Weiss Associates *Environmental and Geologic Services*

5500 Shellmound Street, Emeryville, CA 94608-2411 *Fax: 510-547-5043* *Phone:* ***510-450-6000***

October 27, 1994

Brian Oliva
Alameda County Department
of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

STID 413

Re: Shell Service Station
WIC #204-5508-2404
2800 Telegraph Avenue
Oakland, California
WA Job #81-0700-104

Dear Mr. Oliva:

This letter describes recently completed and anticipated activities at the Shell service station referenced above (Figure 1). 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. Included below are descriptions and results of activities performed in the third quarter 1994 and proposed work for the fourth quarter 1994.

Third Quarter 1994 Activities:

- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells. Well SR-1 is a ground water extraction well and is 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 Fourth Quarter 1994 Activities:

- WA will submit a report presenting the results of the fourth quarter 1994 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.

- California Regional Water Quality Control Board (RWQCB) personnel have indicated that the RWQCB will allow well sampling frequency reductions on a site specific basis if the frequency reductions are justified by site conditions. WA reviewed historic ground water data for this site to determine the appropriate well sampling frequencies. Our criteria used to determine sampling frequencies are described in detail in Attachment B. Our specific recommendations for this site are presented in Table

3. WA will implement these new well sampling frequencies unless we are notified otherwise within 60 days from the date of this letter.

Please call if you have any questions.

Sincerely,
Weiss Associates

J. Michael Asport
Staff Scientist I

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

JMA/JWC:jma

J:\SHELL\0700\QM\700QMAU4.WP

Attachments: A - Blaine Tech's Ground Water Monitoring Report
B - Sampling Frequency Criteria

cc: Lynn Walker, Shell Oil Company, P.O. Box 4023, Concord, California 94524
Richard Hiett, Regional Water Quality Control Board - San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, California 94612

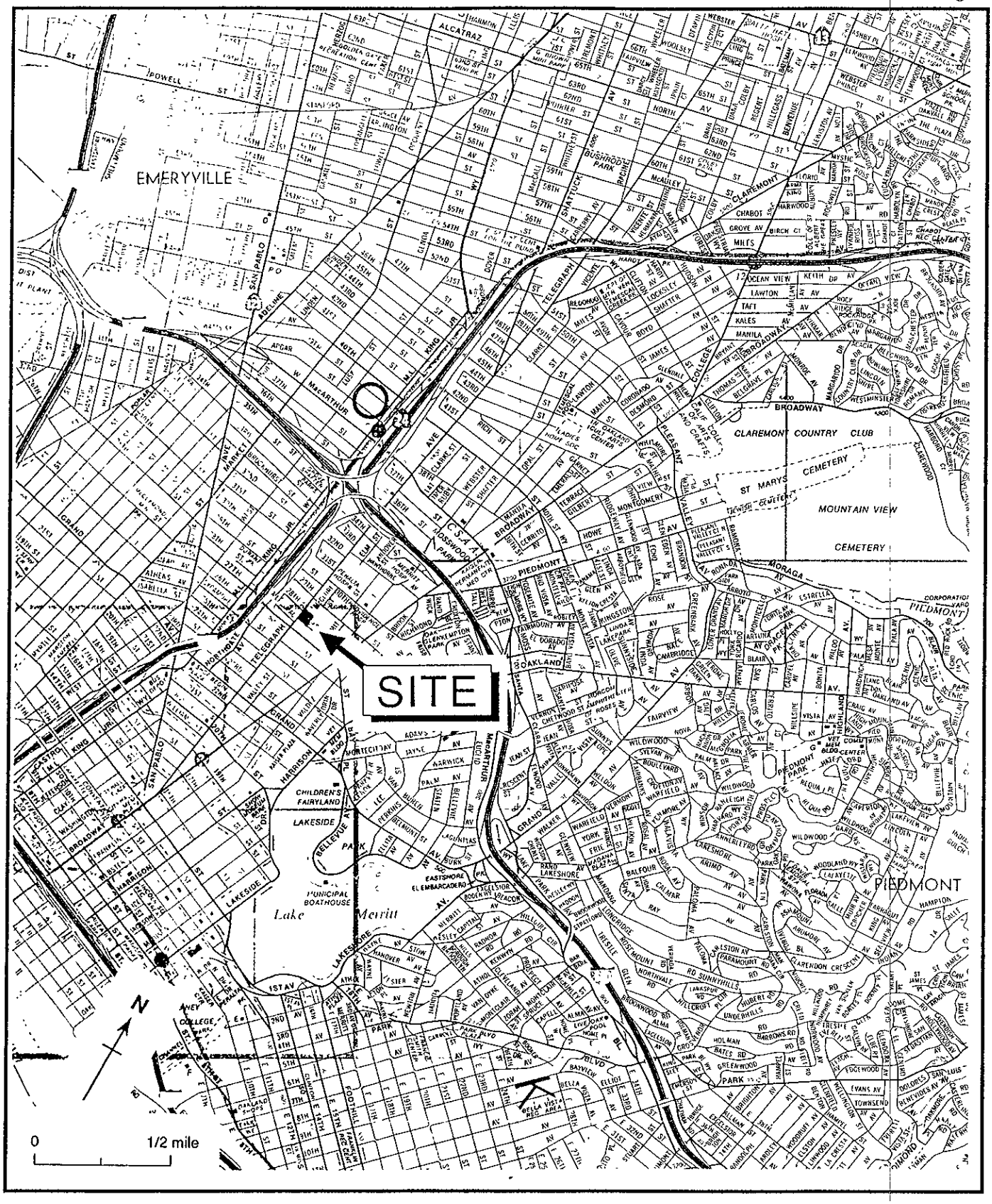

Figure 1. Site Location Map - Former Shell Service Station WIC #204-5508-2404, 2800 Telegraph Avenue, Oakland, California

