5500 Shellmound Street, Emeryville, CA 94608-2411

Fax: 510-547-5043 Phone: 510-547-5420

October 25, 1994

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

Re: Shell Service Station WIC #204-0072-0502 2160 Otis Drive Alameda, California WA Job #81-0429-104 HAZMAT 94 OCT 28 PH 3: 14

Dear Ms. Shin:

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:

- On July 27th, Blaine Tech Services, Inc., (BTS) of San Jose, California measured depths to ground water in all three wells and collected a ground water sample from well MW-2. Although wells MW-1 and S-1 are typically sampled annually, well MW-1 was also sampled on August 18th. BTS's reports describing the sampling activities including the ground water analytic report are included as Attachments A and B.
- Weiss Associates (WA) compiled the ground water elevation data and the laboratory analytic results (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.

Conclusions and Recommendations

Total dissolved solids (TDS) concentrations were measured in ground water from wells MW-1 and MW-2 at 6,300 ppm and 12,800 ppm, respectively. Because these concentrations are well above the 3,000 ppm criteria, ground water beneath the site is brackish and considered "nonpotable".

WA will continue with the sampling frequency presented in earlier monitoring reports. However, the elevated TDS concentrations may affect future activities at this site.

Please call if you have any questions.

No. EG 1576

CERTIFIED ENGINEERING

GEOLOGIS1

Sincerely,

Weiss Associates

John Wolf

Technical Assistant

James W. Carmody, C.E.G.

Senior Project Hydrogeologist

JW/JWC:jw

Attachments:

A - BTS's Ground Water Monitoring Report for July 26, 1994

B - BTS's Ground Water Monitoring Report for August 18, 1994

cc:

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

Tom Callaghan, Water Quality Control Board, San Francisco Bay Region, 2101 Webster Street, Suite

500, Oakland, CA 94612

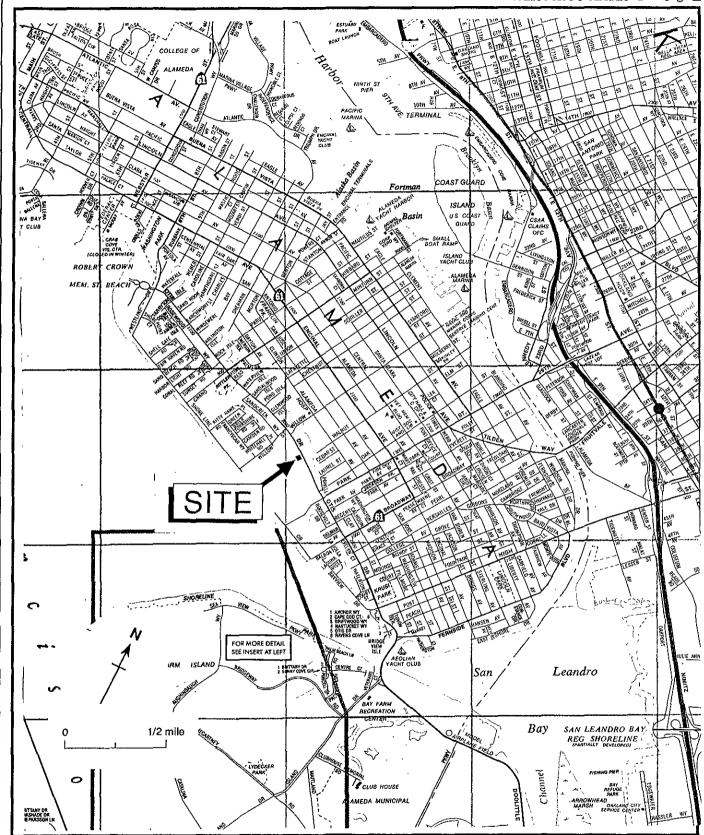


Figure 1: Site Location Map - Shell Service Station, WIC# 204-0072-0502, 2160 Otis Drive, Alameda, CA



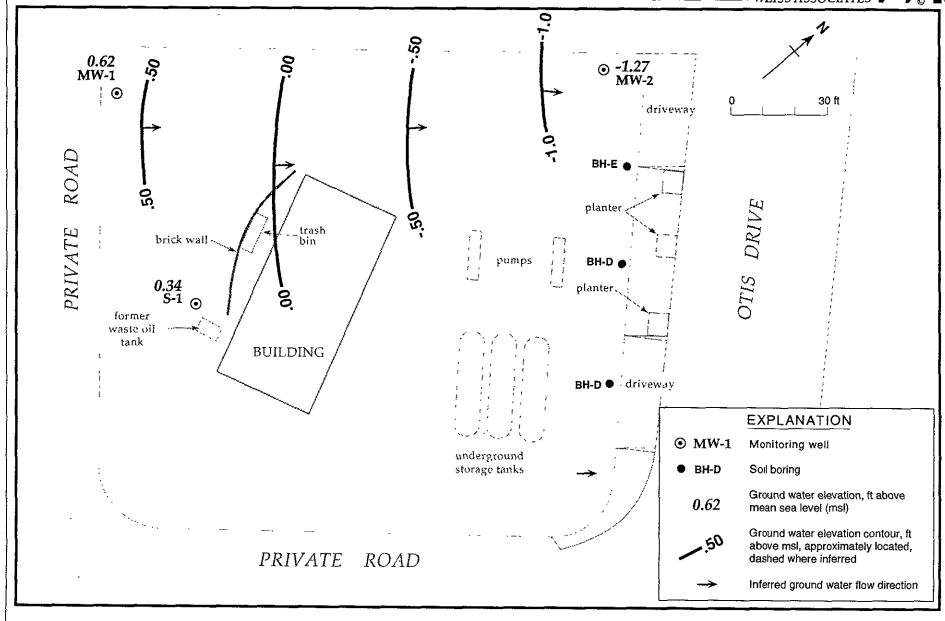


Figure 2. Monitoring Well Locations, Soil Boring Locations and Ground Water Elevation Contours - July 26, 1994 - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	04/11/90	6.00	5.23	0.77
	07/10/90		5.40	0.60
	10/09/90		5.61	0.39
	01/17/91		5.66	0.34
	04/09/91		4.96	1.04
	07/10/91		5.52	0.48
	10/09/91		5.70	0.30
	01/24/92		5.51	0.49
	04/23/92		5.14	0.86
	07/01/92		4.48	1.52
	10/02/92		5.80	0.20
	01/05/93		5.34	0.66
	04/08/93		4.62	1.38
	07/20/93		5.20	0.80
	10/15/93		4.37	1.63
	01/07/94		5.26	0.74
	04/13/94		5.01	0.99
	07/26/94		5.38	0.62
	08/18/94		5.40	0.60
ИW-2	04/11/90	3.29	4.51	-1.22
	07/10/90		4.61	-1.32
	10/09/90		4.74	-1.45
	01/17/91		4.73	-1.44
	04/09/91		4.09	-0.80
	07/10/91		4.66	-1.37
	10/09/91		4.81	-1.52
	01/24/92		4.66	-1.37
	04/23/92	,	4.51	-1.22
	07/01/92		4.57	-1.28
	10/02/92		4.80	-1.51
	01/05/93		4.39	-1.1
	04/08/93		4.15	-0.86
	07/20/93		4.40	-1.11
	10/15/93		5.41	-2.12
	01/07/94		4.34	-1.05
	04/13/94		4.29	-1.00
	07/26/94		4.56	-1.27
-1	09/11/90	5.10	4.29	0.81
	04/11/90		4.00	1.10

⁻⁻ Table 1 continues on next page --

Table 1. Ground Water Elevations - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
		(It doo'to hist)	(10)	(It doo'te Illai)
	07/10/90		4.25	0.85
	10/09/90		4.46	0.64
	01/17/91		4.53	0.57
	04/09/91		4.20	0.90
	07/10/91		4.42	0.68
	10/09/91		4.87	0.23
	01/24/92		4.90	0.20
	04/23/92		4.66	0.44
	07/01/92		4.85	0.25
	10/02/92		4.80	0.30
	01/05/93		5.38	-0.28
	04/08/93		3.69	1.41
	07/20/93		4.20	0.90
	10/15/93		4.38	0.72
	01/07/94		4.19	0.91
	04/17/94		4.03	1.07
	07/26/94		4.76	0.34

California Well ID (Sampling Date Depth to TPH-G TPH-D В E T X POG Frequency) Sampled Water (ft) ---parts per billion (μg/L)-----> S-1 09/04/87 < 5 <5 < 5 < 5 ---(Annually 09/11/89^a 4.29 < 50 < 100 < 0.5 < 1 < 1 <3 <1,000 1st Qtr) 04/11/90 4.00 < 50 < 0.5 < 50 < 0.5< 0.5 < 0.5 <10,000 07/10/90 4.25 < 90 < 0.5 < 0.5 < 0.5 < 0.5 <10,000 ---10/09/90 4.46 < 50 < 0.5 < 0.5 < 0.5 < 0.5 < 5,000 01/17/91 4.53 < 50 < 0.5 < 0.5 < 0.5 < 0.5 04/09/91 4.20 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---07/10/91 4.42 < 50 < 0.5< 0.5 < 0.5 < 0.5 ---10/09/91 4.87 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---01/24/92 4.90 < 0.5 < 50 < 0.5 < 0.5 < 0.5 04/23/92 4.66 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---07/01/92 4.85 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---10/02/92 5.80 < 50 < 0.5 < 0.5 < 0.5 < 0.5 01/05/93 5.38 < 50 < 0.5 < 0.5 < 0.5 < 0.5 01/07/94 4.19 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---01/07/94 4.19 < 50 < 0.5 < 0.5 < 0.5 < 0.5 MW-1 04/11/90 5.23 < 50 < 50 < 0.5 < 0.5 < 0.5 < 0.5 < 10,000(Annually 07/10/90 5.40 100 < 0.5 < 0.5 ---< 0.5 < 0.5 < 10,000 1st Qtr) 10/09/90 5.61 < 50 < 0.5 < 0.5 < 0.5 < 0.5 < 5,000 01/17/91 5.66 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---04/09/91 4.96 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---07/10/91 5.52 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---10/09/91 5.70 < 50 < 0.5 < 0.5 < 0.5 < 0.5 ---01/24/92 5.51 < 50 < 0.5 < 0.5 < 0.5 < 0.5 04/23/92 5.14 < 50 < 0.5 < 0.5 < 0.5 < 0.5 07/01/92 4.48 < 50 < 0.5 < 0.5 < 0.5 < 0.5 10/02/92 4.80 < 0.5 < 0.5 < 50 < 0.5< 0.5

Analytic Results for Ground Water - Petroleum Hydrocarbons - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda,

Table 2A.



