



January 5, 1996

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

STID 3670

95 JAN 12 PM 12:56
ENVIRONMENTAL
PROTECTION
DIVISION

Re: **Fourth Quarter 1995**
Shell Service Station
WIC #204-0079-0109
999 San Pablo Avenue
Albany, California
WA Job #81-0699-205

Dear Ms. Hugo:

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.

Fourth Quarter 1995 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells scheduled to be sampled this quarter (Figures 1 and 2). Well S-5 located immediately adjacent to the ARCO station across Marin Avenue contained 0.54 ft of separate-phase hydrocarbons, probably originating from the ARCO station, and was therefore not sampled. BTS' report describing these activities and the analytic report for the ground water samples are included as Attachment A.
- Weiss Associates (WA) calculated ground water elevations and compiled the analytic data (Tables 1 and 2) and prepared a ground water elevation contour map (Figure 2).

Anticipated First Quarter 1996 Activities:

WA will submit a report presenting the results of the first quarter 1996 ground water sampling and ground water depth measurements. The report will include tabulated chemical

analytic results and ground water elevations, a ground water elevation contour map and plotted benzene concentrations in ground water.

Conclusions and Recommendations:

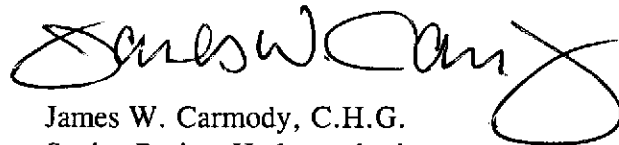
- Since the separate-phase hydrocarbons measured in monitoring well S-5 appear to originate from the ARCO Station across Marin Avenue south of the Shell site, Shell does not intend to install a hydrocarbon skimmer or bail separate-phase hydrocarbons from this well.
- Hydrocarbon degrading microbes were previously detected and are likely to remain active in the subsurface at the site.
- WA recommends continued monitoring at this time according to the sampling frequency schedule originally proposed in our first quarter 1994 quarterly monitoring report.

Please call if you have any questions.

