PACIFIC
ENVIRONMENTAL
GROUP, INC.

STID # 2516

April 21, 1992
Project 305-87.01

Mr. Dan Kirk
Shell Oil Company
P.O. Box 5278
Concord, California 94520

Re: Former Shell Service Station
7194 Amador Valley Boulevard at Village Parkway
Dublin, California 94568
WIC No 204-2217-0105

Dear Mr. Kirk:

This letter presents the results of the first quarter monitoring program prepared by Pacific Environmental Group, Inc. (PACIFIC) for Shell Oil Company (Shell) for the above referenced site (Figures 1 and 2) . The scope of work consisted of sampling and analysis of groundwater from site Monitoring Wells MW-1 through MW-9 and MW-11 through MW-13, gauging of wells at the adjacent BP and UNOCAL sites, construction of a groundwater elevation contour map and a gasoline/benzene concentration map, and preparation of this report.

SITE CONDITIONS

The site is currently occupied by Oil Changers. Kaprealian Engineering, Inc. (Kaprealian) removed four underground storage tanks from the Shell station on August 3, 1987 at which time it appears the station was decommissioned. Shell currently monitors a total of 12 wells (MW-1 through MW-9, and MW-11 through MW-13), both on site and off site. These monitoring wells are constructed of 4-inch diameter PVC casing and range in depth between 16.2 and 25.1 feet. Well MW-5 is screened in a lower aquifer with a total depth of 44.8 feet. The site also has one extraction well (RW-1). A dairy was present immediately west of the Shell site, and contained underground fuel tanks and a product island. Well MW-13 is located on that site approximately 15 feet from the former tank complex. Figure 2 presents the location and layout of the former Shell station, and existing UNOCAL and BP stations.

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FINDINGS

Water level measurements and groundwater samples were collected from Wells MW-1 through MW-9, and MW-11 through MW-13 by Emcon Associates (Emcon) at the direction of PACIFIC on February 25, 1992. Well RW-1 was not sampled. In addition, water levels were monitored on the same date at the adjacent UNOCAL site by Kaprealian and at the adjacent BP site by Alton Geosciences as part of a joint monitoring program. Depth to groundwater in all site wells and adjacent site wells ranged between 6.14 and 9.66 feet below ground surface on the sampling date. The groundwater flow direction was to the east-southeast with an approximate gradient of 0.005. Figure 2 presents groundwater elevation contours constructed for the site and adjacent sites using the groundwater levels obtained on the sampling date. Table 1 presents groundwater elevation data for the wells installed by Shell.

Separate-phase hydrocarbons (SPH) were not detected in any of the site wells. All groundwater samples were collected and analyzed for low-boiling hydrocarbons (calculated as gasoline) and benzene, toluene, ethylbenzene, and xylenes (BTEX compounds). Gasoline was detected in Wells MW-1, MW-3, MW-4, MW-6, and MW-13 at concentrations ranging from 80 parts per billion (ppb) in MW-3 to 780 ppb in MW-13. Benzene was detected in Wells MW-1 through MW-4, MW-6, and MW-13 at concentrations ranging from 3.8 ppb (Well MW-2) to 260 ppb (Well MW-13). The highest gasoline and benzene concentrations were detected in Well MW-13 which is located adjacent to the former storage tank complex of service station located immediately west of the former Shell station. Groundwater analytical data are presented in Table 2. Benzene isoconcentration contours for the February 1992 sampling event are shown on Figure 3.

Shell plans to discontinue quarterly sampling of Well MW-12 unless hydrocarbons are detected in Wells MW-7 or MW-11. Well MW-12 is downgradient of Wells MW-7 and MW-11 and has non-detectable results (with the exception of 1 ppb xylenes in August 1991) since early 1989. Additionally, Shell plans to reduce the sampling frequency in Wells MW-4, MW-7 through MW-9, and MW-11 to a semi-annual basis. Well MW-4 is located within 20 feet of Well MW-13. Wells MW-7 through MW-9, and MW-11 have had non-detectable results since early 1989. Shell plans to discontinue quarterly sampling of Well RW-1, as it is located less than 30 feet from Well MW-1, and appears to yield redundant data. All wells will continue to be monitored for water level data on a quarterly basis. Emcon's groundwater sampling report which includes certified analytical reports is presented in Attachment A.

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

Sincerely,

Pacific Environmental Group, Inc.

Michael Hurd
Project Geologist

Susan Willhite
Senior Geologist
CEG 1272

Attachments:
Table 1 - Groundwater Elevations Data
Table 2 - Groundwater Analytical Data - Low-Boiling Hydrocarbons
Figure 1 - Site Location Map
Figure 2 - Groundwater Contour Map
Figure 3 - Gasoline/Benzene Concentration Map
Attachment A - Groundwater Sampling Report

cc: Mr. Craig Mayfield, Alameda County Flood Control and Water Conservation District
Mr. Donald Dalke, Regional Water Quality Control Board
Mr. Gil Wistar, Alameda County Health Care Services

Table 1
Groundwater Elevation Data

Former Shell Oil Company
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Sample Date	Well Elevation (feet, MSL)	Depth to Water (feet)	Groundwater Elevation (feet, MSL)
MW-1	05/09/88	334.83	8.72	326.11
	08/26/88		9.15	325.68
	10/05/88		8.54	326.29
	11/22/88		9.31	325.52
	12/09/88		9.33	325.50
	01/13/89		NA	NA
	02/10/89		8.51	326.32
	03/02/89		8.71	326.12
	04/04/89		7.93	326.90
	05/01/89		8.43	326.40
	06/01/89		8.56	326.27
	06/29/89		8.60	326.23
	08/09/89		8.43	326.40
	09/11/89		8.65	326.18
	10/10/89		8.52	326.31
	10/25/89		8.56	326.27
	12/20/89		8.80	326.03
	01/17/90		8.47	326.36
	02/23/90		8.25	326.58
	06/04/90		8.62	326.21
	11/20/90		9.50	325.33
	02/12/91		9.51	325.32
	05/06/91		8.34	326.49
	08/28/91		9.28	325.55
	11/13/91		9.59	325.24
	02/25/92		7.49	327.34
MW-2	05/09/88	336.96	10.85	326.11
	08/26/88		11.29	325.67
	10/05/88		10.83	326.13
	11/22/88		11.42	325.54
	12/09/88		11.45	325.51
	01/13/89		NA	NA
	02/10/89		10.74	326.22
	03/02/89		10.91	326.05
	04/04/89		10.06	326.90
	05/01/89		10.58	326.38
	05/31/89		10.73	326.23
	06/28/89		10.90	326.06
	08/08/89		10.78	326.18
	09/08/89		10.97	325.99
	10/09/89		10.88	326.08
	10/24/89		11.00	325.96

