Weiss Associates Environmental and Geologic Services

5500 Shellmound Street, Emeryville, CA 94608-2411 Fax: 510-547-5043 Phone: **510-547-5420**

July 29, 1994

Scott O. Seery
Alameda County Department
of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway
Suite 250
Alameda, California 94502-6577

Re: Shell Service Station
WIC #204-6852-1404
1784 150th Avenue
San Leandro, California 94578
WA Job #81-422-104

Dear Mr. Seery:

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 265.d. Included below are descriptions and results of activities performed in the second quarter 1994 and proposed work for the third quarter 1994.

Second Quarter 1994 Activities:

- Weiss Associates (WA) conducted an offsite subsurface investigation at the site in June. We are currently compiling the data and will submit a subsurface investigation report in August.
- Blaine Tech Services, Inc. (BTS) of San Jose, California measured ground water depths and collected ground water samples from the site wells. The BTS report describing these activities and the analytic report for the ground water samples are included as Attachment A.
- WA compiled ground water elevation and analytic data (Tables 1 and 2), prepared a ground water elevation contour map (Figure 2), and prepared a benzene concentration in ground water map (Figure 3).

July 29, 1994

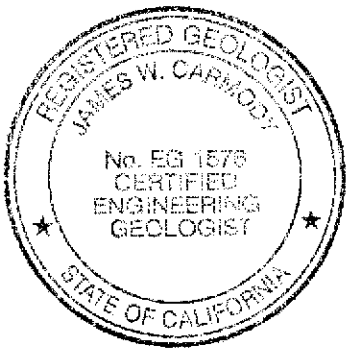
Anticipated Third Quarter 1994 Activities:

- WA will submit a report presenting the results of third quarter 1994 ground water sampling and depth measurements. The report will include tabulated chemical analytic results, a ground water elevation contour map and a benzene concentration in ground water map.

Discussion of Results:

The gradient direction for the second quarter 1994 was north-northwestward. Since March 1992, the ground water flow direction has been north-northwestward eight of the twelve times it was measured. The direction the four other times was southwestward to eastward. No correlation between season or degree of precipitation was found during this period. Since the gradient at this site is relatively flat, about 0.003 ft/ft, large swings in flow direction can be expected.

Please call if you have any questions.



Sincerely,
Weiss Associates

J. Michael Asport
Technical Assistant

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

JMA/JWC:jma

J:\SHELL\400\422QMJY4.WP

Attachments: A - BTS Ground Water Monitoring Report

cc: Dan Kirk, Shell Oil Company, P.O. Box 4023, Concord, California 94520-9998
Lester Feldman, California Regional Water Quality Control Board - San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, California 94612
Eileen Hughes, California Department of Toxic Substances Control, 700 Heinz Avenue, Building "F" Suite 200, Berkeley CA, 94710

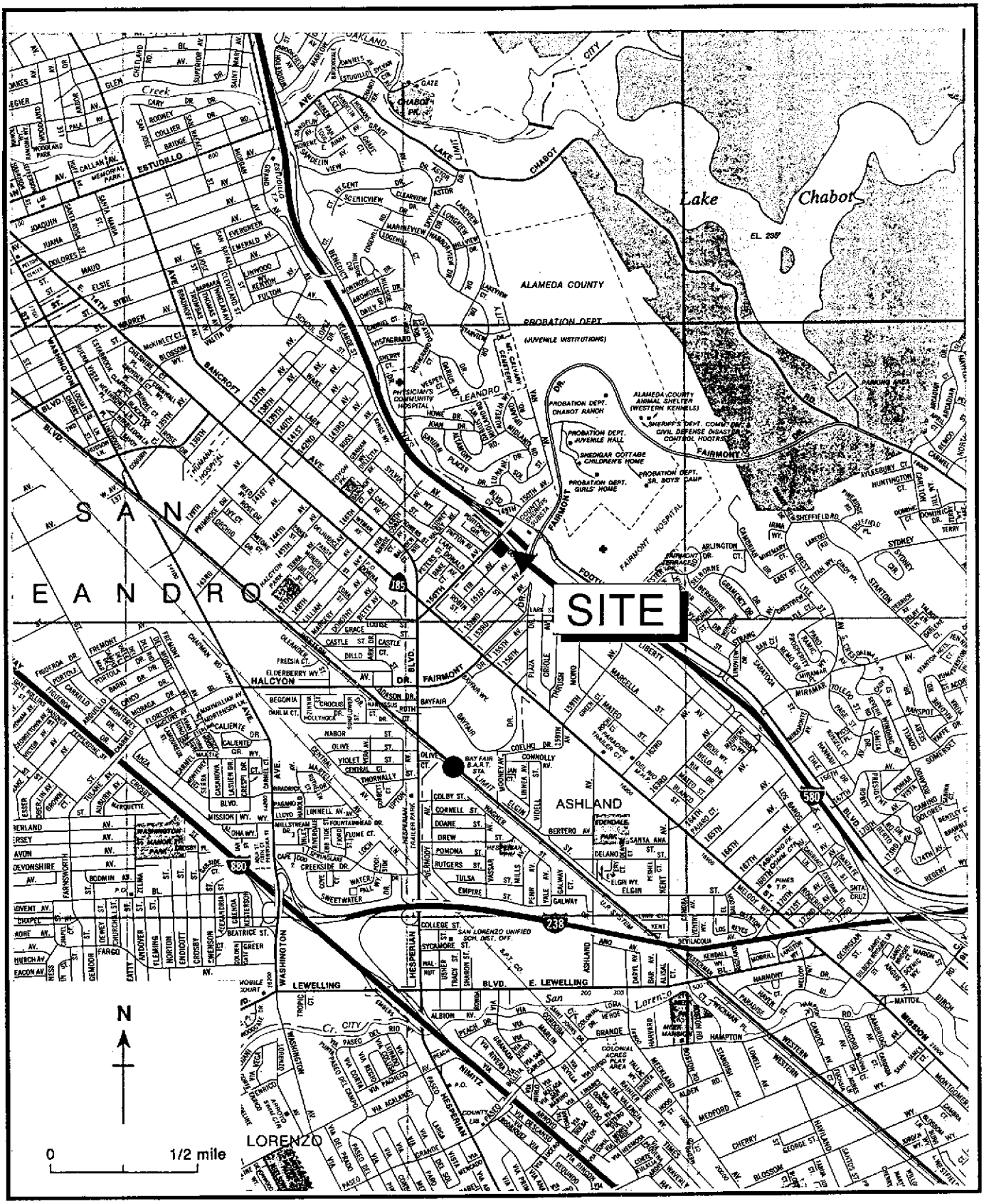


Figure 1. Site Location Map - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