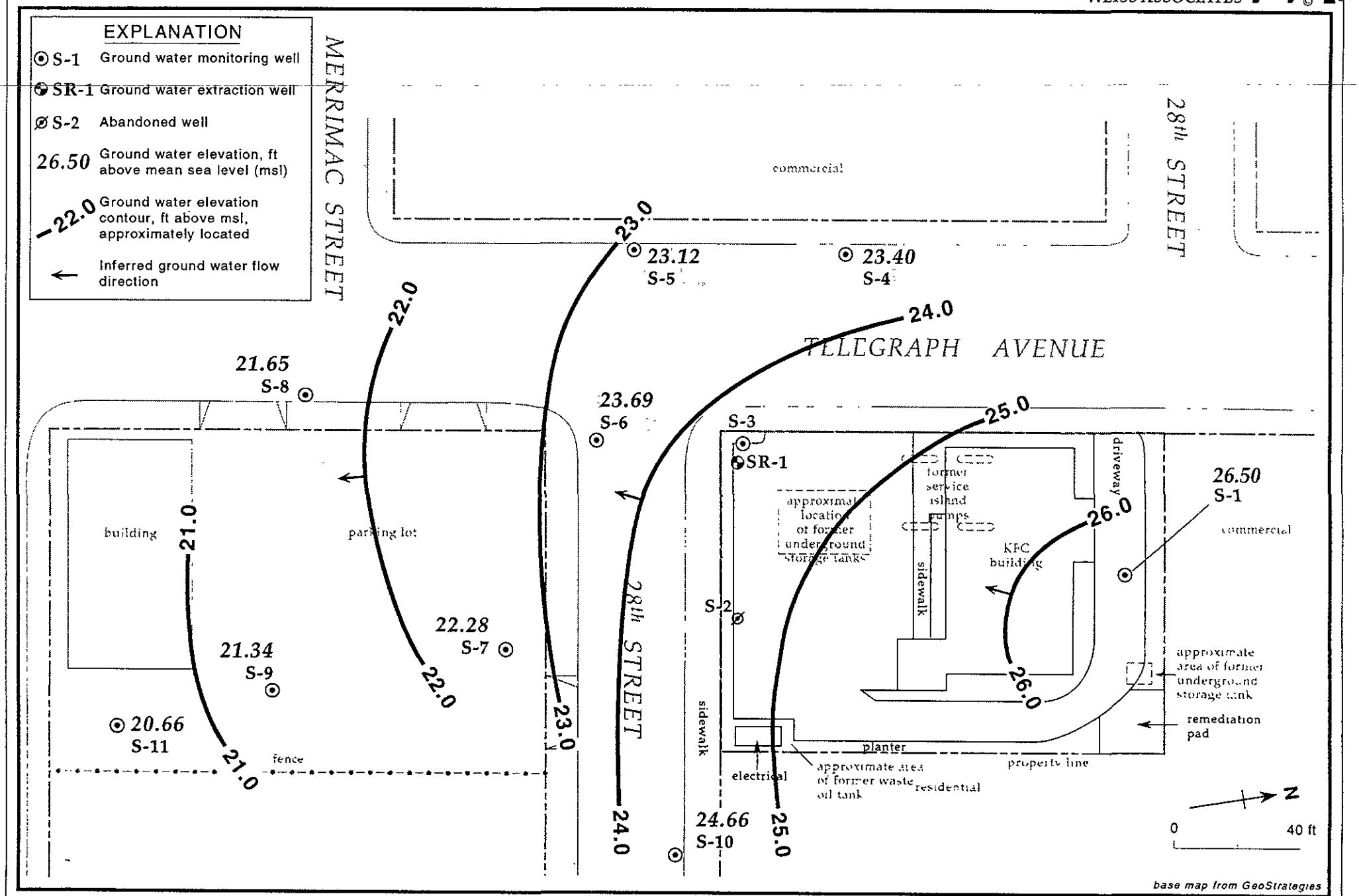

Figure 2. Monitoring Well Locations and Ground Water Elevations - August 1, 1994 - Former Shell Service Station WIC #204-5508-2404, 2800 Telegraph Avenue, Oakland, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2303, 2800 Telegraph Avenue, Oakland, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
S-1	05/04/92	35.31	9.50	25.81
	08/10/92		10.85	24.46
	11/09/92		10.34	24.97
	02/22/93		7.60	27.71
	06/07/93		8.63	26.68
	08/13/93		9.20	26.11
	11/18/93		10.58	24.73
	02/10/94		8.41	26.90
	05/03/94		9.09	26.22
	08/01/94		**8.81**	**26.50**
S-2	05/04/92	33.91	9.44	24.47
	08/10/92		10.73	23.18
	11/09/92		10.29	23.62
	02/22/93[a]		9.04	24.87
S-3	05/04/92	33.56	9.22	24.34
	08/10/92[b]		---	---
S-4	05/04/92	34.08	9.96	24.12
	08/10/92		11.32	22.76
	11/09/92		11.29	22.79
	02/22/93		9.82	24.26
	06/07/93		10.51	23.57
	08/13/93		11.05	23.03
	11/18/93		11.34	22.74
	02/10/94		9.93	24.15
	05/03/94		10.40	23.68
	08/01/94		**10.68**	**23.40**
S-5	05/04/92	33.42	10.27	23.15
	08/10/92		10.68	22.74
	11/09/92		10.69	22.73
	02/22/93		9.45	23.97
	06/07/93		10.23	23.19
	08/13/93		10.58	22.84
	11/18/93		10.70	22.72
	02/10/94		9.75	23.67
	05/03/94		10.19	23.23
	08/01/94		**10.30**	**23.12**

-- Table 1 continues on next page --

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2303, 2800 Telegraph Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
S-6	05/04/92	32.59	9.42	23.17
	08/10/92		10.40	22.19
	11/09/92		10.16	22.43
	02/22/93		7.60	24.99
	06/07/93		8.90	23.69
	08/13/93		9.39	23.20
	11/18/93		10.32	22.27
	02/10/94		8.68	23.91
	05/03/94		9.20	23.39
	08/01/94		**8.90**	**23.69**
S-7	05/04/92	33.33	11.21	22.12
	08/10/92		12.28	21.05
	11/09/92		11.77	21.56
	02/22/93		8.86	24.47
	06/07/93		10.58	22.75