Table 1 (continued)
Groundwater Elevation Data

Former Shell Oil Company
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Sample Date	Well Elevation (feet, MSL)	Depth to Water (feet)	Groundwater Elevation (feet, MSL)
MW-2 (cont.)	12/21/89		11.06	325.90
	01/17/90		10.78	326.18
	02/23/90		10.35	326.61
	06/04/90		10.72	326.24
	11/20/90		11.35	325.61
	02/12/91		11.64	325.32
	05/06/91		10.05	326.91
	08/28/91		11.16	325.80
	11/13/91		11.57	325.39
	02/25/92		9.66	327.30
MW-3	05/09/88	336.96	10.59	326.37
	08/26/88		11.10	325.86
	10/05/88		10.43	326.53
	11/22/88		11.16	325.80
	12/09/88		11.24	325.72
	01/13/89		NA	NA
	02/10/89		10.43	326.53
	03/02/89		10.59	326.37
	04/04/89		9.45	327.51
	05/01/89		10.20	326.76
	06/01/89		10.40	326.56
	06/28/89		10.60	326.36
	08/09/89		10.64	326.32
	09/11/89		10.83	326.13
	10/10/89		10.95	326.01
	10/26/89		10.86	326.10
	12/21/89		11.09	325.87
	01/17/90		10.90	326.06
	02/23/90		10.52	326.44
	06/04/90		10.52	326.44
	11/20/90		12.65	324.31
	02/12/91		11.16	325.80
	05/06/91	336.93	9.85	327.08
	08/28/91		10.90	326.03
	11/13/91		11.28	325.65
	02/25/92		9.04	327.89
MW-4	05/09/88	337 14	10 88	326.26
	08/26/88		11 34	325.80
	10/05/88		10.87	326.27
	11/22/88		11 41	325 73
	12/09/88		11 46	325 68

Table 1 (continued)
Groundwater Elevation Data

Former Shell Oil Company
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Sample Date	Well Elevation (feet, MSL)	Depth to Water (feet)	Groundwater Elevation (feet, MSL)
MW-4 (cont.)	01/13/89		NA	NA
	02/10/89		10.78	326.36
	03/02/89		10.92	326.22
	04/04/89		10.04	327.10
	05/01/89		10.52	326.62
	05/31/89		10.62	326.52
	06/28/89		11.00	326.14
	08/09/89		10.92	326.22
	09/08/89		11.05	326.09
	10/10/89		10.97	326.17
	10/26/89		11.35	325.79
	12/21/89		11.07	326.07
	01/17/90		11.08	326.06
	02/23/90		10.90	325.24
	06/04/90		10.74	326.40
	11/20/90		11.45	325.69
	02/12/91		11.50	325.64
	05/06/91		10.04	327.10
	08/28/91		11.18	325.96
	11/13/91		11.60	325.54
	02/25/92		9.45	327.69
MW-5	08/26/88	334.96	9.10	325.86
	10/05/88		9.95	325.01
	11/22/88		8.93	326.03
	12/09/88		10.48	324.48
	01/13/89		NA	NA
	02/10/89		10.35	324.61
	03/02/89		8.50	326.46
	04/05/89		7.72	327.24
	05/01/89		8.21	326.75
	06/01/89		8.40	326.56
	06/29/89		8.65	326.31
	08/09/89		8.76	326.20
	09/11/89		8.80	326.16
	10/10/89		11.92	323.04
	10/25/89		9.03	325.93
	12/20/89		11 26	323.70
	01/18/90		9 95	325 01
	02/23/90		8.30	326.66
	06/04/90		8 57	326.39
	11/20/90		9.45	325 51
	02/11/91		9 27	325 69

Table 1 (continued)
Groundwater Elevation Data

Former Shell Oil Company
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Sample Date	Well Elevation (feet, MSL)	Depth to Water (feet)	Groundwater Elevation (feet, MSL)
MW-5 (cont.)	05/06/91		7.90	327.06
	08/28/91		9.28	325.68
	11/13/91		9.36	325.60
	02/25/92		9.02	325.94
MW-6	08/26/88	335.42	9.69	325.73
	10/05/88		9.27	326.15
	11/22/88		9.77	325.65
	12/09/88		9.85	325.27
	01/13/89		NA	NA
	02/10/89		9.10	326.32
	03/02/89		9.29	326.13
	04/04/89		8.48	326.94
	05/01/89		8.90	326.52
	06/01/89		9.16	326.26
	06/29/89		9.30	326.12
	08/09/89		9.30	326.12
	09/11/89		9.31	326.11
	10/10/89		9.32	326.10
	10/24/89		9.30	326.12
	12/20/89		9.58	325.84
	01/18/90		9.46	325.96
	02/23/90		8.94	326.48
	06/04/90		9.22	326.20
	11/20/90		9.65	325.77
	02/12/91		9.85	325.57
	05/06/91		9.12	326.30
	08/28/91		9.68	325.74
	11/13/91		10.00	325.42
	02/25/92		8.44	326.98
MW-7	08/26/88	333.23	7.94	325.29
	10/05/88		7.54	325.69
	11/22/88		NA	NA
	12/09/88		7.53	325.70
	01/13/89		NA	NA
	02/10/89		6.62	326.61
	03/02/89		7.03	326 20
	04/05/89		6.80	326 43
	05/01/89		6.53	326 70
	05/31/89		6.93	326 30
	06/28/89		6 85	326 38
	08/09/89		6 67	326 56

Table 1 (continued)
Groundwater Elevation Data

Former Shell Oil Company
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Sample Date	Well Elevation (feet, MSL)	Depth to Water (feet)	Groundwater Elevation (feet, MSL)
MW-7 (cont.)	09/07/89		6.90	326.33
	10/10/89		6.90	326.33
	10/24/89		7.29	325.94
	12/20/89		7.47	325.76
	01/18/90		7.49	325.74
	02/23/90		6.92	326.31
	06/04/90		6.95	326.28
	11/20/90		8.10	325.13
	02/11/91		8.04	325.19
	05/06/91		6.37	325.86
	08/28/91		7.94	325.29
	11/13/91		8.41	324.82
	02/25/92		6.99	326.24
MW-8	03/01/89	335.80	8.28	327.52
	04/04/89		7.31	328.49
	05/01/89		8.97	326.83
	05/31/89		9.17	326.63
	06/28/89		9.40	326.40
	08/08/89		9.42	326.28
	09/07/89		8.50	327.30
	10/10/89		9.46	326.34
	10/26/89		9.56	326.24
	12/21/89		9.57	326.23
	01/18/90		9.29	326.51
	02/26/90		8.50	327.30
	06/04/90		9.04	326.76
	02/11/91		9.40	326.40
	05/06/91		8.70	327.10
	08/28/91		9.68	326.12
	11/13/91		9.87	326.93
	02/25/92		7.45	328.35
MW-9	03/01/89	334.57	8.48	326.09
	04/04/89		7.69	326.88
	05/01/89		8.20	326.37
	05/31/89		8.72	325.85
	06/28/89		9.00	325 57
	08/08/89		8.53	326 04
	09/07/89		8 99	325 58
	10/09/89		8 89	325.68
	10/23/89		9 02	325 55
	12/21/89		9 48	325 09

