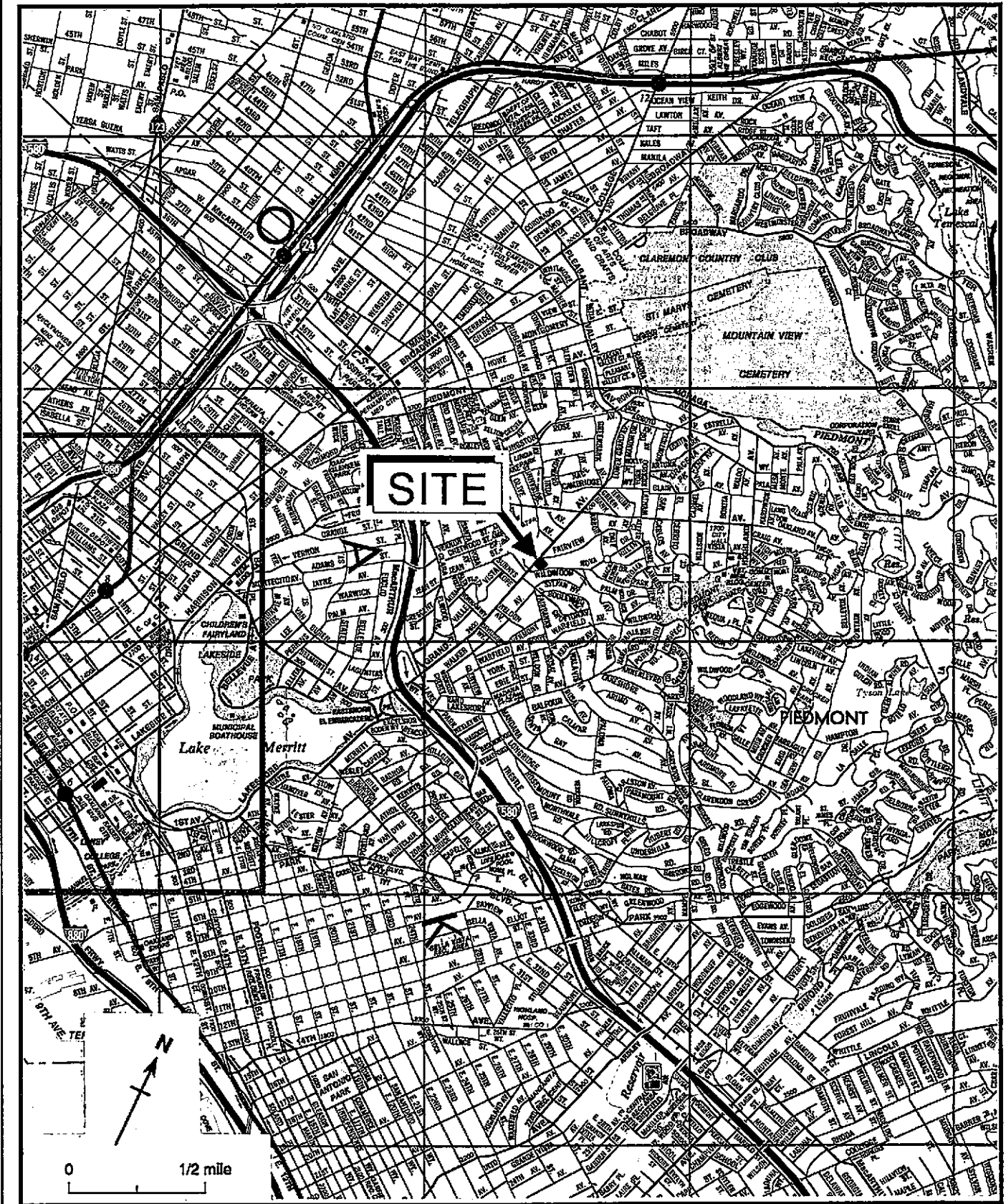


Figure 1. Site Location Map - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