Sincerely,
Weiss Associates



Grady S. Glasser
Technical Assistant



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

Attachments: A - Blaine Tech's Ground Water Monitoring Report

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

GSG/JWC:all
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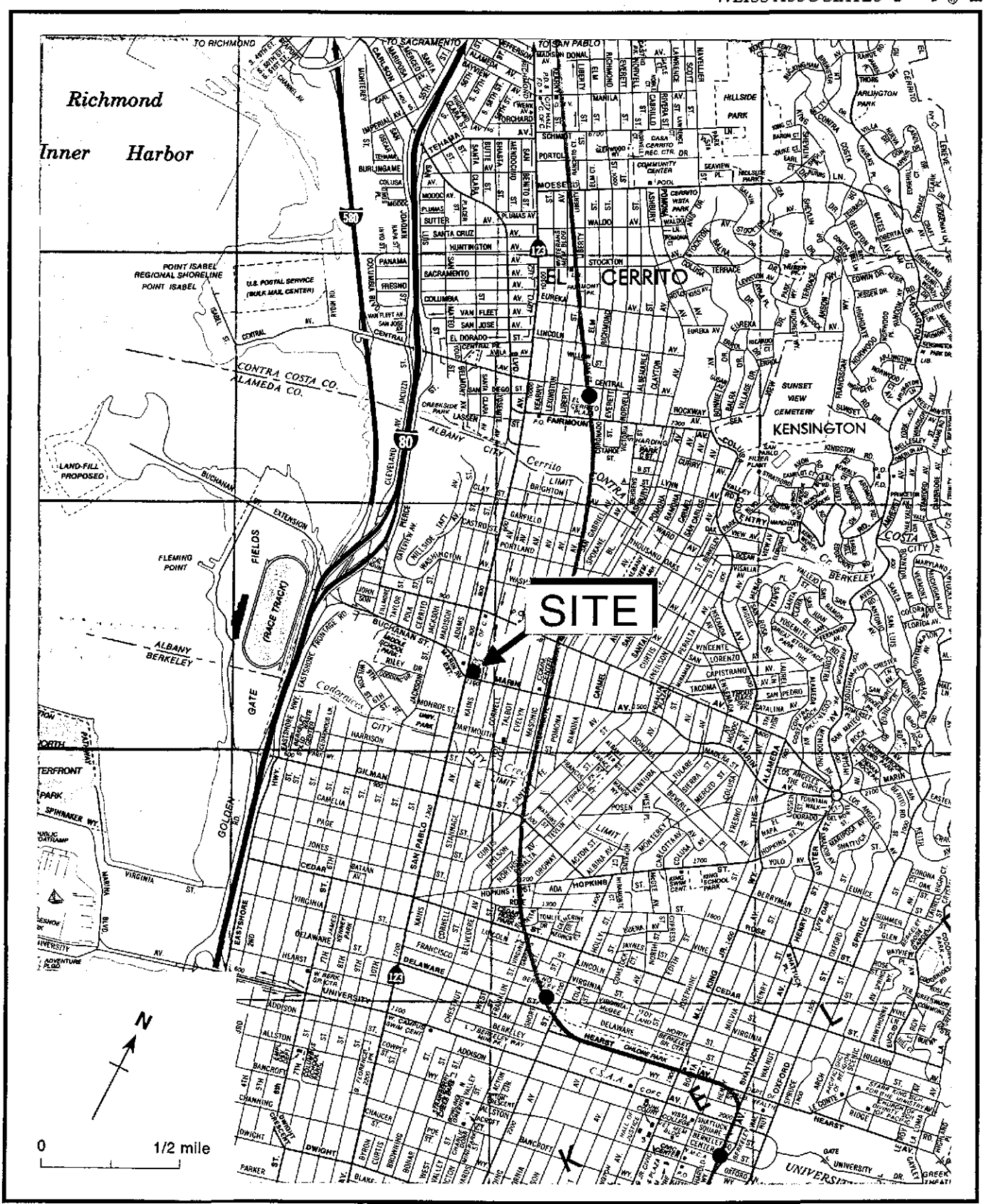
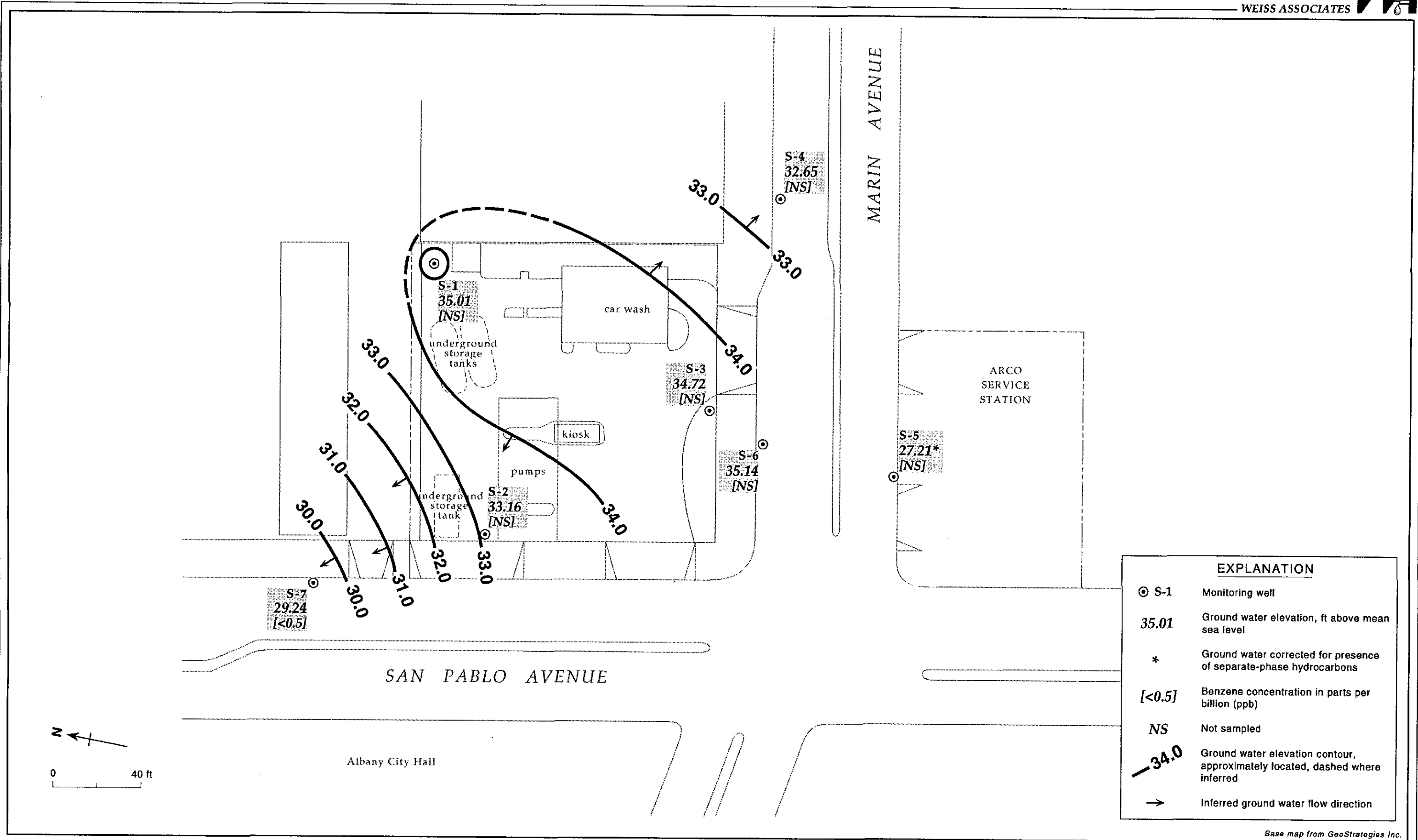