	08/13/93		11.34	21.99
	11/18/93		12.00	21.33
	02/10/94		9.88	23.45
	05/03/94		10.75	22.58
	08/01/94		**11.05**	**22.28**
S-8	05/04/92	31.97	10.29	21.68
	08/10/92		11.12	20.85
	11/09/92		10.71	21.26
	02/22/93		6.04	25.93
	06/07/93		10.06	21.91
	08/13/93		10.56	21.41
	11/18/93		10.90	21.07
	02/10/94		9.53	22.44
	05/03/94		10.06	21.91
	08/01/94		**10.32**	**21.65**
S-9	05/04/92	31.86	10.45	21.41
	08/10/92		11.52	20.34
	11/09/92		11.02	20.84
	02/22/93		8.00	23.86
	06/07/93		10.07	21.79
	08/13/93		10.92	20.94
	11/18/93		11.19	20.67
	02/10/94		9.16	22.70
	05/03/94		10.03	21.83
	08/01/94		**10.52**	**21.34**

-- Table 1 continues on next page --

Table 1. Ground Water Elevations - Shell Service Station WIC #204-5508-2303, 2800 Telegraph Avenue, Oakland, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
S-10	05/04/92	32.95	8.54	24.41
	08/10/92		10.43	22.52
	11/09/92		9.14	23.81
	02/22/93		6.72	26.23
	06/07/93		8.08	24.87
	08/13/93		8.83	24.12
	11/18/93		9.46	23.49
	02/10/94		7.41	25.54
	05/03/94		8.16	24.79
	08/01/94		**8.29**	**24.66**
S-11	05/04/92	30.78	9.99	20.79
	08/10/92		10.92	19.86
	11/09/92		10.44	20.34
	02/22/93		7.30	23.48
	06/07/93		9.51	21.27
	08/13/93		10.39	20.39
	11/18/93		10.64	20.14
	02/10/94		8.50	22.28
	05/03/94		9.42	21.36
	08/01/94		**10.12**	**20.66**
SR-1	05/04/92[c]	---	9.02	---
	08/10/92		10.29	---
	11/09/92		10.92	---
	02/22/93		6.64	---
	06/07/93		7.36	---
	08/13/93		7.96	---
	11/18/93		10.02	---
	02/10/94		---	---
	05/03/94		8.28	---
	08/01/94		**7.98**	---

Notes:

a = Destroyed on April 8, 1993 for onsite construction
b = Well inaccessible since August 1992
c = Top-of-Casing not surveyed

Table 2 Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2404, 2800 Telegraph Avenue, Oakland, California