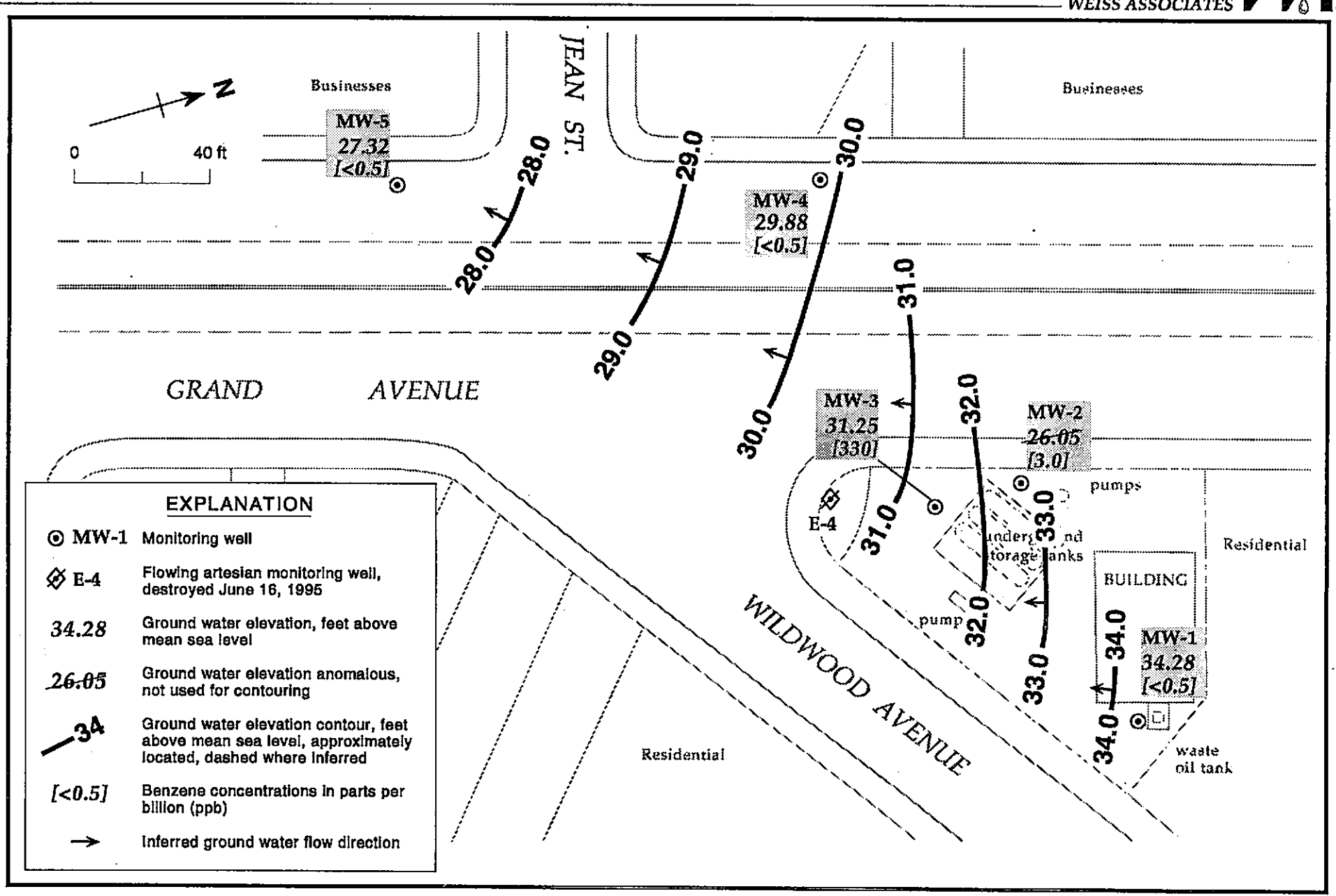


Figure 2. Monitoring Well Locations, Ground Water Elevation Contours and Benzene Concentrations in Ground Water - July 6, 1995 - Shell Service Station, WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	07/12/89	37.96	2.76	35.20
	01/30/90		3.10	34.86
	04/27/90		3.24	34.72
	07/31/90		4.26	33.70
	10/30/90		4.25	33.71
	01/31/91		3.66	34.30
	04/30/91		3.46	34.50
	07/30/91		4.14	33.82
	10/29/91		3.96	34.00
	01/20/92		3.59	34.37
	04/14/92		3.18	31.71
	07/21/92		4.17	33.79
	10/02/92		4.29	33.67
	01/20/93		2.32	35.64
	05/03/93		3.50	34.46
	06/28/93		3.76	34.20
	07/21/93		4.09	33.87
	10/19/93		3.58	34.38
	01/20/94		---	---
	04/12/94		3.60	34.36
07/20/94	4.10	33.86		
10/06/94	4.30	33.66		
01/20/95	2.94	35.02		
07/06/95	3.68	34.28		
MW-2	07/12/89	34.89	3.66	31.23
	01/30/90		3.49	31.40
	04/27/90		3.79	31.10
	07/31/90		4.03	30.86
	10/30/90		4.21	30.68
	01/31/91		4.09	30.80
	04/30/91		3.95	30.94
	07/30/91		4.07	30.82
	10/29/91		4.11	30.78
	01/20/92		3.86	31.03
	04/14/92		3.66	34.30
	07/21/92		3.92	30.97
	10/02/92		4.45	30.44
	01/20/93		3.74	31.15
	05/03/93		3.77	31.12
	06/28/93		3.96	30.93
07/21/93	4.39	30.50		
10/19/93	3.92	30.97		

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	01/20/94		4.45	30.44
	04/12/94		4.72	30.17
	07/20/94		5.32	29.57
	10/06/94		4.03	30.86
	01/20/95		3.89	31.00
	<b>07/06/95</b>		<b>8.84</b>	<b>26.05</b>
MW-3	07/12/89	35.00	3.83	31.17
	01/30/90		3.24	31.76
	04/27/90		4.02	30.98
	07/31/90		4.31	30.69
	10/30/90		4.52	30.48
	01/31/91		4.33	30.67
	04/30/91		3.79	31.21
	07/30/91		4.37	30.63
	10/29/91		4.00	31.00
	01/20/92		3.87	31.13
	04/14/92		3.15	31.85
	07/21/92		4.17	30.83
	10/02/92		4.43	30.57
	01/20/93		2.20	32.80
	05/03/93		3.50	31.50
	06/28/93		4.08	30.92
	07/21/93		4.12	30.88
	10/19/93		4.20	30.80
	01/20/94		4.08	30.92
	04/12/94		3.70	31.30
	07/20/94		4.26	30.74
	10/06/94		4.31	30.69
	01/20/95		3.00	32.00
	<b>07/06/95</b>		<b>3.75</b>	<b>31.25</b>
MW-4	01/30/90	33.73	4.50	29.23
	04/27/90		3.62	30.11
	07/31/90		4.19	29.54
	10/30/90		4.19	29.54
	01/31/91		4.49	29.24
	04/30/91		4.02	29.71
	07/30/91		4.39	29.34
	10/29/91		3.75	29.98
	01/20/92		3.94	29.79
	04/14/92		3.71	30.02
	07/21/92		4.02	29.71