Figure 1. Site Location Map - Shell Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California



EXPLANATION	
⊙ S-1	Monitoring well
35.01	Ground water elevation, ft above mean sea level
*	Ground water corrected for presence of separate-phase hydrocarbons
[<0.5]	Benzene concentration in parts per billion (ppb)
NS	Not sampled
-34.0	Ground water elevation contour, approximately located, dashed where inferred
→	Inferred ground water flow direction

Base map from GeoStrategies Inc.

Figure 2. Monitoring Well Locations, Ground Water Elevation Contours, and Benzene Concentrations in Ground Water - October 31, 1995- Shell Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

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

Well ID	Date	Top-of-Vault Elevation	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft) ^a	Ground Water Elevation (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		
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
	04/21/95		7.01	---	33.72
07/28/95	7.82	---	32.91		
10/31/95	7.57	---	33.16		
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



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

Well ID	Date	Top-of-Vault Elevation	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft) ^a	Ground Water Elevation (ft above msl)
	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
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
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

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

Well ID	Date	Top-of-Vault Elevation	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft) ^a	Ground Water Elevation (ft above msl)
	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
	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
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
S-7	05/13/91	40.10	10.56	---	29.54
	08/23/91		11.16	---	28.94
	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

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

Well ID	Date	Top-of-Vault Elevation	Depth to Water (ft)	Separate-Phase Hydrocarbon Thickness (ft) ^a	Ground Water Elevation (ft above msl)
	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

Notes:

a = When separate-phase hydrocarbons are present, ground water elevation corrected by the relation: corrected ground water elevation = (top-of-box elevation) - (depth to water) + (0.8 x separate-phase hydrocarbon thickness)

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

Well ID & Sampling Frequency	Date	Depth to Water (ft)	TPH-G	←————— parts per billion (µg/L) —————→				DO (ppm)	HDM Units units/L
				B	T	E	X		
S-1 (Bi-annually, 1st & 3rd Qtrs)	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	---	---
	07/29/93	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	---
S-2 (Bi-annually, 1st & 3rd Qtrs)	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	---	---
	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	---	---	