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X
			<----------parts per billion (µg/L)---------->				
WELLS							
S-1	05/04/92	9.50	<50	<0.5	<0.5	<0.5	<0.5
	08/10/92	10.85	<50	<0.5	<0.5	<0.5	<0.5
	11/09/92	10.34	<50	<0.5	<0.5	<0.5	<0.5
	02/23/93	7.60	<50	<0.5	<0.5	<0.5	<0.5
	06/07/93	8.63	<50	2.8	0.7	1.3	3.0
	08/13/93	9.20	<50	<0.5	<0.5	<0.5	<0.5
	11/18/93	10.58	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	8.41	<50	<0.5	<0.5	<0.5	<0.5
	05/03/94	9.09	<50	<0.5	<0.5	<0.5	<0.5
	08/01/94	**8.81**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
S-2	05/04/92	9.44	1,600	190	240	6	54
	08/10/92	10.73	<50	4.1	<0.5	<0.5	<0.5
	09/11/92	10.29	84	19	2.2	0.7	4.3
	02/23/93	9.04	16,000	1,600	850	480	1,800
	06/07/93	Well destroyed	---	---	---	---	---
S-3	05/04/92	9.22	---	---	---	---	---
	08/10/92		---	---	---	---	---
S-4	05/04/92	9.96	<50	<0.5	<0.5	<0.5	<0.5
	08/10/92	11.32	<50	<0.5	<0.5	<0.5	<0.5
	11/09/92	11.29	<50	<0.5	<0.5	<0.5	<0.5
	02/23/93	9.82	<50	<0.5	<0.5	<0.5	<0.5
	06/07/93	10.51	50	9.2	3.3	5.5	14
	08/13/93	11.05	<50	<0.5	<0.5	<0.5	<0.5
	11/18/93	11.34	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	9.93	<50	<0.5	<0.5	<0.5	<0.5
	05/03/94	10.40	<50	<0.5	<0.5	<0.5	<0.5
	08/01/94	**10.68**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
S-5	05/04/92	10.27	<50	<0.5	<0.5	<0.5	<0.5
	08/10/92	10.68	<50	<0.5	<0.5	<0.5	<0.5
	11/09/92	10.69	<50	<0.5	<0.5	<0.5	<0.5
	02/23/93	9.45	<50	<0.5	<0.5	<0.5	<0.5
	06/07/93	10.23	<50	<0.5	<0.5	<0.5	<0.5
	08/13/93	10.58	<50	<0.5	<0.5	<0.5	<0.5
	11/18/93	10.70	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	9.75	<50	<0.5	<0.5	<0.5	<0.5
	05/03/94	10.19	<50	<0.5	<0.5	<0.5	<0.5
	08/01/94	**10.30**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
S-6	05/04/92	9.42	3,100	640	23	22	97
	08/10/92	10.40	3,400	430	26	27	120
	11/09/92	10.16	2,000	320	15	15	100

-- Table 2 continues on next page --

Table 2 Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2404, 2800 Telegraph Ave., Oakland, California (continued)

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X
			<----------parts per billion (µg/L)---------->				
	02/23/93	7.60	14,000	780	380	180	1,300
	06/07/93	8.90	3,900	1,400	83	56	210
	08/13/93	9.39	4,000[b]	890	<0.5	16	41
	11/18/93	10.32	80	5.0	<0.5	<0.5	<0.5
	02/10/94	8.68	4,100	370	21	23	90
	05/03/94	9.20	4,700	550	85	28	340
	08/01/94	**8.90**	**2,900**	**370**	**11**	**11**	**43**
	08/01/94[dup]	**8.90**	**2,600**	**340**	**7.7**	**8.8**	**33**
S-7	05/04/92	11.21	180	1 6	1.5	<0.5	3
	08/10/92	12.28	190	8	4.7	1 4	8.5
	11/09/92	11.77	280	16	7.8	4	21
	02/23/93	8.86	210	13	5.4	2.2	12
	06/07/93	10.58	90	1.2	1.0	2.5	<0.5
	08/13/93	11.34	140	4.0	<0.5	0.8	0.5
	11/18/93	12.00	440	43	0.9	4.9	4.2
	02/10/94	9.88	250[b]	<0.5	1.8	<0.5	<0 5
	05/03/94	10.75	130	<0 5	<0.5	<0.5	<0.5
	08/01/94	**11.05**	**250**	**4.8**	**<0.5**	**<0.5**	**<0.5**
S-8	05/05/92	10.29	1,600	20	96	420	330
	08/10/92	11.12	1,500	19	60	37	250
	11/09/92	10.71	710	5.7	28	24	120
	02/23/93	6.04	3,800	40	68	54	260
	06/07/93	10.06	1,200	13	65	19	150
	08/13/93	10.56	1,300	21	49	23	250
	11/18/93	10.90	870	16	59	5.3	230
	02/10/94	9.53	2,400	11	120	55	530
	02/10/94[dup]	9.53	2,400	11	100	46	440
	05/03/94	10.06	3,100	12	130	27	370
	05/03/94[dup]	10.06	3,000	21	120	25	340
	08/01/94	**10.32**	**1,500**	**20**	**39**	**18**	**190**
S-9	05/05/92	10.45	<50	<0 5	<0.5	<0 5	<0.5
	08/10/92	11.52	<50	<0 5	<0 5	<0 5	<0.5
	11/09/92	11 02	<50	<0.5	<0 5	<0.5	0.7
	02/23/92	8.00	<50	<0.5	<0.5	<0.5	<0 5
	06/07/93	10.07	<50	<0.5	<0.5	<0.5	<0 5
	08/13/93	10.92	140[c]	<0.5	<0.5	<0.5	<0.5
	11/18/93	11.19	170	<0.5	<0 5	<0 5	<0 5
	02/10/94	9 16	140[c]	<0.5	<0 5	<0 5	<0.5
	05/03/94	10.03	<50	<0.5	<0.5	<0.5	<0 5
	08/01/94	**10.52**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
S-10	05/05/92	8 54	<50	<0 5	<0 5	<0 5	<0.5
	08/10/92	10.43	<50	<0 5	<0 5	<0 5	<0.5