⁻⁻ Table 2B continues on next page --

California (continued) Well ID Ε (Sampling Date Depth to TPH-G TPH-D В T X POG Frequency) Water (ft) Sampled <-----> 01/05/93 5.34 < 50 < 0.5 < 0.5 < 0.5 < 0.5 01/05/93^{dup} 5.34 < 50 < 0.5 < 0.5 < 0.5 < 0.5 01/07/94 5.26 < 50 < 0.5 < 0.5 < 0.5 < 0.5 08/18/94 5.40 < 50 < 0.5 < 0.5 < 0.5 < 0.5 MW-2 04/11/90 4.51 200b 220 2.7 < 0.5 0.5 2.4 < 10,000 (Quarterly) 07/10/90 570^b 4.61 450 150 < 0.5 0.9 3.1 < 10,00010/09/90 190^b 4.74 51 55 < 0.5 < 0.5 < 0.5 < 5,000 01/17/91 350^b 4.73 < 50 51 < 0.5 < 0.5< 0.5 04/09/91 4.09 < 50 21 ---<5 <5 < 5 07/10/91 50^b 4.66 < 50 8.4 < 0.5 < 0.5 < 0.5 10/09/91 4.81 150 22 < 0.5 < 0.5 < 0.5 ___ 01/24/92 4.66 < 50 4.8 < 0.5 < 0.5 < 0.5 04/23/92 4.51 < 50 2.3 1.5 < 0.5 < 0.5 07/01/92 4.57 130° 19 < 0.5 < 0.5 < 0.5 10/02/92 4.80 120° 7.8 < 0.5 < 0.5 < 0.8 ---01/05/93 4.39 200° 9.0 < 0.5 0.6 1.8 ---04/08/93 4.15 170° 9.6 < 0.5 < 0.5 1.6 07/20/93 80^{d} 4.40 16 1.3 1.4 6.1 10/15/93 400° 4.38 37 0.6 4.7 ___ 1.1 ---01/07/94 86^d 4.34 12 < 0.5 < 0.5 1.1 < 500 04/13/94 4.29 < 50 14 < 0.5 < 0.5 < 0.5 07/26/94 4.56 290 51 < 0.5 < 0.5 < 0.5 BH-C 12/17/92 5.0 < 50 < 0.5< 0.5 < 0.5 < 0.5 < 0.5 BH-D 12/17/92 5.0 < 50 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5 BH-E 12/17/92 5.5 < 50 < 0.5 < 0.5 < 0.5 < 0.5 < 0.5

Analytic Results for Ground Water - Petroleum Hydrocarbons - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda,

Table 2A.



⁻⁻ Table 2A continues on next page --

Table 2A. Analytic Results for Ground Water - Petroleum Hydrocarbons - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California (continued)

Well ID (Sampling Frequency)	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	В	E	T	X	POG
		<u> </u>		<	parts	s per billion (µ	g/L)	>	······
Тгір	07/10/90		< 50		<0.5	< 0.5	< 0.5	<0.5	
Blank	10/09/90		<50		<0.5	< 0.5	< 0.5	<0.5	
	01/17/91		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	04/09/91		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	07/10/91		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	10/09/91		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	01/24/92		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	04/23/92		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	07/01/92		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	10/02/92		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	01/05/93		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	04/08/93		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	07/20/93		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	10/15/93		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	01/07/94		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
	04/13/94		< 50		< 0.5	< 0.5	< 0.5	< 0.5	
DTSC MCLs									
			NE	NE	1	680	100 ^e	1,750	NE

⁻⁻ Table 2 continues on next page

Table 2A. Analytic Results for Ground Water - Petroleum Hydrocarbons - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California (continued)

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA
Method 8015

TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA
Method 8015

B = Benzene by EPA Method 8020, or 8240

E = Ethylbenzene by EPA Method 8020, or 8240

T = Toluene by EPA Method 8020, or 8240

X = Xylenes by EPA Method 8020, or 8240

POG = Petroleum oil and grease by American Public Health Association Standard Methods 503, or EPA method 5520BF

DTSC MCLs = Department of Toxic Substances Control maximum contaminant levels

< n = Not detected above detection limit of n ppb

NE = DTSC MCL not established

BH-C = Grab Ground Water Sample

Notes:

- a = 0.090 ppm chromium, 0.090 ppm lead and 0.10 ppm Zn detected; no cadmium detected above detection limit of 0.010 ppm by EPA
 Method 6010. No semi-volatile organic compounds or PCBs detected by EPA Method 625. DTSC MCLs for Cr = 0.05 ppm; Pb = 0.05 ppm; secondary MCL for Zn = 5 ppm.
- b = Chromatographic pattern not typical for gasoline; the concentration is due mostly to lighter hydrocarbon compounds.
- c = The concentration reported as gasoline is *partially* due to the presence of discrete peaks not indicative of gasoline.
- d = The concentration reported as gasoline is *primarily* due to the presence of discrete peaks not indicative of gasoline.
- e = DTSC recommended action level for drinking water; MCL not established

Table 2B. Analytic Results for Ground Water - Volatile Organic Compounds - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California

Well ID	Date Sampled	Depth to Water (ft)	TCE	TCA	PCE	Chloroform	cis- 1,2-DCE	trans- 1,2-DCE	1,2-DCA	Carbon Disulfate	Vinyl Chloride
	<u> </u>				<	parts	per billion (με	g/l) <u></u>		>	
S-1	09/04/87ª										
3-1	09/11/89	4.29	ND	ND	ND	ND	AID.	AID			
	04/11/90	4.29	<0.4	<0.4	<0.4	1.7	ND	ND	ND	ND	ND
	07/10/90	4.25	<0.4	<0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4		< 0.4
	10/09/90	4.23	< 0.4	<0.4	<0.5		< 0.4	< 0.4	< 0.4		<2
	01/07/94	4.90	< 0.5	<0.5		< 0.5	< 0.5	< 0.5	< 0.5		<2
	01/07/94 ^{dup}	4.19	<0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5
	01/07/94	4.19	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5
MW-1	04/11/90	5.23	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4		< 0.4
	07/10/90	5.40	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4		<2
	10/09/90	5.61	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		<2
	01/07/94	5.26									
	08/18/94	5.40	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4		
MW-2	04/11/90	4.51	1.0	-0 4	-0.4	4.5	40.4	16			
141 44 -2	07/10/90		1.2	< 0.4	< 0.4	4.5	< 0.4	16	< 0.4		<2
	10/09/90	4.61	0.93	< 0.4	< 0.4	1.7	< 0.4	11	0.44		<2
	01/17/91 ^b	4.74	1.3	< 0.5	1.6	15	46	6.7	< 0.5		2.5
		4.73	1.2	< 0.5	0.6	2.6	74	12	0.5		3.0
	04/09/91	4.09	<5	< 5	<5	<5	64	<5	<5	< 0.5	< 10
	07/10/91	4.66	< 0.5	< 0.5	6.9	43	< 0.5	< 0.5	< 0.5	14	< 10
	10/09/91	4.81	1.9	<1	28	7.4	54	16	<1		1.7
	01/24/92	4.66	2.5	< 0.5	7.0	19	16	4.3	0.6		< 0.5
	04/23/92	4.51	<3	<3	3.0	<3	84	18	<3		<3
	07/01/92	4.57	2.0	<1	2.0	<1	54	14	< 1		1.0
	10/92/92	4.80	1.0	<1	<1	<1	61	12	<1		< 1
	01/05/93	4.39	1.7	< 0.5	2.2	< 0.5	33	8.7	< 0.5		.67
	04/08/93	4.15	1.3	<1	<1	<1	38	7.8	< 1		< 1
	07/20/93	4.40	2.4	1>	4.7	2.3	43	10	< 0.5		< 0.5
	10/15/93	4.38	<2.5	<2.5	<2.5	<2.5	110	25	< 2.5		< 2.5

⁻⁻ Table 2B continues on next page --



Table 2B. Analytic Results for Ground Water - Volatile Organic Compounds - Shell Service Station WIC #204-0072-0502, 2160 Otis Drive, Alameda, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TCE	TCA	PCE	Chloroform	cis- 1,2-DCE	trans- 1,2-DCE	1,2-DCA	Carbon Disulfate	Vinyl Chloride
						parts	per offficial (µg	(/1)			
	01/07/94 04/13/94 07/26/94	4.34 4.29 4.56	3.8 4.3 4.3	<0.5 <1.3 < 0.4	14.0 5.7 3.5	8.9 2.9 <0.4	29 76 57	5.4 14 5. 7	<0.5 <1.3 < 0.4		<0.5 <0.4
				100.	0.2	10.4	<i>51</i>	5.7	~0.4		\0.4
вн-С	12/17/93	5.0	<2	<2	<2	<2	<2	<2	<2		<2
BH-D	12/17/93	5.0	<2	<2	<2	<2	<2	<2	<2		<2
вн-е	12/17/93	5.5	<2	<2	<2	<2	<2	<2	<2		<2
DTSC MCLs			5	200	5	NE	6	10	0.5	NE	0.5

Abbreviations:

TCE = Trichloroethene by EPA Method 601/8010 or 8240

TCA = 1,1,1-Trichloroethane by EPA Method 601/8010 or 8240

PCE = Tetrachloroethene by EPA Method 601/8010 or 8240

cis-1,2-DCE = cis-1,2-Dichloroethene by EPA Method 601/8010 or 8240

trans-1,2-DCE = trans-1,2-Dichloroethene by EPA Method 601/8010 or 8240

--- = Not analyzed

< n =Not detected above detection limit of n ppb

1,2-DCA = 1,2 dichloroethane by EPA Method 601/8010 or 8240 DTCS MCLs = Department of Toxic Substance control maximum contaminant

Ievels

NE = DTSC MCL not established

ND = Analyte not detected, detection limit not known

Notes:

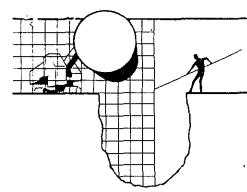
a = 7.0 ppb unknown alcohol and 270 ppb acetone detected

b = 5.0 ppb chlorobenzene detected



ATTACHMENT A

BTS GROUND WATER MONITORING REPORT FOR JULY 26, 1994



BLAINE TECH SERVICES INC.

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

August 15, 1994

Shell Oil Company P.O. Box 5278 Concord, CA 94520-9998

Attn; Daniel T. Kirk

SITE: Shell WIC #204-0072-0502 2160 Otis Drive Alameda, California

QUARTER: 3rd quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940726-Y-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 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.