1/9/92

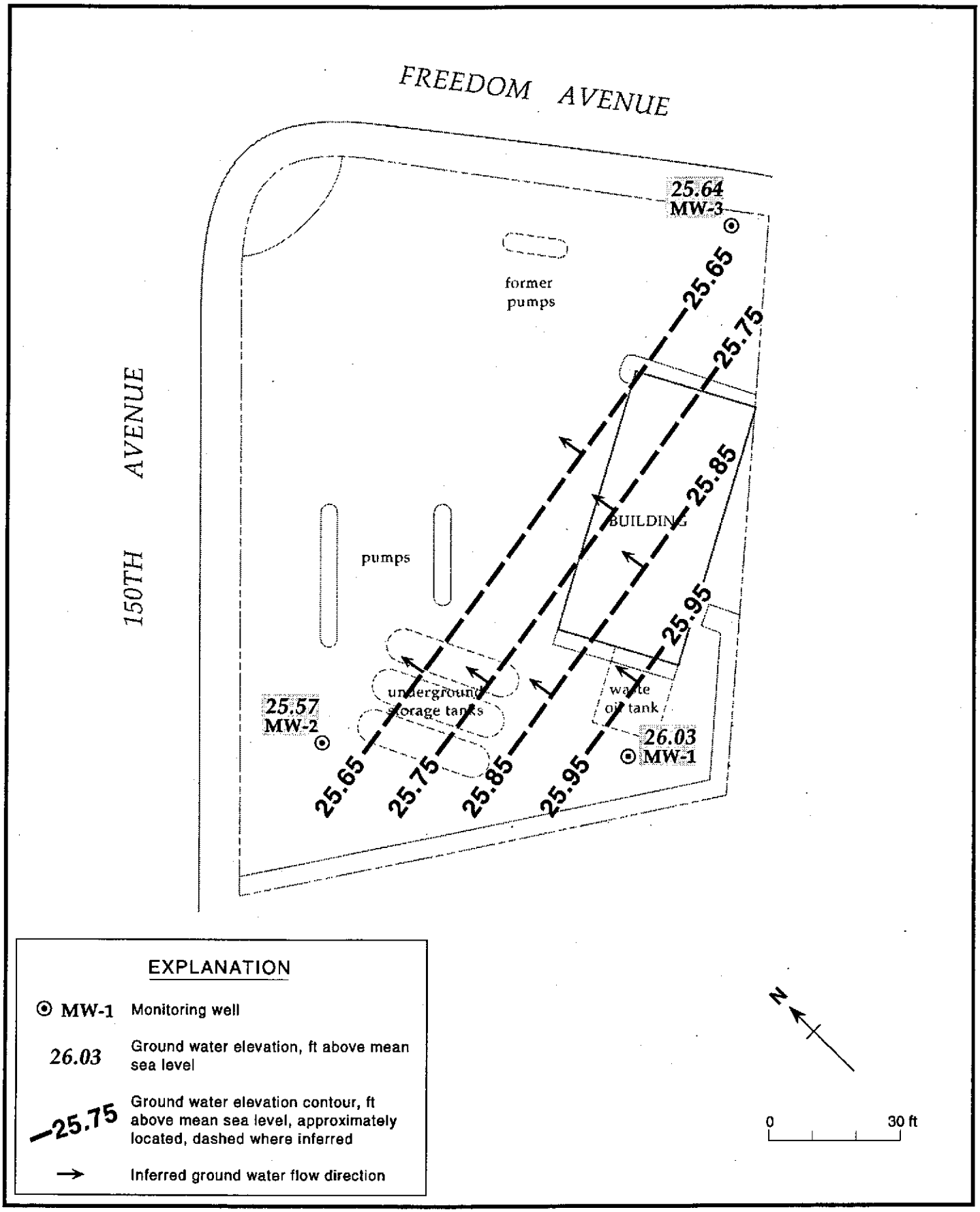


Figure 2. Monitoring Well Locations and Ground Water Elevations Contours - June 6, 1994 - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