-- Table 2 continues on next page --

Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2404, 2800 Telegraph Ave., Oakland, California (continued)

Sample ID	Date	Depth to Water (ft)	TPH-G	B	E	T	X
			<----------parts per billion (µg/L)---------->				
	11/09/92	9.14	<50	<0.5	<0.5	<0.5	<0.5
	02/22/93	6.72	<50	<0.5	<0.5	<0.5	<0.5
	06/07/93	8.08	<50	<0.5	<0.5	<0.5	<0.5
	08/13/93	8.83	<50	<0.5	<0.5	<0.5	<0.5
	11/18/93	9.46	<50	<0.5	<0.5	<0.5	<0.5
	02/10/94	7.41	<50	<0.5	<0.5	<0.5	<0.5
	05/03/94	8.16	<50	<0.5	<0.5	<0.5	<0.5
	08/01/94	**8.29**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
S-11	05/04/92	9.99	1,500	55	57	32	190
	08/10/92	10.92	750	29	43	13	120
	11/09/92	10.44	4,100	32	120	62	1,100
	02/23/93	7.30	760	15	37	13	140
	06/07/93	9.51	1,700	40	100	16	360
	06/07/93[dup]	9.51	1,600	51	83	16	300
	08/13/93	10.39	60	0.9	0.8	<0.5	1.2
	08/13/93[dup]	10.39	70	2.1	0.9	<0.5	2.1
	11/18/93	10.64	150	7.8	9.0	1.0	12
	02/10/94	8.50	4,400	53	160	19	390
	05/03/94	9.42	65	1.5	0.53	<0.5	0.59
	08/01/94	**10.12**	**240**	**18**	**6.9**	**6.7**	**18**
SR-1	11/18/93	10.02	<50	<0.5	<0.5	<0.5	<0.5
	11/18/93dup	10.02	<50	<0.5	<0.5	<0.5	<0.5
Trip Blank	06/04/93		<50	<0.5	<0.5	<0.5	<0.5
	08/13/93		<50	<0.5	<0.5	<0.5	<0.5
	11/18/93		<50	<0.5	<0.5	<0.5	<0.5
	02/10/94		<50	<0.5	<0.5	<0.5	<0.5
	05/03/94		<50	<0.5	<0.5	<0.5	<0.5
	08/01/94		**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
DTSC MCLs			NE	1.0	680	100[c]	1,750

-- Table 2 continues on next page --

Table 2. Analytic Results for Ground Water, Former Shell Service Station, WIC #204-5508-2404, 2800 Telegraph Ave., Oakland, California (continued)

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
--- = 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

Notes:

a = Well paved over, inaccessible since August, 1992.
b = The concentration reported as gasoline is primarily due to the presence of a combination of gasoline and a discrete peak not indicative of gasoline.
c = The concentration reported as gasoline is primarily due to the presence of a discrete peak not indicative of gasoline.
d = DTSC recommended action level for drinking water; MCL not established

Table 3. Recommended Sampling Frequency Modifications for Ground Water Monitoring Wells Shell Service Station #WIC 204-5508-2404, 2800 Telegraph Ave, Oakland, California

Monitoring Well	Current Sampling Frequency	Recommended Sampling Frequency	Rationale for Recommended Sampling Frequency
S-1	Quarterly	Annually	Clean upgradient well, hydrocarbon concentrations below MCLs for eight of nine quarters
S-4	Quarterly	Annually	Clean crossgradient well, hydrocarbon concentrations below MCLs for eight of nine quarters
S-5	Quarterly	Biannually	Clean down and crossgradient well, hydrocarbon concentrations below MCLs for nine quarters
S-6	Quarterly	Annually	Intermediate well, stable hydrocarbon concentrations for nine quarters
S-7	Quarterly	Biannually	Intermediate well, stable hydrocarbon concentrations for nine quarters
S-8	Quarterly	Quarterly	Downgradient well, stable hydrocarbon concentrations for 10 quarters
S-9	Quarterly	Annually	Intermediate well, hydrocarbon concentrations below MCLs for nine quarters
S-10	Quarterly	Annually	Clean crossgradient well, hydrocarbon concentrations below MCLs for 10 quarters
S-11	Quarterly	Quarterly	Down and crossgradient well, stable hydrocarbon concentrations for 10 quarters

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT

BLAINE
TECH SERVICES INC.

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

August 19, 1994

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

Attn: Lynn Walker

SITE:
Shell WIC #204-5508-2303
2800 Telegraph Avenue
Oakland, California

QUARTER:
3rd quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940801-K-1

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 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 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 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 #178.