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	10/02/92		4.13	29.60
	01/20/93		3.10	30.63
	05/03/93		3.70	30.03
	06/28/93		3.81	29.92
	07/21/93		3.81	29.92
	10/19/93		3.94	29.79
	01/20/94		4.00	29.73
	04/12/94		4.01	29.72
	07/20/94		3.91	29.82
	10/06/94		3.99	29.74
	01/20/95		3.56	30.17
	07/06/95		3.85	29.88
MW-5	01/30/90	31.38	7.12	24.26
	04/27/90		4.19	27.19
	07/31/90		4.09	27.29
	10/30/90		4.39	26.99
	01/31/91		4.49	26.89
	04/30/91		4.27	27.11
	07/30/91		4.32	27.06
	10/29/91		3.79	27.59
	01/20/92		4.09	27.29
	04/14/92		4.12	27.26
	07/21/92		4.13	27.25
	10/02/92		4.30	27.08
	01/20/93		3.12	28.26
	05/03/93		4.07	27.31
	06/28/93		4.08	27.30
	07/21/93		4.05	27.33
	10/19/93		4.20	27.18
	01/20/94		4.40	26.98
	04/12/94		4.18	27.20
	07/20/94		4.06	27.32
	10/06/94		4.01	27.37
	01/20/95		3.49	27.89
	07/06/95		4.06	27.32
E-4	07/12/89	34.63	a	>39.13
(Well destroyed on 6/16/95)	01/30/90		b	>34.63
	04/27/90		b	>34.63
	07/31/90		b	>34.63
	10/30/90		b	>34.63
	01/31/91		b	>34.63

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	04/30/91		b	> 34.63
	07/30/91		b	> 34.63
	10/29/91		b	> 34.63
	01/20/92		b	> 34.63
	04/14/92		b	> 34.63
	07/21/92		b	> 34.63
	10/02/92		b	> 34.63
	01/20/93		b	> 34.63
	05/03/93		b	> 34.63
	06/28/93		b	> 34.63
	07/21/93		b	> 34.63
	10/19/93		b	> 34.63
	01/20/94		b	> 34.63
	04/12/94		b	> 34.63
	07/20/94		b	> 34.63
	10/06/94		b	> 34.63
	01/20/95		b	> 34.63

a = Well E-4 is a flowing artesian well. The potentiometric surface was greater than 4.5 ft above the top of the well casing.  
 b = Well E-4 potentiometric surface was higher than the top of the well casing.



Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen <sup>a</sup>
MW-1 (1st and 3rd Quarters)	07/12/89	2.76	<50	<0.5	<1	<1	<3	---
	01/30/90	3.10	<50	<0.5	<0.5	<0.5	<0.5	---
	04/27/90	3.24	<50	<0.5	<0.5	<0.5	<0.5	---
	07/31/90	4.26	<50	<0.5	<0.5	<0.5	<0.5	---
	10/30/90	4.25	<50	<0.5	<0.5	<0.5	<0.5	---
	01/31/91	3.66	<50	<0.5	<0.5	<0.5	<0.5	---
	04/30/91	3.46	<50	0.8	0.6	<0.5	1.2	---
	07/30/91	4.14	<50	<0.5	<0.5	<0.5	<0.5	---
	10/29/91	3.96	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/92	3.59	<30	<0.3	<0.3	<0.3	<0.3	---
	04/14/92	3.18	<50	<0.5	<0.5	<0.5	<0.5	---
	07/21/92	4.17	<50	<0.5	<0.5	<0.5	<0.5	---
	10/02/92	4.29	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/93	2.32	<50	<0.5	<0.5	<0.5	<0.5	---
	05/04/93	3.50	<50	<0.5	<0.5	<0.5	<0.5	1,930
	07/21/93	4.09	<50	<0.5	<0.5	<0.5	<0.5	4,640
	10/19/93	3.58	50	<0.5	<0.5	<0.5	<0.5	4,310
	01/20/94 <sup>b</sup>	---	---	---	---	---	---	---
	04/12/94	3.60	<50	<0.5	<0.5	<0.5	<0.5	7,460
	07/20/94	4.10	<50	<0.5	<0.5	<0.5	<0.5	3,200
10/06/94	4.30	<50	<0.5	<0.5	<0.5	<0.5	3,200	
01/20/95	2.94	<50	<0.5	<0.5	<0.5	<0.5	10,600	
07/06/95	3.68	<50	<0.5	<0.5	<0.5	<0.5	---	
MW-2 (1st and 3rd Quarters)	07/12/89	3.66	60	2.7	<1	<1	<3	---
	01/30/90	3.49	<50	6.6	0.54	<0.5	0.93	---
	04/27/90	3.79	60	2.1	<0.5	<0.5	<0.5	---
	07/31/90	4.03	70	1.5	<0.5	<0.5	<0.5	---



Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen <sup>a</sup>
	10/30/90	4.21	70	<0.5	<0.5	0.7	1.6	---
	01/31/91	4.09	80	<0.5	0.9	<0.5	1.9	---
	04/30/91	3.95	100	5.9	0.7	0.6	2.0	---
	07/30/91	4.07	<50	<0.5	<0.5	<0.7	<0.5	---
	10/29/91	4.11	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/92	3.86	<30	0.84	<0.41	<0.3	<0.48	---
	04/14/92	3.66	70	16	3.1	<0.5	2.1	---
	07/21/92	3.92	<50	<0.5	<0.5	<0.5	<0.5	---
	10/02/92	4.45	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/93	3.74	<50	3.8	0.52	<0.5	<0.5	---
	05/04/93	3.77	680 <sup>d</sup>	2.8	<0.5	<0.5	<0.5	900
	07/21/93	4.39	<50	8.0	1.8	1.2	7.9	5,880
	10/19/93	3.92	<50	<0.5	<0.5	<0.5	<0.5	5,700
	01/20/94	4.45	<50	1.5	<0.5	<0.5	<0.5	3,200
	04/12/94	4.72	<50	2.9	<0.5	<0.5	<0.5	11,380
	07/20/94	5.32	<50	<0.5	<0.5	<0.5	<0.5	2,400
	10/06/94	4.03	<50	<0.5	<0.5	<0.5	<0.5	2,900
	01/20/95	3.89	290	28	<0.5	<0.5	<0.5	4,600
	07/06/95	3.84	120	3.0	<0.5	<0.5	<0.5	---
MW-3 (1st and 3rd Quarters)	07/12/89	3.83	3,900	380	99	41	30	---
	01/30/90	3.24	5,500	440	79	35	130	---
	04/27/90	4.02	4,500	310	37	26	110	---
	07/31/90	4.31	3,500	210	8.4	17	62	---
	10/30/90	4.52	2,300	610	<0.5	<0.5	28	---
	01/31/91	4.33	4,100	300	19	20	81	---
	04/30/91	3.79	3,800	370	8.6	19	60	---
	07/30/91	4.37	3,300	160	15	13	87	---
	10/29/91	4.00	1,000	35	2.9	2.8	8.1	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen <sup>a</sup>
	01/20/92	3.87	6,900	380	47	18	48	---
	04/14/92	3.15	6,000	480	41	38	55	---
	07/21/92	4.17	3,700	330	30	13	23	---
	10/02/92	4.43	4,200	260	13	10	12	---
	01/20/93	2.20	4,200	360	32	15	26	---
	01/20/93 <sup>dup</sup>	2.20	3,900	370	32	15	26	---
	05/04/93	3.50	12,000	290	120	520	620	630
	07/21/93	4.12	2,000	170	<10	12	11	4,340
	07/21/93 <sup>dup</sup>	4.12	2,000	170	<10	10	14	---
	10/19/93	4.20	2,000	240	<0.5	<0.5	<0.5	5,740
	01/20/94	4.08	4,200	280	<10	<10	<10	4,100
	01/20/94 <sup>dup</sup>	4.08	3,800	250	<10	<10	<10	4,100
	04/12/94	3.70	4,700	380	<10	<10	<10	10,620
	04/12/94 <sup>dup</sup>	3.70	3,400	370	<25	<25	<25	---
	07/20/94	4.26	5,100	320	15	77	34	2,300
	07/20/94 <sup>dup</sup>	4.26	4,400	250	13	14	32	---
	10/06/94	4.31	4,300	280	4.0	9.7	15	2,300
	01/20/95	3.00	4,600	180	16	18	10	11,100
	01/20/95 <sup>dup</sup>	3.00	4,300	170	15	12	7.2	---
	07/06/95	3.75	3,900	310	7.6	<0.5	13	---
	07/06/95 <sup>dup</sup>	3.75	4,100	330	7.9	<0.5	2.4	---
MW-4 (1st and 3rd Quarters)	01/31/90	4.50	<50	<0.5	<0.5	<0.5	<0.5	---
	04/27/90	3.62	130 <sup>c</sup>	<0.5	<0.5	<0.5	<0.5	---
	07/31/90	4.19	<50	<0.5	<0.5	<0.5	<0.5	---
	10/30/90	4.19	<50	<0.5	<0.5	<0.5	<0.5	---
	01/31/91	4.49	50 <sup>c</sup>	<0.5	<0.5	<0.5	<0.5	---
	04/30/91	4.02	<50	<0.5	<0.5	<0.5	<0.5	---
	07/30/91	4.39	<50	<0.5	<0.5	<0.5	<0.5	---

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G					Dissolved Oxygen <sup>2</sup>
			B	E	T	X		
<-----parts per billion (µg/L)----->								
	10/29/91	3.75	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/92	3.94	<30	<0.3	<0.3	<0.3	<0.3	---
	04/14/92	3.71	<50	<0.5	<0.5	<0.5	<0.5	---
	07/21/92	4.02	<50	<0.5	<0.5	<0.5	<0.5	---
	10/02/92	4.13	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/93	3.10	<50	<0.5	<0.5	<0.5	<0.5	---
	05/04/93	3.70	<50	<0.5	<0.5	<0.5	<0.5	1,740
	07/21/93	3.81	<50	0.56	<0.5	<0.5	<0.5	4,510
	10/10/93	3.94	<50	<0.5	<0.5	<0.5	<0.5	5,750
	01/20/94	4.00	<50	0.71	<0.5	<0.5	<0.5	4,400
	04/12/94	4.01	<50	<0.5	<0.5	<0.5	<0.5	7,290
	07/20/94	3.91	160	<0.5	<0.5	<0.5	<0.5	6,400
	10/11/94	3.99	410	<0.5	<0.5	<0.5	<0.5	5,000
	01/20/95	3.56	<50	<0.5	<0.5	<0.5	<0.5	4,900
	07/06/95	3.85	<50	<0.5	<0.5	<0.5	<0.5	---
MW-5 (1st and 3rd Quarters)	01/31/90	7.12	<50	<0.5	<0.5	<0.5	<0.5	---
	04/27/90	4.19	210c	<0.5	<0.5	<0.5	<0.5	---
	07/31/90	4.09	90	<0.5	<0.5	<0.5	<0.5	---
	10/30/90	4.39	100	0.8	0.6	0.7	1.4	---
	01/31/91	4.49	80c	<0.5	<0.5	<0.5	<0.5	---
	04/30/91	4.27	90	<0.5	<0.5	<0.5	<0.5	---
	07/30/91	4.37	90	<0.5	<0.5	<0.5	<0.5	---
	10/29/91	3.79	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/92	4.09	<30	<0.3	<0.3	<0.3	<0.3	---
	04/14/92	4.12	<50c	<0.5	<0.5	<0.5	<0.5	---
	07/21/92	4.13	74c	<0.5	<0.5	<0.5	<0.5	---
	10/02/92	4.30	76c	<0.5	<0.5	<0.5	<0.5	---
	01/20/93	3.12	72c	<0.5	<0.5	<0.5	<0.5	---



Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen <sup>a</sup>
	05/04/93	4.07	70c	<0.5	<0.5	<0.5	<0.5	1,620
	05/04/93 <sup>dup</sup>	4.07	80c	<0.5	<0.5	<0.5	<0.5	---
	07/21/93	4.05	<50	<0.5	<0.5	<0.5	<0.5	3,460
	10/19/93	4.20	51	<0.5	<0.5	<0.5	<0.5	3,820
	01/20/94	4.40	90	<0.5	<0.5	<0.5	<0.5	4,200
	04/12/94	4.18	67	<0.5	<0.5	<0.5	<0.5	---
	07/20/94	4.06	<50	<0.5	<0.5	<0.5	<0.5	3,200
	10/06/94	4.01	80	<0.5	<0.5	<0.5	<0.5	2,100
	10/06/94 <sup>dup</sup>	4.01	60	<0.5	<0.5	<0.5	<0.5	---
	01/20/95	3.49	<50	<0.5	<0.5	<0.5	<0.5	3,200
	07/06/95	4.06	<50	<0.5	<0.5	<0.5	<0.5	---
E-4 (well destroyed on 6/16/95)	07/12/89	d	<50	<0.5	<1	<1	<3	---
	01/31/90	d	<50	<0.5	<0.5	<0.5	<0.5	---
	04/27/90	d	120 <sup>c</sup>	<0.5	<0.5	<0.5	<0.5	---
	07/31/90	d	<50	<0.5	<0.5	<0.5	<0.5	---
	10/30/90	d	<50	<0.5	<0.5	<0.5	<0.5	---
	01/31/91	d	<50	<0.5	<0.5	<0.5	<0.5	---
	04/30/91	d	<50	<0.5	<0.5	<0.5	<0.5	---
	07/30/91	d	<50	<0.5	<0.5	0.6	<0.5	---
	10/29/91	d	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/92	d	<30	<0.3	<0.3	<0.3	<0.3	---
	04/14/92	d	<50	<0.5	<0.5	<0.5	<0.5	---
	07/21/92	d	<50	<0.5	<0.5	<0.5	<0.5	---
	10/02/92	d	<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/93	d	<50	<0.5	<0.5	<0.5	<0.5	---
	05/04/93	d	<50	<0.5	<0.5	<0.5	<0.5	630
	07/21/93	d	<50	5.4	1.0	0.72	4.4	5,440
	10/19/93	d	<50	<0.5	<0.5	<0.5	<0.5	5,630

Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G      B      E      T      X					Dissolved Oxygen <sup>a</sup>
			←-----parts per billion (µg/L)----->					
	01/20/94	d	<50	<0.5	<0.5	<0.5	<0.5	---
	04/12/94	d	<50	<0.5	<0.5	<0.5	<0.5	9,410
	07/20/94	d	<50	<0.5	<0.5	<0.5	<0.5	2,000
	10/06/94	d	<50	<0.5	<0.5	<0.5	<0.5	1,300
	01/20/95	d	<50	<0.5	<0.5	<0.5	<0.5	3,700
Trip Blank	07/12/89		<50	<0.5	<1	<1	<3	---
	01/31/90		<50	<0.5	<.5	<0.5	<0.5	---
	04/27/90		<50	<0.5	<0.5	<0.5	<0.5	---
	07/31/90		<50	<0.5	<0.5	<0.5	<0.5	---
	10/30/90		<50	<0.5	<0.5	<0.5	<0.5	---
	01/31/91		<50	<0.5	<0.5	<0.5	<0.5	---
	04/30/91		<50	<0.5	<0.5	<0.5	<0.5	---
	07/30/91		<50	<0.5	<0.5	<0.5	<0.5	---
	10/29/91		<50	<0.5	<0.5	<0.5	<0.5	---
	10/02/92		<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/93		<50	<0.5	<0.5	<0.5	<0.5	---
	05/03/93		<50	<0.5	<0.5	<0.5	<0.5	---
	07/21/93		<50	<0.5	<0.5	<0.5	<0.5	---
	10/19/93		<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/94		<50	<0.5	<0.5	<0.5	<0.5	---
	04/12/94		<50	<0.5	<0.5	0.71	<0.5	---
	07/20/94		<50	<0.5	<0.5	<0.5	<0.5	---
	10/06/94		<50	<0.5	<0.5	<0.5	<0.5	---
	01/20/95		<50	<0.5	<0.5	<0.5	<0.5	---
	07/06/95		<50	<0.5	<0.5	<0.5	<0.5	---



Table 2. Analytic Results for Ground Water, Shell Service Station WIC #204-6001-0109, 29 Wildwood Avenue, Piedmont, California (continued)

Well ID and Sampling Frequency	Date Sampled	Depth to Water (ft)	TPH-G	B	E	T	X	Dissolved Oxygen <sup>a</sup>
<-----parts per billion (µg/L)----->								
Bailer	04/27/90		110 <sup>e</sup>	<0.5	<0.5	<0.5	<0.5	---
Blank	01/31/91		<5	<0.5	<0.5	<0.5	<0.5	---
	10/02/92		ND	ND	ND	ND	ND	---
DTSC MCLs			NE	1	680	100 <sup>f</sup>	1,750	NA

**Abbreviations:**

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Modified EPA Method 8015  
 B = Benzene by EPA Method 602 or 8020  
 E = Ethylbenzene by EPA Method 602 or 8020  
 T = Toluene by EPA Method 602 or 8020  
 X = Xylenes by EPA Method 602 or 8020  
 HVOCs = Halogenated volatile organic compounds by EPA Method 601 or 624  
 --- = Not analyzed  
 NE = Not established  
 DTSC MCLs = California Department of Toxic Substances Control Maximum Contaminant Levels for drinking water  
 <n = Not detected above detection limit of n ppb

**Notes:**

a = Field measurement of dissolved oxygen concentration (ppb)  
 b = Well inaccessible, not sampled  
 c = Chromatogram contained discrete peaks; not representative of gasoline  
 d = Artesian well; potentiometric surface above top-of-casing elevation  
 e = Researched on later date due to inaccessibility from parked car  
 f = DTSC recommended action level for drinking water; MCL not established.