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

Well ID & Sampling Frequency	Date	Depth to Water (ft)	TPH-G	← parts per billion (µg/L) →				DO (ppm)	HDM Units units/L
				B	T	E	X		
	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	---	---
	01/26/95	6.38	21,000	790	12	290	570	5.5	10 ⁴ to 10 ⁵ ^{ab}
	07/28/95	7.82	14,000	2,400	360	960	370	4.0	---
S-3 (Bi-annually, 1st & 3rd Qtrs)	05/13/91	7.90	3,300	30	3.6	26	13	---	---
	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	---	---
	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	---
S-4 (Annually 1st Qtr)	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 ^c	<0.5	<0.5	<0.5	<0.5	---	---
	05/06/92	7.21	54	<0.5	<0.5	<0.5	<0.5	---	---

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

Well ID & Sampling Frequency	Date	Depth to Water (ft)	TPH-G	parts per billion (µg/L)				DO (ppm)	HDM Units units/L
				B	T	E	X		
	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	---	---
	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	---	---	---	---	---	---	---
S-5 (Quarterly)	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}			---	---	---	---	---	---	

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

Well ID & Sampling Frequency	Date	Depth to Water (ft)	TPH-G	←————— parts per billion (µg/L) —————→				DO (ppm)	HDM Units units/L
				B	T	E	X		
S-6 (Bi-annually, 1st & 3rd Qtrs)	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	---
S-7 (Quarterly)	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	---	---	

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

Well ID & Sampling Frequency	Date	Depth to Water (ft)	TPH-G ←	B ←	T ←	E →	X →	DO (ppm)	HDM Units units/L
			parts per billion (µg/L)						
	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	---	---
	01/26/95	7.75	<50	<0.5	<0.5	<0.5	<0.5	4.6	10 ³ to 10 ⁵ ^{ab}
	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	---
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	---	---
DTSC MCLs			NE	1	100 ^f	680	1,750	---	---



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

Abbreviations:

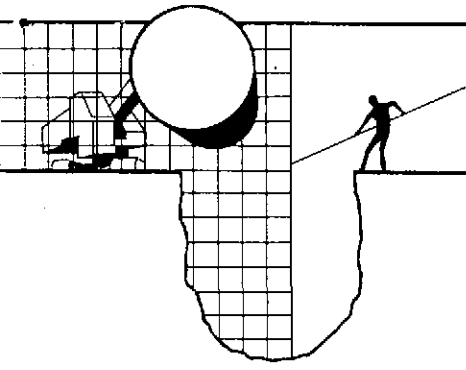
TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
B = Benzene by EPA Method 8020
T = Toluene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
X = Xylenes by EPA Method 602 or 8020
--- = Not analyzed
DTSC MCLs = California Department of Toxic Substances Control maximum
contaminant levels for drinking water
NE = Not established
< n = Not detected at detection limits of n ppb
dup = Duplicate sample
SPH = Separate-phase hydrocarbons detected, no sample collected
DO = Dissolved Oxygen
HDM = Hydrocarbon Degrading Microbes

Notes:

a = Simple method
b = Estimated number
c = Compounds detected and calculated as gasoline are not characteristic of the
standard gasoline chromatographic pattern
d = Well inaccessible
e = Sample analyzed for Total Dissolved Solids (450,000 ppb)
f = DTSC recommended action level for drinking water; MCL not established

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

November 21, 1995

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

Attn: R. Jeff Granberry

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

4th Quarter 1995

Quarterly Groundwater Monitoring Report 951031-K-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 black ink, appearing to read 'Francis Thie', written in a cursive style.

