Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608-2411 Fax: 510-547-5043 Phone: **510-450-6000**

June 8, 1995

Britt Johnson
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: **Second Quarter 1995**
Shell Service Station
WIC #204-0079-0109
999 San Pablo Avenue
Albany, California
WA Job #81-0699-105

Dear Mr. Johnson:

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

Second 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. Well S-5 located immediately adjacent to the ARCO station across Marin Avenue contained 1.17 ft of separate-phase hydrocarbons, probably originating from the ARCO station, and was 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).

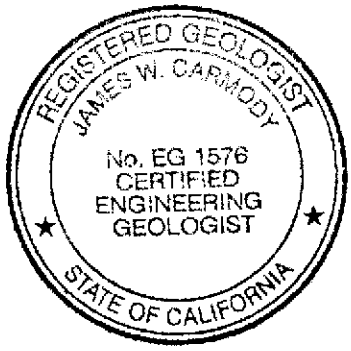
Anticipated Third Quarter 1995 Activities:

WA will submit a report presenting the results of the third quarter 1995 ground water sampling and ground water depth measurements. The report will include tabulated chemical analytic results, ground water elevations and a ground water elevation contour map.

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, WA 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 in accordance 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.E.G.
Senior Project Hydrogeologist

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

cc: Dan Kirk, Shell Oil 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:eac
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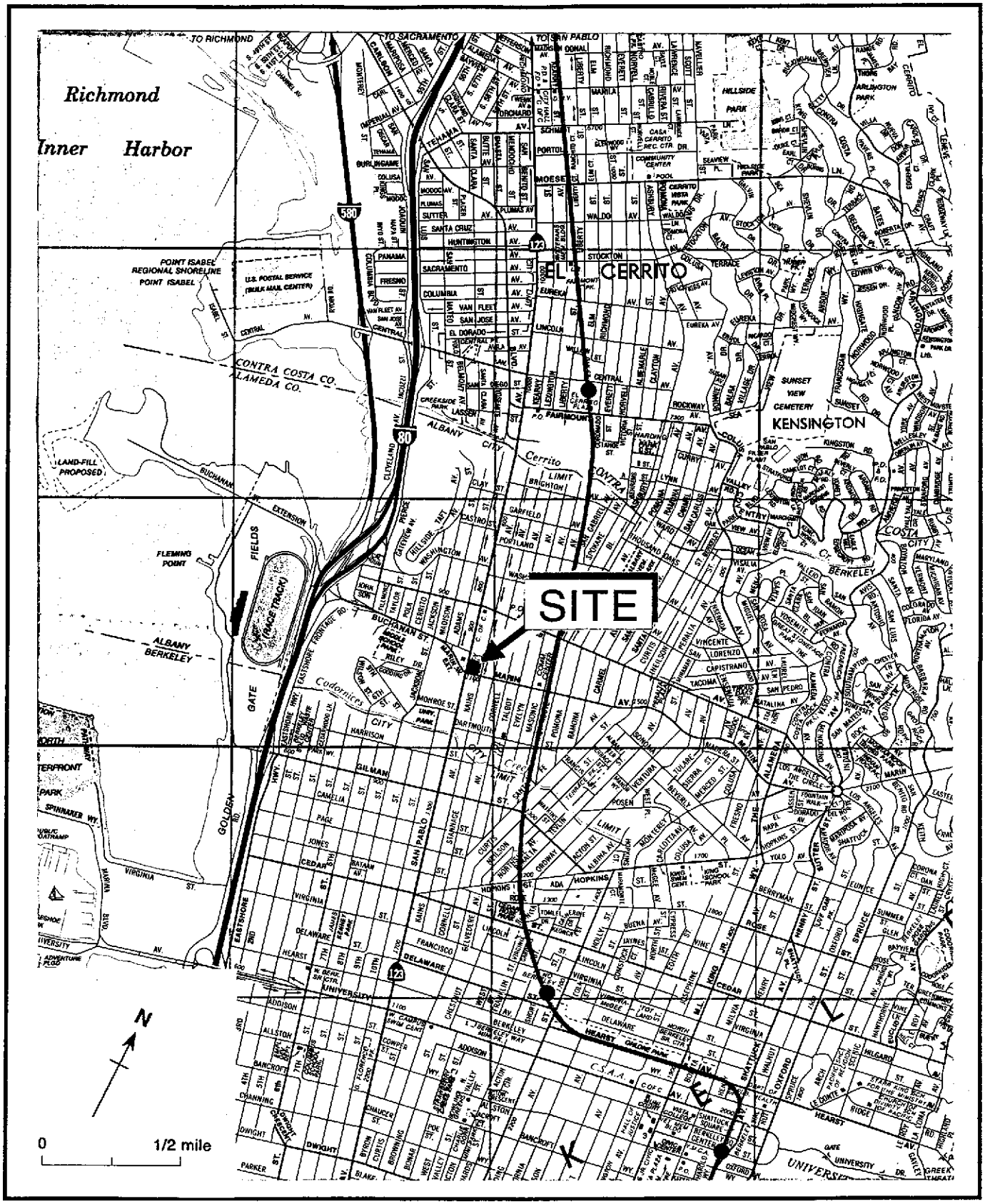

