PACIFIC
ENVIRONMENTAL
GROUP, INC.

STID

October 23, 1995
Project 305-085.2C

Mr. R. Jeff Granberry
Shell Oil Products Company
P.O. Box 4023
Concord, California 94524

Re: Quarterly Report - Third Quarter 1995
Shell Service Station
230 West MacArthur Boulevard at Piedmont Avenue
Oakland, California
WIC No 204-5508-0703

Dear Mr. Granberry:

The following presents the results of third quarter 1995 monitoring for the site referenced above. This letter has been prepared for Shell Oil Products Company by Pacific Environmental Group, Inc. (PACIFIC).

FINDINGS

On September 12, 1995 groundwater monitoring wells were gauged and sampled by Blaine Tech Services, Inc. (Blaine) at the direction of PACIFIC. Groundwater elevation contours for the sampling date are shown on Figure 1. Table 1 presents groundwater elevation data.

All wells were analyzed for total purgeable petroleum hydrocarbons (TPPH), benzene, toluene, ethylbenzene, and xylenes. Groundwater analytical data are presented in Table 2. TPPH and benzene concentrations for the September 1995 sampling event are shown on Figure 2. The laboratory analyzed Wells MW-3, MW-4, the duplicate sample taken from Well MW-4, and the equipment blank out of hold time. Hydrocarbon ranges for positive results of TPPH are presented in the certified analytical report. Blaine's groundwater sampling report, which includes field data and the certified analytical report, is presented as Attachment A.

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

REGISTERED GEOLOGIST
ROSS W.N. TINLINE
No. 5860
EXP. 5/31/97
STATE OF CALIFORNIA

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

cc: Ms. Lisa McCann, Regional Water Quality Control Board - San Francisco 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
	12/15/94		12.98	60.91
	03/13/95		11.74	62.15
	06/26/95		13.00	60.89
	09/12/95		14.14	59.75
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

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.)	12/03/90		17.06	58.18
	03/01/91		16.62	58.62
	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
	12/15/94		15.25	59.99
	03/13/95		15.32	59.92
	06/26/95		14.65	60.59
	09/12/95		15.78	59.46
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

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-3 (cont.)	03/03/94		13.92	60.76
	06/06/94		14.73	59.95
	09/12/94		15.42	59.26
	12/15/94		13.80	60.88
	03/13/95		12.41	62.27
	06/26/95		13.79	60.89
	09/12/95		14.77	59.91
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
	12/15/94		13.43	60.40
	03/13/95		12.13	61.70
	06/25/95		13.26	60.57
	09/12/95		14.64	59.19

MSL = Mean sea level
TOC = Top of casing

Table 2
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH and BTEX Compounds)

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

Well Number	Date Sampled	TPPH (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[a]	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
	12/15/94	ND	ND	ND	ND	ND
	03/13/95[d]	60	4.7	9.8	ND	2.9
	04/21/95	ND	ND	ND	ND	ND
	06/26/95	ND	ND	ND	ND	ND
	09/12/95	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

Table 2 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH and BTEX Compounds)

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

Well Number	Date Sampled	TPPH (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-2 (cont.)	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	67	ND	ND	ND	ND
	11/16/92	50	ND	ND	ND	1.2
	02/18/93	52[a]	ND	ND	ND	ND
	02/18/93(D)	52[a]	ND	ND	ND	ND
	06/01/93	ND	ND	ND	ND	ND
	08/30/93	70[a]	ND	ND	ND	ND
	12/13/93	68[a]	ND	ND	ND	ND
	03/03/94	280[a]	ND	ND	ND	ND
	06/06/94	ND	ND	ND	ND	ND
	09/12/94	ND	ND	ND	ND	ND
	12/15/94	230[a]	ND	ND	ND	ND
	03/13/95	ND	2.9	6.3	ND	2.7
	04/21/95	ND	ND	ND	ND	ND
	06/26/95	ND	ND	ND	ND	ND
	09/12/95	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

Table 2 (continued)
Groundwater Analytical Data
(TPPH and BTEX Compounds)