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
SEmeryville, CA 94608-2411
ATTN: Michael Asport

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

1721

CHAIN OF CUSTODY RECORD
Serial No: 940801-K1

Date: 8/1/94
Page 1 of 2

Site Address: 2800 Telegraph Ave., Oakland

WIC#: 204-5508-2303

Shell Engineer: Lynn Walker — Phone No.: (510) 675-6169 Fax #: 675-6172

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: KCB

Printed Name: Keith Brown

LAB: Net

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
S-1	8/1			W		3						X								
S-4						3						X								
S-5						3						X								
S-6						3						X							seals intact - AL CUSTODY SEALED 8/2/94	
S-7						3						X								
S-8						3						X								
S-9						3						X								
S-10						3						X								

CHECK ONE (1) BOX ONLY — CT/DT

- Quarterly Monitoring ☒ 8421
- Site Investigation ☐ 8421
- Soil Closure/Disposal ☐ 8422
- Water Closure/Disposal ☐ 8423
- Soil/Air Rem. or Sys. O & M ☐ 8462
- Water Rem. or Sys. O & M ☐ 8463
- Other ☐

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 16 days ☒ (Normal)
- Other ☐

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

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
[signature]	Keith Brown	8/2/94	11:40	[signature]	GT Lumbre	8/2/94	11:40
[signature]	GT Lumbre	8/2/94	16:30				
				[signature] via NCS	Tony Lopez	8/3/94	08:30

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

1721

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940801-141

Date: 8/1/94
Page 2 of 2

Site Address: 2800 Telegraph Ave., Oakland

WIC#: 204-5508-2303

Shell Engineer: Lynn Walker — Phone No.: (510) 675-6169 Fax #: 675-6172

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: KCB

Printed Name: Keith Brown

LAB: Net

Analysis Required

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
S-11	8/1			W		3						X						
DUP	"			"		3						X						
EB	"			"		3						X						
TB	↓			↓		2						X						

CHECK ONE (1) BOX ONLY — CT/DT

- Quarterly Monitoring ☒ 6441
- Site Investigation ☐ 6441
- Soil Closure/Disposal ☐ 6442
- Water Closure/Disposal ☐ 6443
- Soil/Air Rem. or Sys. O & M ☐ 6442
- Water Rem. or Sys. O & M ☐ 6443
- Other ☐

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 16 days ☒ (Normal)
- Other ☐

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

seals intact. AL
CUSTODY SEALED
8/4/94

	Printed Name	Date	Time		Printed Name	Date	Time
Relinquished By (signature):	Keith Brown	8/4/94	1140	Received (signature):	G Lumber	8/4/94	1140
Relinquished By (signature):	G Lumber	8/4/94	1630	Received (signature):			
Relinquished By (signature):				Received (signature):	via NCS	8/3/94	0830

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

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	8/1/94	TOB	--	NONE	--	--	8.81	27.20
S-4	8/1/94	TOB	--	NONE	--	--	10.68	30.36
S-5	8/1/94	TOB	--	NONE	--	--	10.30	30.55
S-6 *	8/1/94	TOB	ODOR	NONE	--	--	8.90	22.14
S-7	8/1/94	TOB	--	NONE	--	--	11.05	30.72
S-8	8/1/94	TOB	ODOR	NONE	--	--	10.32	19.15
S-9	8/1/94	TOB	--	NONE	--	--	10.52	30.00
S-10	8/1/94	TOB	--	NONE	--	--	8.29	24.24
S-11	8/1/94	TOB	--	NONE	--	--	10.12	19.12
SR-1	8/1/94	TOB	--	NONE	--	--	7.98	34.35

* Sample DUP was a duplicate sample taken from well S-6.

NATIONAL ENVIRONMENTAL® TESTING, INC.

Santa Rosa Division
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

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

Date: 08/15/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.03378
Received: 08/03/1994

Client Reference Information

SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

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:

Judy Ridley
Project Coordinator

Jim Hoch
Operations Manager

Enclosure(s)

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-1
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210831

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/10/1994
DILUTION FACTOR*	1						08/10/1994
as Gasoline	ND		50	ug/L	5030		08/10/1994
Carbon Range:	ND						08/10/1994
METHOD 8020 (GC,Liquid)	--						08/10/1994
Benzene	ND		0.5	ug/L	8020		08/10/1994
Toluene	ND		0.5	ug/L	8020		08/10/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/10/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/10/1994
SURROGATE RESULTS	--						08/10/1994
Bromofluorobenzene (SURR)	88			% Rec.	5030		08/10/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-4
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210832

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/09/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	ND		50	ug/L	5030		08/09/1994
Carbon Range:	ND						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	ND		0.5	ug/L	8020		08/09/1994
Toluene	ND		0.5	ug/L	8020		08/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/09/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	90			% Rec.	5030		08/09/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-5
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210833

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/09/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	ND		50	ug/L	5030		08/09/1994
Carbon Range:	ND						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	ND		0.5	ug/L	8020		08/09/1994
Toluene	ND		0.5	ug/L	8020		08/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/09/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	85			% Rec.	5030		08/09/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-6
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210834

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/10/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	2,900	FC	50	ug/L	5030		08/09/1994
Carbon Range:	C5-C14						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	370	FC	0.5	ug/L	8020		08/09/1994
Toluene	11		0.5	ug/L	8020		08/10/1994
Ethylbenzene	11		0.5	ug/L	8020		08/10/1994
Xylenes (Total)	43		0.5	ug/L	8020		08/10/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	93			% Rec.	5030		08/09/1994

FC : Compound quantitated at a 10X dilution factor.