Figure 1. Site Location Map - Shell Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

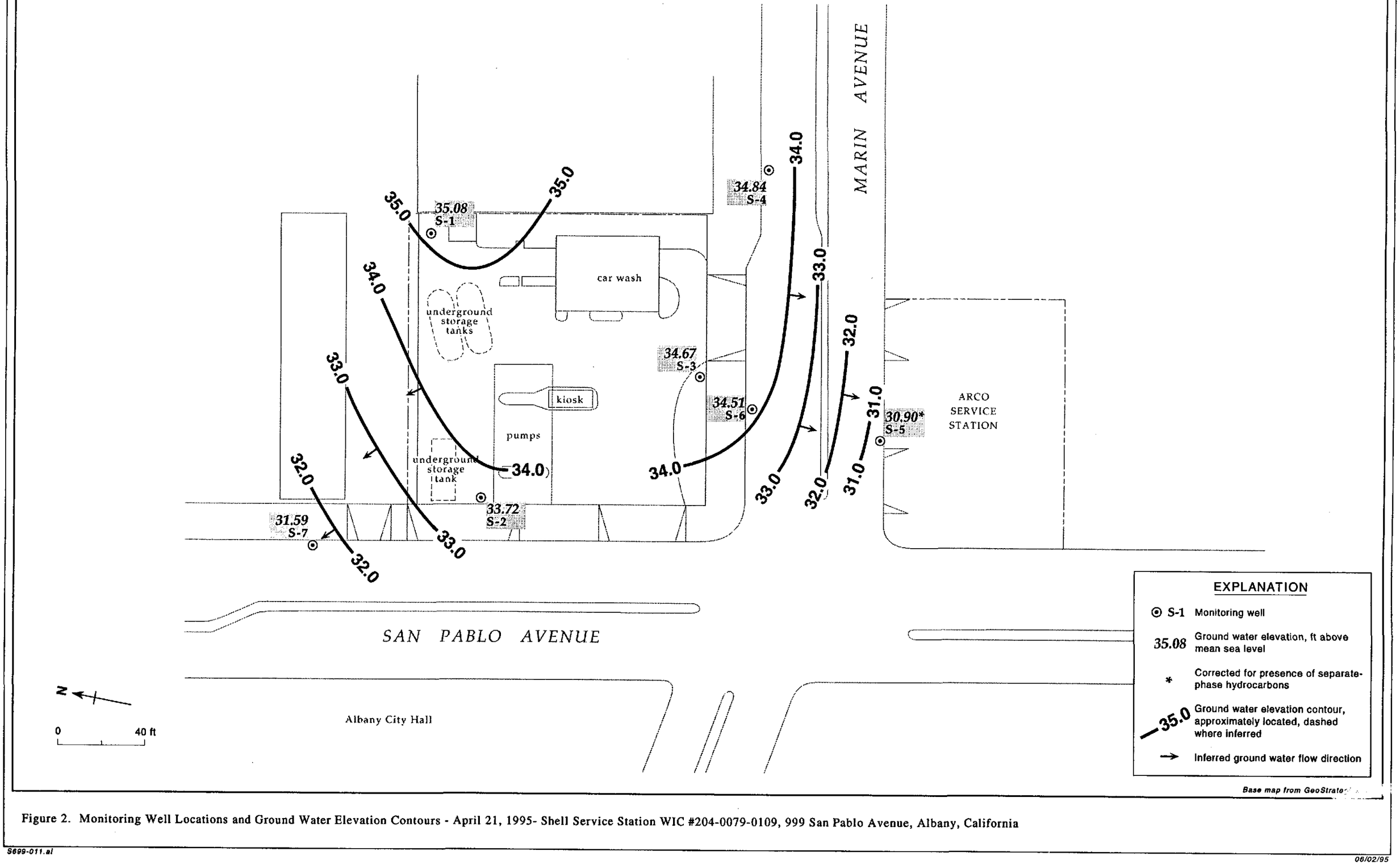

Figure 2. Monitoring Well Locations and Ground Water Elevation Contours - April 21, 1995- Shell Service Station WIC #204-0079-0109, 999 San Pablo Avenue, Albany, California