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

Well Number	Date Sampled	TPPH (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-3 (cont.)	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[a]	ND	ND	ND	ND
	11/16/92(D)	140[a]	ND	ND	ND	ND
	02/18/93	680[a]	ND	ND	ND	ND
	06/01/93	160[a]	ND	ND	ND	ND
	06/01/93(D)	150[a]	ND	ND	ND	ND
	08/30/93	110[a]	ND	ND	ND	ND
	12/13/93	140[a]	ND	ND	ND	ND
	12/13/93(D)	110[a]	ND	ND	ND	ND
	03/03/94	61[a]	ND	ND	ND	ND
	06/06/94	ND	ND	ND	ND	ND
	09/12/94	ND	ND	ND	ND	ND
	12/15/94	ND	ND	0.9	ND	0.6
	03/13/95	100[b]	7.9	17	0.7	6.1
	04/21/95	60	0.9	1.1	ND	1.0
	06/26/95	ND	ND	ND	ND	ND
	09/12/95[d]	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[a]	20	ND	21	52
	03/03/94	3,500	150	86	85	90
	03/03/94(D)	3,200	130	73	74	76

Table 2 (continued)
Groundwater Analytical Data
(TPPH and BTEX Compounds)

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

Well Number	Date Sampled	TPPH (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-4 (cont.)	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
	12/15/94	2,900	78	14	94	17
	12/15/94(D)	2,900	90	7	96	18
	03/13/95[c]	2,700	240	24	99	34
	03/13/95(D)[c]	2,500	300	24	140	28
	06/26/95	2,100	87	10	67	25
	06/26/95(D)	2,300	92	12	74	26
	09/12/95[d]	1,300	33	13	9.3	15
	09/12/95(D)[d]	1,500	2.1	16	11	17

TPPH = Total purgeable petroleum hydrocarbons
ppb = Parts per billion
ND = Not detected
NA = Not analyzed
(D) = Duplicate sample
a. The concentration reported as gasoline is primarily due to the presence of a discrete hydrocarbon peak not indicative of gasoline.
b. The laboratory noted result to have an atypical gasoline pattern.
c. The laboratory noted sample was analyzed within hold time but further dilution was required and done out of hold time. The laboratory suggests these to be minimum concentrations.
d. The laboratory noted the sampled was analyzed after the method specified holding time.
See certified analytical reports for detection limits.
Prior to June 1995, TPPH was reported as TPH calculated as gasoline.

N

BUILDING

PLANTER

PRODUCT ISLANDS (TYP)

UNDERGROUND FUEL STORAGE TANK COMPLEX

MW-3 (59.91)

MW-2 (59.46)

59.9

BUILDING

59.8

PLANTER

59.7

MW-1 (59.75)

59.6

59.5

59.4

59.3

MW-4 (59.19)

59.2

PLANTER

PLANTER

SIDEWALK

APPROACH

SIDEWALK

APPROACH

PIEDMONT AVENUE

MAC ARTHUR BOULEVARD

LEGEND

MW-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

(59.91) GROUNDWATER ELEVATION IN FEET - MSL, 9-12-95

59.8 GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 9-12-95

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

APPROXIMATE GRADIENT = 0.005

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: 305-085.2C

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
1,300/33 *

PLANTER

PLANTER

APPROACH

SIDEWALK

APPROACH

MAC ARTHUR BOULEVARD

PIEDMONT AVENUE

LEGEND

MW-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

1,300/33 TPPH/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 9-12-95

ND NOT DETECTED

* ANALYZED OUT OF HOLD TIME

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

TPPH/BENZENE CONCENTRATION MAP

FIGURE:
2
PROJECT:
305-085.2C

ATTACHMENT A

GROUNDWATER SAMPLING REPORT

BLAINE
TECH SERVICES INC.

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

September 28, 1995

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

R. B.

Attn: R. Jeff Granberry

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

3rd Quarter 1995

Quarterly Groundwater Monitoring Report 950912-A-3

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. Copies of our Sampling Report along with the laboratory's Certified Analytical Report are forwarded to the consultant overseeing work at this site. Submission of the assembled documents to interested regulatory agencies will be made by the designated consultant.

Groundwater monitoring at this site was performed in accordance with Standard Operating Procedures provided to the interested regulatory agencies. If you have any questions about the work performed at this site please call me at (408) 995-5535 ext. 201.

Yours truly,

Francis Thie

attachments: Table of Well Gauging Data
Chain of Custody
Field Data Sheets
Certified Analytical Report

cc: Pacific Environmental Group
2025 Gateway Place, #440
San Jose, CA 95110
Attn: Rhonda Barrick

(Any professional evaluations or recommendations will be made by the consultant under separate cover.)