**ATTACHMENT A**

**BLAINE TECH'S GROUND WATER MONITORING REPORT**



July 21, 1995

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

Attn: Daniel T. Kirk

SITE:  
Shell WIC #204-6001-0109  
29 Wildwood Avenue  
Piedmont, California

QUARTER:  
3rd quarter of 1995

## QUARTERLY GROUNDWATER SAMPLING REPORT 950706-D-2

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This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a **TABLE OF WELL GAUGING DATA**. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

## **STANDARD PROCEDURES**

---

### **Evacuation**

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be removed in cases where the well dewateres and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

### **Decontamination**

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California.

### **Free Product Skimmer**

The column headed VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVE column. Gauging at such sites is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

### **Sample Containers**

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

### **Sampling**

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing pre-frozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

### **Sample Designations**

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

### **Chain of Custody**

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company Chain of Custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the Chain of Custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

## Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1386.

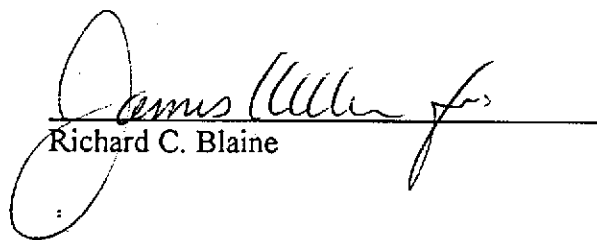
### Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

### Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

  
Richard C. Blaine

RCB/lp

Attachments: table of well gauging data  
chain of custody  
certified analytical report

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

### 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	7/6/95	TOC	--	NONE	--	--	3.68	13.15
MW-2	7/6/95	TOC	ODOR	NONE	--	--	3.84	11.50
MW-3 *	7/6/95	TOC	ODOR	NONE	--	--	3.75	8.96
MW-4	7/6/95	TOC	--	NONE	--	--	3.85	12.82
MW-5	7/6/95	TOC	--	NONE	--	--	4.06	15.91

\* Sample DUP was a duplicate sample taken from well MW-3.



**SHELL OIL COMPANY**  
RETAIL ENVIRONMENTAL ENGINEERING - WEST

**CHAIN OF CUSTODY RECORD**

Serial No: 950706-22

Date: 7-6-95

Page 1 of 1

7479

Site Address: 29 Wildwood Avenue, Piedmont

WIC#: 204-6001-0109

Shell Engineer: Daniel T. Kirk  
Phone No.: (510) 675-6168  
Fax #: 675-6160

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

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

Comments:

Sampled by: MIKE P. DILLOUGHERTY

Printed Name: MIKE P. DILLOUGHERTY

**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 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
					X				
					X				
					X				
					X				
					X				
					X				
					X				
					X				
					X				

LAB: NET PACIFIC

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
G.W. Monitoring <input checked="" type="checkbox"/>	4461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	4441	48 hours <input type="checkbox"/>
Soil Classify/Disposal <input type="checkbox"/>	4442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classify/Disposal <input type="checkbox"/>	4443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	4452	
Water Rem. or Sys. O & M <input type="checkbox"/>	4453	
Other <input type="checkbox"/>		

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

UST AGENCY: \_\_\_\_\_

Sample ID	Date	Sludge	Soil	Water	Air	No. of conds.	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
MW-1	7-6-95			W		3						X						
MW-2	7-6-95					3						X						
MW-3	7-6-95					3						X						
MW-4	7-6-95					3						X						
MW-5	7-6-95					3						X						
BB	7-6-95					3						X						
DUP	7-6-95					3						X						
TB	7-6-95					3						X						

7/7/95  
Seal Intact. (P)

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>MIKE P. DILLOUGHERTY</u>	Date: <u>7/7</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>G. Yumore</u>	Date: <u>7/7</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>GT YUMORE</u>	Date: <u>7/7</u>	Received (signature): <u>[Signature]</u>	Printed Name: _____	Date: _____
Relinquished By (signature): _____	Printed Name: _____	Date: _____	Received (signature): <u>[Signature]</u>	Printed Name: <u>THOMAS ROSSER</u>	Date: <u>7/8/95</u>

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



NATIONAL  
ENVIRONMENTAL  
TESTING, INC.

Santa Rosa Division  
3636 North Laughlin Road  
Suite 110  
Santa Rosa, CA 95403-8226  
Tel: (707) 526-7200  
Fax: (707) 541-2333

Jim Keller  
Blaine Tech Services  
985 Timothy Dr.  
San Jose, CA 95133

Date: 07/14/1995  
NET Client Acct. No: 1821  
NET Job No: 95.02640  
Received: 07/08/1995

Client Reference Information

Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Ken Larson  
Division Manager

Jennifer L. Roseberry  
Project Manager

Enclosure(s)





Client Name: Blaine Tech Services  
Client Acct: 1821  
NET Job No: 95.02640

Date: 07/14/1995  
ELAP Cert: 1386  
Page: 2

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

SAMPLE DESCRIPTION: MW-1

Date Taken: 07/06/1995

Time Taken:

NET Sample No: 245606

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/12/1995	3003
Purgeable TPH	ND		50	ug/L	5030/M8015		07/12/1995	3003
Carbon Range: C6 to C12	--						07/12/1995	3003
METHOD 8020 (GC, Liquid)	--						07/12/1995	3003
Benzene	ND		0.5	ug/L	8020		07/12/1995	3003
Toluene	ND		0.5	ug/L	8020		07/12/1995	3003
Ethylbenzene	ND		0.5	ug/L	8020		07/12/1995	3003
Xylenes (Total)	ND		0.5	ug/L	8020		07/12/1995	3003
SURROGATE RESULTS	--						07/12/1995	3003
Bromofluorobenzene (SURRE)	100			% Rec.	8020		07/12/1995	3003

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.





