PACIFIC
ENVIRONMENTAL
GROUP, INC.

October 20, 1994
Project 305-085.2B

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

Re: Quarterly Report - Third Quarter 1994
Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California
WIC No 204-5508-0703

Dear Mr. Kirk:

The following presents the results of the third quarter 1994 monitoring program for the site referenced above. This letter has been prepared for Shell Oil Company by Pacific Environmental Group, Inc. (PACIFIC).

FINDINGS

Groundwater monitoring wells were gauged and sampled by Blaine Tech Services, Inc. (Blaine) at the direction of PACIFIC on September 12, 1994. Groundwater elevation contours for the sampling date are shown on Figure 1. Table 1 presents groundwater elevation data.

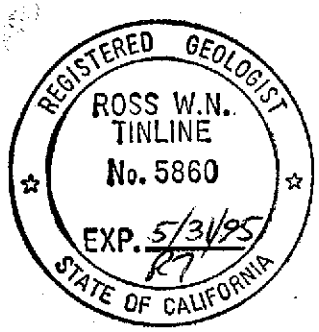
Groundwater analytical data are presented in Table 2. Total petroleum hydrocarbons calculated as gasoline (TPH-g) and benzene concentrations for the September 1994 sampling event are shown on Figure 2. The only positive result of TPH-g was found in Well MW-4 and its duplicate sample. The laboratory noted these results to be in the C_5-C_{12} hydrocarbon range. Blaine's groundwater sampling report is presented as Attachment A.

2025 Gateway Place, Suite 440, San Jose, California 95110 (408) 441-7500 FAX (408) 441-7539

If you have any questions regarding the contents of this letter, please call.

Sincerely,

Pacific Environmental Group, Inc.



Ross W.N. Tinline
Project Geologist
RG 5860

Attachments: Table 1 - Groundwater Elevation Data
Table 2 - Groundwater Analytical Data -
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)
Figure 1 - Groundwater Elevation Contour Map
Figure 2 - TPH-g/Benzene Concentration Map
Attachment A - Groundwater Sampling Report

cc: Ms. Lisa McCann, Regional Water Quality Control Board - S.F. Bay Region
Mr. Craig Mayfield, Alameda County Flood Control and Water Conservation District
Mr. Gil Wistar, Alameda County Health Department

Table 1
Groundwater Elevation Data

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-1	07/14/88	73.89	13.30	60.59
	10/04/88		13.65	60.24
	11/10/88		13.55	60.34
	12/09/88		13.22	60.67
	01/10/89		12.86	61.03
	01/20/89		12.91	60.98
	02/06/89		12.94	60.95
	03/10/89		12.59	61.30
	06/06/89		14.05	59.84
	09/07/89		14.92	58.97
	12/18/89		14.88	59.01
	03/08/90		14.08	59.81
	06/07/90		13.89	60.00
	09/05/90		14.83	59.06
	12/03/90		15.05	58.84
	03/01/91		14.34	59.55
	06/03/91		14.16	59.73
	09/04/91		14.60	59.29
	03/13/92		13.40	60.49
	06/03/92		13.76	60.13
	08/19/92		14.57	59.32
	11/16/92		14.78	59.11
	02/18/93		12.14	61.75
	06/01/93		13.30	60.59
	08/30/93		14.32	59.57
	12/13/93		14.06	59.83
	03/03/94		13.12	60.77
	06/06/94		14.20	59.69
	09/12/94		15.72	58.17
MW-2	07/14/88	75.24	15.18	60.06
	10/04/88		15.30	59.94
	11/10/88		15.17	60.07
	12/09/88		14.82	60.42
	01/20/89		14.54	60.70
	02/06/89		14.59	60.65
	03/10/89		14.88	60.36
	06/06/89		15.30	59.94
	09/07/89		16.76	58.48
	12/18/89		16.65	58.59
	03/08/90		15.92	59.32
	06/07/90		16.10	59.14
	09/05/90		16.61	58.63
	12/03/90		17.06	58.18
	03/01/91		16.62	58.62