S699-011.ai

06/02/95

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**
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**
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

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)
	01/19/93		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**
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**
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

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)
	10/10/94		12.05	1.8	29.38
	01/26/95		8.42	1.72	32.95
	04/21/95		**10.03**	**1.17**	**30.90**
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**
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
	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**

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	B	T	E	X	Dissolved Oxygen	HDM Units
			← parts per billion (µg/L) →					←parts per million (mg/L)→	
S-1	05/13/91	8.24	1,500	20	2.6	86	74	---	---
(Bi-annually,	08/23/91	8.37	2,900	27	<2.5	75	18	---	---
1st & 3rd	11/07/91	8.30	2,900	8	2.5	46	26	---	---
Qtrs)	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	---	---
S-2	05/13/91	8.50	23,000	3,900	230	1,100	3,200	---	---
(Bi-annually,	08/23/91	8.80	23,000	4,400	260	1,900	2,400	---	---
1st & 3rd	11/07/91	8.61	40,000	4,000	160	1,020	3,400	---	---
Qtrs)	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	---	---
	01/04/94	7.70	21,000	2,100	67	990	770	---	---

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	Dissolved Oxygen	HDM Units
			← parts per billion (µg/L) →					←parts per million (mg/L)→	
	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]
S-3	05/13/91	7.90	3,300	30	3.6	26	13	---	---
(Bi-annually,	08/23/91	8.14	2,000	25	4	9.3	4.5	---	---
1st & 3rd	11/07/91	7.91	4,000	20	3.9	5	4.9	---	---
Qtrs)	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	---	---
S-4	05/13/91	7.44	<50	<0.5	<0.5	<0.5	<0.5	---	---
(Annually 1st	08/23/91	8.32	<50	<0.5	<0.5	<0.5	<0.5	---	---
Qtr)	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	---	---
	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	---	---

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	Dissolved Oxygen	HDM Units
			← parts per billion (µg/L) →					←parts per million (mg/L)→	
	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	---	---
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	**10.03**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
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	---	---

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	Dissolved Oxygen	HDM Units
			← parts per billion (µg/L) →					←parts per million (mg/L)→	
	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	---	---
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	---	---
	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**	**---**	**---**

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	Dissolved Oxygen	HDM Units
			← parts per billion (µg/L) →					parts per million (mg/L)	
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**	**---**	**---**
DTSC MCLs			NE	1	10[f]	680	1,750	---	---

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

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

J:\SHELL\0699\Q495Q1\95Q2T2.DOC

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

May 12, 1995

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

Attn: Daniel T. Kirk

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

QUARTER:
2nd quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950421-G-2

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 water may be removed in cases where the well dewaters 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 REMOVED column. Gauging at such site 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 prefrozen 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

RCBlp

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)
S-1	4/21/95	TOB	--	NONE	--	--	7.65	11.99
S-2	4/21/95	TOB	--	NONE	--	--	7.01	12.04
S-3	4/21/95	TOB	--	NONE	--	--	6.79	12.10
S-4	4/21/95	TOB	--	NONE	--	--	6.26	14.16
S-5	4/21/95	TOB	FREE PRODUCT	8.86	1.17	--	10.03	--
S-6	4/21/95	TOB	--	NONE	--	--	5.61	15.13
S-7	4/21/95	TOB	--	NONE	--	--	8.51	15.00

#6303

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950421-G2

Date: 4-21
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

Comments:

Sampled by: [signature]

Printed Name: GRANT MOHR

Analysis Required

LAB: MET

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	[X]	5461
Site Investigation	[ ]	5441
Soil Classify/Disposal	[ ]	5442
Water Classify/Disposal	[ ]	5443
Soil/Air Rem. or Sys. O & M	[ ]	5452
Water Rem. or Sys. O & M	[ ]	5453
Other	[ ]	

TURN AROUND TIME
- 24 hours [ ]
- 48 hours [ ]
- 16 days [X] (Normal)
- Other [ ]

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

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	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
S7	4/21			x		3						x								
TB	↓			x		2						x								

(Cu 4/24/95 ... @ Seal Intact ON)

Relinquished By (signature):	Printed Name:	Date/Time:	Received (signature):	Printed Name:	Date/Time:
[signature]	GRANT MOHR	Date: 4/24 Time: 10:35	[signature]	G PLUMBLE	Date: 4/24 Time: 10:25
[signature]	G PLUMBLE	Date: 4/24 Time: 16:01	[signature]	PAM GREENE	Date: 4-25-95 Time: 08:00
		Date: Time:			Date: Time:

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: 04/29/1995
NET Client Acct. No: 1821
NET Pacific Job No: 95.01669
Received: 04/25/1995

Client Reference Information

SHELL/999 San Pablo Ave., Albany, CA/950421-G2

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:

Thomas F. Cullen, Jr.
Division Manager

Linda DeMartino
Project Coordinator

Enclosure(s)

Ref: SHELL/999 San Pablo Ave., Albany, CA/950421-G2

SAMPLE DESCRIPTION: S7
Date Taken: 04/21/1995
Time Taken:
NET Sample No: 240675

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						04/28/1995	2796
DILUTION FACTOR*	1						04/28/1995	2796
as Gasoline	ND		50	ug/L	5030		04/28/1995	2796
Carbon Range:	--						04/28/1995	2796
METHOD 8020 (GC,Liquid)	--						04/28/1995	2796
Benzene	ND		0.5	ug/L	8020		04/28/1995	2796
Toluene	ND		0.5	ug/L	8020		04/28/1995	2796
Ethylbenzene	ND		0.5	ug/L	8020		04/28/1995	2796
Xylenes (Total)	ND		0.5	ug/L	8020		04/28/1995	2796
SURROGATE RESULTS	--						04/28/1995	2796
Bromofluorobenzene (SURR)	106			% Rec.	5030		04/28/1995	2796

Ref: SHELL/999 San Pablo Ave., Albany, CA/950421-G2

SAMPLE DESCRIPTION: TB
Date Taken: 04/21/1995
Time Taken:
NET Sample No: 240676

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
TPH (Gas/BTXE,Liquid)								
METHOD 5030/M8015	--						04/28/1995	2796
DILUTION FACTOR*	1						04/28/1995	2796
as Gasoline	ND		50	ug/L	5030		04/28/1995	2796
Carbon Range:	--						04/28/1995	2796
METHOD 8020 (GC,Liquid)	--						04/28/1995	2796
Benzene	ND		0.5	ug/L	8020		04/28/1995	2796
Toluene	ND		0.5	ug/L	8020		04/28/1995	2796
Ethylbenzene	ND		0.5	ug/L	8020		04/28/1995	2796
Xylenes (Total)	ND		0.5	ug/L	8020		04/28/1995	2796
SURROGATE RESULTS	--						04/28/1995	2796
Bromofluorobenzene (SURR)	100			% Rec.	5030		04/28/1995	2796

Ref: SHELL/999 San Pablo Ave., Albany, CA/950421-G2

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Liquid)							
as Gasoline	98.0	0.49	0.50	mg/L	04/28/1995	caf	2796
Benzene	92.6	4.63	5.00	ug/L	04/28/1995	caf	2796
Toluene	98.8	4.94	5.00	ug/L	04/28/1995	caf	2796
Ethylbenzene	90.4	4.52	5.00	ug/L	04/28/1995	caf	2796
Xylenes (Total)	100.3	15.04	15.0	ug/L	04/28/1995	caf	2796
Bromofluorobenzene (SURR)	111.0	111	100	% Rec.	04/28/1995	caf	2796

Ref: SHELL/999 San Pablo Ave., Albany, CA/950421-G2

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
TPH (Gas/BTXE,Liquid)						
as Gasoline	ND	0.05	mg/L	04/28/1995	caf	2796
Benzene	ND	0.5	ug/L	04/28/1995	caf	2796
Toluene	ND	0.5	ug/L	04/28/1995	caf	2796
Ethylbenzene	ND	0.5	ug/L	04/28/1995	caf	2796
Xylenes (Total)	ND	0.5	ug/L	04/28/1995	caf	2796
Bromofluorobenzene (SURR)	102		% Rec.	04/28/1995	caf	2796

Ref: SHELL/999 San Pablo Ave., Albany, CA/950421-G2

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
TPH (Gas/BTXE,Liquid)											240639
as Gasoline	99.2	101.2	1.9	0.50	ND	0.496	0.506	mg/L	04/28/1995	2796	240639
Benzene	111.0	107.9	2.6	8.1	0.7	9.69	9.44	ug/L	04/28/1995	2796	240639
Toluene	101.4	108.8	7.0	28.4	ND	28.8	30.9	ug/L	04/28/1995	2796	240639

NET®

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 [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: 960421-G2 Log No: 6503
Cooler received on: 4-25-95 and checked on 4-25-95 by Pam Greene
(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 0.2°
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:	Number of vials:

*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)