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	9/12/95	TOC	--	NONE	--	--	14.14	29.45
MW-2	9/12/95	TOC	--	NONE	--	--	15.78	27.73
MW-3	9/12/95	TOC	--	NONE	--	--	14.77	28.20
MW-4 *	9/12/95	TOC	--	NONE	--	--	14.64	24.00

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950912-A3

Date: 9/12/95
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: Randy Valentine

Printed Name: RANDY VALENTINE

LAB: NET

Analysis Required

Sample ID	Date	TIME ~~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
MW1	9/12	1356		X		3						X								
MW2	9/12	1433		X		3						X								
MW3	9/12	1415		X		3						X								
MW4	9/12	1455		X		3						X								
EB	9/12	1400		X		3						X								
DUP	9/12			X		3						X								
TB	9/12			X		2						X								

CHECK ONE (1) BOX ONLY

		CT/DT
Quarterly Monitoring	X	6441
Site Investigation		6441
Soil Closure/Disposal		6442
Water Closure/Disposal		6443
Soil/Air Rem. or Sys. O & M		6462
Water Rem. or Sys. O & M		6463
Other		

TURN AROUND TIME

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

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

CUSTODY SEALED
Date 9/13/95 Time 1330 Initials P.S.
SEAL INTACT?
Yes Y No ____ Initials ____
WA NOG

Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
Randy Valentine	RANDY VALENTINE	9-13-95	1135	[illegible]	[illegible] Smart	9/13/95	1133
[illegible]	Phyllis Smart	9-13-95	1330				
Relinquished By (signature)	Printed Name	Date	Time	Received (signature)	Printed Name	Date	Time
				[illegible]	PHIL PROSSER	9/14/95	1357

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

NATIONAL ENVIRONMENTAL TESTING, INC.

Santa Rosa Division
3636 North Laughlin Road
Suite 110
Santa Rosa, CA 95403-8226
Tel: (707) 526-7200
Fax: (707) 541-2333

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

Date: 10/02/1995
NET Client Acct. No: 1821
NET Job No: 95.03648
Received: 09/14/1995

Client Reference Information

Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

Sample analysis in support of the project referenced above has been completed and results are presented on the 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 free to call me at (707) 541-2305.

Submitted by:

Jennifer L. Roseberry
Project Manager

Enclosure(s)

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

SAMPLE DESCRIPTION: MW1
Date Taken: 09/12/1995
Time Taken: 13:56
NET Sample No: 251004

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						09/26/1995	3207
Purgeable TPH	ND		50	ug/L	5030/M8015		09/26/1995	3207
Carbon Range: C6 to C12	--						09/26/1995	3207
METHOD 8020 (GC, Liquid)	--						09/26/1995	3207
Benzene	ND		0.5	ug/L	8020		09/26/1995	3207
Toluene	ND		0.5	ug/L	8020		09/26/1995	3207
Ethylbenzene	ND		0.5	ug/L	8020		09/26/1995	3207
Xylenes (Total)	ND		0.5	ug/L	8020		09/26/1995	3207
SURROGATE RESULTS	--						09/26/1995	3207
Bromofluorobenzene (SURR)	90			% Rec.	8020		09/26/1995	3207

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

SAMPLE DESCRIPTION: MW2
Date Taken: 09/12/1995
Time Taken: 14:33
NET Sample No: 251005

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						09/26/1995	3207
Purgeable TPH	ND		50	ug/L	5030/M8015		09/26/1995	3207
Carbon Range: C6 to C12	--						09/26/1995	3207
METHOD 8020 (GC, Liquid)	--						09/26/1995	3207
Benzene	ND		0.5	ug/L	8020		09/26/1995	3207
Toluene	ND		0.5	ug/L	8020		09/26/1995	3207
Ethylbenzene	ND		0.5	ug/L	8020		09/26/1995	3207
Xylenes (Total)	ND		0.5	ug/L	8020		09/26/1995	3207
SURROGATE RESULTS	--						09/26/1995	3207
Bromofluorobenzene (SURR)	86			% Rec.	8020		09/26/1995	3207