Cichard C. Blaine

RCB/lp

attachments: table of well gauging data

chain of custody

certified analytical report

cc: Weiss Associates

5500 Shellmound Street Emeryville, CA 94608-2411

ATTN: Michael Asport

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	7/26/94	TOC	•-	NONE	_	-	4.76	18.77
MW-1	7/26/94	TOC		NONE			5.38	16.49
MW-2	7/26/94	TOC		NONE			4.56	17.06

SHELL OIL COMPANY CHAIN OF CUSTODY RECORD Sorial No: 940726-V2 Dalo: . 7/26 RETAIL ENVIRONMENTAL ENGINEERING - WEST / of / Page Sile Address: 2160 Otis Drive, Alameda Analysis Required WIC#: 204-0072-0502 CHICK OH! (I) JOX OHLY CI/DI TURN AROUND TIME gaholaoH yhehoup X sun Phone No.: (510) 675-6168 Fax#: 675-6160 24 hours 🔲 Shell Engineer: D HII Dan Kirk Sile investigation 44 hours | Consuliani Name & Address: Blaine Tech Services, Inc. 985 Timothy Drive San Jose, CA Sol Cloudy/Disposal | | | | | | 16 days X (Normal) Water Clausty/Disporat 95133 [] Hu Phone No.: (408) 995-5535 Fox #: 293-8773 (EPA 8240) Consultant Contact: TPH (EPA 8015 Mod. Diesel) Disoled Solf/Ale Rem, or Syr. □ 8482 Jim Keller Combination IPH 8015 & HOTE: Holly lob or Worles Rem, or Sys. soon as foulble of 24/48 hm, IAI, Commonis: તમ 🗍 BTEX (EPA 8020/602) TPH (EPA 8015 Mod. Volatile Organics Preparation Used X/N 1efiO Test for Disposal Sampled by: Container Size Printed Name: JOE CARRERA. Total SAMPLE . PA Asbeslos MATERIAL CONDITION/ DESCRIPTION COMMENTS IJ Sample ID Date Sludge Soll Wolet Αlr conts. X 7.26 MW-2 χ Х χ K 726. Date: 7/2/1/ Received (Lignature); Relinquished by (signoture):

(M (M) (M)

Relinquished by (signoture):

(M) (M) Printed Name: Printed Name: Dale: 7/27 JOE CACKERA Time: Printed Name: Printed Name: Dale: Ilme: 18:00 Rme: Kelinguished By (signalure): Printed Name: Received/(signature): Printed Name: Dale: Dale: 7/25/10 (VIANCS) īlme: Ilmo: THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS



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: 08/11/1994

NET Client Acct. No: 1821 NET Pacific Job No: 94.03280

Received: 07/28/1994

Client Reference Information

SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

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:

nga krarea

Project Coordinator

Zim Hoch

Operations Manager

Enclosure(s)





Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994 ELAP Certificate: 1386

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

SAMPLE DESCRIPTION: MW-2

Date Taken: 07/26/1994

Time Taken:

		Reporting			Date	Date
Parameter .	Results Flags	Limit	Units	Method	Extracted	Analyzed
Tot. Dissolved Solids (TFR)	12,800,000	10,000	ug/L	160.1		08/02/1994
TPH (Gas/BTXE, Liquid)						
METHOD 5030/M8015						08/03/1994
DILUTION FACTOR*	1					08/03/1994
as Gasoline	290	50	ug/L	5030		08/04/1994
Carbon Range:	C5-C12					08/04/1994
METHOD 8020 (GC, Liquid)						08/03/1994
Benzene	51	0.5	ug/L	8020		08/04/1994
Toluene	ND	0.5	ug/L	8020		08/03/1994
Ethylbenzene	ND	0.5	ug/L	8020		08/04/1994
Xylenes (Total)	ND	0.5	ug/L	8020		08/03/1994
SURROGATE RESULTS						08/03/1994
Bromofluorobenzene (SURR)	94		% Rec.	5030		08/03/1994



Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994 ELAP Certificate: 1386

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

SAMPLE DESCRIPTION: MW-2

Date Taken: 07/26/1994

Time Taken:

nai sample no. 210371		Danaul 2			Date	Data
Paramakan.	Dagulta 271	Reportin Limit	_	Method		Date Analyzed
Parameter (CC rimid)	Results Flags	שנווונים	Units	Mechoa	Extracted	Anaryzeu
METHOD 601 (GC, Liquid) DILUTION FACTOR*	1					08/03/1994
		0.4	ug/L	601		08/03/1994
Bromodichloromethane	ND	0.4	ug/L	601		08/03/1994
Bromoform	ND	-	-	601		08/03/1994
Bromomethane	ND	0.4	ug/L			08/03/1994
Carbon tetrachloride	ND	0.4	ng/L	601		
Chlorobenzene	ND	0.4	ug/L	601		08/03/1994
Chloroethane	ND	0.4	ug/L	601		08/03/1994
2-Chloroethylvinyl ether	ND	1.0	ug/L	601		08/03/1994
Chloroform	ND	0.4	ug/L	601		08/03/1994
Chloromethane	ND	0.4	ug/L	601		08/03/1994
Dibromochloromethane	ND	0.4	ug/L	601		08/03/1994
1,2-Dichlorobenzene	ND	0.4	ug/L	601		08/03/1994
1,3-Dichlorobenzene	ND	0.4	ug/L	601		08/03/1994
1,4-Dichlorobenzene	ND	0.4	ug/L	601		08/03/1994
Dichlorodifluoromethane	ND	0.4	ug/L	601		08/03/1994
1,1-Dichloroethane	ND	0.4	ug/L	601		08/03/1994
1,2-Dichloroethane	ND	0.4	ug/L	601		08/03/1994
1,1-Dichloroethene	ND	0.4	ug/L	601		08/03/1994
trans-1,2-Dichloroethene	5.7 ~	0.4	ug/L	601		08/03/1994
1,2-Dichloropropane	ND	0.4	ug/L	601		08/03/1994
cis-1,3-Dichloropropene	ND	0.4	ug/L	601		08/03/1994
trans-1,3-Dichloropropene	NO	0.4	ug/L	601		08/03/1994
Methylene chloride	ND	10	ug/L	601		08/03/1994
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601		08/03/1994
Tetrachloroethene	3,5	0.4	ug/L	601		08/03/1994
1,1,1-Trichloroethane	ND	0.4	ug/L	601		08/03/1994
1,1,2-Trichloroethane	ND	0.4	ug/L	601		08/03/1994
Trichloroethene	4.3	0.4	ug/L	601		08/03/1994
Trichlorofluoromethane	ND	0.4	ug/L	601		08/03/1994
Vinyl chloride	ND	0.4	ug/L	601		08/03/1994
SURROGATE RESULTS						08/03/1994
1,4-Difluorobenzene (SURR)	104		% Rec.	601		08/03/1994
Bromochloromethane (SURR)	94		% Rec.	601		08/03/1994
Decimonitation (4544)	÷ *					



Client Name: Blaine Tech Services

NET Job No: 94,03280

Date: 08/11/1994 ELAP Certificate: 1386

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

SAMPLE DESCRIPTION: Equip. Blank

Date Taken: 07/26/1994

Time Taken:

		Reporting	g		Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
Tot. Dissolved Solids (TFR)	27,000	10,000	ug/L	160.1		07/29/1994
TPH (Gas/BTXE, Liquid)						
METHOD 5030/M8015						08/04/1994
DILUTION FACTOR*	1					08/04/1994
as Gasoline	ND	50	ug/L	5030		08/04/1994
Carbon Range:						08/04/1994
METHOD 8020 (GC, Liquid)						08/04/1994
Benzene	ND	0.5	ug/L	8020		08/04/1994
Toluene	ND	0.5	ug/L	8020		08/04/1994
Ethylbenzene	ND	0.5	ug/L	8020		08/04/1994
Xylenes (Total)	ND	0.5	ug/L	8020		08/04/1994
SURROGATE RESULTS						08/04/1994
Bromofluorobenzene (SURR)	94		% Rec.	5030		08/04/1994



Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994 ELAP Certificate: 1386

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

SAMPLE DESCRIPTION: Equip. Blank
Date Taken: 07/26/1994

Time Taken:

•		Reportin	ıg		Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
METHOD 601 (GC, Liquid)						
DILUTION FACTOR*	1					08/03/1994
Bromodichloromethane	ND	0.4	ug/L	601		08/03/1994
Bromoform	ИD	0.4	ug/L	601		08/03/1994
Bromomethane	ND	0.4	ug/L	601		08/03/1994
Carbon tetrachloride	ND	0.4	ug/L	601		08/03/1994
Chlorobenzene	ND	0.4	ug/L	601		08/03/1994
Chloroethane	ND	0.4	ug/L	601		08/03/1994
2-Chloroethylvinyl ether	ND	1.0	ug/L	601		08/03/1994
Chloroform	ND ,	0.4	ug/L	601		08/03/1994
Chloromethane	ND	0.4	ug/L	601		08/03/1994
Dibromochloromethane	ND	0.4	ug/L	601		08/03/1994
1,2-Dichlorobenzene	ND	0.4	ug/L	601		08/03/1994
1,3-Dichlorobenzene	ND	0.4	ug/L	601		08/03/1994
1,4-Dichlorobenzene	ND	0.4	ug/L	601		08/03/1994
Dichlorodifluoromethane	ND	0.4	ug/L	601		08/03/1994
1,1-Dichloroethane	ND	0.4	ug/L	601		08/03/1994
1,2-Dichloroethane	ND	0.4	ug/L	601		08/03/1994
1,1-Dichloroethene	ND	0.4	ug/L	601		08/03/1994
trans-1,2-Dichloroethene	ND	0.4	ug/L	601		08/03/1994
1,2-Dichloropropane	ND	0.4	ug/L	601		08/03/1994
cis-1,3-Dichloropropene	ND	0.4	ug/L	601		08/03/1994
trans-1,3-Dichloropropene	ND	0.4	ug/L	601		08/03/1994
Methylene chloride	ND	10	ug/L	601		08/03/1994
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601		08/03/1994
Tetrachloroethene	ND	0.4	ug/L	601		08/03/1994
1,1,1-Trichloroethane	ND	0.4	ug/L	601		08/03/1994
1,1,2-Trichloroethane	ND	0.4	ug/L	601		08/03/1994
Trichloroethene	ND	0.4	ug/L	601		08/03/1994
Trichlorofluoromethane	ND	0.4	ug/L	601		08/03/1994
Vinyl chloride	ND	0.4	ug/L	601		08/03/1994
SURROGATE RESULTS						08/03/1994
1,4-Difluorobenzene (SURR)	86		% Rec.	601		08/03/1994
Bromochloromethane (SURR)	87		% Rec.	601		08/03/1994



Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994 ELAP Certificate: 1386

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

SAMPLE DESCRIPTION: Trip Blank

Date Taken: 07/26/1994

Time Taken:

			Reportin	ıg		Date	Date
Parameter	Results	Flags	Limit	Units	Method	Extracted	Analyzed
TPH (Gas/BTXE, Liquid)							
METHOD 5030/M8015							08/04/1994
DILUTION FACTOR*	1						08/04/1994
as Gasoline	ND		50	ug/L	5030		08/04/1994
Carbon Range:							08/04/1994
METHOD 8020 (GC, Liquid)							08/04/1994
Benzene	ND		0.5	ug/L	8020		08/04/1994
Toluene	ND		0.5	ug/L	8020		08/04/1994
Ethylbenzene	ND		0.5	ug/L	8020		08/04/1994
Xylenes (Total)	ND		0.5	ug/L	8020		08/04/1994
SURROGATE RESULTS							08/04/1994
Bromofluorobenzene (SURR)	93			% Rec.	5030		08/04/1994



Client Name: Blaine Tech Services

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCV	CCV			
	CCA	Standard	Standard			
	Standard	Amount	Amount		Date	Analyst
Parameter	% Recovery	Found	Expected	Units	Analyzed	Initials
Tot. Dissolved Solids (TFR)	103.8	1038	1000	mg/L	07/29/1994	shr
Tot. Dissolved Solids (TFR)	105.6	1056	1000	mg/L	08/02/1994	shr
TPH (Gas/BTXE, Liquid)						
as Gasoline	101.0	1.01	1.00	mg/L	08/04/1994	aal
Benzene	98.6	4.93	5.00	ug/L	08/04/1994	aal
Toluene	100.0	5.00	5.00	ug/L	08/04/1994	aal
Ethylbenzene	99.2	4.96	5.00	ug/L	08/04/1994	aal
Xylenes (Total)	99.3	14.9	15.0	ug/L	08/04/1994	aal
Bromofluorobenzene (SURR)	102.0	102	100	% Rec.	08/04/1994	aal



Client Name: Blaine Tech Services

NET Job No: 94.03280

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		ccv	CCV			
	CCV	Standard	Standard			
	Standard	Amount	Amount		Date	Analyst
Parameter	% Recovery	Found	Expected	Units	Analyzed	Initials
METHOD 601 (GC, Liquid)						
Bromodichloromethane	100.0	20.0	20.0	ug/L	08/03/1994	asm
Bromoform	104.0	20.8	20.0	ug/L	08/03/1994	asm
Bromomethane	95.5	19.1	20.0	ug/L	08/03/1994	asm
Carbon tetrachloride	101.0	20.2	20.0	ug/L	08/03/1994	asm
Chlorobenzene	104.0	20.8	20.0	ug/L	08/03/1994	asm
Chloroethane	102.5	20.5	20.0	ug/L	08/03/1994	asm
2-Chloroethylvinyl ether	102.5	20.5	20.0	ug/L	08/03/1994	asm
Chloroform	98.0	19.6	20.0	ug/L	08/03/1994	asm
Chloromethane	92.5	18.5	20.0	ug/L	08/03/1994	asm
Dibromochloromethane	105.5	21.1	20.0	ug/L	08/03/1994	asm
1,2-Dichlorobenzene	104.0	20.8	20.0	ug/L	08/03/1994	asm
1.3-Dichlorobenzene	102.0	20.4	20.0	ug/L	08/03/1994	asm
1.4-Dichlorobenzene	102.5	20.5	20.0	ug/L	08/03/1994	asm
Dichlorodifluoromethane	99.0	19.8	20.0	ug/L	08/03/1994	asm
1.1-Dichloroethane	102.5	20.5	20.0	ug/L	08/03/1994	asm
1,2-Dichloroethane	102.5	20.5	20.0	ug/L	08/03/1994	asm
1.1-Dichloroethene	100.0	20.0	20.0	ug/L	08/03/1994	asm
trans-1,2-Dichloroethene	99.5	19.9	20.0	ug/L	08/03/1994	asm
1,2-Dichloropropane	101.0	20,2	20.0	ug/L	08/03/1994	asm
cis-1,3-Dichloropropene	103.0	20.6	20.0	ug/L	08/03/1994	asm
trans-1,3-Dichloropropene	105.5	21.1	20.0	ug/L	08/03/1994	asm
Methylene chloride	120.5	24.1	20.0	ug/L	08/03/1994	asm
1,1,2,2-Tetrachloroethane	102.0	20.4	20.0	ug/L	08/03/1994	asm
Tetrachloroethene	102.0	20.4	20.0	ug/L	08/03/1994	asm
1,1,1-Trichloroethane	102.0	20.4	20.0	ug/L	08/03/1994	asm
1,1,2-Trichloroethane	105.5	21.1	20.0	ug/L	08/03/1994	asm
Trichloroethene	100.5	20.1	20,0	ug/L	08/03/1994	asm
Trichlorofluoromethane	102.0	20.4	20.0	ug/L	08/03/1994	asm
Vinyl chloride	99.0	19.8	20.0	ug/L	08/03/1994	asm
1,4-Difluorobenzene (SURR)	98.0	98	100	% Rec.	08/03/1994	asm
Bromochloromethane (SURR)	96.0	96	100	% Rec.	08/03/1994	asm



Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994

ELAP Certificate: 1386

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

METHOD BLANK REPORT

Method Blank

	Amount	Reporting		Date	Analyst
Parameter	Found	Limit	Units	Analyzed	<u>Initials</u>
Tot. Dissolved Solids (TFR)	ND	10	mg/L	08/02/1994	shr
TPH (Gas/BTXE, Liquid)					
as Gasoline	ND	0.05	mg/L	08/04/1994	aal
Benzene	ND	0.5	ug/L	08/04/1994	aal
Toluene	ND	0.5	ug/L	08/04/1994	aal
Ethylbenzene	ND	0.5	$na \backslash r$	08/04/1994	aal
Xylenes (Total)	ND	0.5	ug/L	08/04/1994	aal
Bromofluorobenzene (SURR)	99		% Rec.	08/04/1994	aal



Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994 ELAP Certificate: 1386

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

METHOD BLANK REPORT

Method Blank

	Blank					
	Amount	Reporting		Date	Analyst	
Parameter	Found	Limit	Units	Analyzed	Initials	
METHOD 601 (GC, Liquid)						
Bromodichloromethane	ND	0.4	ug/L	08/03/1994	asm	
Bromoform	ND	0.4	ug/L	08/03/1994	asm	
Bromomethane	ND	0.4	ug/L	08/03/1994	asm	
Carbon tetrachloride	ND	0.4	ug/L	08/03/1994	asm	
Chlorobenzene	ИD	0.4	ug/L	08/03/1994	asm	
Chloroethane	ND	0.4	ug/L	08/03/1994	asm	
2-Chloroethylvinyl ether	ND	1.0	ug/L	08/03/1994	asm	
Chloroform	ND	0.4	ug/L	08/03/1994	asm	
Chloromethane	ND	0.4	ug/L	08/03/1994	asm	
Dibromochloromethane	ND	0.4	ug/L	08/03/1994	asm	
1,2-Dichlorobenzene	ND	0.4	ug/L	08/03/1994	asm	
1,3-Dichlorobenzene	ND	0.4	ug/L	08/03/1994	asm	
1,4-Dichlorobenzene	ND	0.4	ug/L	08/03/1994	asm	
Dichlorodifluoromethane	ND	0.4	ug/L	08/03/1994	asm	
1,1-Dichloroethane	ND	0.4	ug/L	08/03/1994	asm	
1,2-Dichloroethane	ND	0.4	ug/L	08/03/1994	asm	
1,1-Dichloroethene	ND	0.4	ug/L	08/03/1994	asm	
trans-1,2-Dichloroethene	ND	0.4	ug/L	08/03/1994	asm	
1,2-Dichloropropane	ND	0.4	ug/L	08/03/1994	asm	
cis-1,3-Dichloropropene	ND	0.4	ug/L	08/03/1994	asm	
trans-1,3-Dichloropropene	ND	0.4	ug/L	08/03/1994	asm	
Methylene chloride	ND	10	ug/L	08/03/1994	asm	
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	08/03/1994	asm	
Tetrachloroethene	ND	0.4	ug/L	08/03/1994	asm	
1,1,1-Trichloroethane	ND	0.4	ug/L	08/03/1994	asm	
1,1,2-Trichloroethane	ND	0.4	ug/L	08/03/1994	asm	
Trichloroethene	ND	0.4	ug/L	08/03/1994	asm	
Trichlorofluoromethane	ND	0.4	ug/L	08/03/1994	asm	
Vinyl chloride	ND	0.4	ug/L	08/03/1994	asm	
1,4-Difluorobenzene (SURR)	90		% Rec.	08/03/1994	asm	
Bromochloromethane (SURR)	82		% Rec.	08/03/1994	asm	



Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994 ELAP Certificate: 1386

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

	Matrix Spike	Matrix Spike Dup		Spike	Sample	Matrix Spike	Matrix Spiké Dup.		Date	Analyst
Parameter	% Rec.	% Rec.	RPD	Amount	Conc.	Conc.	Conc.	Units	Analyzed	Initials
TPH (Gas/BTXE, Liquid)	* 1001	· KCC.		11110-0110	001101					
as Gasoline	101.0	104.0	2.9	1.00	ND	1.01	1.04	mg/L	08/04/1994	aal
Benzene	99.7	101.9	2.1	31.0	ND	30.9	31.6	ug/L	08/04/1994	aal
Toluene	99.6	101.0	1.3	97.2	ND	96.8	98.2	ug/L	08/04/1994	aal
TPH (Gas/BTXE, Liquid)										
as Gasoline	103.0	96.0	6.9	1.00	0.29	1.32	1.25	mg/L	08/04/1994	aal
Benzené	86.5	80.0	7.8	31.0	51.	77.8	75.8	ug/L	08/04/1994	aal
Toluene	103.7	97.6	6.0	97.2	ND	100.8	94.9	ug/L	08/04/1994	aal



Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994 ELAP Certificate: 1386

Page: 12

Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

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
METHOD 601 (GC, Liquid)		•								
Chlorobenzene	105.5	101.5	3.9	20.0	ND	21.1	20.3	ug/L	08/03/199	4 asm
1,1-Dichloroethene	101.0	96.5	4.5	20.0	ND	20.2	19.3	ug/L	08/03/199	4 asm
Trichloroethene	100.0	101.0	1.0	20.0	ND	20.0	20.2	ug/L	08/03/199	4 asm



Client Name: Blaine Tech Services

NET Job No: 94.03280

Date: 08/11/1994

ELAP Certificate: 1386

Page: 13

Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940726-Y2

LABORATORY CONTROL SAMPLE REPORT

		LCS	LCS			
	LCS	Amount	Amount		Date	Analyst
Parameter	% Recovery RPD	Found	Expected	Units	Analyzed	<u>Initials</u>
Tot, Dissolved Solids (TFR)	109.0	1090	1000	mg/L	08/02/1994	shr



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 fimits 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.