Table 1 (continued)
Groundwater Elevation Data

Former Shell Oil Company
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Sample Date	Well Elevation (feet, MSL)	Depth to Water (feet)	Groundwater Elevation (feet, MSL)
MW-9 (cont.)	01/18/90		8.73	325.84
	02/26/90		9.06	325.51
	06/04/90		8.64	325.93
	11/20/90		9.95	324.62
	02/11/91		9.85	324.72
	05/06/91		10.05	324.52
	08/28/91		10.34	324.23
	11/13/91		9.39	325.18
	02/25/92		7.18	327.39
MW-10*	03/02/89	335.37	8.95	326.42
	04/04/89		7.89	327.48
	05/01/89		9.07	326.30
	06/01/89		8.86	326.51
	06/29/89		9.05	326.32
	08/09/89		9.70	326.67
	09/07/89		8.14	327.23
	10/10/89		9.21	326.16
	10/26/89		9.60	325.77
	12/20/89		9.42	325.95
MW-11	03/02/89	334.20	8.30	325.90
	04/04/89		7.52	325.68
	05/01/89		7.97	326.23
	11/20/90		NA	NA
	05/31/90		8.13	326.07
	06/28/89		8.30	325.90
	08/08/89		8.22	325.98
	09/07/89		8.32	325.88
	10/09/89		8.28	325.92
	10/24/89		8.38	325.82
	12/20/89		8.48	325.72
	01/18/90		8.20	326.00
	02/26/90		7.86	326.34
	06/04/90		8.13	326.07
	11/20/90		8.83	325.37
	02/11/90		8.95	325.25
	05/06/91		7.71	326 49
	08/28/91		8.62	325.58
	11/15/91		8.99	325 21
	02/25/92		7.21	326.99

Table 1 (continued)
Groundwater Elevation Data

Former Shell Oil Company
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Sample Date	Well Elevation (feet, MSL)	Depth to Water (feet)	Groundwater Elevation (feet, MSL)
MW-12	03/02/89	332.53	6.94	325.59
	04/04/89		6.33	326.20
	05/01/89		6.62	325.91
	06/01/89		6.82	325.71
	06/29/89		7.00	325.53
	08/09/89		6.76	325.77
	09/07/89		6.81	325.72
	10/09/89		7.11	325.42
	10/24/89		7.60	324.93
	12/20/89		8.25	324.28
	01/18/90		8.23	324.30
	02/26/90		7.54	324.99
	06/04/90		7.96	324.57
	11/20/90		8.80	323.73
	02/12/90		7.85	324.68
	05/06/91		7.35	325.18
	08/28/91		7.79	324.74
	11/13/91		7.89	324.64
	02/25/92		6.14	326.39
MW-13	05/06/91	335.64	8.37	327.27
	08/28/91		9.82	325.82
	11/13/91		10.19	325.45
	02/25/92		7.66	327.98
RW-1	12/09/89	336.19	10.73	325.46
	01/13/89		NA	NA
	02/10/89		10.91	325.28
	03/02/89		10.15	325.04
	04/05/89		9.34	326.85
	05/01/89		9.85	326.34
	06/01/89		9.96	326.23
	06/30/89		9.90	326.29
	08/09/89		9.80	326.39
	09/11/89		10.02	326.17
	10/10/89		9.88	326.31
	10/25/89		9.80	326.39
	12/21/89		10 25	325.94
	01/17/89		9.80	326.39
	02/23/90		9.60	326 59
	06/04/90		9.97	326.22
	11/20/90		10.50	325 69
	02/11/91		10 87	325.32
	02/25/92		NA	NA

MSL = Mean sea level
NA = Not analyzed
* = Well destroyed June 13, 1990

Table 2
Groundwater Analytical Data
Low-Boiling Hydrocarbons

Former Shell Service Station
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Date Sampled	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-1	05/09/88	440	120	50	NR	120
	08/26/88	200,000	4,400	260	300	450
	10/05/88	17,000	6,700	360	210	730
	11/22/88	8,000	3,900	830	250	340
	12/09/88	11,000	790	36	7.3	68
	01/13/89	8,800	3,800	110	330	90
	02/10/89	18,000	4,700	400	660	190
	03/02/89	14,000	6,100	770	320	440
	04/04/89	11,000	4,800	770	270	780
	05/01/89	11,000	2,800	880	410	780
	06/01/89	ND	ND	ND	ND	ND
	06/29/89	4,700	310	160	75	260
	08/09/89	12,000	1,300	620	830	680
	09/11/89	ND	ND	ND	ND	2.2
	10/10/89	8,700	1,100	310	180	590
	10/25/89	7,500	660	250	460	480
	12/20/89	6,200	270	110	260	220
	01/17/90	7,400	200	170	160	260
	02/23/90	1,500	130	13	30	24
	06/04/90	830	88	10	2.6	28
	11/20/90	NA	NA	NA	NA	NA
	02/12/91	1,500	180	39	82	110
	05/06/91	510	41	11	25	35
	08/28/91	450	41	16	24	34
	11/13/91	320	41	14	23	33
	02/25/92	240	24	9.2	14	20
MW-2	05/09/88	ND	ND	ND	NR	ND
	08/26/88	1,700	230	16	87	120
	10/05/88	200	20	2.3	8.3	12
	11/22/88	800	93	1.6	4.3	60
	12/09/88	270	45	3.6	7.2	14
	01/13/89	180	26	2.3	17	7
	02/10/89	320	43	1.7	34	15
	03/02/89	230	24	0.9	9.2	18
	04/04/89	230	53	2.3	7.1	20
	05/01/89	ND	2.7	ND	ND	ND
	05/31/89	120	14	ND	3.9	7.6
	06/28/89	ND	4.1	ND	ND	ND
	08/08/89	88	3.9	ND	ND	ND
	09/08/89	ND	3.2	ND	ND	ND
	10/09/89	110	6.7	ND	ND	ND
	10/24/89	ND	2.5	ND	ND	1.9
	12/21/89	ND	7.1	ND	5	9.8
	01/17/90	ND	4.4	ND	1.6	1.4