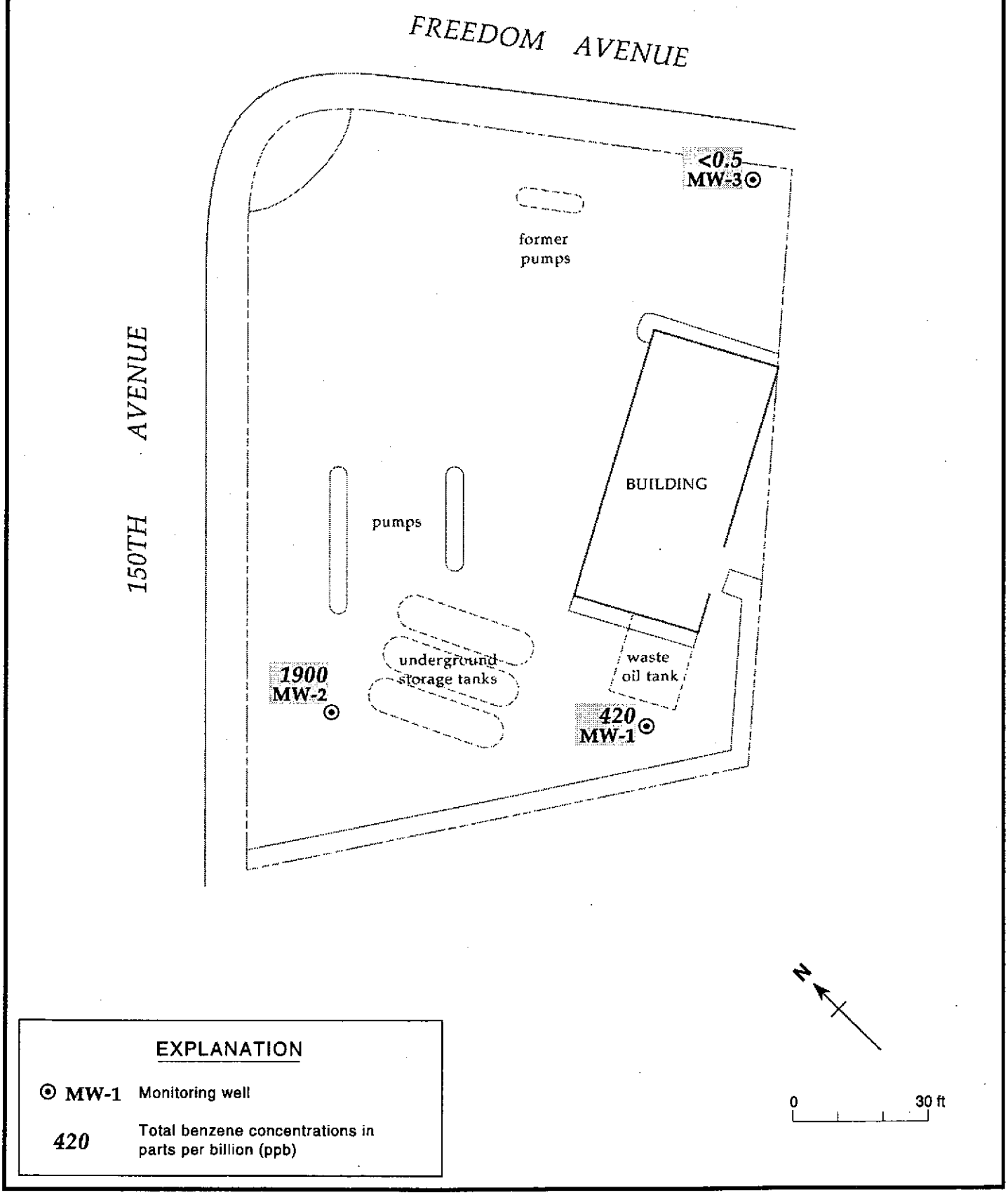


Figure 3. Benzene Concentrations in Ground Water - June 6, 1994 - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
MW-1	03/08/90	49.13	25.29	23.84
	06/12/90		25.85	23.28
	09/13/90		27.49	21.64
	12/18/90		27.41	21.72
	03/07/91		25.79	23.34
	06/07/91		25.64	23.49
	09/17/91		27.54	21.59
	12/09/91		27.81	21.32
	02/13/92		25.57	23.56
	02/24/92		22.83	26.30
	02/27/92		23.09	26.04
	03/01/92		23.26	25.87
	06/03/92		24.64	24.49
	09/01/92		26.74	22.39
	10/06/92		27.18	21.95
	11/11/92		27.99	21.14
	12/04/92		27.14	21.99
	01/22/93		20.09	29.04
	02/10/93		24.26	24.87
	03/03/93		20.50	28.63
	05/11/93		21.70	27.43
	06/17/93		22.42	26.71
	09/10/93		24.11	25.02
	12/13/93		23.73	25.40
	03/03/94		22.08	27.05
	06/06/94		**23.10**	**26.03**
MW-2	02/13/92	45.83	22.22	23.61
	02/24/92		19.61	26.22
	02/27/92		19.92	25.91
	03/01/92		21.11	24.72
	06/03/92		21.58	24.25
	09/01/92		23.46	22.37
	10/06/92		23.99	21.84
	11/11/92		24.25	21.58
	12/04/92		23.89	21.94
	01/22/93		17.03	28.80
	02/10/93		18.08	27.75
	03/03/93		17.28	28.55
	05/11/93		18.41	27.42

-- Table 1 continues on next page --

Table 1. Ground Water Elevations - Shell Service Station WIC #204-6852-1404, 1784 150th Avenue, San Leandro, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Ground Water Elevation (ft above msl)
	06/17/93		19.06	26.77
	09/10/93		20.88	24.95
	12/13/93		20.42	25.41
	03/03/94		18.48	27.35
	06/06/94		**20.26**	**25.57**
MW-3	02/13/92	51.97	27.97	24.00
	02/24/92		25.60	26.37
	02/27/92		25.88	26.09
	03/01/92		26.00	25.97
	06/03/92		27.70	24.27
	09/01/92		29.46	22.51
	10/06/92		30.01	21.96
	11/11/92		30.26	21.71
	12/04/92		29.93	22.04
	01/22/93		22.76	29.21
	02/10/93		21.40	30.57
	03/03/93		23.08	28.89
	05/11/93		24.51	27.46
	06/17/93		25.21	26.76
	09/10/93		26.95	25.02
	12/13/93		26.52	25.45
	03/03/94		24.50	27.47
	06/06/94		**26.33**	**25.64**

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-0703, 1784 150th Avenue, San Leandro, California