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 IMMISCIBLES LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLES LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1	10/31/95	TOB	--	NONE	--	--	7.72	11.45
S-2	10/31/95	TOB	--	NONE	--	--	7.57	11.82
S-3	10/31/95	TOB	--	NONE	--	--	6.74	11.94
S-4	10/31/95	TOB	--	NONE	--	--	8.45	13.76
S-5	10/31/95	TOB	FREE PRODUCT	12.67	0.54	--	13.21	--
S-6	10/31/95	TOB	--	NONE	--	--	4.98	14.81
S-7	10/31/95	TOB	--	NONE	--	--	10.86	14.68



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 951031-KL

Date: 10/31

Page 1 of 1

Site Address: 999 San Pablo Ave., Albany

WIC#: 204-0079-0109

Shell Engineer: Dan Kirk
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

Commons:

Sampled by: KCB

Printed Name: Keith C. Brown

Analysis Required

LAB: Net

CHECK ONE (1) BOX ONLY	CI/DI	TURN AROUND TIME
Quantity Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Classfy/Dkposal <input type="checkbox"/>	6442	15 days <input checked="" type="checkbox"/> (Normal)
Water Classfy/Dkposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6462	
Water Rem. or Sys. O & M <input type="checkbox"/>	6463	
Other <input type="checkbox"/>		

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

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				

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.
S-7 ✓	10/31			W		3
TB ✓	10/31			W		2

CUSTODY SEALED

Date 10/31/95 Time 1530 Initials CS
SEAL INTACT?
 Yes No Initials JK

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Keith C. Brown</u>	Date: <u>11-1-95</u> Time: <u>1330</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>Phyllis Smart</u>	Date: <u>11/1/95</u> Time: <u>1330</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Phyllis Smart</u>	Date: <u>11-1-95</u> Time: <u>1530</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>PAM GREENE</u>	Date: <u>11/2/95</u> Time: <u>08:00</u>
Relinquished By (signature):	Printed Name:	Date:	Received (signature):	Printed Name:	Date:

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

VIA: NCS



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

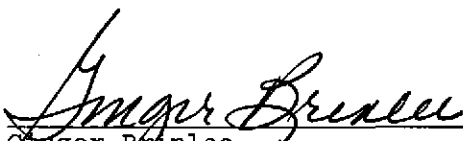
Date: 11/10/1995
NET Client Acct. No: 1821
NET Job No: 95.04265
Received: 11/02/1995

Client Reference Information

Shell 999 San Pablo Ave., Albany, CA/951031-K2

Sample analysis in support of the project referenced above has been completed and results are presented on the 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 free to call me at (707) 541-2305.

Submitted by:



Ginger Branlee
Project Coordinator

Enclosure (s)





Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 95.04265

Date: 11/10/1995
ELAP Cert: 1386
Page: 2

Ref: Shell 999 San Pablo Ave., Albany, CA/951031-K2

SAMPLE DESCRIPTION: S-7

Date Taken: 10/31/1995

Time Taken:

NET Sample No: 254661

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						11/07/1995	3333
Purgeable TPH	ND		50	ug/L	5030/M8015		11/07/1995	3333
Carbon Range: C6 to C12	--						11/07/1995	3333
METHOD 8020 (GC, Liquid)	--						11/07/1995	3333
Benzene	ND		0.5	ug/L	8020		11/07/1995	3333
Toluene	ND		0.5	ug/L	8020		11/07/1995	3333
Ethylbenzene	ND		0.5	ug/L	8020		11/07/1995	3333
Xylenes (Total)	ND		0.5	ug/L	8020		11/07/1995	3333
SURROGATE RESULTS	--						11/07/1995	3333
Bromofluorobenzene (SURRE)	88			% Rec.	8020		11/07/1995	3333

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: 95.04265

Date: 11/10/1995
ELAP Cert: 1386
Page: 3

Ref: Shell 999 San Pablo Ave., Albany, CA/951031-K2

SAMPLE DESCRIPTION: TB
Date Taken: 10/31/1995
Time Taken:
NET Sample No: 254662

Parameter	Results	Flags	Reporting		Method	Date	Date	Run
			Limit	Units		Extracted	Analyzed	Batch
No.								
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						11/07/1995	3333
Purgeable TPH	ND		50	ug/L	5030/M8015		11/07/1995	3333
Carbon Range: C6 to C12	--						11/07/1995	3333
METHOD 8020 (GC, Liquid)	--						11/07/1995	3333
Benzene	ND		0.5	ug/L	8020		11/07/1995	3333
Toluene	ND		0.5	ug/L	8020		11/07/1995	3333
Ethylbenzene	ND		0.5	ug/L	8020		11/07/1995	3333
Xylenes (Total)	ND		0.5	ug/L	8020		11/07/1995	3333
SURROGATE RESULTS	--						11/07/1995	3333
Bromofluorobenzene (SURR)	91			% Rec.	8020		11/07/1995	3333