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

Revised September, 1993 abb.93

COOL	ER RECEIPT FORM
	and the second s
oject: Shell dianica	1940736-Y2 Log No: -/635 nd checked on 7/38/94 by T Socrasen
oler received on	
- macent?	(ES) NO
re custody papers present?	
re custody papers property	YES NO O. 2 °C
re the custody papers	YES INO O. 2 °C
s sufficient ice used	condition (unbroken)?(ES) NO \
d all bottles arrive in good	NO NO
d bottle labels match coc?	alysis indicated?YES NO
re proper bottles used 101 and	YES NO
	hubbles:
A vials checked for headspace Note which voas (if any	•
mple descriptor:	Number of vials:
.11 VOAs with headspace bubble used for analysis	s have been set aside so they will not be
st here all other jobs receiv	
	NET log #
ient Job #	

(coolerrec)



Santa Rose Division 435 Tesconi Circle Santa Rosa, CA 95401 fel: (707) 526-7200

Fax: (70/) 526-9623

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

Date: 08/24/1994

NET Client Acct. No: 1821 NET Pacific Job No: 94.03668

Received: 08/18/1994

Client Reference Information

SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

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:

roject Coordinator

Operations Manager

Enclosure (s)





Client Name: Blaine Tech Services Date: 08/24/1994
Client Acct: 1821 ELAP Cert: 1386 NET Job No: 94.03668

Page: 3

Ref: BHELL, 2160 Otis Drive, Alameda, Jub No. 940818F1

SAMPLE DESCRIPTION: MK-1

Date Taken: 08/18/1994 Time Taken: 11:45 NET Sample No: 212205

			Reportin	_		Date	Date
Parameter	Results	Flags	Limit	Units	Mothod	Extracted	Analyzed
Method 601 (CC, Liquid)							
DILUTION FACTOR*	1						08/19/1994
Bromodichloromethane	ИО		0.4	ղգ/Ն	ear		00/19/1994
Bromotorm	ND		0.4	ug/L	601		08/19/1994
Bromomethana	ND		0.4	ug/ե	601		09/19/1994
Carbon tetrachloride	ND		0.4	og/ħ	601		08/19/1994
Chlorobenzene	ND		0.4	ug/L	601		08/19/1994
Chloroethane	นห		0.4	ug/L	601		QA/19/1994
2-Chlorocthylvinyl ether	ND		. 1.0	սց/և	601		08/19/1994
Chloroform	ND	ø	0.4	ug/L	601		08/19/1994
Chloromethane	ND		0.4	ug/L	601		08/19/1994
Dibromochioromethane	ND		0.4	ug/L	601		08/19/1994
1,2-Dichlorobenzene	ND		0.4	սց/ե	601		08/19/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	601		08/19/1994
1,4 Dichlorobenmene	ND		0.4	ug/h	601		08/19/1994
Dichlorodifluoromethane	ND		0.4	սց/Ն	601		08/19/1994
1,1-Dichloroethano	מא		0.4	ug/L	601		08/19/1994
1,2-Dichlorosthans	ND		0.4	սց/ւ	601		08/19/1994
1,1-Dichloroethene	ND		0.4	ug/I.	607		08/19/1994
trans-1,2-Dichloroethene	ИĎ		0.4	ug/L	601		08/19/1994
1,2-Dichloropropans	ND		0.4	ug/L	601		08/19/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	601		08/19/1994
Erans-1,3-Dichloropropene	ND		0.4	ug/L	601		08/19/1994
Mathylene chloride	ND'		10	ug/Ii	601		08/19/1994
1,1,2,2-Tetrachloxoethane	ND		0.4	ug/L	601		08/19/1994
Tetrachloroethene	ND		0,4	ug/L	601		08/19/1994
1,1,1-Trichlorocthune	ND		0.4	ug/L	601		08/19/1994
1,1,2-Trichluroethane	מא		0.4	ug/6	601	•	06/19/1994
Trichlorosthene	NO		0.4	ug/L	€01		08/19/1994
Trichlorofluoromethane	מא		0.4	ug/L	601		08/19/1994
Vinyl oblorido	ND		0.4	ug/L	601		08/19/1994
SURROGATE RESULTS							08/13/1999
1,4-Difluorobenzene (SURR)	76		•	* Red.	601		08/19/1994
1.4 Dichlorobutane (SURR)	64			% Rec.	601		08/19/1994

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

HUG 26.94 12:02 No.007 P.05



Client Name: Blaine Toch Sor

Client Acct: 1821 NHT Job No: 94.03668 Date: 08/24/1994

ELAP Cert: 1386 Fage: 4

Ref: SHELL, 2160 Otis Drive, Atameda, Job No. 940818F1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCV	CCV			
	CCV	Standard	Standard			
	Standard	λπουπέ	Amount		Dato	Analyst
Parameter	3 Recovery	Found	Expected	Units	Analyzed	Initials
TPR (Gas/BTXE, Liquid)						
as Gasoline	100.0	1.00	1.00	mg/L	08/19/1994	lss
Benzene	98.2	4.91	5.00	աց/ե	06/19/1994	las
Toluene	106.6	5.33	5.00	սց/ե	08/19/1994	lsa
Ethylbonsone	100.2	5.01	5.00	սց/ւ	08/19/1994	lss
Xylenes (Total)	103.3	15.5	15.0	ug/t	08/19/1994	laa
Bromofluorobenzene (SURR)	108.0	108	100	% Red.	08/19/1994	100

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

OS REKKLESSH ID:4085285501 HOR 50.84 IS:05 NO.007 P.04



Client Name: Blaine York Sorvices

Client Acct: 1821 NET Job No: 94.03668

BRAP Cort: 1386 Date: 08/24/1994

Page: 2

Rof: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

SAMPLE DESCRIPTION: MW-1

Date Taken: 09/18/1994 Time Taken: 11:45 NET Sample No. 212205

		Reporting	1		Date	Date
Parameter	Results Flags	<u> Limit</u>	Units	Method	Extracted	Analyzed
fot. Dissolved Solids (TFR)	000,00E,6	10,000	ug/L	160.1		08/20/1994
TPH (Gas/BTXB, Liquid)						
METHOD 5030/MBD15						08/19/1994
DILUTION FACTOR*	1					08/19/1994
as Gasoline	ND	50	ug/£	5030		08/19/1994
Carbon Rango:	•					09/19/1994
METHOD 8020 (GC, Liquid)						08/19/1994
Battzena	100	0.5	ug/L	8030		08/19/1994
Toluene	ND	0.5	ug/L	8020		08/19/1994
Ethylbenzene	NO	0.5	ug/L	8020		08/19/1994
Tylenes (Total)	ND	0.5	ug/L	8020		08/19/1994
SURROGATE RESULTS	••					08/19/1994
Bromofluorobensens (SURR)	95		₹ Rec.	5030		08/19/1994

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

AUG 26'94 IZ:02 No.007 P.05

10:1085285501



Client Name: Dlaine Tech Services Date: 08/24/
Client Adot: 1821 ELAF Cert: 1386

Date: 08/24/1994

l'age: 5

Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCV	ccv			
	CCA	Standard	Standard			
	Standard	Amount	Amount		Date	Analyst
Parameter	3 Recovery	Found	Expected	Unita	Minlyzed	Initials
METHOD 601 (GC, Liquid)						
Bromodichloromothano	95.5	19.1	20.0	υ φ/ Ι,	08/18/1994	jmh
Bromoform	84,5	16.9	20.0	սգ/Ն	08/18/1994	jmh
Bromomothane	83.0	16,6	20.0	աց/ե	08/18/1994	jmb
Carbon tetrachloride	94.0	18.0	20.0	ug/L	05/18/1994	jmh
Chlorobenzene	98.0	19.6	20.0	ug/L	08/18/1994	jmlı
Chioroethane	74.5	14.9	20.0	ug/L	08/18/1994	ຕ໌ເກຽ
2-Chloroethylvinyl ether	114.0	22.8	20.0	υα/6	08/18/1994	jmh
Chloroform	94.5	16.9	20.0	ug/L	08/18/1994	jmh
Chloromethane	67.0	13.4	20.0	ս ց/ L	08/18/1994	jmh
Dibromochloromethane	92.5	18.5	20.0	υ ց/ [,	08/18/1994	jmħ
1,2-Dichlorobonzens	94.5	18.9	20.0	սց/Ն	08/18/1994	jmh
1,3-Dighlorobenzene	71.0	14.2	20.0	ug/L	08/18/1994	jmh
1,4-Dichlorobenzene	77.0	15.4	20.0	ug/h	08/18/1994	rím't
Dichlorodifluoromethang	80.0	16.0	20.0	սց/Ն	08/18/1994	jmir
1,1-Dichlorosthans	107.5	21,5	20.0	ug/L	08/18/1994	jmh
1,2-Dichlorocthane	92.0	18.4	20.0	սց/ե	08/18/1994	rlmt
L,1-Dichloroethene	82.0	16.4	20.0	ug/L	08/18/1994	jmh i
trans-1,2-Dichloroothene	79.0	15.A	20.0	ug/L	08/18/1994	jmb
1,2-Dichloropropane	95.5	19.1	20.0	ug/L	08/18/1994	jada
cis-1,3-Dichloropropene	94.5	18.9	20.0	ug/L	08/18/1994	jmb
trans-1,3-Dichloropropene	92.5	16.5	20.0	ug/L	08/18/1994	j mh
Methylene chloride	106.5	21.3	20.0	ug/L	08/18/1994	jmh
1,1,2,2 Tetrachloroethane	07.5	17.5	20.0	ug/fi	08/18/1994	, rimc
Tetrachloroethene	96.0	19.2	20.0	ug/L	08/18/1994	jmli
1,1,1-Trichloroethane	94.0	18.8	20.0	ug/L	08/18/1994	ງ່າໜ້າ
1,1,2 ·Trichloroethane	93.5	18.7	20.0	սց/և	08/18/1994	jmħ
Trichloroethene	93.0	18.6	20.0	ug/L	08/18/1994	jmb
Trichlorofluoromethane	82.5	16.5	20.0	ug/L	08/18/1994	jmb
Vinyl chlorido	76.5	15.3	20.0	ug/L	08/18/1994) mbs
1,4-Difluorobenzene (SURR)	97.0	97	100	* Rec.	08/18/1994	- դար
1,4-Dichlorobutane (SURR)	86.0	86	100	t Roc.	08/18/1994	###