Client Name: Blaine Tech Services  
Client Acct: 1821  
NET Job No: 95.02640

Date: 07/14/1995  
ELAP Cert: 1386  
Page: 3

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

SAMPLE DESCRIPTION: MW-2

Date Taken: 07/06/1995

Time Taken:

NET Sample No: 245607

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/12/1995	3003
Purgeable TPH	120		50	ug/L	5030/M8015		07/12/1995	3003
Carbon Range: C6 to C12	--						07/12/1995	3003
METHOD 8020 (GC, Liquid)	--						07/12/1995	3003
Benzene	3.0	C	0.5	ug/L	8020		07/12/1995	3003
Toluene	ND		0.5	ug/L	8020		07/12/1995	3003
Ethylbenzene	ND		0.5	ug/L	8020		07/12/1995	3003
Xylenes (Total)	ND		0.5	ug/L	8020		07/12/1995	3003
SURROGATE RESULTS	--						07/12/1995	3003
Bromofluorobenzene (SURR)	120			% Rec.	8020		07/12/1995	3003

C : Positive result confirmed by secondary column or GC/MS analysis.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services  
 Client Acct: 1821  
 NET Job No: 95.02640

Date: 07/14/1995  
 ELAP Cert: 1386  
 Page: 4

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

SAMPLE DESCRIPTION: MW-3  
 Date Taken: 07/06/1995  
 Time Taken:  
 NET Sample No: 245608

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	10						07/12/1995	3003
Purgeable TPH	3,900		500	ug/L	5030/M8015		07/12/1995	3003
Carbon Range: C6 to C12	--						07/12/1995	3003
METHOD 8020 (GC, Liquid)	--						07/12/1995	3003
Benzene	310		5	ug/L	8020		07/12/1995	3003
Toluene	ND		5	ug/L	8020		07/12/1995	3003
Ethylbenzene	7.6		5	ug/L	8020		07/12/1995	3003
Xylenes (Total)	13		5	ug/L	8020		07/12/1995	3003
SURROGATE RESULTS	--						07/12/1995	3003
Bromofluorobenzene (SURR)	143	MI		% Rec.	8020		07/12/1995	3003

MI : Matrix Interference Suspected.

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services

Date: 07/14/1995

Client Acct: 1821

ELAP Cert: 1386

NET Job No: 95.02640

Page: 5

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

SAMPLE DESCRIPTION: MW-4

Date Taken: 07/06/1995

Time Taken:

NET Sample No: 245609

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/12/1995	3003
Purgeable TPH	ND		50	ug/L	5030/M8015		07/12/1995	3003
Carbon Range: C6 to C12	--						07/12/1995	3003
METHOD 8020 (GC, Liquid)	--						07/12/1995	3003
Benzene	ND		0.5	ug/L	8020		07/12/1995	3003
Toluene	ND		0.5	ug/L	8020		07/12/1995	3003
Ethylbenzene	ND		0.5	ug/L	8020		07/12/1995	3003
Xylenes (Total)	ND		0.5	ug/L	8020		07/12/1995	3003
SURROGATE RESULTS	--						07/12/1995	3003
Bromofluorobenzene (SURR)	98			% Rec.	8020		07/12/1995	3003

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services  
Client Acct: 1821  
NET Job No: 95.02640

Date: 07/14/1995  
ELAP Cert: 1386  
Page: 6

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

SAMPLE DESCRIPTION: MW-5

Date Taken: 07/06/1995

Time Taken:

NET Sample No: 245610

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/12/1995	3003
Purgeable TPH	ND		50	ug/L	5030/MB015		07/12/1995	3003
Carbon Range: C6 to C12	--						07/12/1995	3003
METHOD 8020 (GC, Liquid)							07/12/1995	3003
Benzene	ND		0.5	ug/L	8020		07/12/1995	3003
Toluene	ND		0.5	ug/L	8020		07/12/1995	3003
Ethylbenzene	ND		0.5	ug/L	8020		07/12/1995	3003
Xylenes (Total)	ND		0.5	ug/L	8020		07/12/1995	3003
SURROGATE RESULTS	--						07/12/1995	3003
Bromofluorobenzene (SURR)	106			% Rec.	8020		07/12/1995	3003

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services  
Client Acct: 1821  
NET Job No: 95.02640

Date: 07/14/1995  
ELAP Cert: 1386  
Page: 7

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

SAMPLE DESCRIPTION: EB

Date Taken: 07/06/1995

Time Taken:

NET Sample No: 245611

Parameter	Results	Flags	Reporting			Date	Date	Run
			Limit	Units	Method	Extracted	Analyzed	Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/12/1995	3003
Purgeable TPH	ND		50	ug/L	5030/M8015		07/12/1995	3003
Carbon Range: C6 to C12	--						07/12/1995	3003
METHOD 8020 (GC, Liquid)	--						07/12/1995	3003
Benzene	ND		0.5	ug/L	8020		07/12/1995	3003
Toluene	ND		0.5	ug/L	8020		07/12/1995	3003
Ethylbenzene	ND		0.5	ug/L	8020		07/12/1995	3003
Xylenes (Total)	ND		0.5	ug/L	8020		07/12/1995	3003
SURROGATE RESULTS	--						07/12/1995	3003
Bromofluorobenzene (SURRE)	98			% Rec.	8020		07/12/1995	3003

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services  
Client Acct: 1821  
NET Job No: 95.02640

Date: 07/14/1995  
ELAP Cert: 1386  
Page: 8

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

SAMPLE DESCRIPTION: DUP

Date Taken: 07/06/1995

Time Taken:

NET Sample No: 245612

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	10						07/12/1995	3003
Purgeable TPH	4,100		500	ug/L	5030/M8015		07/12/1995	3003
Carbon Range: C6 to C12	--						07/12/1995	3003
METHOD 8020 (GC, Liquid)	--						07/12/1995	3003
Benzene	330		5	ug/L	8020		07/12/1995	3003
Toluene	ND		5	ug/L	8020		07/12/1995	3003
Ethylbenzene	7.9		5	ug/L	8020		07/12/1995	3003
Xylenes (Total)	2.4		5	ug/L	8020		07/12/1995	3003
SURROGATE RESULTS	--						07/12/1995	3003
Bromofluorobenzene (SURRE)	146	MI		µ Rec.	8020		07/12/1995	3003

MI : Matrix Interference Suspected.