Table 1 (continued)
Groundwater Elevation Data

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth To Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-2 (cont.)	06/03/91		16.65	58.59
	09/04/91		16.57	58.67
	03/13/92		14.66	60.58
	06/03/92		15.90	59.34
	08/19/92		16.72	58.52
	11/16/92		16.66	58.58
	02/18/93		13.88	61.36
	06/01/93		14.74	60.50
	08/30/93		15.85	59.39
	12/13/93		15.83	59.41
	03/03/94		14.80	60.44
	06/06/94		16.65	58.59
	09/12/94		16.72	58.52
MW-3	07/14/88	74.68	14.05	60.63
	10/04/88		14.60	60.08
	11/10/88		14.35	60.33
	12/09/88		14.04	60.64
	01/10/89		13.70	60.98
	01/20/89		13.72	60.96
	02/06/89		13.75	60.93
	03/10/89		13.42	61.26
	06/06/89		14.52	60.16
	09/07/89		15.52	59.16
	12/18/89		19.59	55.09
	03/08/90		14.72	59.96
	06/07/90		14.65	60.03
	09/05/90		15.51	59.17
	12/03/90		14.85	59.83
	03/01/91		14.92	59.76
	06/03/91		14.75	59.93
	09/04/91		15.14	59.54
	03/13/92		13.50	61.18
	06/03/92		14.39	60.29
	08/19/92		15.08	59.60
	11/16/92		15.43	59.25
	02/18/93		12.96	61.72
	06/01/93		13.98	60.70
	08/30/93		14.82	59.86
	12/13/93		14.70	59.98
	03/03/94		13.92	60.76
	06/06/94		14.73	59.95
	09/12/94		15.42	59.26

Table 1 (continued)
Groundwater Elevation Data

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth To Water (feet, TOC)	Groundwater Elevation (feet, MSL)
MW-4	01/23/90	73.83	14.68	59.15
	03/08/90		14.38	59.45
	06/07/90		14.27	59.56
	09/05/90		15.40	58.43
	12/03/90		15.90	57.93
	06/03/91		14.60	59.23
	09/04/91		15.25	58.58
	03/13/92		12.72	61.11
	06/03/92		14.33	59.50
	08/19/92		15.18	58.65
	11/16/92		15.39	58.44
	02/18/93		12.62	61.21
	06/01/93		13.68	60.15
	08/30/93		14.83	59.00
	12/13/93		14.50	59.33
	03/03/94		13.48	60.35
	06/06/94		14.26	59.57
	09/12/94		15.42	58.41

MSL = Mean sea level
TOC = Top of casing

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-1	07/14/88	ND	ND	ND	ND	ND
	10/04/88	ND	8	4.3	ND	9
	11/10/88	ND	ND	ND	ND	ND
	12/09/88	ND	ND	ND	ND	ND
	01/10/89	ND	ND	ND	ND	NA
	01/20/89	ND	ND	NA	NA	ND
	02/06/89	ND	ND	ND	ND	ND
	03/10/89	ND	ND	ND	ND	ND
	06/06/89	ND	ND	ND	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	12/18/89	ND	ND	ND	ND	ND
	03/08/90	ND	ND	ND	ND	ND
	06/07/90	ND	ND	ND	ND	ND
	09/05/90	ND	ND	ND	ND	ND
	12/03/90	ND	ND	ND	ND	ND
	03/01/91	ND	ND	ND	ND	ND
	06/03/91	ND	ND	ND	ND	ND
	09/04/91	ND	ND	ND	ND	ND
	03/13/92	ND	ND	ND	ND	ND
	06/03/92	ND	ND	ND	ND	ND
	08/19/92	87	ND	ND	ND	ND
	11/16/92	ND	ND	ND	ND	ND
	02/18/93	59*	ND	ND	ND	ND
	06/01/93	ND	ND	ND	ND	ND
	08/30/93	ND	ND	ND	ND	ND
	12/13/93	ND	ND	ND	ND	ND
	03/03/94	100	ND	ND	ND	ND
	06/06/94	ND	ND	ND	ND	ND
	09/12/94	ND	ND	ND	ND	ND
MW-2	07/14/88	ND	7.9	2.6	1.1	4
	10/04/88	90	ND	1.3	2.3	12
	11/10/88	ND	ND	ND	ND	2
	12/09/88	ND	ND	0.6	ND	3
	01/20/89	ND	ND	ND	ND	ND
	02/06/89	NA	ND	ND	ND	ND
	03/10/89	ND	ND	ND	ND	ND
	06/06/89	ND	ND	0.5	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	12/18/89	ND	ND	ND	ND	ND
	03/08/90	ND	ND	ND	ND	ND