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

IN: d085285701 40.4 700.0N 80:SI 46'85 80H OS BEKKLESSU



Client Name: Dlaine York Services

ELAP Cart: 1386

Page: 6

Date: 08/24/1994

Rof: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

METHOD BLANK REPORT

Method

	Blank					
	Amount	Reporting		Date	Analyst	
Parameter	Found	Limit	Units	Analyzed	<u> Initials</u>	
Tot. Dissolved Solids (TFR)	ND	10	mg/L	08/20/1994	shr	
TPH (Gas/BTKE, Liquid)						
as Gasoline	เหม	0.05	ng/L`	00/19/1994	188	
Benzene	NO	0.5	ug/L	08/19/1994	188	
Toluene	ND	0.5	ug/L	08/19/1994	laa	
Sthylbonzono	ND	0.5	ug/L	08/19/1994	las	
Xylenes (Total)	ND	0.5	ug/L	08/19/1994	了希腊	
Bromofluorobenzene (SURR)	ยา		% Red.	08/19/1994	las	

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

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70.4 500.0N 80:SI \$6'82 80R

OS REKKLESSH



Client Acet: 1821 NET Job No: 94,03660 Date: 08/24/1994

REAP Cort: 1986 Page: 7

Ref: SHELL, 2160 Otim Drive, Alameda, Job No. 940818F1

METHOD BLANK REPORT

Method Blank

	Blank				
	Amount	Reporting		Date	A nalyst
Parameter	Found	Linit	Onita	Analyzed	fnitial:
METHOD 601 (GC, Liquid)					
Bromodichloromethane	ND		ug/L	09/18/1994	jπh
Bromoform	ИĎ	0.4	vg/L	08/18/1994	jmh
Bromomethane	ND	0.4	ug/L	08/18/1994	jmh
Carbon tetrachloride	ND	0.4	ug/r,	08/18/1994	jmh
Chlorobenzene	ND	0.4	ug/L	08/18/1994	jmh
Chloroethane	MD	0.4	ng/L	08/18/1994	jmh
2 Chlorocthylvinyl ether	ND	0.4	սց/ե	08/18/1994	imb
Chloroform	ND	1.0	ug/L	08/18/1994	jmh
Chloromethane	ND	0.4	ug/l,	08/18/1994	rlm t
Dibromochloromethane	ND	0.4	ug/L	08/18/1994	jmh
1,2-Dichlorobenzene	ИO	0.4	ug/L	08/18/1994	jmb
1,3-Dichlorobenzono	מא	0.4	ug/L	08/18/1994	jmh .
1,4-Dichlorobensene	מא	0.4	ug/L	08/18/1994	jmh
Dichlorodifluoromethane	2.1	0.4	ug/L	08/18/1994	jmb
1,1-Dichloroethane	ND	0.4	ug/L	08/18/1994	jmh
1,2-Dichloroethane	NO	0.4	ug/L	08/18/1994	jmh
1,1-Dichlogoethene	ND	0.4	ug/L	08/18/1994	jmh
trans-1,2-Dichloroethene	ND	0.4	ug/L	08/18/1994	jmh
1,2-Dichloropropane	ОИ	0.4	ug/L	08/18/1994	dmt
cis-1,3-Dichloropropene	ND	0.4	ug/L	08/18/1994	:jmb
trans-1,3-Dichloropropens	ND	0.4	ug/L	08/18/1994	rlm į
Methylene chloride	ØЮ	0.4	սց/Ն	08/18/1994	jmh
1,1,2,2.Totrachloroothano	(TIA)	10	ug/L	08/18/1994	jmh
Tetrachloroothone	CΠβ	0.4	ug/L	08/18/1994	jmh
1,1,1-Trichloroethane	СИ	0.4	ug/L	08/18/1994	jmb
1,1,2-Trichloroethane	ND	0.4	ug/L	08/18/1994	jmh
Trichloroethene	מא	0.4	ug/L	08/18/1994	jmh
Trichlorofluoromethane	ND	0.4	ug/L	08/18/1994	jmtr
Vinyl chloride	90	0.4	ug/L	08/18/1994	jmh
1,4.Difluorobonzone (SURR)	102		% Rec.	08/18/1994	jmh.
1,4-Dichlorobutane (SURR)	62		% Rec.	08/18/1994	ri mh

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

05 REKKLESSH ID:4085285401 H06 56.94 ID:00 No.007 P.08



Client Acct: 1821 NET Job No: 94.03668 Date: 08/24/1994

ELAP Cert: 1386 Page: 8

Ref: SHELL, 2160 Oliu Drive, Alamoda, Job No. 940818F1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike * Rec.	Matrix Spike Dup & Rec.	RPD	Spike Amount	Sample Conc.	Matrix Splke Conc.	Matrix Spike Dup. Conc.	Unite	Date Analyzed	Amalyst Initials
TPH (Gas/STXE, Liquid)									•	
as Gasoline	104.0	100.0	3.9	1.00	ND	1.04	1.00	mg/L	08/19/1994	las
Benzene	98.5	99.5	1.0	39.3	ND	38.7	39.1	ug/L	08/19/1994	lns
Toluene	100.0	99.0	0.9	103	1.0	104	103	սց/Լ	08/19/1994	108

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

90.4 100.0N 40:21 48'84 80H ID: #085285501 OS REKKLESSU



Date: 08/24/1994

ELAP Curt: 1386

Pago: 9

Ref: SHMLL, 2160 Otts Drivo, Alameda, Job No. 940818F1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike ♦ Rec.	Matrix Spike Dup * Rec,	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Cong.	Units	Date Analyzod	Analyst Initials
METHOD 601 (GC, Liquid)										
Chlorobenzene	88.5	98,0	10.2	20.0	ND	17.7	1.9 . 6	ug/L	00/10/1994	jmh
1,1-Dichloroethene	72.0	82.0	13.0	20.0	ND	24.4	16.4	ug/L	08/18/1994	judi
Trichloroethone	85.5	93.0	8.4	20.0	ND	17.1	10.6	ug/L	08/18/1994	jmh

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

01.9 50.04 No:SI 48.62 BUR ID: d08528550J OS REKKLESSH



Date: 08/24/1994

BEAR Cort: 1386

Page: 10

Ref: SHBLL, 2160 Octs Drive, Alameda, Job No. 940818F1

LABORATORY CONTROL SAMPLE REPORT

		LCS	rcs			
	1,08	Amount	Amount		Date	Analyat
Parameter	1 Recovery RPD	Found	Expected	Unite	Analyzed	Initials
Tot. Dissolved Solids (TFR)	100.9	1,009	1000	mg/L	08/20/1994	shr

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

TI:4 700,00 40:21 46'82 30A

ID:4085285101

OS REKKLESSH



KEY TO ABBREVIATIONS and METHOD REFERENCES

: Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercades 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.

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

Revised September, 1993 abb.93

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204	4-0072-	-0502			•														CHECK DHE (I) TOX DHEA	CT/01 TURK AR
Shell Engineer: Dan Kirk Consullant Name & Blaine Tech Ser	Addres	SS :		Phone 575-6 Fax #:	No.: 168 675-	(510) 6160						g.		SOLOS					32+ laved?gotlon	titi 21 tours
Consultant Contact Jim Keller Comments:	ve S	Inc. an Jose	e. CA	951: Phone 995-5: Fax #:	33 No.: 535 293-	(408) 8773	, ~	:Diesel).		PA 8240)		Combination 1PH 8015 & BTEX 8020	EPA 601	DISSOLUEDS					Woler Cloudy/Okpoint Self/Air Rem, or Syz.	\$152 HORE Hotel \$152 Colpet \$152 If \$4031
Sampled by:	1/9	7					8015 Mod.	015 Mod	8020/602	ganles (B	ooscal	on TPH 80	BY	7155		ارم	Used	Y/N	Oner	24/48 hrs.
Printed Name: 70. Sample ID	Dalo	Sludge	Soll	Water	τİΑ	No. of conh.	H (EPA	TPH (EPA 8015 Mod.: Diesel)	BIEX (EPA 8020/602)	Volatile Organics (EPA	Test for Disposal	Combination	HVOCIS	10 TAY	Asbestos	Sontainer Sizo	Preparation Used	Composite	MATERIAL DESCRIPTION	SAM CONDI COMM
mw-1 11:4	1918			X		7	<u> </u>			•	-	X	X	X)				
, in the second			:												•					
					<u> </u>									-					-	
Relinced by top notice);	Prinje	d Nam	•:			Date	- 2-	7-32	L L	1	A do	/ahua						•	
Religional by (signature		76 Priple	mF/c	un	614		Ilm	• /			OWOT	Anou	Colure Colure		re			3/ Jinjo	Morner Normer Normer Normer	Dale: lime:
A Alfred LA			1 hu	J/inc	.	ROYIDE	Time	• T L	136	ì	_	(3)	فصس					٠.		Date: Time:

COOLER RECEIPT FORM

Project: shall offs Dr. Alam Cooler received on: 8118/94 ar	Log No: 2.015 A checked on 8/18/94 by A-Lope (signature)
Wore custody papers present?	(ES) NO
Were custody papers properly fil	led out? (ES) NO
Were the custody papers signed?.	(TES) NO
Was sufficient ice used?	DES NO 0.5°C
Did all bottles arrive in good o	condition (unbroken)?XES NO
Did bottle labels match COC?	
Were proper bottles used for ana	
Correct preservatives used?	NO
VOA vials checked for headspace Note which voas (if any)	bubbles? NO had bubbles:*
Sample descriptor: $MW-/$	Number of vials:
	the second secon
e de la companya del la companya de	
	The second section of the second seco
The same of the sa	1 1/ 1 1/ 1 1/ 1 1/ 1 1/ 1 1/ 1 1/ 1 1
*All VOAs with headspace bubbles used for analysis	s have been set aside so they will not be
List here all other jobs receive	ed in the same cooler:
Client Job #	NET log #

(coolerrec)

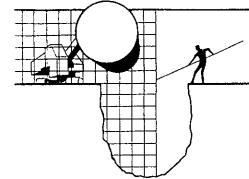
SHELL ELL MONITORING DA.A SHEET.