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

SAMPLE DESCRIPTION: MW3
Date Taken: 09/12/1995
Time Taken: 14:15
NET Sample No: 251006 *

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						09/28/1995	3211
Purgeable TPH	ND		50	ug/L	5030/M8015		09/28/1995	3211
Carbon Range: C6 to C12	--						09/28/1995	3211
METHOD 8020 (GC, Liquid)	--						09/28/1995	3211
Benzene	ND		0.5	ug/L	8020		09/28/1995	3211
Toluene	ND		0.5	ug/L	8020		09/28/1995	3211
Ethylbenzene	ND		0.5	ug/L	8020		09/28/1995	3211
Xylenes (Total)	ND		0.5	ug/L	8020		09/28/1995	3211
SURROGATE RESULTS	--						09/28/1995	3211
Bromofluorobenzene (SURR)	86			% Rec.	8020		09/28/1995	3211

* : Sample analyzed outside the method specified holding time. Results should be considered as minimum values.

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

SAMPLE DESCRIPTION: MW4
Date Taken: 09/12/1995
Time Taken: 14:55
NET Sample No: 251007 *

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						09/27/1995	3207
Purgeable TPH	1,300		50	ug/L	5030/M8015		09/27/1995	3207
Carbon Range: C6 to C12	--						09/27/1995	3207
METHOD 8020 (GC, Liquid)	--						09/27/1995	3207
Benzene	33		0.5	ug/L	8020		09/27/1995	3207
Toluene	13		0.5	ug/L	8020		09/27/1995	3207
Ethylbenzene	9.3		0.5	ug/L	8020		09/27/1995	3207
Xylenes (Total)	15		0.5	ug/L	8020		09/27/1995	3207
SURROGATE RESULTS	--						09/27/1995	3207
Bromofluorobenzene (SURR)	102			% Rec.	8020		09/27/1995	3207

* : Sample analyzed outside the method specified holding time. Results should be considered as minimum values.

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

SAMPLE DESCRIPTION: EB
Date Taken: 09/12/1995
Time Taken: 14:00
NET Sample No: 251008 *

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						09/27/1995	3207
Purgeable TPH	ND		50	ug/L	5030/M8015		09/27/1995	3207
Carbon Range: C6 to C12	--						09/27/1995	3207
METHOD 8020 (GC, Liquid)	--						09/27/1995	3207
Benzene	ND		0.5	ug/L	8020		09/27/1995	3207
Toluene	ND		0.5	ug/L	8020		09/27/1995	3207
Ethylbenzene	ND		0.5	ug/L	8020		09/27/1995	3207
Xylenes (Total)	ND		0.5	ug/L	8020		09/27/1995	3207
SURROGATE RESULTS	--						09/27/1995	3207
Bromofluorobenzene (SURR)	81			% Rec.	8020		09/27/1995	3207

* : Sample analyzed outside the method specified holding time. Results should be considered as minimum values.

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

SAMPLE DESCRIPTION: DUP
Date Taken: 09/12/1995
Time Taken:
NET Sample No: 251009 *

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						09/27/1995	3207
Purgeable TPH	1,500		50	ug/L	5030/M8015		09/27/1995	3207
Carbon Range: C6 to C12	--						09/27/1995	3207
METHOD 8020 (GC, Liquid)	--						09/27/1995	3207
Benzene	2.1		0.5	ug/L	8020		09/27/1995	3207
Toluene	16		0.5	ug/L	8020		09/27/1995	3207
Ethylbenzene	11		0.5	ug/L	8020		09/27/1995	3207
Xylenes (Total)	17		0.5	ug/L	8020		09/27/1995	3207
SURROGATE RESULTS	--						09/27/1995	3207
Bromofluorobenzene (SURR)	110			% Rec.	8020		09/27/1995	3207

* : Sample analyzed outside the method specified holding time. Results should be considered as minimum values.