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Client Name: Blaine Tech Services  
Client Acct: 1821  
NET Job No: 95.02640

Date: 07/14/1995  
ELAP Cert: 1386  
Page: 9

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

SAMPLE DESCRIPTION: TB

Date Taken: 07/06/1995

Time Taken:

NET Sample No: 245613

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						07/12/1995	3003
Purgeable TPH	ND		50	ug/L	5030/M8015		07/12/1995	3003
Carbon Range: C6 to C12	--						07/12/1995	3003
METHOD 8020 (GC, Liquid)	--						07/12/1995	3003
Benzene	ND		0.5	ug/L	8020		07/12/1995	3003
Toluene	ND		0.5	ug/L	8020		07/12/1995	3003
Ethylbenzene	ND		0.5	ug/L	8020		07/12/1995	3003
Xylenes (Total)	ND		0.5	ug/L	8020		07/12/1995	3003
SURROGATE RESULTS	--						07/12/1995	3003
Bromofluorobenzene (SURR)	98			½ Rec.	8020		07/12/1995	3003

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Client Name: Blaine Tech Services

Date: 07/14/1995

Client Acct: 1821

ELAP Cert: 1386

NET Job No: 95.02640

Page: 10

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

## CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV	CCV	CCV	Units	Date Analyzed	Analyst Initials	Run Batch Number
	Standard	Standard	Standard				
	% Recovery	Amount Found	Amount Expected				
METHOD 5030/8015-M (Shell)							
Purgeable TPH	102.0	0.51	0.50	mg/L	07/12/1995	aal	3003
Benzene	102.4	5.12	5.00	ug/L	07/12/1995	aal	3003
Toluene	101.4	5.07	5.00	ug/L	07/12/1995	aal	3003
Ethylbenzene	107.0	5.35	5.00	ug/L	07/12/1995	aal	3003
Xylenes (Total)	112.7	16.9	15.0	ug/L	07/12/1995	aal	3003
Bromofluorobenzene (SURR)	106.0	106	100	% Rec.	07/12/1995	aal	3003

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.





Client Name: Blaine Tech Services  
Client Acct: 1821  
NET Job No: 95.02640

Date: 07/14/1995  
ELAP Cert: 1386  
Page: 11

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

## METHOD BLANK REPORT

Parameter	Method	Reporting		Date	Analyst	Run
	Blank	Amount	Limit	Analyzed	Initials	Batch
	Found		Units			Number
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	07/12/1995	aal	3003
Benzene	ND	0.5	ug/L	07/12/1995	aal	3003
Toluene	ND	0.5	ug/L	07/12/1995	aal	3003
Ethylbenzene	ND	0.5	ug/L	07/12/1995	aal	3003
Xylenes (Total)	ND	0.5	ug/L	07/12/1995	aal	3003
Bromofluorobenzene (SURR)	95		% Rec.	07/12/1995	aal	3003

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



Client Name: Blaine Tech Services

Date: 07/14/1995

Client Acct: 1821

ELAP Cert: 1386

NET Job No: 95.02640

Page: 12

Ref: Shell 29 Wildwood Avenue, Piedmont, CA./950706-D2

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Spike Amount	Sample Conc.	Matrix Spike Dup.			Date Analyzed	Run Batch	Sample Spiked
	% Rec.	% Rec.	RPD			Conc.	Conc.	Units			
METHOD 5030/8015-M (Shell)											
Purgeable TPH	94.0	92.0	2.2	0.5	ND	0.47	0.46	mg/L	07/12/1995	3003	245606
Benzene	91.1	87.8	3.7	9.0	ND	8.2	7.9	ug/L	07/12/1995	3003	245606
Toluene	91.6	89.6	2.2	33.5	ND	30.7	30.0	ug/L	07/12/1995	3003	245606

NOTE: Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety.



## KEY TO ABBREVIATIONS and METHOD REFERENCES

- < : Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
- \* : Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
- ICVS : Initial Calibration Verification Standard (External Standard).
- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than applicable listed reporting limit.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference,  $100 \text{ (Value 1 - Value 2) / mean value}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- umhos/cm : Micromhos per centimeter.

### Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

COOLER RECEIPT FORM

Project: 950706-02 Log No: 7479  
Cooler received on: 7/8/95 and checked on 7/8/95 by [Signature]  
(signature)

- Were custody papers present?.....YES NO
- Were custody papers properly filled out?.....YES NO
- Were the custody papers signed?.....YES NO
- Was sufficient ice used?.....YES NO TEMP: 00c
- Did all bottles arrive in good condition (unbroken)?.....YES NO
- Did bottle labels match COC?.....YES NO
- Were proper bottles used for analysis indicated?.....YES NO
- Correct preservatives used?.....YES NO
- VOA vials checked for headspace bubbles?.....YES NO

Note which voas (if any) had bubbles:\*

Sample descriptor:

FB  
IB  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Number of vials:

3  
1  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*All VOAs with headspace bubbles have been set aside so they will not be used for analysis.....YES NO

List here all other jobs received in the same cooler:

Client Job #

NET log #

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(coolerrec)