Project	#. G/10 9	10 =	/ Wic	I# 2 AU		
Sampler:	1:9408	10//		a Sampled:	0072 8-18	
]	1071					
	": mw~	- /	MGT	. Diamater:	(cricia one)	2 3 🐧 6
1	11 Depth:		-	th to Water:		
Before	16.47	fter	Bef	ore 5,43	After	
Depth to	Free Produ	ct:		ckness of Fre	e Product	(feet):
Measurem	ents refere	nced to:	(pvc)	Grade	Other	
20111 12111 (73 a	vertim Parter (VCP): (e ² /1) = n)/131 r sa/t-st = diameter (in.) = 1.001 in1/141		10 414, 20 0 0.2 10 0.2	7		
	4	×	3		21.7	7
	Volume	. ^ .	Specified V	olumes =	gallons	
Purging:	Bailer D Middleburg Electric S Suction Pu Type of In	ubmersib mp D		Samp1i	Suction	
rime	TEMP. (F)	рĦ	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1140	76.0	6.9	8420	42-6	7. 5	00 = 1.8 mg/2
1142	75.8	6.7	1/200	14.4	17.5	
1143	75.8	6-7	11,100	29.3	22.0	
				*		
					· · · · · · · · · · · · · · · · · · ·	
Did Well	Davater?	o If yes	, gals.	Gallons 2	Actually Ev	acuated: 22.0
Sampling	Time: // 4/	5-	•			
Sample Y.	D.: MW-1	<i>,</i>	Labo	oratory: NC	7	
Analyzed	tor: Tfl	16-8		0/- IDS		
Duplicate			Clea	uning Blank I	.b.:	, , , , , , , , , , , , , , , , , , , ,
Analyzed	for:					
Shipping	Notations:				······································	
Additions	1 Notation:					



ATTACHMENT B

BTS GROUND WATER MONITORING REPORT FOR AUGUST 18, 1994



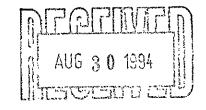
BLAINE TECH SERVICES INC.

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

August 26, 1994

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

Attn: Daniel T. Kirk



SITE: Shell WIC #204-0072-0502 2160 Otis Drive Alameda, California

QUARTER: 3rd quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940818-F-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 Emeryville, CA 94608-2411

ATTN: Michael Asport

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 ((eet)
MW-1	8/18/94	TOC	-	NONE	-	_	5.40	16.47

		.CO									СН	ΙΑΙ	10	F C	US	O	Ϋ́	REC	CORD	Dale	:: 8/18/94
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20	4~0072-	-0502						ļ	ļ					•				ļ —	CHICK OHI (I) FOX OHIY	C1/01	JUST CHUOSA HSUT
Shell Engineer:		·		Phono	No.:	(510)								25		ľ			Quarterly Montering	KII	24 hours 🗀
Dan Kirk				Phono 675-61 Fax #:	675- 675-	6160]							Ž					SI e investigation .	1441	44 hours
Consuliani Namo & Blaine Tech Se	rvices,	Inc.									1	BTEX 6020	_	3	•				SOI Cloudy/Disposal	1412	16 days X (Normal)
985 Timothy Dr Consultant Contac	<u>ive S</u>	an Jose	<u>≥, C</u> ∧	9511 Phono	33	(100)				6		ង្គ័	100	Ą					Water Ciousy/Disposal	1413	Other D
Jim Keller	••		ı	995-55 Fox #:	35	(408)	(303)	Se Se		8220)		್	1	JE						£162	C(n)
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	/		·				Mod.	Mod	/80	5		문		01350 WED			٥	_	Olyes		24/41 hm, 1A1,
Sampled by:	///	7					8015	215	8	l g	8 8	1 40	BY	Δ		₽Z]	≈ ×	Y'N		<u>'</u>	
Printed Name: 72	17 in 6	sry					× ×	\ \ \ \ \ \ \	PA	Ö		Ť	v	7	N N	ers	e e	å.	MATERIAL		SAMPLE
Sample ID	Dale	Sludge	Soll	Water	ıîA	No. of	H (EPA	IPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volaille Organics (EPA	Test for Disposal	Combination TPH 8015	HOCI	10TA	Asbeslos	Container Size	Preparation Use	Сотрозне	DESCRIPTION		CONDITION/ COMMENTS
Jumple 15	- 0010	310000	3011	Malet	All	conis.	표	à	120	%	Ë	<u> ပိ</u>	¥	12	3	ő	Pre	ပြီ			COMMENTS
mw-1 11:	10/18		1	X		7]			[=	X	X	Х							
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fl Lun	m	69		UND	BRI	<u></u>	Dim	o: \$	44	TY/	Š	Z OV	nolula) c); ‹				rinio M	difforme:		Oale: 8/13/5
Refinquished by (yonat	uto):	79	חסוקו טפ	10:1 1/10 (Dat	0//	419	<i>ly i</i> Rec	eN60	រា (ស្នង	TON TO):)				d Name: 0		Dale:8/18/54
(VCV)		IH		RAIORY	Wari b	ROYIDE	A CC	ry o	E IEUS	CHA	IN OI	(CVs	ору	MIII	MYQ	ICEA	HO 8	ESVLI	ny lope:		111110: 17 17



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: 08/24/1994

NET Client Acct. No: 1821 NET Pacific Job No: 94.03668

Received: 08/18/1994

Client Reference Information

SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

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:

Project Coordinator

olm Moch Operations Manager

Enclosure(s)





Client Acct: 1821 NET Job No: 94.03668 Date: 08/24/1994

ELAP Cert: 1386

Page: 3

Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

SAMPLE DESCRIPTION: MW-1

Date Taken: 08/18/1994 Time Taken: 11:45 NET Sample No: 212205

•		Reportir	ng	•	Date	Date
Parameter	Results Flags	Limit	Units	Method	Extracted	Analyzed
METHOD 601 (GC, Liquid)						
DILUTION FACTOR*	1					08/19/1994
Bromodichloromethane	ND	0.4	ug/L	601		08/19/1994
Bromoform	ND	0.4	ug/L	601		08/19/1994
Bromomethane	ND	0.4	ug/L	601		08/19/1994
Carbon tetrachloride	ND	0.4	ug/L	601		08/19/1994
Chlorobenzene	ND	0.4	ug/L	601		08/19/1994
Chloroethane	ND	0.4	ug/L	601		08/19/1994
2-Chloroethylvinyl ether	ND	1.0	ug/L	601		08/19/1994
Chloroform	ND	0.4	ug/L	601		08/19/1994
Chloromethane	ND	0.4	ug/L	601		08/19/1994
Dibromochloromethane	ND	0.4	ug/L	601		08/19/1994
1,2-Dichlorobenzene	ND	0.4	ug/L	601		08/19/1994
1,3-Dichlorobenzene	ND	0.4	ug/L	601		08/19/1994
1,4-Dichlorobenzene	ND	0.4	ug/L	601		08/19/1994
Dichlorodifluoromethane	ND	0.4	ug/L	601		08/19/1994
1,1-Dichloroethane	ND	0.4	ug/L	601		08/19/1994
1,2-Dichloroethane	ND	0.4	ug/L	601		08/19/1994
1,1-Dichloroethene	ND	0.4	ug/L	601	ř	08/19/1994
trans-1,2-Dichloroethene	ND	0.4	ug/L	601		08/19/1994
1,2-Dichloropropane	ND	0.4	ug/L	601		08/19/1994
cis-1,3-Dichloropropene	ND	0.4	ug/L	601		08/19/1994
trans-1,3-Dichloropropene	ND	0.4	ug/L	601		08/19/1994
Methylene chloride	ND	10	ug/L	601		08/19/1994
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	601		08/19/1994
Tetrachloroethene	ND	0.4	ug/L	601		08/19/1994
1,1,1-Trichloroethane	ND	0.4	ug/L	601		08/19/1994
1,1,2-Trichloroethane	ND	0.4	ug/L	601		08/19/1994
Trichloroethene	ND	0.4	ug/L	601		08/19/1994
Trichlorofluoromethane	ND	0.4	ug/L	601		08/19/1994
Vinyl chloride	ND	0.4	ug/L	601		08/19/1994
SURROGATE RESULTS				•		08/19/1994
1,4-Difluorobenzene (SURR)	76		% Rec.	601		08/19/1994



Client Name: Blaine Tech Services
Client Acct: 1821 EL ELAP Cert: 1386

Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Date: 08/24/1994

Page: 4

		CCV	CCV		•	
	CCV	Standard	Standard			
	Standard	Amount	Amount		Date	Analyst
Parameter	% Recovery	Found	Expected	Units	Analyzed	Initials
TPH (Gas/BTXE, Liquid)						
as Gasoline	100.0	1.00	1.00	mg/L	08/19/1994	lss
Benzene	98.2	4.91	5.00	ug/L	08/19/1994	lss
Toluene	106.6	5.33	5.00	ug/Ľ	08/19/1994	lss
Ethylbenzene	100.2	5.01	5.00	ug/L	08/19/1994	lss
Xylenes (Total)	103.3	15.5	15.0	ug/L	08/19/1994	lss
Bromofluorobenzene (SURR)	1.08.0	108	100	% Rec.	08/19/1994	lss



Date: 08/24/1994 Client Acct: 1821 ELAP Cert: 1386 NET Job No: 94.03668 Page: 2

Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

SAMPLE DESCRIPTION: MW-1

Date Taken: 08/18/1994 Time Taken: 11:45 NET Sample No: 212205

		Reporting	J		Date	Date
Parameter	Results Flags	Limit	Units	Method	• Extracted	Analyzed
Tot. Dissolved Solids (TFR)	6,300,000	10,000	ug/L	160.1		08/20/1994
TPH (Gas/BTXE, Liquid)						
METHOD 5030/M8015	u -					08/19/1994
DILUTION FACTOR*	1					08/19/1994
as Gasoline	ND	50	ug/L	5030		08/19/1994
Carbon Range:						08/19/1994
METHOD 8020 (GC, Liquid)	- -					08/19/1994
Benzene	ND	0.5	ug/L	8020		08/19/1994
Toluene	ND	0.5	ug/L	8020		08/19/1994
Ethylbenzene	ИD	0.5	ug/L	8020		08/19/1994
Xylenes (Total)	ND	0.5	ug/L	8020		08/19/1994
SURROGATE RESULTS						08/19/1994
Bromofluorobenzene (SURR)	95		% Rec.	5030		08/19/1994