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

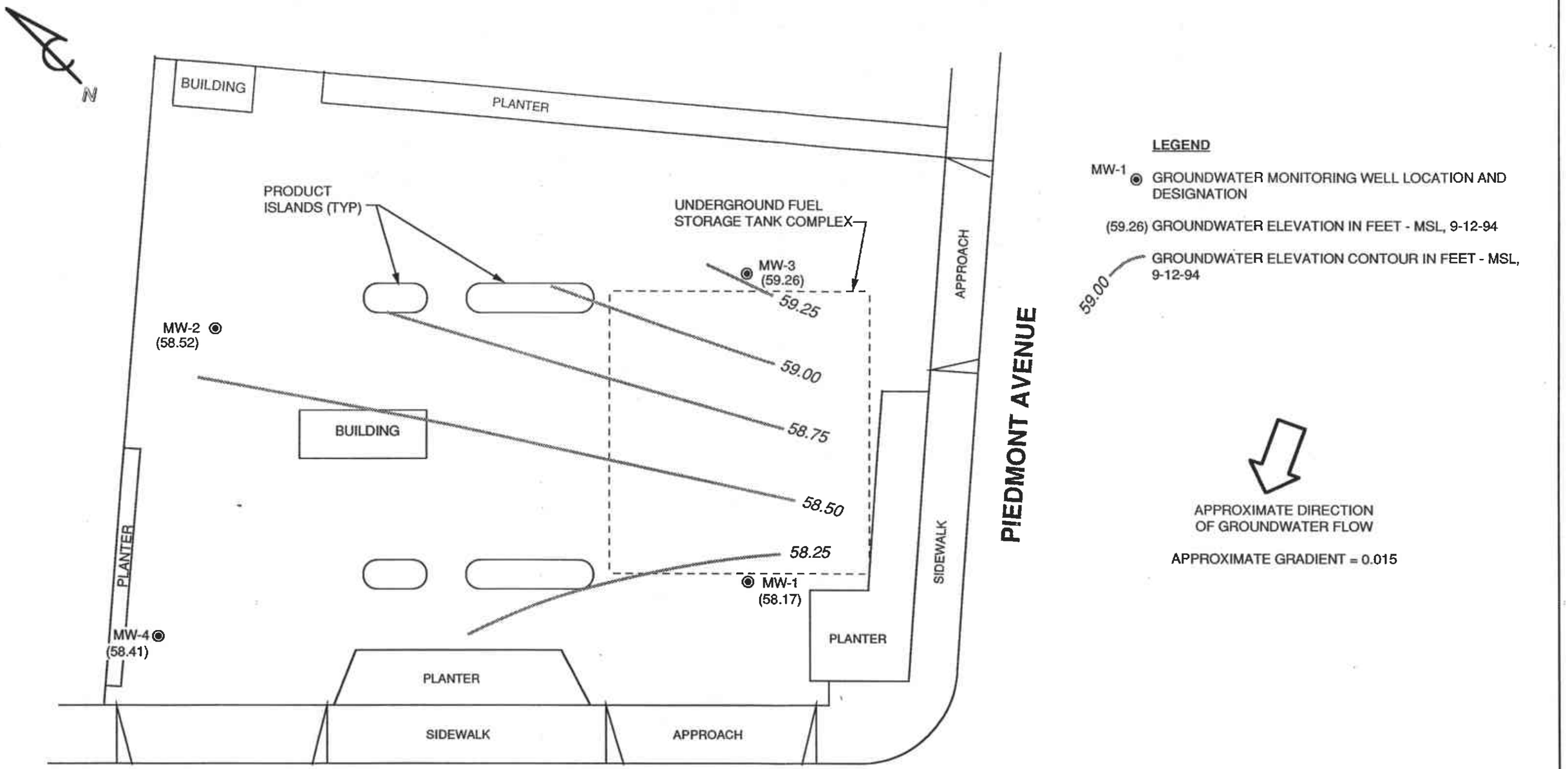
Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-2 (cont.)	06/07/90	ND	ND	ND	ND	ND
	09/05/90	ND	ND	ND	ND	ND
	12/03/90	ND	ND	ND	ND	ND
	03/01/91	ND	ND	ND	ND	ND
	06/03/91	ND	ND	ND	ND	ND
	09/04/91	ND	ND	ND	ND	ND
	03/13/92	ND	ND	ND	ND	ND
	06/03/92	ND	ND	ND	ND	ND
	08/19/92	67	ND	ND	ND	ND
	11/16/92	50	ND	ND	ND	1.2
	02/18/93	52*	ND	ND	ND	ND
	02/18/93(D)	52*	ND	ND	ND	ND
	06/01/93	ND	ND	ND	ND	ND
	08/30/93	70*	ND	ND	ND	ND
	12/13/93	68*	ND	ND	ND	ND
	03/03/94	280*	ND	ND	ND	ND
	06/06/94	ND	ND	ND	ND	ND
	09/12/94	ND	ND	ND	ND	ND
MW-3	07/14/88	ND	ND	ND	ND	ND
	10/04/88	ND	ND	ND	ND	5
	11/10/88	ND	ND	ND	ND	ND
	12/09/88	ND	ND	ND	ND	ND
	01/10/89	ND	ND	ND	ND	NA
	01/20/89	NA	NA	ND	ND	ND
	02/06/89	70	ND	ND	ND	ND
	03/10/89	150	ND	ND	ND	ND
	06/06/89	ND	ND	ND	ND	ND
	09/07/89	ND	0.65	ND	ND	ND
	12/06/89	46	1.3	ND	0.44	0.66
	03/08/90	ND	ND	ND	ND	ND
	06/07/90	ND	ND	ND	ND	ND
	09/05/91	ND	ND	ND	ND	ND
	12/03/90	ND	ND	ND	ND	ND
	03/01/91	1.9	59	ND	22	ND
	06/03/91	ND	ND	ND	ND	ND
	09/04/91	ND	ND	ND	ND	ND
	03/13/92	ND	ND	ND	ND	ND
	06/03/92	ND	ND	ND	ND	ND
	08/19/92	92	ND	ND	ND	ND
	08/19/92(D)	76	ND	ND	ND	ND
	11/16/92	200*	ND	ND	ND	ND