Table 2 (continued)
Groundwater Analytical Data
Low-Boiling Hydrocarbons

Former Shell Service Station
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Date Sampled	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-2 (cont.)	02/23/90	70	6.3	ND	2.7	2.5
	06/04/90	60	2.4	ND	0.8	ND
	11/20/90	60	5.6	ND	ND	ND
	02/12/91	130	14	ND	0.9	0.5
	05/06/91	60	1.5	ND	5	ND
	08/28/91	100	6.3	ND	1	1.1
	11/13/91	ND	11	ND	1.3	ND
	02/25/92	ND	3.8	ND	ND	ND
MW-3	05/09/88	76	10	4.4	NR	15
	08/26/88	5,200	170	6	32	54
	10/05/88	260	100	2.7	5.8	7
	11/22/88	180	75	1.4	8.1	4
	12/09/88	160	5	5.9	ND	ND
	01/13/89	160	36	1.2	3	2
	02/10/89	300	83	ND	8.6	8
	03/02/89	570	160	1	17	9
	04/04/89	150	64	0.8	2.7	6
	05/01/89	130	48	1.2	3.4	2
	06/01/89	ND	ND	ND	ND	ND
	06/28/89	90	68	0.7	ND	5.1
	08/09/89	150	23	5.3	2.6	ND
	09/11/89	ND	ND	ND	ND	ND
	10/10/89	80	6.4	0.72	ND	ND
	10/26/89	150	11	ND	1.6	ND
	12/21/89	ND	6.8	ND	ND	ND
	01/17/90	ND	4	ND	6.8	ND
	02/23/90	50	10	ND	1.2	0.9
	06/04/90	80	10	ND	1.4	ND
	11/20/90	100	26	0.7	1.2	1.9
	02/12/91	130	27	ND	ND	ND
	05/06/91	120	31	0.8	2.1	0.8
	08/28/91	340	87	1.1	6.5	3.8
	11/13/91	240	140	ND	3.1	0.9
	02/25/92	80	17	ND	ND	ND
MW-4	05/09/88	290	76	33	NA	150
	08/26/88	210	640	41	110	160
	10/05/88	450	110	6 3	16	20
	11/22/88	500	110	4	20	27
	12/09/88	260	920	7 5	5 9	11
	01/13/89	990	200	6 5	46	14
	02/10/89	290	90	3 6	8 8	9
	03/02/89	630	210	6 2	34	7
	04/04/89	640	340	13	25	40
	05/01/89	100	65	2	3	4

Table 2 (continued)
Groundwater Analytical Data
Low-Boiling Hydrocarbons

Former Shell Service Station
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Date Sampled	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-4 (cont.)	05/31/89	60	ND	ND	ND	ND
	06/28/89	110	62	1.3	ND	4.8
	08/09/89	160	110	2	6.4	ND
	09/08/89	94	45	0.5	3.8	ND
	10/10/89	90	30	1	1.9	ND
	10/26/89	ND	3.4	ND	ND	ND
	12/21/89	ND	35	1.1	3.6	1.6
	01/17/90	ND	4	ND	6.8	ND
	02/23/90	ND	8	ND	1.1	0.7
	06/04/90	160	85	1.1	1.9	ND
	11/20/90	140	52	1	0.8	0.9
	02/12/91	130	48	ND	1.5	ND
	05/06/91	140	49	1.3	4.1	1.7
	08/28/91	90	13	ND	1	1.1
	11/13/91	ND	10	ND	ND	ND
	02/25/92	120	47	ND	0.5	0.5
MW-5	08/26/88	210	6	44	9	19
	10/05/88	7,500	2,700	ND	110	590
	11/22/88	150	21	26	3	2
	12/09/88	240	37	2.2	6.7	7.7
	01/13/89	80	1.6	ND	7.7	2
	02/10/89	60	ND	ND	ND	ND
	03/02/89	ND	ND	ND	ND	ND
	04/05/89	ND	ND	ND	ND	ND
	05/01/89	ND	1.3	ND	ND	ND
	06/01/89	ND	ND	ND	ND	ND
	06/29/89	ND	ND	ND	ND	ND
	08/09/89	89	8.5	1.8	1.5	2.2
	09/11/89	1,100	7.8	1.4	ND	6.3
	10/10/89	ND	ND	ND	ND	ND
	10/25/89	ND	1.4	ND	ND	1.6
	12/20/89	ND	ND	ND	ND	ND
	01/18/90	ND	ND	ND	ND	ND
	02/23/90	ND	ND	ND	0.6	ND
	06/04/90	ND	ND	ND	ND	ND
	11/20/90	ND	ND	ND	ND	1
	02/11/91	ND	ND	ND	ND	ND
	05/06/91	ND	ND	ND	ND	ND
	08/28/91	ND	ND	ND	ND	1
	11/13/91	ND	ND	ND	ND	ND
	02/25/92	ND	ND	ND	ND	ND

Table 2 (continued)
Groundwater Analytical Data
Low-Boiling Hydrocarbons

Former Shell Service Station
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Date Sampled	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-6	08/26/88	15,000	390	390	670	1,700
	10/05/88	2,700	130	38	960	220
	11/22/88	NA	NA	NA	NA	NA
	12/09/88	540	62	3	26	5
	01/13/89	980	160	22	120	29
	02/10/89	1,900	290	24	93	48
	03/02/89	1,400	160	20	130	33
	04/04/89	1,200	220	27	74	69
	05/01/89	790	120	11	25	17
	06/01/89	1,200	49	49	69	30
	06/29/89	940	130	15	69	35
	08/09/89	1,400	280	39	170	64
	09/11/89	ND	ND	ND	ND	ND
	10/10/89	1,000	85	11	12	16
	10/24/89	1,500	67	20	50	39
	12/20/89	ND	4.9	5.1	ND	ND
	01/18/90	ND	67	12	48	18
	02/23/90	1	150	16	47	30
	06/04/90	190	ND	ND	ND	0.6
	11/20/90	730	120	12	39	21
	02/12/91	550	65	10	33	16
	05/06/91	550	72	11	38	23
	08/28/91	580	82	7.6	28	20
	11/13/91	430	60	7.6	20	12
	02/25/92	400	52	6.6	18	11
MW-7	08/26/88	ND	0.8	ND	ND	ND
	10/05/88	ND	ND	ND	ND	ND
	11/22/88	700	41	9	1	20
	12/09/88	ND	ND	ND	ND	0.6
	01/13/89	ND	ND	ND	ND	ND
	02/10/89	ND	ND	ND	ND	ND
	03/02/89	ND	ND	ND	ND	ND
	04/05/89	ND	ND	ND	ND	ND
	05/01/89	ND	ND	ND	ND	ND
	05/31/89	ND	ND	ND	ND	ND
	06/28/89	ND	ND	ND	ND	ND
	08/09/89	ND	ND	ND	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	10/10/89	ND	ND	ND	ND	ND
	10/24/89	ND	ND	ND	ND	ND
	12/20/89	ND	ND	ND	ND	ND
	01/18/90	ND	ND	ND	ND	ND
	02/23/90	ND	ND	ND	ND	ND
	06/04/90	ND	ND	ND	ND	ND
	11/20/90	ND	ND	ND	ND	ND
	02/11/91	ND	ND	ND	ND	ND