Client Name: Blaine Tech Services Date: 08/24
Client Acct: 1821. ELAP Cert: 1386

NET Job No: 94.03668

Date: 08/24/1994

Page: 5

Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

		CCV	ccv			
	CCA	Standard	Standard			
	Standard	Amount	Amount		Date	Analyst
Parameter	% Recovery	Found	Expected	Units	Analyzed	Initials
METHOD 601 (GC, Liquid)						
Bromodichloromethane	95.5	19.1	20.0	ug/L	08/18/1994	jmh
Bromoform	84.5	16.9	20.0	ug/L	08/18/1994	jmh
Bromomethane	83.0	16.6	20.0	ug/L	08/18/1994	jmh
Carbon tetrachloride	94.0	18.8	20.0	ug/L	08/18/1994	jmh
Chlorobenzene	98.0	19.6	20.0	ug/L	08/18/1994	jmh
Chloroethane	74.5	14.9	20.0	ug/L	08/18/1994	jmh
2-Chloroethylvinyl ether	114.0	22.8	20.0	ug/L	08/18/1994	jmh
Chloroform	94.5	18.9	20.0	ug/L	08/18/1994	jmh
Chloromethane	67.0	13.4	20.0	ug/L	08/18/1994	jmh
Dibromochloromethane	92.5	18.5	20.0	ug/L	08/18/1994	jmh
1,2-Dichlorobenzene	94.5	18.9	20.0	uġ/L	08/18/1994	jmh
1,3-Dichlorobenzene	71.0	14.2	20.0	ug/L	08/18/1994	jmh
1,4-Dichlorobenzene	77.0	15.4	20.0	ug/L	08/18/1994	jmh
Dichlorodifluoromethane	80.0	16.0	20.0	ug/L	08/18/1994	jmh
1,1-Dichloroethane	107.5	21.5	20.0	ug/L	08/18/1994	jmh
1,2-Dichloroethane	92.0	18.4	20.0	ug/L	08/18/1994	jmh
1,1-Dichloroethene	82.0	16.4	20.0	ug/L	08/18/1994	jmh
trans-1,2-Dichloroethene	79.0	15.8	20.0	ug/L	08/18/1994	jmh
1,2-Dichloropropane	95.5	19.1	20.0	ug/L	08/18/1994	jmh
cis-1,3-Dichloropropene	94.5	18.9	20.0	ug/L	08/18/1994	jmh
trans-1,3-Dichloropropene	92.5	18.5	20.0	ug/L	08/18/1994	jmh
Methylene chloride	106.5	21.3	20.0	ug/L	08/18/1994	jmh
1,1,2,2-Tetrachloroethane	87.5	17.5	20.0	ug/L	08/18/1994	jmh
Tetrachloroethene	96.0	19.2	20.0	ug/L	08/18/1994	jmh
1,1,1-Trichloroethane	94.0	18.8	20.0	ug/L	08/18/1994	jmh
1,1,2-Trichloroethane	93.5	18.7	20.0	ug/L	08/18/1994	jmh
Trichloroethene	93.0	18.6	20.0	ug/L	08/18/1994	jmh
Trichlorofluoromethane	82.5	16.5	20.0	ug/L	08/18/1994	յահ
Vinyl chloride	76.5	15.3	20.0	ug/L	08/18/1994	jmh
1,4-Difluorobenzene (SURR)	97.0	97	100	% Rec.	08/18/1994	jmh
1,4-Dichlorobutane (SURR)	86.0	86	100	% Rec.	08/18/1994	jmh



Client Name: Blaine Tech Services Client Name: Blaine Tech Services Date: 08/24 Client Acct: 1821 . ELAP Cert: 1386

NET Job No: 94.03668

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METHOD BLANK REPORT

Method

	Blank					
	Amount	Reporting		Date	Analyst Initials	
Parameter	Found	Limit	Units	Analyzed		
Tot. Dissolved Solids (TFR)	ND	1.0	mg/L	08/20/1994	shr	
TPH (Gas/BTXE, Liquid)						
as Gasoline`	ND	0.05	mg/L	08/19/1994	lss	
Benzene	ND	0.5	ug/L	08/19/1994	lss	
Toluene	ND	0.5	ug/L	08/19/1994	lss	
Ethylbenzene	ND	0.5	ug/L	08/19/1994	lss	
Xylenes (Total)	ND	0.5	ug/L	08/19/1994	lss	
Bromofluorobenzene (SURR)	91		% Rec.	08/19/1994	lss	



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METHOD BLANK REPORT

Method Blank

	Blank					
	Amount	Reporting		Date	Analyst	
Parameter	Found	Limit	Units	Analyzed	Initials	
METHOD 601 (GC, Liquid)						
Bromodichloromethane	ND		ug/L	08/18/1994	jmh	
Bromoform	ND	0.4	ug/L	08/18/1994	jmh	
Bromomethane	ND	0.4	ug/L	08/18/1994	jmh	
Carbon tetrachloride	ND	0.4	ug/L	08/18/1994	jmh	
Chlorobenzene	ND	0.4	ug/L	08/18/1994	jmh	
Chloroethane	ND	0.4	ug/L	08/18/1994	jmh	
2-Chloroethylvinyl ether	ND	0.4	ug/L	08/18/1994	jmh	
Chloroform	ND	1.0	ug/L	08/18/1994	jmh	
Chloromethane	ND	0.4	ug/L	08/18/1994	jmh	
Dibromochloromethane	ND	0.4	ug/L	08/18/1994	jmh	
1,2-Dichlorobenzene	ND	0.4	ug/L	08/18/1994	jmh	
1,3-Dichlorobenzene	ND	0.4	ug/L	08/18/1994	jmh	
1,4-Dichlorobenzene	ND	0.4	ug/L	08/18/1994	jmh	
Dichlorodifluoromethane	2.1	0.4	ug/L	08/18/1994	jmh	
1,1-Dichloroethane	ND	0.4	ug/L	08/18/1994	jmh	
1,2-Dichloroethane	ND	0.4	ug/L	08/18/1994	jmh	
1,1-Dichloroethene	ND	0.4	ug/L	08/18/1994	jmh	
trans-1,2-Dichloroethene	ND	0.4	ug/L	08/18/1994	jmh	
1,2-Dichloropropane	ND	0,4	ug/L	08/18/1994	jmh	
cis-1,3-Dichloropropene	ND	0.4	ug/L	08/18/1994	jmh	
trans-1,3-Dichloropropene	, ND	0.4	ug/L	08/18/1994	jmh	
Methylene chloride	ND	0.4	ug/L	08/18/1994	jmh	
1,1,2,2-Tetrachloroethane	ND	10	ug/L	08/18/1994	jmh	
Tetrachloroethene	ND	0.4	ug/L	08/18/1994	jmh	
1,1,1-Trichloroethane	ND	0.4	ug/L	08/18/1994	jmh	
1,1,2-Trichloroethane	ND	0.4	ug/L	08/18/1994	jmh	
Trichloroethene	ND	0.4	ug/L	08/18/1994	jmh	
Trichlorofluoromethane	ND	0.4	ug/L	08/18/1994	jmh	
Vinyl chloride	ND	0.4	ug/L	08/18/1994	jmh	
1,4-Difluorobenzene (SURR)	102		% Rec.	08/18/1994	jmh	
1,4-Dichlorobutane (SURR)	82		% Rec.	08/18/1994	jmh	



Client Name: Blaine Tech Services Date: 08/24
Client Acct: 1821 ELAP Cert: 1386 Date: 08/24/1994 NET Job No: 94.03668 Page: 8

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Analyst Initials
	1 11001	* ******		741100176	COIIC.		COIIC.	UILLB	IMIGITY ZEG	INICIALS
TPH (Gas/BTXE, Liquid)										
as Gasoline	104.0	100.0	3.9	1.00	ND	1.04	1.00	mg/L	08/19/1994	lss
Benzene	98.5	99.5	1.0	39.3	ND	38.7	39.1	ug/L	08/19/1994	lss
Toluene	100.0	99.0	0.9	103	1.0	104	103	ug/L	08/19/1994	lss



Client Name: Blaine Tech Services Client Acct: 1821 ELAP Cert: 1386 NET Job No: 94.03668 Page: 9

Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Date: 08/24/1994

	Matrix Spike	Matrix Spike Dup		Spike	Sample	Matrix Spike	Matrix Spike Dup.		Date	Analyst
Parameter	% Rec.	% Rec.	RPD	Amount	Conc.	Conc.	Conc.	Units	Analyzed	Initials
METHOD 601 (GC, Liquid)										
Chlorobenzene	88.5	98.0	10.2	20.0	ND	17.7	19.6	ug/L	08/18/1994	jmh
1,1-Dichloroethene	72.0	82.0	13.0	20.0	ND	14.4	16.4	ug/L	08/18/1994	jmh
Trichloroethene	85.5	93.0	8.4	20.0	ND	17,1	18.6	ug/L	08/18/1994	jmh



Client Acct: 1821

Date: 08/24/1994

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Ref: SHELL, 2160 Otis Drive, Alameda, Job No. 940818F1

LABORATORY CONTROL SAMPLE REPORT

		LCS	LCS			
	LCS	Amount	Amount		Date	Analyst
Parameter	% Recovery RPD	Found	Expected	Units	Analyzed	Initials
Tot. Dissolved Solids (TFR)	100.9	1,009	1000	mq/L	08/20/1994	shr

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. 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.

<u>Methods</u> 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986., Rev. 1, December 1987.

 $\underline{\rm SM}$: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Revised September, 1993 abb.93

COOLER RECEIPT FORM

Project: snoll otis Dr. Alameda Cooler received on: \$118194 and che	Log No: 2015 cked on 8/18/94 by A-Lope
	(signature)
Were custody papers present?	VES NO
Were custody papers properly filled o	ut? (YES) NO
Were the custody papers signed?	YES NO
Was sufficient ice used?	NO O.5°C
Did all bottles arrive in good condit	ion (unbroken)?YES NO
Did bottle labels match COC?	VES NO
Were proper bottles used for analysis	indicated? (ES) NO
Correct preservatives used?	YES NO
VOA vials checked for headspace bubbl Note which voas (if any) had	
Sample descriptor: Number Mu)-/	r of vials: 2 of 6
*All VOAs with headspace bubbles have used for analysis	
List here all other jobs received in	the same cooler:
Client Job # NET]	.og #
	·

(coolerrec)