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	B	E	T	X	1,2-DCA
			<----------parts per billion (ug/l)---------->							
MW-1	03/08/90	25.29	510	120[a]	<10,000	1.5	<0.5	0.8	5.4	12
	06/12/90	25.85	390	100[a]	<10,000	86	0.7	1.3	6.2	<0.4
	09/13/90	27.49	100	130[a]	<10,000	56	2.4	0.75	2.8	<0.4[b]
	12/18/90	27.41	480	<50[a]	<10,000	54	3.3	1.7	3.7	5.3
	03/07/91	25.79	80	<50[a]	---	266	1.2	<0.5	<1.5	6.7
	06/07/91	25.64	510	<50[a]	---	130	6.1	3.8	11	7.9
	09/17/91	27.54	330	120[c]	---	67	3	<0.5	2.2	6
	12/09/91	27.81	140[d]	80	---	<0.5	1.7	<0.5	4.7	5.4
	03/01/92	23.36	<50	<50	---	<0.5	<0.5	<0.5	<0.5	3
	06/03/92	24.64	1,500	---	---	520	72	180	230	3
	09/01/92	26.74	130	---	---	16	1.8	1.4	3.4	1.3[e]
	12/04/92	27.14	150	---	---	360	1.8	0.7	2.1	3.3
	03/03/93	20.50	<50	---	---	1.5	<0.5	<0.5	<0.5	0.76
	06/17/93	22.42	1,600	---	---	340	120	120	440	3
	09/10/93	24.11	2,600	---	---	670	310	340	730	2.3
	12/13/93	23.73	11,000	---	---	470	380	320	2,300	6.3
	03/03/94	22.08	16,000	---	---	700	480	690	3,200	---
	06/06/94	23.10	7,500	---	---	420	200	280	1,000	3.1
MW-2	02/24/92	19.61	17,000	2,700[c]	---	6,200	550	1,600	1,900	200
	03/01/92	21.11	86,000	1,000[g]	---	30,000	2,300	34,000	16,000	82
	06/03/92	21.58	87,000	---	---	28,000	2,000	18,000	10,000	<50
	09/01/92	23.46	110,000	---	---	21,000	1,900	13,000	7,800	83[h]
	12/04/92	23.89	42,000	---	---	15,000	960	2,400	2,900	100
	03/03/93	17.28	160,000	---	---	36,000	32,000	3,800	21,000	7.7
	03/03/93[h]	---	150,000	---	---	31,000	20,000	3,100	14,000	16
	06/17/93	19.06	65,000	---	---	34,000	3,200	15,000	11,000	37
	06/17/93[h]	19.06	62,000	---	---	28,000	2,700	14,000	10,000	36
	09/10/93[f]	20.88	72,000	---	---	24,000	2,300	16,000	11,000	28.0
	09/10/93[dupf]	20.88	71,000	---	---	23,000	2,300	15,000	10,000	27.0
	12/13/93	20.42	19,000	---	---	5,400	680	4,900	3,100	<0.5
	12/13/93[dup]		17,000	---	---	6,200	720	5,500	3,500	3.4
	03/03/94	18.48	110,000	---	---	21,000	2000	24,000	13,000	---
	03/03/94[dup]	18.48	93,000	---	---	19,000	1,800	22,000	12,000	---
	06/06/94	20.26	10,000	---	---	1,900	2,500	3,300	13,000	5.8
	06/06/94[dup]	20.26	99,000	---	---	9,900	2,400	12,000	12,000	5.7
MW-3	02/24/92	25.60	4,500	1,300[c]	---	97	78	<5	18	9.1
	03/01/92	26.00	2,200	440	---	69	<0.5	<0.5	<0.5	13
	06/03/92	27.70	4,100	---	---	13	44	72	65	16
	09/01/92	29.46	1,900	---	---	20	5.5	6.8	<5	19
	09/01/92[i]	29.46	1,900	---	---	21	3.4	6.6	<5	21
	12/04/92	29.93	2,400	---	---	8.2	<5	<5	<5	16
	12/04/92[i]	29.93	2,100	---	---	11	5.7	<0.5	<0.5	18
	03/03/93	23.08	5,100	---	---	63	75	61	150	3.3

-- Table 2 continues on next page --

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-0703, 1784 150th Avenue, San Leandro, California (continued)

Well ID	Date Sampled	Depth to Water (ft)	TPH-G	TPH-D	POG	B	E	T	X	1,2-DCA
			<-----parts per billion (ug/l)----->							
	06/17/93	25.21	4,000	---	---	94	82	140	150	23
	09/10/93	26.95	3,200	---	---	140	12.5	12.5	12.5	20.0
	12/13/93	26.52	6,200	---	---	<12.5	<12.5	<12.5	<12.5	13
	03/03/94	24.50	4,500	---	---	73	<5	<5	<5	---
	06/06/94	26.33	3,200	---	---	<0.5	3.1	<0.5	<0.5	16
Trip Blank	03/08/90		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	06/12/90		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	12/18/90		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	03/07/91		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	06/07/91		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	09/17/91		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	12/09/91		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	02/24/92		<50	---	---	<0.5	0.6	2.5	2.2	---
	03/01/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	06/03/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	09/01/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5
	12/04/92		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5[j]
	03/03/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5
	06/17/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5
	09/10/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	12/13/93		<50	---	---	<0.5	<0.5	<0.5	<0.5	<0.5[k]
	03/03/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	06/06/94		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
Bailer Blank	03/08/90		<50	---	---	<0.5	<0.5	<0.5	<0.5	---
	09/01/92		<50	---		<0.5	<0.5	0.7	<0.5	<0.5
	12/04/92		60	---		<0.5	<0.5	<0.5	<0.5	<0.5[j]
DTSC MCLs			NE	NE	NE	1	680	100[l]	1,750	5.0

-- Table 2 continues on next page --

Table 2. Analytic Results for Ground Water - Shell Service Station WIC #204-6852-0703, 1784 150th Avenue, San Leandro, 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
POG = Petroleum oil and grease by American Public Health Association Standard Method 503E or 5520F
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
1,2-DCA = 1,2-Dichloroethane by EPA Method 601
--- = Not analyzed
<n = Not detected above method detection limit of n ppb
DTSC MCLs = California Department of Toxic Substances Control maximum contaminant levels for drinking water
NE = Not established

Notes:

a = No total petroleum hydrocarbons as motor oil detected above modified EPA Method 8015 detection limit of 500 ppb
b = Tetrachloroethene (PCE) detected at 24 ppb by EPA Method 601; DTSC MCL for PCE = 5 ppb
c = Result is due to hydrocarbon compounds lighter than diesel
d = Result due to a non-gasoline hydrocarbon compound
e = In the matrix spike/matrix spike duplicate of sample MW-1, the RPD for Freon 113 and 1,3-dichloroebenze was greater than 25%
f = The MW-2 and Dup samples each contained 1.6 ppb of methylene chloride which is within normal laboratory background levels.
g = Diesel result is due to a petroleum hydrocarbon that is lighter than diesel
h = Sample MW-2 was diluted 1:100 for EPA Method 8010 due to the interfering hydrocarbon peaks
i = Duplicate sample
j = The trip and field blank samples from 12/04/92 contained 14 and 10 µg/L 1,3-dichloroebenzene, respectively
k = 1.4 µg/L Chloroethene detected in equipment blank, trip blank not analyzed
l = DTSC recommended action level for drinking water; MCL not established

ATTACHMENT A

GROUND WATER MONITORING REPORT AND ANALYTIC REPORT

BLAINE
TECH SERVICES INC.