Table 2 (continued)
Groundwater Analytical Data
Low-Boiling Hydrocarbons

Former Shell Service Station
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Date Sampled	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-7 (cont.)	05/06/91	ND	ND	ND	ND	ND
	08/28/91	ND	ND	ND	ND	ND
	11/13/91	ND	ND	ND	ND	ND
	02/25/92	ND	ND	ND	ND	ND
MW-8	03/01/89	ND	ND	ND	ND	ND
	04/04/89	ND	ND	ND	ND	ND
	05/01/89	ND	ND	ND	ND	ND
	05/31/89	ND	ND	ND	ND	ND
	06/28/89	ND	ND	ND	ND	ND
	08/08/89	ND	ND	ND	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	10/10/89	ND	ND	ND	ND	ND
	10/26/89	ND	ND	ND	ND	ND
	12/21/89	ND	ND	ND	ND	ND
	01/18/90	ND	ND	ND	ND	ND
	02/26/90	ND	ND	ND	ND	ND
	06/04/90	ND	ND	ND	ND	ND
	11/20/90	ND	ND	ND	ND	ND
	02/11/91	ND	ND	ND	ND	ND
	05/06/91	ND	ND	ND	ND	ND
	08/28/91	ND	ND	ND	ND	ND
	11/13/91	ND	ND	ND	ND	ND
	02/25/92	ND	ND	ND	ND	ND
MW-9	03/1/89	ND	ND	ND	ND	ND
	04/04/89	ND	ND	ND	ND	ND
	05/01/89	ND	ND	ND	ND	ND
	05/31/89	ND	ND	ND	ND	ND
	06/28/89	ND	ND	ND	ND	ND
	08/08/89	ND	ND	ND	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	10/09/89	ND	ND	ND	ND	ND
	10/23/89	ND	ND	ND	ND	ND
	12/21/89	ND	ND	ND	ND	ND
	01/18/90	ND	ND	ND	ND	ND
	02/26/90	ND	ND	ND	ND	ND
	06/04/90	ND	ND	ND	ND	ND
	11/20/90	ND	ND	ND	ND	ND
	02/11/91	ND	ND	ND	ND	ND
	05/06/91	ND	ND	ND	ND	ND
	08/28/91	ND	ND	ND	ND	ND
	11/13/91	ND	ND	ND	ND	ND
	02/25/92	ND	ND	ND	ND	ND

Table 2 (continued)
Groundwater Analytical Data
Low-Boiling Hydrocarbons

Former Shell Service Station
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

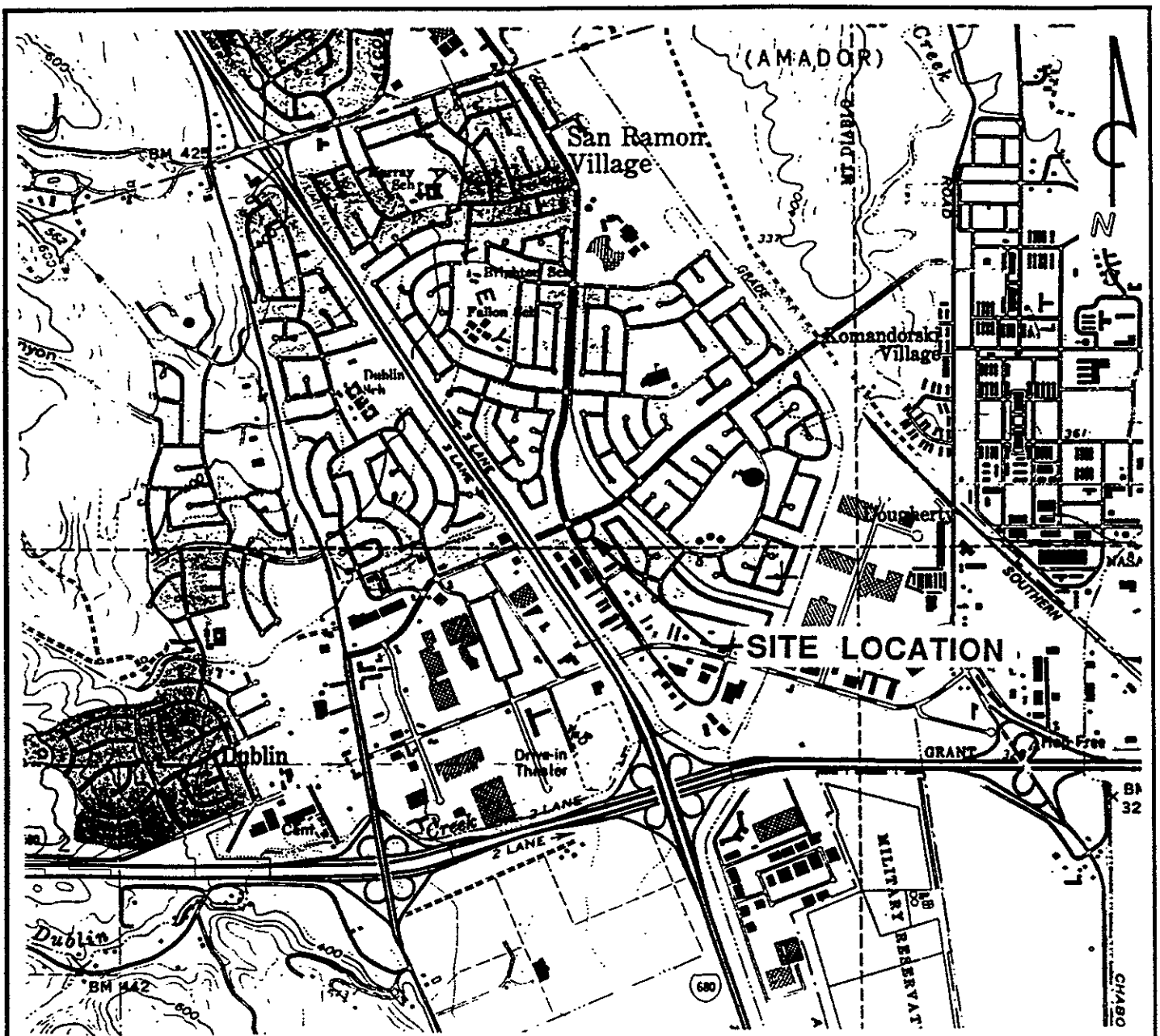
Well Number	Date Sampled	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-10*	03/02/89	1,000	140	36	ND	77
	04/04/89	3,300	760	240	46	630
	05/01/89	680	99	24	8.1	32
	06/01/89	1,400	120	39	ND	45
	06/29/89	1,300	51	1.4	6.1	91
	08/09/89	860	310	26	45	82
	09/07/89	390	55	2.9	4.0	18
	10/10/89	460	85	7.6	10	45
	10/26/89	270	20	1.4	3.5	9.3
	12/20/89	ND	5.7	ND	ND	ND
	01/18/90	NA	NA	NA	NA	NA
MW-11	03/02/89	ND	ND	ND	ND	ND
	04/04/89	ND	ND	ND	ND	ND
	05/01/89	ND	ND	ND	ND	ND
	11/20/90	ND	ND	ND	ND	ND
	05/31/89	ND	ND	ND	ND	ND
	06/28/89	ND	ND	ND	ND	ND
	08/08/89	ND	ND	ND	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	10/09/89	ND	ND	ND	ND	ND
	10/24/89	ND	ND	ND	ND	ND
	12/20/89	ND	ND	ND	ND	ND
	01/18/90	ND	ND	ND	ND	ND
	02/26/90	ND	ND	ND	ND	ND
	06/04/90	ND	ND	ND	ND	ND
	11/20/90	ND	ND	ND	ND	ND
	02/11/91	ND	ND	ND	ND	ND
	05/06/91	ND	ND	ND	ND	ND
	08/28/91	ND	ND	ND	ND	1
	11/15/91	ND	ND	ND	ND	ND
	02/25/92	ND	ND	ND	ND	ND
MW-12	03/02/89	ND	ND	ND	ND	ND
	04/04/89	ND	ND	ND	ND	ND
	05/01/89	ND	ND	ND	ND	ND
	06/01/89	ND	ND	ND	ND	ND
	06/29/89	ND	ND	ND	ND	ND
	08/09/89	ND	ND	ND	ND	ND
	09/07/89	ND	ND	ND	ND	ND
	10/09/89	ND	ND	ND	ND	ND
	10/24/89	ND	ND	ND	ND	ND
	12/20/89	ND	ND	ND	ND	ND
	01/18/90	ND	ND	ND	ND	ND