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-7
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210835

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/09/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	250		50	ug/L	5030		08/09/1994
Carbon Range:	C5-C14						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	4.8		0.5	ug/L	8020		08/09/1994
Toluene	ND		0.5	ug/L	8020		08/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/09/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	98			% Rec.	5030		08/09/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-8
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210836

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/12/1994
DILUTION FACTOR*	1						08/12/1994
as Gasoline	1,500		50	ug/L	5030		08/12/1994
Carbon Range:	C5-C14						08/12/1994
METHOD 8020 (GC,Liquid)	--						08/12/1994
Benzene	20		0.5	ug/L	8020		08/12/1994
Toluene	18		0.5	ug/L	8020		08/12/1994
Ethylbenzene	39	FC	0.5	ug/L	8020		08/12/1994
Xylenes (Total)	190	FC	0.5	ug/L	8020		08/12/1994
SURROGATE RESULTS	--						08/12/1994
Bromofluorobenzene (SURR)	86			% Rec.	5030		08/12/1994

FC : Compound quantitated at a 10X dilution factor.

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-9
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210837

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/09/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	ND		50	ug/L	5030		08/09/1994
Carbon Range:	ND						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	ND		0.5	ug/L	8020		08/09/1994
Toluene	ND		0.5	ug/L	8020		08/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/09/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	95			% Rec.	5030		08/09/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-10
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210838

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/09/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	ND		50	ug/L	5030		08/09/1994
Carbon Range:	ND						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	ND		0.5	ug/L	8020		08/09/1994
Toluene	ND		0.5	ug/L	8020		08/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/09/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	93			% Rec.	5030		08/09/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: S-11
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210839

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/10/1994
DILUTION FACTOR*	1						08/10/1994
as Gasoline	240		50	ug/L	5030		08/10/1994
Carbon Range:	C5-C14						08/10/1994
METHOD 8020 (GC,Liquid)	--						08/10/1994
Benzene	18		0.5	ug/L	8020		08/10/1994
Toluene	6.7		0.5	ug/L	8020		08/10/1994
Ethylbenzene	6.9		0.5	ug/L	8020		08/10/1994
Xylenes (Total)	18		0.5	ug/L	8020		08/10/1994
SURROGATE RESULTS	--						08/10/1994
Bromofluorobenzene (SURR)	93			% Rec.	5030		08/10/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: DUP
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210840

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/10/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	2,600	FC	50	ug/L	5030		08/09/1994
Carbon Range:	C5-C14						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	340	FC	0.5	ug/L	8020		08/09/1994
Toluene	8.8		0.5	ug/L	8020		08/10/1994
Ethylbenzene	7.7		0.5	ug/L	8020		08/10/1994
Xylenes (Total)	33		0.5	ug/L	8020		08/10/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	93			% Rec.	5030		08/09/1994

FC : Compound quantitated at a 10X dilution factor.

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: EB
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210841

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/09/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	ND		50	ug/L	5030		08/09/1994
Carbon Range:	ND						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	ND		0.5	ug/L	8020		08/09/1994
Toluene	ND		0.5	ug/L	8020		08/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/09/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	91			% Rec.	5030		08/09/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

SAMPLE DESCRIPTION: TB
Date Taken: 08/01/1994
Time Taken:
NET Sample No: 210842

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						08/09/1994
DILUTION FACTOR*	1						08/09/1994
as Gasoline	ND		50	ug/L	5030		08/09/1994
Carbon Range:	--						08/09/1994
METHOD 8020 (GC,Liquid)	--						08/09/1994
Benzene	ND		0.5	ug/L	8020		08/09/1994
Toluene	ND		0.5	ug/L	8020		08/09/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/09/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/09/1994
SURROGATE RESULTS	--						08/09/1994
Bromofluorobenzene (SURR)	84			% Rec.	5030		08/09/1994

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
TPH (Gas/BTXE,Liquid)						
as Gasoline	107.0	1.07	1.00	mg/L	08/09/1994	lss
Benzene	105.0	5.25	5.00	ug/L	08/09/1994	lss
Toluene	108.2	5.41	5.00	ug/L	08/09/1994	lss
Ethylbenzene	92.2	4.61	5.00	ug/L	08/09/1994	lss
Xylenes (Total)	98.9	14.84	15.0	ug/L	08/09/1994	lss
Bromofluorobenzene (SURR)	102.0	102	100	% Rec.	08/09/1994	lss
TPH (Gas/BTXE,Liquid)						
as Gasoline	104.0	1.04	1.00	mg/L	08/09/1994	aal
Benzene	108.0	5.40	5.00	ug/L	08/09/1994	aal
Toluene	85.4	4.27	5.00	ug/L	08/09/1994	aal
Ethylbenzene	89.8	4.49	5.00	ug/L	08/09/1994	aal
Xylenes (Total)	90.0	13.5	15.0	ug/L	08/09/1994	aal
Bromofluorobenzene (SURR)	102.0	102	100	% Rec.	08/09/1994	aal
TPH (Gas/BTXE,Liquid)						
as Gasoline	100.0	1.00	1.00	mg/L	08/10/1994	aal
Benzene	100.0	5.00	5.00	ug/L	08/10/1994	aal
Toluene	93.6	4.68	5.00	ug/L	08/10/1994	aal
Ethylbenzene	98.4	4.92	5.00	ug/L	08/10/1994	aal
Xylenes (Total)	96.7	14.5	15.0	ug/L	08/10/1994	aal
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	08/10/1994	aal
TPH (Gas/BTXE,Liquid)						
as Gasoline	103.0	1.03	1.00	mg/L	08/12/1994	lss
Benzene	89.8	4.49	5.00	ug/L	08/12/1994	lss
Toluene	94.6	4.73	5.00	ug/L	08/12/1994	lss
Ethylbenzene	91.8	4.59	5.00	ug/L	08/12/1994	lss
Xylenes (Total)	94.7	14.2	15.0	ug/L	08/12/1994	lss
Bromofluorobenzene (SURR)	89.0	89	100	% Rec.	08/12/1994	lss