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: 95.04265

Date: 11/10/1995
ELAP Cert: 1386
Page: 4

Ref: Shell 999 San Pablo Ave., Albany, CA/951031-K2

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	88.0	0.44	0.50	mg/L	11/07/1995	dat3	3333
Benzene	90.6	4.53	5.00	ug/L	11/07/1995	dat3	3333
Toluene	88.8	4.44	5.00	ug/L	11/07/1995	dat3	3333
Ethylbenzene	95.2	4.76	5.00	ug/L	11/07/1995	dat3	3333
Xylenes (Total)	93.5	14.02	15.0	ug/L	11/07/1995	dat3	3333
Bromofluorobenzene (SURR)	94.0	94	100	% Rec.	11/07/1995	dat3	3333

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: 95.04265

Date: 11/10/1995
ELAP Cert: 1386
Page: 5

Ref: Shell 999 San Pablo Ave., Albany, CA/951031-K2

METHOD BLANK REPORT

Parameter	Method	Reporting	Units	Date	Analyst	Run
	Blank					
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	11/07/1995	dat3	3333
Benzene	ND	0.5	ug/L	11/07/1995	dat3	3333
Toluene	ND	0.5	ug/L	11/07/1995	dat3	3333
Ethylbenzene	ND	0.5	ug/L	11/07/1995	dat3	3333
Xylenes (Total)	ND	0.5	ug/L	11/07/1995	dat3	3333
Bromofluorobenzene (SURR)	89		% Rec.	11/07/1995	dat3	3333

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: 95.04265

Date: 11/10/1995
ELAP Cert: 1386
Page: 6

Ref: Shell 999 San Pablo Ave., Albany, CA/951031-K2

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike			Spike Amount	Sample Conc.	Matrix Spike			Date Analyzed	Run Batch	Sample Spiked
	Spike % Rec.	Dup % Rec.	RPD			Spike Conc.	Dup. Conc.	Units			
METHOD 5030/8015-M (Shell)											
Purgeable TPH	88.0	86.0	2.3	0.50	ND	0.44	0.43	mg/L	11/07/1995	3333	254661
Benzene	101.4	100.0	1.4	7.3	ND	7.4	7.3	ug/L	11/07/1995	3333	254661
Toluene	95.9	93.7	2.3	26.9	ND	25.8	25.2	ug/L	11/07/1995	3333	254661

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: 951031-K2 Log No: 9088
Cooler received on: 11/2/95 and checked on 11/2/95 by Jim Greene
(signature) Jim Greene

- 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
- 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

TEMP 3°

Note which voas (if any) had bubbles:*

Sample descriptor:
1B

Number of vials:
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 #
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

BLAINE TECH SERVICES INC.

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

CHAIN OF CUSTODY
951031-K2

CLIENT
Shell

SITE
**999 San Pablo Ave
Albany, Ca**

SAMPLE I.D.	MATRIX S = SOIL W = H2O	CONTAINERS	
		TOTAL	VOL
S-7 1010		1/6	V/A

CONDUCT ANALYSIS TO DETECT						
C = COMPOSITE ALL CONTAINERS	X	ADM				

LAB Crosby DHS # _____

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

EPA RWQCB REGION _____
 LIA
 OTHER 9510250 R1-11

SPECIAL INSTRUCTIONS

**SEE ATTACHED SHELL COC
FOR BILLING INFO.**

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN	
	10/31/95	1015	Keith Brown	As Contracted	
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[Signature]	10/31/95	1015	[Signature]	10/31/95	10.15
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[Signature]	10/31/95	14.00	G.O. 1436	10/31/95	1400
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
G.O. 1436	10-31-98	1520	[Signature]	10/31/95	08:30
SHIPPED VIA	DATE SENT	TIME SENT	COOLER #		