Table 2 (continued)
Groundwater Analytical Data
Low-Boiling Hydrocarbons

Former Shell Service Station
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

Well Number	Date Sampled	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-12 (cont.)	02/26/90	ND	ND	ND	ND	ND
	06/04/90	ND	ND	ND	ND	ND
	11/20/90	ND	ND	ND	ND	ND
	02/12/91	ND	ND	ND	ND	ND
	05/06/91	ND	ND	ND	ND	ND
	08/28/91	ND	ND	ND	ND	1
	11/13/91	ND	ND	ND	ND	ND
	02/25/92	ND	ND	ND	ND	ND
MW-13	05/06/91	1,100	430	30	41	130
	08/28/91	1,000	350	6.4	44	43
	11/13/91	680	320	5.6	38	17
	02/25/92	780	260	3.5	26	15
RW-1	12/09/89	6,800	740	5	11	37
	01/13/89	10,000	3,200	27	60	ND
	02/10/89	6,000	2,800	ND	ND	ND
	03/02/89	3,900	2,400	ND	ND	ND
	04/05/89	1,700	1,000	ND	9	ND
	05/01/89	900	390	5	10	ND
	06/01/89	1,100	1.4	3.3	ND	13
	6/30/89	1,400	ND	ND	ND	ND
	08/09/89	7,500	1,700	210	280	300
	09/11/89	97	1.7	2.1	2.3	14
	10/10/89	1,400	48	4.5	ND	3
	10/25/89	820	51	1.2	25	3
	12/21/89	490	16	1	8.5	19
	01/17/90	ND	27	1.7	14	1.6
	02/23/90	420	42	1.8	13	2.7
	06/04/90	180	23	0.7	5.3	1.2
	11/20/90	1,900	170	52	29	38
	02/11/91	NA	NA	NA	NA	NA

ppb = Parts per billion
ND = Not detected
NA = Not analyzed
NR = Not requested
* = Well destroyed June 13, 1990
See certified analytical results for detection limits



QUADRANGLE LOCATION

REFERENCES:
USGS 7.5 MIN. TOPOGRAPHIC MAP
TITLED: DUBLIN, CALIFORNIA
DATED: 1961 REVISED: 1980

SCALE

2000 0 2000 FEET

PACIFIC ENVIRONMENTAL GROUP INC

FORMER SHELL SERVICE STATION
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

SITE LOCATION MAP

FIGURE 1

PROJECT 305-87.01

N

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

PRODUCT ISLAND (TYP)

FORMER MOBIL STATION
CURRENT BP STATION

UNDERGROUND STORAGE TANKS

MW-1 (326.89) B-2

MW-2 (327.03)

MW-3 (326.98)

MW-4 (327.16)

MW-5 (326.90)

MW-6 (326.91)

STATION BUILDING

UNPAVED AREA

? 327.0

? 326.5

MW-7 (326.24)

FORMER UNDERGROUND STORAGE TANKS

PRODUCT ISLANDS

EXISTING UNDERGROUND STORAGE TANKS

MW-4 (327.54)

MW-1 (327.54)

STATION BUILDING

MW-3 (328.48)

MW-2 (328.32)

UNOCAL STATION

AMADOR VALLEY BOULEVARD

FORMER UNDERGROUND STORAGE TANK COMPLEX

VILLAGE PARKWAY

MW-6 (326.98)

PLANTER

MW-1 (327.34)

MW-5 (325.94) *

RW-1 †

MW-12 (326.39)

FORMER PRODUCT ISLANDS (TYP)

BUILDING

MW-11 (326.99)

MW-3 (327.89)

MW-2 (327.30)

BUILDING

327.0

MW-4 (327.69)

MW-10 Ø

MW-13 (327.98)

FORMER SHELL SERVICE STATION
CURRENT OIL CHANGERS

FORMER UNDERGROUND FUEL STORAGE TANKS

FORMER PRODUCT ISLAND

FORMER DAIRY

328.0

327.5

MW-9 (327 39)

MW-8 (328 35)

LEGEND

MW-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

MW-1 ◒ GROUNDWATER MONITORNG WELL LOCATION AND DESIGNATION (UNOCAL)

MW-1 ◑ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION (BP)

RW-1 ◓ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

MW-10 Ø DESTROYED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

(326.99) GROUNDWATER ELEVATION IN FEET - MSL, 2-25-92

327.0 GROUNDWATE ELEVATION CONTOUR IN FEET - 2-25-92

* NOT USED IN CONTOURING (WELL SCREENED ACROSS DEEPER AQUIFER)

† WELL NOT MEASURED

PACIFIC ENVIRONMENTAL GROUP, INC.