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

June 27, 1994

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

Attn: Daniel T. Kirk

SITE:
Shell WIC #204-6852-1404
1784 150th Avenue
San Leandro, California

QUARTER:
2nd quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940606-F-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

ecovered 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 (feet)
MW-1	6/6/94	TOC	ODOR	NONE	--	--	23.10	44.57
MW-2 *	6/6/94	TOC	ODOR	NONE	--	--	20.26	44.30
MW-3	6/6/94	TOC	--	NONE	--	--	26.33	41.56

* Sample DUP was a duplicate sample taken from well MW-2.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940606 F2

(9716)

Date: 6-6-94
Page 1 of 1

Site Address: 1784 150th Avenue, San Leandro

WIC#: 204-6852-1404

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

Consultant Name & Address: Blaine Tech Services, Inc. 985 Timothy Drive San Jose, CA 95133

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

Comments:

Sampled by:

Printed Name: Tom Flucy

LAB: ~~Accutest~~ NET

Sample ID	Time	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	8010		Asbestos	Container size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
mw-1	1405	6/6/94			X		3						X	X			40 VOA	HCl			
mw-2	1430						3						X	X							
mw-3	1340						3						X	X							
DUP	—						3						X	X							
E.B	1348						3						X	X							
TB	LAB						2						X								

CUSTODY SEALED 6/7/94

	Printed Name:	Date:	Time:		Printed Name:	Date:	Time:
Relinquished By (signature):	Tom Flucy	6/6/94	1440	Received (signature):	G P Lumbreras	6/7/94	0900
Relinquished By (signature):	G P Lumbreras	6/7/94	1610	Received (signature):		Date:	Time:
Relinquished By (signature): (UPS NCS)		Date:	Time:	Received (signature):		Date: 6/8/94	Time: 0800

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: 06/20/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.02376
Received: 06/08/1994

Client Reference Information

SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

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, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: MW-1
Date Taken: 06/06/1994
Time Taken: 14:05
NET Sample No: 196394

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						06/14/1994
DILUTION FACTOR*	10						06/14/1994
as Gasoline	7,500		500	ug/L	5030		06/14/1994
METHOD 8020 (GC,Liquid)	--						06/14/1994
Benzene	420		5	ug/L	8020		06/14/1994
Toluene	280		5	ug/L	8020		06/14/1994
Ethylbenzene	200		5	ug/L	8020		06/14/1994
Xylenes (Total)	1,000		5	ug/L	8020		06/14/1994
SURROGATE RESULTS	--						06/14/1994
Bromofluorobenzene (SURR)	133	MI		% Rec.	5030		06/14/1994

MI : Matrix Interference Suspected

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: MW-1
Date Taken: 06/06/1994
Time Taken: 14:05
NET Sample No: 196394

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 8010 (GC,Liquid)							
DILUTION FACTOR*	1						06/14/1994
Bromodichloromethane	ND		0.4	ug/L	8010		06/14/1994
Bromoform	ND		0.4	ug/L	8010		06/14/1994
Bromomethane	ND		0.4	ug/L	8010		06/14/1994
Carbon tetrachloride	ND		0.4	ug/L	8010		06/14/1994
Chlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Chloroethane	ND		0.4	ug/L	8010		06/14/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	8010		06/14/1994
Chloroform	ND		0.4	ug/L	8010		06/14/1994
Chloromethane	ND		0.4	ug/L	8010		06/14/1994
Dibromochloromethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Dichlorodifluoromethane	ND		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloroethane	3.1		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloropropane	ND		0.4	ug/L	8010		06/14/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
Methylene chloride	ND		10	ug/L	8010		06/14/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	8010		06/14/1994
Tetrachloroethene	ND		0.4	ug/L	8010		06/14/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,1,2-Trichloroethane	ND		1	ug/L	8010		06/14/1994
Trichloroethene	ND		0.4	ug/L	8010		06/14/1994
Trichlorofluoromethane	ND		0.4	ug/L	8010		06/14/1994
Vinyl chloride	ND		0.4	ug/L	8010		06/14/1994
SURROGATE RESULTS	--						06/14/1994
1,4-Difluorobenzene (SURR)	97			% Rec.			06/14/1994
1,4-Dichlorobutane (SURR)	94			% Rec.			06/14/1994

Client Acct: 1821
Client Name: Blaine Tech Services
NET Job No: 94.02376

Date: 06/20/1994
ELAP Certificate: 1386
Page: 4

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: MW-2
Date Taken: 06/06/1994
Time Taken: 14:30
NET Sample No: 196395

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						06/10/1994
DILUTION FACTOR*	100						06/10/1994
as Gasoline	10,000		5,000	ug/L	5030		06/10/1994
METHOD 8020 (GC,Liquid)	--						06/10/1994
Benzene	1,900		50	ug/L	8020		06/10/1994
Toluene	3,300		50	ug/L	8020		06/10/1994
Ethylbenzene	2,500		50	ug/L	8020		06/10/1994
Xylenes (Total)	13,000		50	ug/L	8020		06/10/1994
SURROGATE RESULTS	--						06/10/1994
Bromofluorobenzene (SURR)	147	MI		% Rec.	5030		06/10/1994

MI : Matrix Interference Suspected

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: MW-2
Date Taken: 06/06/1994
Time Taken: 14:30
NET Sample No: 196395

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 8010 (GC,Liquid)							
DILUTION FACTOR*	1						06/14/1994
Bromodichloromethane	ND		0.4	ug/L	8010		06/14/1994
Bromoform	ND		0.4	ug/L	8010		06/14/1994
Bromomethane	ND		0.4	ug/L	8010		06/14/1994
Carbon tetrachloride	ND		0.4	ug/L	8010		06/14/1994
Chlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Chloroethane	ND		0.4	ug/L	8010		06/14/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	8010		06/14/1994
Chloroform	ND		0.4	ug/L	8010		06/14/1994
Chloromethane	ND		0.4	ug/L	8010		06/14/1994
Dibromochloromethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Dichlorodifluoromethane	ND		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloroethane	5.8		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloropropane	ND		0.4	ug/L	8010		06/14/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
Methylene chloride	ND		10	ug/L	8010		06/14/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	8010		06/14/1994
Tetrachloroethene	ND		0.4	ug/L	8010		06/14/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,1,2-Trichloroethane	ND		1	ug/L	8010		06/14/1994
Trichloroethene	ND		0.4	ug/L	8010		06/14/1994
Trichlorofluoromethane	ND		0.4	ug/L	8010		06/14/1994
Vinyl chloride	ND		0.4	ug/L	8010		06/14/1994
SURROGATE RESULTS	--						06/14/1994
1,4-Difluorobenzene (SURR)	257	MI		% Rec.			06/14/1994
1,4-Dichlorobutane (SURR)	102			% Rec.			06/14/1994