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-3 (cont.)	11/16/92(D)	140*	ND	ND	ND	ND
	02/18/93	680*	ND	ND	ND	ND
	06/01/93	160*	ND	ND	ND	ND
	06/01/93(D)	150*	ND	ND	ND	ND
	08/30/93	110*	ND	ND	ND	ND
	12/13/93	140*	ND	ND	ND	ND
	12/13/93(D)	110*	ND	ND	ND	ND
	03/03/94	61*	ND	ND	ND	ND
	06/06/94	ND	ND	ND	ND	ND
	09/12/94	ND	ND	ND	ND	ND
MW-4	01/23/90	1,600	100	10	30	20
	03/08/90	4,200	260	18	88	39
	06/07/90	2,000	150	6.9	14	17
	09/05/90	1,700	130	10	7.2	19
	12/03/90	2,600	108	41	17	59
	06/03/91	2,800	160	15	8.8	32
	09/04/91	---------- Separate-Phase Hydrocarbon Sheen ----------				
	03/13/92	2,700	180	70	5.9	29
	06/03/92	1,700	190	ND	30	23
	08/19/92	170	4.2	ND	0.6	1.0
	11/16/92	2,600	92	49	50	81
	02/18/93	7,400	120	38	51	87
	06/01/93	7,000	1,800	1,700	1,600	1,700
	08/30/93	2,100	80	11	ND	11
	08/30/93(D)	2,100	77	5.6	ND	5.5
	12/13/93	2,000*	20	ND	21	52
	03/03/94	3,500	150	86	85	90
	03/03/94(D)	3,200	130	73	74	76
	06/06/94	590	25	ND	ND	ND
	06/06/94(D)	400	16	ND	ND	ND}
	09/12/94	1,800	42	ND	3.7	4.7
	09/12/94(D)	2,000	40	ND	5.7	8.0

ppb = Parts per billion
ND = Not detected
NA = Not analyzed
(D) = Duplicate sample
* = The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline.
See certified analytical reports for detection limits.



PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 20 40 FEET

SHELL SERVICE STATION
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE:
1
PROJECT:
305-085.2B

N

BUILDING

PLANTER

PRODUCT ISLANDS (TYP)

UNDERGROUND FUEL STORAGE TANK COMPLEX

MW-3
ND/ND

APPROACH

MW-2
ND/ND

BUILDING

PLANTER

MW-1
ND/ND

SIDEWALK

MW-4
1,800/42

PLANTER

PLANTER

APPROACH

SIDEWALK

APPROACH

PIEDMONT AVENUE

MAC ARTHUR BOULEVARD

LEGEND

MW-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

1,800/42 TPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 9-12-94

ND NOT DETECTED

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 20 40 FEET

SHELL SERVICE STATION
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California

TPH-g/BENZENE CONCENTRATION MAP

FIGURE:
2
PROJECT:
305-085.2B

ATTACHMENT A

GROUNDWATER SAMPLING REPORT

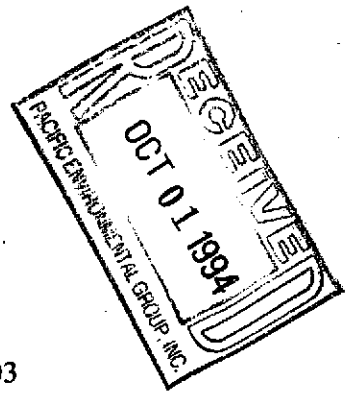
BLAINE
TECH SERVICES INC.

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

September 29, 1994

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

Attn: Daniel T. Kirk



SITE:
Shell WIC #204-5508-0703
230 West MacArthur Blvd.
Oakland, California

QUARTER:
3rd quarter of 1994

QUARTERLY GROUNDWATER SAMPLING REPORT 940912-J-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: Pacific Environmental Group, Inc.
2025 Gateway Place, Suite #440
San Jose, CA 95110
ATTN: Rhonda Barrick

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	9/12/94	TOC	--	NONE	--	--	15.72	29.44
MW-2	9/12/94	TOC	--	NONE	--	--	16.72	27.72
MW-3	9/12/94	TOC	--	NONE	--	--	15.42	28.14
MW-4 *	9/12/94	TOC	--	NONE	--	--	15.42	24.02

* Sample DUP was a duplicate sample taken from welll MW-4.

2528

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 940912J1

Date: 8/12/94
Page 1 of 1

Site Address: 230 West MacArthur Blvd., Oakland

WIC#: 204-5508-0703

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: JEAN GATINEAU

LAB: NET

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
MW-1	9/12			X		3						X						
MW-2	↓			↓		↓						↓						
MW-3																		
MW-4																		
E.B.																		
DUP						↓												
T.B.	↓			↓		2						↓						

CHECK ONE (1) BOX ONLY — C1/D1

Quarterly Monitoring	☒	8441
Site Investigation	☐	8441
Soil Closure/Disposal	☐	8442
Water Closure/Disposal	☐	8443
Soil/Air Rem. or Sys. O & M	☐	8462
Water Rem. or Sys. O & M	☐	8463
Other	☐	

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 96 days ☒ (Normal)
- Other ☐ ___

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

Relinquished By (signature): [signature] — Printed Name: JEAN GATINEAU — Date: 9/13/94 Time: 1950

Relinquished By (signature): [signature] — Printed Name: GT Lumsee — Date: 9/13 Time: 1610

Relinquished By (signature): (CUSTODY) — Printed Name: — Date: Time:

Received (signature): [signature] — Printed Name: GT Lumsee — Date: 9/13 Time: 9:50

Received (signature): — Printed Name: — Date: Time:

Received (signature): [signature] — Printed Name: K. Temple — Date: 9/14/94 Time: 0730

THE LABORATORY MUST PROVIDE A COPY OF THIS

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: 09/26/1994
NET Client Acct. No: 1821
NET Pacific Job No: 94.04171
Received: 09/14/1994