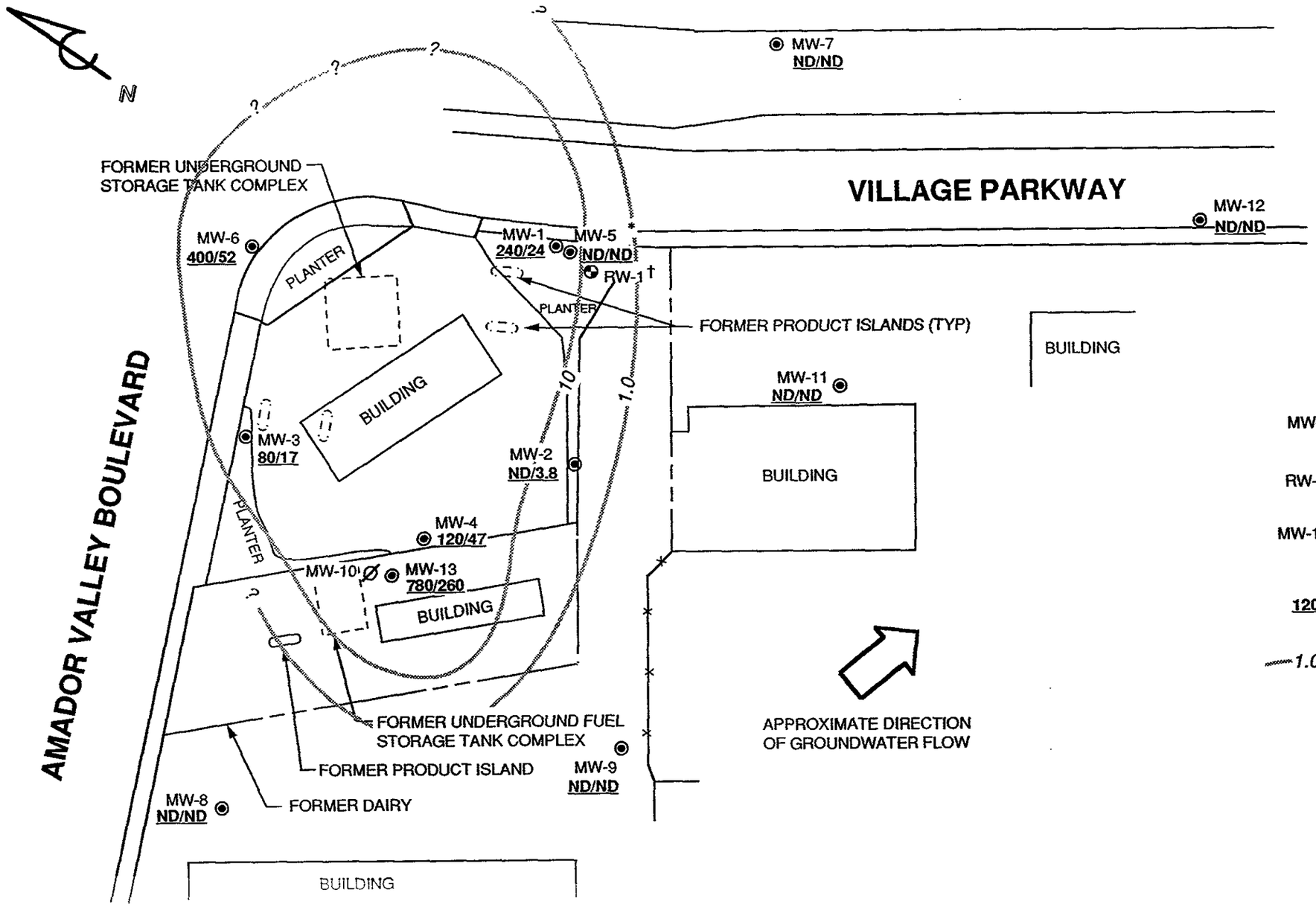
SCALE
0 60 120 FEET

FORMER SHELL SERVICE STATION
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

GROUNDWATER CONTOUR MAP

FIGURE 2
PROJECT 305-87 01

04/24/92



LEGEND

- MW-1 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- RW-1 ◓ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- MW-10 Ø DESTROYED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- 120/47 GASOLINE/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION (ppb), 2-25-92
- 1.0 BENZENE ISOCONCENTRATION CONTOUR IN ppb, 2-25-92
- ND NON-DETECTABLE LEVELS
- * NOT USED IN CONTOURING (WELL SCREENED ACROSS DEEPER AQUIFER)
- † WELL NOT SAMPLED

PACIFIC ENVIRONMENTAL GROUP, INC.

SCALE
0 50 100 FEET

FORMER SHELL SERVICE STATION
7194 Amador Valley Boulevard at Village Parkway
Dublin, California

GASOLINE/BENZENE CONCENTRATION MAP

FIGURE: 3
PROJECT: 305-87.01

04/24/92

ATTACHMENT A

GROUNDWATER SAMPLING REPORT

EMCON
ASSOCIATES
Consultants in Wastes
Management and
Environmental Control

MAR 25 1992

March 24, 1992
Project: G67-66.01
WIC#: 204-2217-0105

Mr. Gerald O'Regan
Pacific Environmental Group, Inc.
1601 Civic Center Drive, Suite 202
Santa Clara, California 95050

Re: First quarter 1992 ground-water monitoring report, Shell Oil Company, 7194 Amador Valley Boulevard, Dublin, California

Dear Mr. O'Regan:

This letter presents the results of the first quarter 1992 ground-water monitoring event for the Shell Oil Company (Shell) service station located at 7194 Amador Valley Boulevard, Dublin, California. First quarter monitoring was conducted on February 25, 1992. The site is monitored quarterly.

GROUND-WATER LEVEL SURVEY

A water-level survey preceded the purging and sampling of the monitoring wells. The wells included in the survey are identified in figure 1 (supplied by Pacific Environmental Group, Inc.). During the survey, wells MW-1 through MW-9, MW-11, MW-12, and MW-13 were measured for depth to water, floating product thickness, and total depth. Depth to water and floating product thickness were measured to the nearest 0.01 foot with an oil/water interface probe. No floating product was observed in any wells. Total depth was measured to the nearest 0.1 foot. Results of the first quarter water-level survey, and available data from four previous surveys, are summarized in table 1.

SAMPLING AND ANALYSIS

Ground water samples were collected from wells MW-1 through MW-9, MW-11, MW-12, and MW-13 on February 25, 1992. Prior to sample collection, the wells were purged with an electric submersible pump (MW-1), or a polyvinyl chloride (PVC) bailer (all others). During the purging operation, ground water was monitored for pH, electrical conductivity, and temperature as a function of volume of water removed. Purging continued until these parameters were stable and a minimum of three casing volumes of ground water were removed. Wells MW-5 and MW-7 were evacuated to dryness before three casing volumes were removed. The wells were allowed to recharge for up to 24 hours. Samples were col-

1938 Junction Avenue, San Jose, California, (408) 453-0713, Fax (408) 453-0432

lected after the wells had recharged to a level sufficient for sample collection. Field measurements from first quarter monitoring, and available measurements from four previous monitoring events, are summarized in table 1. Purge water from the monitoring wells was contained in 55-gallon drums. The drums were identified with Shell-approved labels and secured for on-site storage.

Ground water samples were collected with a Teflon® bailer, labeled, placed on ice, and transported to a Shell-approved and state-certified analytical laboratory for analysis. Shell chain-of-custody documents accompanied all samples to the laboratory.

All equipment that was placed down a well or that came in contact with ground water was steam cleaned on site with steaming hot deionized water prior to use at each well.

Quality control (QC) samples for first quarter monitoring included a trip blank (TB). All water samples from first quarter monitoring were analyzed for total petroleum hydrocarbons (TPH) as gasoline, and benzene, toluene, ethylbenzene, and total xylenes (BTEX).

ANALYTICAL RESULTS

Analytical results from the first quarter 1992 monitoring event, and available results from four previous monitoring events, are summarized in table 2. The original certified analytical reports and a copy of the final chain-of-custody documents are attached.

Note that because of an error on the well location map that was submitted to EMCON Associates (EMCON), monitoring wells MW-1 and MW-5 were incorrectly labeled during sampling. The field sampling team identified the map error during the water-level survey and collected accurate depth-to-water and total depth measurements for all requested wells. Later in the day, a field sampler mistakenly sampled well MW-1 thinking it was well MW-5, and then sampled well MW-5 thinking it was well MW-1.

EMCON carefully reviewed all field data sheets from first quarter monitoring, reviewed historical purging information for wells MW-1 and MW-5, and questioned the field sampling team about the order of events on February 25, 1992. Corrections were made to the water sample field data sheets and chain-of-custody forms on March 24, 1992. The corrected chain-of-custody forms were submitted to IT Analytical Services (IT), and corrected certified analytical reports were generated by IT on March 24, 1992.

If you have any questions, please call.