LAB RECEIVING #: 9510.250

REPORT DATE: 11/15/95
REPORTED TO: BLAINE TECH SERVICES, INC.
ATTN.: MR. JIM KELLER
985 TIMOTHY DRIVE
SAN JOSE, CA 95133
WIC#: 204-0079-0109
PROJECT #: 951031-K2
PROJECT NAME: SHELL-999 SAN PABLO AVE.

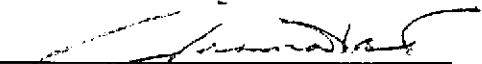
DATE SAMPLED: 10/31/95
DATE RECEIVED: 10/31/95
OF SAMPLES: 1
SAMPLE MATRIX: LIQUID
SAMPLE ID: S-7

SAMPLE HANDLING & CONTROL STATEMENT

The above mentioned sample was received in appropriate container accompanied by a fully signed and dated chain-of-custody record. The container was assigned a unique identification number and had sufficient amount for the test requested unless otherwise noted in the accompanying laboratory report. There were no site specific quality control requirements made at the time of sample submittal. Sample submitted did not exceed the holding time of the requested test parameters.

QUALITY CONTROL SUMMARY STATEMENT

Laboratory Quality Control parameters and results of instrument calibration standards were all within control limits and the analytical data hereby submitted falls within acceptable limits of accuracy and precision unless otherwise indicated. Please see the attached Quality Control Data for additional information.

SUBMITTED BY: 
Girma Selassie
QA/QC Director



The information contained in this cover sheet is an integral part of the attached analytical report.

DOHS Lab Certificate #: 1552
Expiration Date: Awaiting Renewal

A2LA Certificate #: 0389.01
Expiration Date: September 30, 1996

COVER SHEET



Analytical Report

1101 South Richfield Road Placentia, California 92670 • 714-777-1425 • 1-800-3 CROSBY • FAX 714-777-3926

ENVIRONMENTAL • CHEMICAL • MICROBIOLOGICAL • TESTING SERVICES



CLIENT: BLAINE TECH SERVICES, INC.
ATTN.: MR. JIM KELLER

LAB RECEIVING#: 9510.250

WIC #: 204-0079-0109
PROJECT #: 951031-K2
PROJECT NAME: SHELL-999 SAN PABLO AVE.

MATRIX: LIQUID

Prepared: 11/6/95
Analyzed: 11/13-14/95
Analyst: CM/AR

Spl. Prep. Meth.: EPA 5030\SIMPLE METHOD

LAB ID: AA67999
SAMPLE DESCRIPTION: S-7

Liquid Dilution	Concentration of Hydrocarbon				
	Benzene	Toluene	Ethyl Benzene	p,m-Xylene	o-Xylene
10 ⁻¹	0.6	0.5	0.7	1.8	9.6
10 ⁻²	ND	ND	ND	0.8	0.8
10 ⁻³	39.8	ND	ND	0.5	54.2
10 ⁻⁴	87.5	31.3	26.5	58.0	54.2
10 ⁻⁵	103.3	36.0	32.1	64.7	60.1
10 ⁻⁶	281.8	239.6	221.8	405.3	243.4
Control (azide-inhibited)	461.9	452.6	453.6	825.0	469.5
DETECTION LIMIT	0.5	0.5	0.5	0.5	0.5
BTEX-Degrading units/l (estimated)	10 ³	10 ⁵	10 ⁵	10 ⁵	10 ²

NOTES:

ND denotes Not Detected at the Indicated detection limit.

This report is preceded by a cover sheet that contains vital information.

Approved by the State of California, Department of Health Services
This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction or use of the Laboratory's name for advertising or publicity without authorization is prohibited.