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

SAMPLE DESCRIPTION: TB
Date Taken: 09/12/1995
Time Taken:
NET Sample No: 251010 *

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						09/27/1995	3207
Purgeable TPH	ND		50	ug/L	5030/M8015		09/27/1995	3207
Carbon Range: C6 to C12	--						09/27/1995	3207
METHOD 8020 (GC, Liquid)	--						09/27/1995	3207
Benzene	ND		0.5	ug/L	8020		09/27/1995	3207
Toluene	ND		0.5	ug/L	8020		09/27/1995	3207
Ethylbenzene	ND		0.5	ug/L	8020		09/27/1995	3207
Xylenes (Total)	ND		0.5	ug/L	8020		09/27/1995	3207
SURROGATE RESULTS	--						09/27/1995	3207
Bromofluorobenzene (SURR)	78			% Rec.	8020		09/27/1995	3207

* : Sample analyzed outside the method specified holding time. Results should be considered as minimum values.

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)							
Purgeable TPH	108.0	0.54	0.50	mg/L	09/26/1995	aal	3207
Benzene	99.6	4.98	5.00	ug/L	09/26/1995	aal	3207
Toluene	107.4	5.37	5.00	ug/L	09/26/1995	aal	3207
Ethylbenzene	105.6	5.28	5.00	ug/L	09/26/1995	aal	3207
Xylenes (Total)	108.7	16.3	15.0	ug/L	09/26/1995	aal	3207
Bromofluorobenzene (SURR)	90.0	90	100	% Rec.	09/26/1995	aal	3207
METHOD 5030/8015-M (Shell)							
Purgeable TPH	100.0	0.50	0.50	mg/L	09/28/1995	dld	3211
Benzene	102.6	5.13	5.00	ug/L	09/28/1995	dld	3211
Toluene	102.6	5.13	5.00	ug/L	09/28/1995	dld	3211
Ethylbenzene	107.2	5.36	5.00	ug/L	09/28/1995	dld	3211
Xylenes (Total)	107.3	16.1	15.0	ug/L	09/28/1995	dld	3211
Bromofluorobenzene (SURR)	105.0	105	100	% Rec.	09/28/1995	dld	3211

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	09/26/1995	aal	3207
Benzene	ND	0.5	ug/L	09/26/1995	aal	3207
Toluene	ND	0.5	ug/L	09/26/1995	aal	3207
Ethylbenzene	ND	0.5	ug/L	09/26/1995	aal	3207
Xylenes (Total)	ND	0.5	ug/L	09/26/1995	aal	3207
Bromofluorobenzene (SURR)	85		% Rec.	09/26/1995	aal	3207
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	09/28/1995	dld	3211
Benzene	ND	0.5	ug/L	09/28/1995	dld	3211
Toluene	ND	0.5	ug/L	09/28/1995	dld	3211
Ethylbenzene	ND	0.5	ug/L	09/28/1995	dld	3211
Xylenes (Total)	ND	0.5	ug/L	09/28/1995	dld	3211
Bromofluorobenzene (SURR)	106		% Rec.	09/28/1995	dld	3211

Ref: Shell 230 West MacArthur Blvd., Oakland, CA/950912-A3

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter		Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
METHOD 5030/8015-M (Shell)												251054
Purgeable TPH		102.0	100.0	2.0	0.50	ND	0.51	0.50	mg/L	09/26/1995	3207	251054
Benzene		95.1	88.9	6.7	8.1	ND	7.7	7.2	ug/L	09/26/1995	3207	251054
Toluene		93.3	90.0	3.6	30	ND	28	27	ug/L	09/26/1995	3207	251054
METHOD 5030/8015-M (Shell)												251415
Purgeable TPH		88.0	84.0	4.7	0.5	1.1	1.54	1.52	mg/L	09/28/1995	3211	251415
Benzene		93.5	92.8	0.8	8.01	1.1	8.59	8.53	ug/L	09/28/1995	3211	251415
Toluene	MI	--	--	--	--	--	--	--	ug/L	09/28/1995	3211	251415

MI : Matrix interference suspected.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

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

COOLER RECEIPT FORM

Project: 950912-A3 Log No: 8484
Cooler received on: 9/14/95 and checked on 9/14/95 by
(signature)

Were custody papers present?.....~~YES~~ NO

Were custody papers properly filled out?.....~~YES~~ NO

Were the custody papers signed?.....~~YES~~ NO

Was sufficient ice used?.....~~YES~~ NO TEMP. 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:
FB	1
TB	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)

SHELL WELL MONITORING DATA SHEET

Project #: 9509.12-A3	Wic #: 204 5508 0703
Sampler: RV	Start Date: 9-12-95
Well I.D.: MW1	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 29.45 After	Depth to Water: Before 14.14 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