Client Reference Information

SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

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)

Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.04171

Date: 09/26/1994
ELAP Cert: 1386
Page: 2

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

SAMPLE DESCRIPTION: MW-1
Date Taken: 09/12/1994
Time Taken:
NET Sample No: 215236

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/22/1994
DILUTION FACTOR*	1						09/22/1994
as Gasoline	ND		50	ug/L	5030		09/22/1994
Carbon Range:	--						09/22/1994
METHOD 8020 (GC,Liquid)	--						09/22/1994
Benzene	ND		0.5	ug/L	8020		09/22/1994
Toluene	ND		0.5	ug/L	8020		09/22/1994
Ethylbenzene	ND		0.5	ug/L	8020		09/22/1994
Xylenes (Total)	ND		0.5	ug/L	8020		09/22/1994
SURROGATE RESULTS	--						09/22/1994
Bromofluorobenzene (SURR)	97			% Rec.	5030		09/22/1994

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

SAMPLE DESCRIPTION: MW-2
Date Taken: 09/12/1994
Time Taken:
NET Sample No: 215237

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/22/1994
DILUTION FACTOR*	1						09/22/1994
as Gasoline	ND		50	ug/L	5030		09/22/1994
Carbon Range:	--						09/22/1994
METHOD 8020 (GC,Liquid)	--						09/22/1994
Benzene	ND		0.5	ug/L	8020		09/22/1994
Toluene	ND		0.5	ug/L	8020		09/22/1994
Ethylbenzene	ND		0.5	ug/L	8020		09/22/1994
Xylenes (Total)	ND		0.5	ug/L	8020		09/22/1994
SURROGATE RESULTS	--						09/22/1994
Bromofluorobenzene (SURR)	106			% Rec.	5030		09/22/1994

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

SAMPLE DESCRIPTION: MW-3
Date Taken: 09/12/1994
Time Taken:
NET Sample No: 215238

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/22/1994
DILUTION FACTOR*	1						09/22/1994
as Gasoline	ND		50	ug/L	5030		09/22/1994
Carbon Range:	--						09/22/1994
METHOD 8020 (GC,Liquid)	--						09/22/1994
Benzene	ND		0.5	ug/L	8020		09/22/1994
Toluene	ND		0.5	ug/L	8020		09/22/1994
Ethylbenzene	ND		0.5	ug/L	8020		09/22/1994
Xylenes (Total)	ND		0.5	ug/L	8020		09/22/1994
SURROGATE RESULTS	--						09/22/1994
Bromofluorobenzene (SURR)	105			% Rec.	5030		09/22/1994

Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.04171

Date: 09/26/1994
ELAP Cert: 1386
Page: 5

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

SAMPLE DESCRIPTION: MW-4
Date Taken: 09/12/1994
Time Taken:
NET Sample No: 215239

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/22/1994
DILUTION FACTOR*	1						09/22/1994
as Gasoline	1,800		50	ug/L	5030		09/22/1994
Carbon Range:	C5-C12						09/22/1994
METHOD 8020 (GC,Liquid)	--						09/22/1994
Benzene	42		0.5	ug/L	8020		09/22/1994
Toluene	ND		0.5	ug/L	8020		09/22/1994
Ethylbenzene	3.7		0.5	ug/L	8020		09/22/1994
Xylenes (Total)	4.7		0.5	ug/L	8020		09/22/1994
SURROGATE RESULTS	--						09/22/1994
Bromofluorobenzene (SURR)	116			% Rec.	5030		09/22/1994

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

SAMPLE DESCRIPTION: EB
Date Taken: 09/12/1994
Time Taken:
NET Sample No: 215240

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/22/1994
DILUTION FACTOR*	1						09/22/1994
as Gasoline	ND		50	ug/L	5030		09/22/1994
Carbon Range:	--						09/22/1994
METHOD 8020 (GC,Liquid)	--						09/22/1994
Benzene	ND		0.5	ug/L	8020		09/22/1994
Toluene	ND		0.5	ug/L	8020		09/22/1994
Ethylbenzene	ND		0.5	ug/L	8020		09/22/1994
Xylenes (Total)	ND		0.5	ug/L	8020		09/22/1994
SURROGATE RESULTS	--						09/22/1994
Bromofluorobenzene (SURR)	99			% Rec.	5030		09/22/1994