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/09/1994	lss
Benzene	ND	0.5	ug/L	08/09/1994	lss
Toluene	ND	0.5	ug/L	08/09/1994	lss
Ethylbenzene	ND	0.5	ug/L	08/09/1994	lss
Xylenes (Total)	ND	0.5	ug/L	08/09/1994	lss
Bromofluorobenzene (SURR)	78		% Rec.	08/09/1994	lss
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/09/1994	aal
Benzene	ND	0.5	ug/L	08/09/1994	aal
Toluene	ND	0.5	ug/L	08/09/1994	aal
Ethylbenzene	ND	0.5	ug/L	08/09/1994	aal
Xylenes (Total)	ND	0.5	ug/L	08/09/1994	aal
Bromofluorobenzene (SURR)	103		% Rec.	08/09/1994	aal
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/10/1994	aal
Benzene	ND	0.5	ug/L	08/10/1994	aal
Toluene	ND	0.5	ug/L	08/10/1994	aal
Ethylbenzene	ND	0.5	ug/L	08/10/1994	aal
Xylenes (Total)	ND	0.5	ug/L	08/10/1994	aal
Bromofluorobenzene (SURR)	97		% Rec.	08/10/1994	aal
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	08/12/1994	lss
Benzene	ND	0.5	ug/L	08/12/1994	lss
Toluene	ND	0.5	ug/L	08/12/1994	lss
Ethylbenzene	ND	0.5	ug/L	08/12/1994	lss
Xylenes (Total)	ND	0.5	ug/L	08/12/1994	lss
Bromofluorobenzene (SURR)	83		% Rec.	08/12/1994	lss

Ref: SHELL, 2800 Telegraph Ave., Oakland, Job No. 940801-K1

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	Analyst Initials
TPH (Gas/BTXE,Liquid)										
as Gasoline	90.0	102.0	12.4	1.00	ND	0.90	1.02	mg/L	08/09/1994	lss
Benzene	83.8	102.9	20.4	34.0	ND	28.5	35.0	ug/L	08/09/1994	lss
Toluene	90.4	102.3	12.3	94.7	ND	85.6	96.9	ug/L	08/09/1994	lss
TPH (Gas/BTXE,Liquid)										
as Gasoline	79.0	96.0	19.4	1.00	ND	0.79	0.96	mg/L	08/09/1994	aal
Benzene	78.9	95.2	18.7	33.1	ND	26.1	31.5	ug/L	08/09/1994	aal
Toluene	80.5	94.5	16.0	102.8	ND	82.8	97.1	ug/L	08/09/1994	aal
TPH (Gas/BTXE,Liquid)										
as Gasoline	89.0	95.0	6.5	1.00	ND	0.89	0.95	mg/L	08/08/1994	jmh
Benzene	89.6	94.8	5.6	32.8	ND	29.4	31.1	ug/L	08/08/1994	jmh
Toluene	91.6	96.2	4.9	73.8	ND	67.6	71.0	ug/L	08/08/1994	jmh
TPH (Gas/BTXE,Liquid)										
as Gasoline	100.0	100.0	0.0	1.00	ND	1.00	1.00	mg/L	08/09/1994	aal
Benzene	94.9	97.3	2.5	33.1	ND	31.4	32.2	ug/L	08/09/1994	aal
Toluene	95.6	96.9	1.4	102.8	ND	98.3	99.6	ug/L	08/09/1994	aal
TPH (Gas/BTXE,Liquid)										
as Gasoline	92.0	96.0	4.3	1.00	ND	0.92	0.96	mg/L	08/10/1994	aal
Benzene	93.1	97.2	4.3	31.9	ND	29.7	31.0	ug/L	08/10/1994	aal
Toluene	93.0	97.0	4.2	98.8	ND	91.9	95.8	ug/L	08/10/1994	aal
TPH (Gas/BTXE,Liquid)										
as Gasoline	101.0	101.0	0.0	1.00	ND	1.01	1.01	mg/L	08/12/1994	lss
Benzene	97.6	104.2	6.4	33.3	ND	32.5	34.7	ug/L	08/12/1994	lss
Toluene	96.4	100.2	3.8	96.2	ND	92.7	96.4	ug/L	08/12/1994	lss

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. Actual reporting limits and results have been multiplied by the listed dilution factor. **Do not** multiply the reporting limits or reported values by the dilution factor.
dw	:	Result expressed as dry weight.
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 the 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., Rev. 1, December 1987.

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

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abb.93

COOLER RECEIPT FORM

Project: Shell, 2800 Telegraph Ave. Oakland Log No: 1721
Cooler received on: 8/3/94 and checked on 8/5/94 by A Lopez
(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 0.1°C

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:
TB	1 of 2

*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)