1 Case Volume	x	Specified Volumes	=	gallons
9.9	x	3	=	29.7

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible ✓
Extraction Pump
Other ___

Sampling: Bailer ✓
Disposable Bailer
Extraction Port
Other ___

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1347	63.6	6.9	390	10.	10.0	
1349	62.8	6.6	370	89.	20.0	
1350	62.4	6.6	370	175.	30.0	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 30.0

Sampling Time: 1356 Sampling Date: 9-12-95

Sample I.D.: MW1 Laboratory: NET

Analyzed for: (TPH-G) (BTEX) TPH-D OTHER:

Duplicate I.D.: Cleaning Blank I.D.: EB@1400

Analyzed for: TPH-G BTEX TPH-D OTHER:

SHELL WELL MONITORING DATA SHEET

Project #: 950912-A3	Wic #: 204 5508 0703
Sampler: RV	Start Date: 9-12-95
Well I.D.: MW2	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 27.73 After	Depth to Water: Before 15.78 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

7.7 (1 Case Volume) x 3 (Specified Volumes) = 23.1 gallons

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible ✓
Extraction Pump
Other_____

Sampling: Bailer ✓
Disposable Bailer
Extraction Port
Other_____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1423	64.0	7.7	540	17.	8.0	
1424	63.2	7.1	510	70.	16.0	
1425	63.8	7.0	530	7200	24.0	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 24.0

Sampling Time: 1433	Sampling Date: 9-12-95
Sample I.D.: MW2	Laboratory: NET
Analyzed for: (Circle) (TPH-G) (BTEX) TPH-D OTHER:	
Duplicate I.D.:	Cleaning Blank I.D.:
Analyzed for: (Circle) TPH-G BTEX TPH-D OTHER:	

SHELL WELL MONITORING DATA SHEET

Project #: 950912-A3	Wic #: 204 5508 0703
Sampler: RV	Start Date: 9-12-95
Well I.D.: MW3	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 28.20 After	Depth to Water: Before 14.77 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade Other:	

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

8.7	x	3	=	26.1
1 Case Volume		Specified Volumes		gallons

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible ✓
Extraction Pump
Other_____

Sampling: Bailer ✓
Disposable Bailer
Extraction Port
Other_____

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1407	63.0	7.3	390	151.	9.0	
1408	62.2	7.1	430	94	18.0	
1409	62.6	7.0	420	7200	27.0	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 27.0

Sampling Time: 1415	Sampling Date: 9-12-95
Sample I.D.: MW3	Laboratory: NET
Analyzed for: (TPH-G) (BTEX) TPH-D OTHER: (Circle)	
Duplicate I.D.:	Cleaning Blank I.D.:
Analyzed for: TPH-G BTEX TPH-D OTHER: (Circle)	

SHELL WELL MONITORING DATA SHEET

Project #: 950912-A3	Wic #: 204 5508 0703
Sampler: RW	Start Date: 9-12-95
Well I.D.: MW4	Well Diameter: (circle one) 2 3 (4) 6 ___
Total Well Depth: Before 24.00 After	Depth to Water: Before 14.64 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: (PVC) Grade	Other:

Well Diameter	VCF	Well Diameter	VCF
1"	0.04	6"	1.47
2"	0.16	8"	2.61
3"	0.37	10"	4.08
4"	0.65	12"	5.87
5"	1.02	16"	10.43

6.0 (1 Case Volume) x 3 (Specified Volumes) = 18.0 gallons

Purging: Bailer
Disposable Bailer
Middleburg
Electric Submersible ✓
Extraction Pump
Other ___

Sampling: Bailer ✓
Disposable Bailer
Extraction Port
Other ___

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
1445	63.4	7.2	500	100 -	6.0	
1446	63.4	7.2	570	24.	12.0	
1447	63.8	7.0	580	7200	18.0	

Did Well Dewater? N If yes, gals. Gallons Actually Evacuated: 18.0

Sampling Time: 1455 Sampling Date: 9-12-95

Sample I.D.: MW4 Laboratory: NET

Analyzed for: (TPH-G) (BTEX) TPH-D OTHER:
(Circle)

Duplicate I.D.: DUP Cleaning Blank I.D.:

Analyzed for: TPH-G BTEX TPH-D OTHER:
(Circle)