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

SAMPLE DESCRIPTION: DUP
Date Taken: 09/12/1994
Time Taken:
NET Sample No: 215241

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/22/1994
DILUTION FACTOR*	1						09/22/1994
as Gasoline	2,000		50	ug/L	5030		09/22/1994
Carbon Range:	C5-C12						09/22/1994
METHOD 8020 (GC,Liquid)	--						09/22/1994
Benzene	40		0.5	ug/L	8020		09/22/1994
Toluene	ND		0.5	ug/L	8020		09/22/1994
Ethylbenzene	5.7		0.5	ug/L	8020		09/22/1994
Xylenes (Total)	8.0		0.5	ug/L	8020		09/22/1994
SURROGATE RESULTS	--						09/22/1994
Bromofluorobenzene (SURR)	118			% Rec.	5030		09/22/1994

NET®

Client Name: Blaine Tech Services
Client Acct: 1821
NET Job No: 94.04171

Date: 09/26/1994
ELAP Cert: 1386
Page: 8

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

SAMPLE DESCRIPTION: TB
Date Taken: 09/12/1994
Time Taken:
NET Sample No: 215242

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed
TPH (Gas/BTXE,Liquid)							
METHOD 5030/M8015	--						09/22/1994
DILUTION FACTOR*	1						09/22/1994
as Gasoline	ND		50	ug/L	5030		09/22/1994
Carbon Range:	--						09/22/1994
METHOD 8020 (GC,Liquid)	--						09/22/1994
Benzene	ND		0.5	ug/L	8020		09/22/1994
Toluene	ND		0.5	ug/L	8020		09/22/1994
Ethylbenzene	ND		0.5	ug/L	8020		09/22/1994
Xylenes (Total)	ND		0.5	ug/L	8020		09/22/1994
SURROGATE RESULTS	--						09/22/1994
Bromofluorobenzene (SURR)	94			% Rec.	5030		09/22/1994

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

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	108.0	1.08	1.00	mg/L	09/22/1994	dfw
Benzene	86.4	4.32	5.00	ug/L	09/22/1994	dfw
Toluene	98.2	4.91	5.00	ug/L	09/22/1994	dfw
Ethylbenzene	93.0	4.65	5.00	ug/L	09/22/1994	dfw
Xylenes (Total)	92.3	13.84	15.0	ug/L	09/22/1994	dfw
Bromofluorobenzene (SURR)	92.0	92	100	% Rec.	09/22/1994	dfw

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

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	09/22/1994	dfw
Benzene	ND	0.5	ug/L	09/22/1994	dfw
Toluene	ND	0.5	ug/L	09/22/1994	dfw
Ethylbenzene	ND	0.5	ug/L	09/22/1994	dfw
Xylenes (Total)	ND	0.5	ug/L	09/22/1994	dfw
Bromofluorobenzene (SURR)	93		% Rec.	09/22/1994	dfw

Ref: SHELL, 230 West MacArthur Blvd., Oakland, Job No. 940912-J1

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	115.0	115.0	0.0	1.00	ND	1.15	1.15	mg/L	09/22/1994	dfw
Benzene	105.9	106.2	0.3	35.4	ND	37.5	37.6	ug/L	09/22/1994	dfw
Toluene	107.8	105.8	1.9	103	ND	111	109	ug/L	09/22/1994	dfw

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, Oakland, 940912-J1 Log No: 2528
Cooler received on: 9-14-94 and checked on 9-14-94 by J. Sorensen
(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 2.9°C

Did all bottles arrive in good condition (unbroken)?..... YES NO

Did bottle labels match COC?..... YES NO

Were proper bottles used for analysis indicated?..... YES NO

Correct preservatives used?..... YES NO

VOA vials checked for headspace bubbles?..... YES NO
Note which voas (if any) had bubbles:*

Sample descriptor:	Number of vials:
TB	2 of 2

*All VOAs with headspace bubbles have been set aside so they will not be used for analysis..... YES NO

List here all other jobs received in the same cooler:

Client Job #	NET log #

(coolerrec)