MI : Matrix Interference Suspected

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: MW-3
Date Taken: 06/06/1994
Time Taken: 13:40
NET Sample No: 196396

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						06/14/1994
DILUTION FACTOR*	1						06/14/1994
as Gasoline	3,200		50	ug/L	5030		06/14/1994
METHOD 8020 (GC,Liquid)	--						06/14/1994
Benzene	ND		0.5	ug/L	8020		06/14/1994
Toluene	ND		0.5	ug/L	8020		06/14/1994
Ethylbenzene	3.1		0.5	ug/L	8020		06/14/1994
Xylenes (Total)	ND		0.5	ug/L	8020		06/14/1994
SURROGATE RESULTS	--						06/14/1994
Bromofluorobenzene (SURR)	147	MI		% Rec.	5030		06/14/1994

MI : Matrix Interference Suspected

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: MW-3
Date Taken: 06/06/1994
Time Taken: 13:40
NET Sample No: 196396

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 8010 (GC,Liquid)							
DILUTION FACTOR*	1						06/14/1994
Bromodichloromethane	ND		0.4	ug/L	8010		06/14/1994
Bromoform	ND		0.4	ug/L	8010		06/14/1994
Bromomethane	ND		0.4	ug/L	8010		06/14/1994
Carbon tetrachloride	ND		0.4	ug/L	8010		06/14/1994
Chlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Chloroethane	ND		0.4	ug/L	8010		06/14/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	8010		06/14/1994
Chloroform	ND		0.4	ug/L	8010		06/14/1994
Chloromethane	ND		0.4	ug/L	8010		06/14/1994
Dibromochloromethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Dichlorodifluoromethane	ND		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloroethane	16		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloropropane	ND		0.4	ug/L	8010		06/14/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
Methylene chloride	ND		10	ug/L	8010		06/14/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	8010		06/14/1994
Tetrachloroethene	ND		0.4	ug/L	8010		06/14/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,1,2-Trichloroethane	ND		1	ug/L	8010		06/14/1994
Trichloroethene	ND		0.4	ug/L	8010		06/14/1994
Trichlorofluoromethane	ND		0.4	ug/L	8010		06/14/1994
Vinyl chloride	ND		0.4	ug/L	8010		06/14/1994
SURROGATE RESULTS	--						06/14/1994
1,4-Difluorobenzene (SURR)	187	MI		% Rec.			06/14/1994
1,4-Dichlorobutane (SURR)	87			% Rec.			06/14/1994

MI : Matrix Interference Suspected

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: DUP
Date Taken: 06/06/1994
Time Taken:
NET Sample No: 196397

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						06/10/1994
DILUTION FACTOR*	100						06/14/1994
as Gasoline	99,000		5,000	ug/L	5030		06/10/1994
METHOD 8020 (GC,Liquid)	--						06/14/1994
Benzene	9,900	FI	50000	ug/L	8020		06/14/1994
Toluene	12,000	FI	50000	ug/L	8020		06/14/1994
Ethylbenzene	2,400		50	ug/L	8020		06/10/1994
Xylenes (Total)	12,000		50	ug/L	8020		06/10/1994
SURROGATE RESULTS	--						06/14/1994
Bromofluorobenzene (SURR)	133	MI		% Rec.	5030		06/14/1994

FI : Compound quantitated at a 1000X dilution factor.
MI : Matrix Interference Suspected

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: DUP
Date Taken: 06/06/1994
Time Taken:
NET Sample No: 196397

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 8010 (GC,Liquid)							
DILUTION FACTOR*	1						06/14/1994
Bromodichloromethane	ND		0.4	ug/L	8010		06/14/1994
Bromoform	ND		0.4	ug/L	8010		06/14/1994
Bromomethane	ND		0.4	ug/L	8010		06/14/1994
Carbon tetrachloride	ND		0.4	ug/L	8010		06/14/1994
Chlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Chloroethane	ND		0.4	ug/L	8010		06/14/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	8010		06/14/1994
Chloroform	ND		0.4	ug/L	8010		06/14/1994
Chloromethane	ND		0.4	ug/L	8010		06/14/1994
Dibromochloromethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Dichlorodifluoromethane	ND		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloroethane	5.7		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloropropane	ND		0.4	ug/L	8010		06/14/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
Methylene chloride	ND		10	ug/L	8010		06/14/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	8010		06/14/1994
Tetrachloroethene	ND		0.4	ug/L	8010		06/14/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,1,2-Trichloroethane	ND		1	ug/L	8010		06/14/1994
Trichloroethene	ND		0.4	ug/L	8010		06/14/1994
Trichlorofluoromethane	ND		0.4	ug/L	8010		06/14/1994
Vinyl chloride	ND		0.4	ug/L	8010		06/14/1994
SURROGATE RESULTS	--						06/14/1994
1,4-Difluorobenzene (SURR)	257	MI		% Rec.			06/14/1994
1,4-Dichlorobutane (SURR)	99			% Rec.			06/14/1994

MI : Matrix Interference Suspected

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: EB
Date Taken: 06/06/1994
Time Taken: 13:48
NET Sample No: 196398

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						06/10/1994
DILUTION FACTOR*	1						06/10/1994
as Gasoline	ND		50	ug/L	5030		06/10/1994
METHOD 8020 (GC,Liquid)	--						06/10/1994
Benzene	ND		0.5	ug/L	8020		06/10/1994
Toluene	ND		0.5	ug/L	8020		06/10/1994
Ethylbenzene	ND		0.5	ug/L	8020		06/10/1994
Xylenes (Total)	ND		0.5	ug/L	8020		06/10/1994
SURROGATE RESULTS	--						06/10/1994
Bromofluorobenzene (SURR)	87			% Rec.	5030		06/10/1994

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: EB
Date Taken: 06/06/1994
Time Taken: 13:48
NET Sample No: 196398

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
METHOD 8010 (GC,Liquid)							
DILUTION FACTOR*	1						06/14/1994
Bromodichloromethane	ND		0.4	ug/L	8010		06/14/1994
Bromoform	ND		0.4	ug/L	8010		06/14/1994
Bromomethane	ND		0.4	ug/L	8010		06/14/1994
Carbon tetrachloride	ND		0.4	ug/L	8010		06/14/1994
Chlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Chloroethane	ND		0.4	ug/L	8010		06/14/1994
2-Chloroethylvinyl ether	ND		1.0	ug/L	8010		06/14/1994
Chloroform	ND		0.4	ug/L	8010		06/14/1994
Chloromethane	ND		0.4	ug/L	8010		06/14/1994
Dibromochloromethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,3-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
1,4-Dichlorobenzene	ND		0.4	ug/L	8010		06/14/1994
Dichlorodifluoromethane	ND		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,1-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
trans-1,2-Dichloroethene	ND		0.4	ug/L	8010		06/14/1994
1,2-Dichloropropane	ND		0.4	ug/L	8010		06/14/1994
cis-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
trans-1,3-Dichloropropene	ND		0.4	ug/L	8010		06/14/1994
Methylene chloride	ND		10	ug/L	8010		06/14/1994
1,1,2,2-Tetrachloroethane	ND		0.4	ug/L	8010		06/14/1994
Tetrachloroethene	ND		0.4	ug/L	8010		06/14/1994
1,1,1-Trichloroethane	ND		0.4	ug/L	8010		06/14/1994
1,1,2-Trichloroethane	ND		1	ug/L	8010		06/14/1994
Trichloroethene	ND		0.4	ug/L	8010		06/14/1994
Trichlorofluoromethane	ND		0.4	ug/L	8010		06/14/1994
Vinyl chloride	ND		0.4	ug/L	8010		06/14/1994
SURROGATE RESULTS	--						06/14/1994
1,4-Difluorobenzene (SURR)	99			% Rec.			06/14/1994
1,4-Dichlorobutane (SURR)	94			% Rec.			06/14/1994

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

SAMPLE DESCRIPTION: TB
Date Taken:
Time Taken:
NET Sample No: 196399

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						06/10/1994
DILUTION FACTOR*	1						06/10/1994
as Gasoline	ND		50	ug/L	5030		06/10/1994
METHOD 8020 (GC,Liquid)	--						06/10/1994
Benzene	ND		0.5	ug/L	8020		06/10/1994
Toluene	ND		0.5	ug/L	8020		06/10/1994
Ethylbenzene	ND		0.5	ug/L	8020		06/10/1994
Xylenes (Total)	ND		0.5	ug/L	8020		06/10/1994
SURROGATE RESULTS	--						06/10/1994
Bromofluorobenzene (SURR)	76			% Rec.	5030		06/10/1994

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

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	115.0	1.15	1.00	mg/L	06/10/1994	klh
Benzene	100.0	5.00	5.00	ug/L	06/10/1994	klh
Toluene	107.2	5.36	5.00	ug/L	06/10/1994	klh
Ethylbenzene	101.0	5.05	5.00	ug/L	06/10/1994	klh
Xylenes (Total)	102.7	15.4	15.0	ug/L	06/10/1994	klh
Bromofluorobenzene (SURR)	106.0	106	100	% Rec.	06/10/1994	klh
TPH (Gas/BTXE,Liquid)						
as Gasoline	109.0	1.09	1.00	mg/L	06/14/1994	aal
Benzene	105.4	5.27	5.00	ug/L	06/14/1994	aal
Toluene	104.4	5.22	5.00	ug/L	06/14/1994	aal
Ethylbenzene	98.2	4.91	5.00	ug/L	06/14/1994	aal
Xylenes (Total)	102.0	15.3	15.0	ug/L	06/14/1994	aal
Bromofluorobenzene (SURR)	96.0	96	100	% Rec.	06/14/1994	aal

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials
METHOD 8010 (GC,Liquid)						
Bromodichloromethane	109.5	21.9	20.0	ug/L	06/14/1994	asm
Bromoform	105.0	21.0	20.0	ug/L	06/14/1994	asm
Bromomethane	101.0	20.2	20.0	ug/L	06/14/1994	asm
Carbon tetrachloride	113.0	22.6	20.0	ug/L	06/14/1994	asm
Chlorobenzene	111.0	22.2	20.0	ug/L	06/14/1994	asm
Chloroethane	101.0	20.2	20.0	ug/L	06/14/1994	asm
2-Chloroethylvinyl ether	108.0	21.6	20.0	ug/L	06/14/1994	asm
Chloroform	117.0	23.4	20.0	ug/L	06/14/1994	asm
Chloromethane	65.5	13.1	20.0	ug/L	06/14/1994	asm
Dibromochloromethane	114.0	22.8	20.0	ug/L	06/14/1994	asm
1,2-Dichlorobenzene	109.5	21.9	20.0	ug/L	06/14/1994	asm
1,3-Dichlorobenzene	112.0	22.4	20.0	ug/L	06/14/1994	asm
1,4-Dichlorobenzene	114.0	22.8	20.0	ug/L	06/14/1994	asm
Dichlorodifluoromethane	101.5	20.3	20.0	ug/L	06/14/1994	asm
1,1-Dichloroethane	96.0	19.2	20.0	ug/L	06/14/1994	asm
1,2-Dichloroethane	116.0	23.2	20.0	ug/L	06/14/1994	asm
1,1-Dichloroethene	106.0	21.2	20.0	ug/L	06/14/1994	asm
trans-1,2-Dichloroethene	93.0	18.6	20.0	ug/L	06/14/1994	asm
1,2-Dichloropropane	111.5	22.3	20.0	ug/L	06/14/1994	asm
cis-1,3-Dichloropropene	113.5	22.7	20.0	ug/L	06/14/1994	asm
trans-1,3-Dichloropropene	118.5	23.7	20.0	ug/L	06/14/1994	asm
Methylene chloride	98.5	19.7	20.0	ug/L	06/14/1994	asm
1,1,2,2-Tetrachloroethane	128.0	25.6	20.0	ug/L	06/14/1994	asm
Tetrachloroethene	117.0	23.4	20.0	ug/L	06/14/1994	asm
1,1,1-Trichloroethane	111.5	22.3	20.0	ug/L	06/14/1994	asm
1,1,2-Trichloroethane	122.0	24.4	20.0	ug/L	06/14/1994	asm
Trichloroethene	109.5	21.9	20.0	ug/L	06/14/1994	asm
Trichlorofluoromethane	105.0	21.0	20.0	ug/L	06/14/1994	asm
Vinyl chloride	110.0	22.0	20.0	ug/L	06/14/1994	asm
1,4-Difluorobenzene (SURR)	97.0	97	100	% Rec.	06/14/1994	asm
1,4-Dichlorobutane (SURR)	109.0	109	100	% Rec.	06/14/1994	asm

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

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	06/10/1994	klh
Benzene	ND	0.5	ug/L	06/10/1994	klh
Toluene	ND	0.5	ug/L	06/10/1994	klh
Ethylbenzene	ND	0.5	ug/L	06/10/1994	klh
Xylenes (Total)	ND	0.5	ug/L	06/10/1994	klh
Bromofluorobenzene (SURR)	89		% Rec.	06/10/1994	klh
TPH (Gas/BTXE,Liquid)					
as Gasoline	ND	0.05	mg/L	06/14/1994	aal
Benzene	ND	0.5	ug/L	06/14/1994	aal
Toluene	ND	0.5	ug/L	06/14/1994	aal
Ethylbenzene	ND	0.5	ug/L	06/14/1994	aal
Xylenes (Total)	ND	0.5	ug/L	06/14/1994	aal
Bromofluorobenzene (SURR)	78		% Rec.	06/14/1994	aal

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials
METHOD 8010 (GC,Liquid)					
Bromodichloromethane	ND	0.4	ug/L	06/14/1994	asm
Bromoform	ND	0.4	ug/L	06/14/1994	asm
Bromomethane	ND	0.4	ug/L	06/14/1994	asm
Carbon tetrachloride	ND	0.4	ug/L	06/14/1994	asm
Chlorobenzene	ND	0.4	ug/L	06/14/1994	asm
Chloroethane	ND	0.4	ug/L	06/14/1994	asm
2-Chloroethylvinyl ether	ND	1.0	ug/L	06/14/1994	asm
Chloroform	ND	0.4	ug/L	06/14/1994	asm
Chloromethane	ND	0.4	ug/L	06/14/1994	asm
Dibromochloromethane	ND	0.4	ug/L	06/14/1994	asm
1,2-Dichlorobenzene	ND	0.4	ug/L	06/14/1994	asm
1,3-Dichlorobenzene	ND	0.4	ug/L	06/14/1994	asm
1,4-Dichlorobenzene	ND	0.4	ug/L	06/14/1994	asm
Dichlorodifluoromethane	ND	0.4	ug/L	06/14/1994	asm
1,1-Dichloroethane	ND	0.4	ug/L	06/14/1994	asm
1,2-Dichloroethane	ND	0.4	ug/L	06/14/1994	asm
1,1-Dichloroethene	ND	0.4	ug/L	06/14/1994	asm
trans-1,2-Dichloroethene	ND	0.4	ug/L	06/14/1994	asm
1,2-Dichloropropane	ND	0.4	ug/L	06/14/1994	asm
cis-1,3-Dichloropropene	ND	0.4	ug/L	06/14/1994	asm
trans-1,3-Dichloropropene	ND	0.4	ug/L	06/14/1994	asm
Methylene chloride	ND	10	ug/L	06/14/1994	asm
1,1,2,2-Tetrachloroethane	ND	0.4	ug/L	06/14/1994	asm
Tetrachloroethene	ND	0.4	ug/L	06/14/1994	asm
1,1,1-Trichloroethane	ND	0.4	ug/L	06/14/1994	asm
1,1,2-Trichloroethane	ND	0.4	ug/L	06/14/1994	asm
Trichloroethene	ND	0.4	ug/L	06/14/1994	asm
Trichlorofluoromethane	ND	0.4	ug/L	06/14/1994	asm
Vinyl chloride	ND	0.4	ug/L	06/14/1994	asm
1,4-Difluorobenzene (SURR)	102		% Rec.	06/14/1994	asm
1,4-Dichlorobutane (SURR)	100		% Rec.	06/14/1994	asm

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

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	108.0	112.0	3.6	1.00	ND	1.08	1.12	mg/L	06/10/1994	klh
Benzene	96.3	106.6	10.1	27.1	ND	26.1	28.9	ug/L	06/10/1994	klh
Toluene	96.5	98.4	1.9	83.3	ND	80.4	82.0	ug/L	06/10/1994	klh
TPH (Gas/BTXE,Liquid)										
as Gasoline	107.0	113.0	5.5	1.00	ND	1.07	1.13	mg/L	06/14/1994	aal
Benzene	98.3	102.3	3.9	35.3	ND	34.7	36.1	ug/L	06/14/1994	aal
Toluene	98.2	101.1	2.8	83.0	ND	81.5	83.9	ug/L	06/14/1994	aal

Ref: SHELL, 1784 150th Ave., San Leandro, Project No: 940606F2

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 8010 (GC,Liquid)										
Chlorobenzene	124.0	120.0	3.3	20.0	ND	24.8	24.0	ug/L	06/14/1994	asm
1,1-Dichloroethene	121.0	116.5	3.8	20.0	ND	24.2	23.3	ug/L	06/14/1994	asm
Trichloroethene	126.5	121.0	4.4	20.0	ND	25.3	24.2	ug/L	06/14/1994	asm

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.

Revised September, 1993
abb.93

COOLER RECEIPT FORM

Project: Shell 1784 150th Ave. San Leandro Log No: 9716
Cooler received on: 6/8/94 and checked on 6/8/94 by A. Lepe
A. Lepe
(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 4.0°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:

*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)