Very truly yours,

EMCON Associates

David Larsen
Environmental Sampling Coordinator

Orrin Childs
Environmental Sampling Supervisor

DL/OC:dl

Attachments: Table 1 - Monitoring well field measurement data
Table 2 - Summary of analytical results
Figure 1 - Site map
Certified analytical reports
Chain-of-custody documents

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station 7194 Amador Valley Boulevard
Dublin California
WIC # 204-2217 0105

Date: 03/24/92
Project Number: 667 66 01

Well Designation	Water Level Field Date	TOC Elevation (ft-MSL)	Depth to Water (feet)	Ground-water Elevation (ft-MSL)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
MW-1	11/20/90	334.83	9.50	325.33	NR	NR	11/20/90	NR	NR	NR	NR
MW-1	02/12/91	334.83	9.51	325.32	NR	NR	02/12/91	NR	NR	NR	NR
MW-1	05/06/91	334.83	8.34	326.49	NR	NR	05/06/91	NR	NR	NR	NR
MW-1	08/28/91	334.83	9.28	325.55	25.26	NR	08/28/91	6.21	490	24*	NR
MW-1	02/25/92	334.83	7.49	327.34	25.1	ND	02/25/92	6.84	1873	69.3	<200
MW-2	11/20/90	336.96	11.35	325.61	NR	NR	11/20/90	NR	NR	NR	NR
MW-2	02/12/91	336.96	11.64	325.32	NR	NR	02/12/91	NR	NR	NR	NR
MW-2	05/06/91	336.96	10.05	326.91	NR	NR	05/06/91	NR	NR	NR	NR
MW-2	08/28/91	336.96	11.16	325.80	24.63	NR	08/28/91	6.83	2380	23*	NR
MW-2	02/25/92	336.96	9.66	327.30	24.5	ND	02/25/92	6.68	8810	67.1	>200
MW-3	11/20/90	336.96	12.65	324.31	NR	NR	11/20/90	NR	NR	NR	NR
MW-3	02/12/91	336.96	11.16	325.80	NR	NR	02/12/91	NR	NR	NR	NR
MW-3	05/06/91	336.93	9.85	327.08	NR	NR	05/06/91	NR	NR	NR	NR
MW-3	08/28/91	336.93	10.90	326.03	24.35	NR	08/28/91	6.16	1220	23*	NR
MW-3	02/25/92	336.93	9.04	327.89	24.3	ND	02/25/92	6.87	3030	65.3	>200
MW-4	11/20/90	337.14	11.45	325.69	NR	NR	11/20/90	NR	NR	NR	NR
MW-4	02/12/91	337.14	11.50	325.64	NR	NR	02/12/91	NR	NR	NR	NR
MW-4	05/06/91	337.14	10.04	327.10	NR	NR	05/06/91	NR	NR	NR	NR
MW-4	08/28/91	337.14	11.18	325.96	24.87	NR	08/28/91	7.04	1880	24*	NR
MW-4	02/25/92	337.14	9.45	327.69	24.8	ND	02/25/92	6.79	6300	63.7	>200

TOC = top of casing
ft-MSL = elevation in feet, relative to mean sea level
std units = standard pH units
micromhos/cm = micromhos per centimeter
degrees F = degrees Fahrenheit
NTU = nephelometric turbidity units
NR = not reported, data not available
* = temperature measured in degrees centrigrade
ND = none detected

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station: 7194 Amador Valley Boulevard
Dublin, California
WIC # 204-2217-0105

Date: 03/24/92
Project Number: G67-66.01

Well Designation	Water Level Field Date	TOC Elevation (ft-MSL)	Depth to Water (feet)	Groundwater Elevation (ft-MSL)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
MW-5	11/20/90	334.96	9.45	325.51	NR	NR	11/20/90	NR	NR	NR	NR
MW-5	02/11/91	334.96	9.27	325.69	NR	NR	02/11/91	NR	NR	NR	NR
MW-5	05/06/91	334.96	7.90	327.06	NR	NR	05/06/91	NR	NR	NR	NR
MW-5	08/28/91	334.96	9.28	325.68	44.84	NR	08/28/91	6.65	1520	23*	NR
MW-5	02/25/92	334.96	9.02	325.94	44.8	ND	02/25/92	7.10	6220	64.9	>200
MW-6	11/20/90	335.42	9.65	325.77	NR	NR	11/20/90	NR	NR	NR	NR
MW-6	02/12/91	335.42	9.85	325.57	NR	NR	02/12/91	NR	NR	NR	NR
MW-6	05/06/91	335.42	9.12	326.30	NR	NR	05/06/91	NR	NR	NR	NR
MW-6	08/28/91	335.42	9.68	325.74	22.95	NR	08/28/91	6.52	1220	23*	NR
MW-6	02/25/92	335.42	8.44	326.98	23.4	ND	02/25/92	6.82	5090	66.9	>200
MW-7	11/20/90	333.23	8.10	325.13	NR	NR	11/20/90	NR	NR	NR	NR
MW-7	02/11/91	333.23	8.04	325.19	NR	NR	02/11/91	NR	NR	NR	NR
MW-7	05/06/91	333.23	6.37	326.86	NR	NR	05/06/91	NR	NR	NR	NR
MW-7	08/28/91	333.23	7.94	325.29	16.32	NR	02/28/91	7.95	1890	25*	NR
MW-7	02/25/92	333.23	6.99	326.24	16.2	ND	02/25/92	7.04	6010	79.4	>200
MW-8	11/20/90	NR	NR	NR	NR	NR	11/20/91	NR	NR	NR	NR
MW-8	02/11/91	335.80	9.40	326.40	NR	NR	02/11/91	NR	NR	NR	NR
MW-8	05/06/91	335.80	8.70	327.10	NR	NR	05/06/91	NR	NR	NR	NR
MW-8	08/28/91	335.80	9.68	326.12	16.25	NR	08/28/91	6.35	1940	25*	NR
MW-8	02/25/92	335.80	7.45	328.35	16.2	ND	02/25/92	6.75	6640	67.7	>200

TOC = top of casing
ft-MSL = elevation in feet, relative to mean sea level
std units = standard pH units
micromhos/cm = micromhos per centimeter
degrees F = degrees Fahrenheit
NTU = nephelometric turbidity units
NR = not reported, data not available
* = temperature measured in degrees centrigrade
ND = none detected

Table 1
Monitoring Well Field Measurement Data
First Quarter 1992

Shell Station 7194 Amador Valley Boulevard
Dublin California
WIC # 204-221/ 0105

Date: 03/24/92
Project Number G67 66 01

Well Designation	Water Level Field Date	TOC Elevation (ft-MSL)	Depth to Water (feet)	Ground-water Elevation (ft-MSL)	Total Well Depth (feet)	Floating Product Thickness (feet)	Water Sample Field Date	pH (std. units)	Electrical Conductivity (micromhos/cm)	Temperature (degrees F)	Turbidity (NTU)
MW 9	11/20/90	334.57	9.95	324.62	NR	NR	11/20/90	NR	NR	NR	NR
MW 9	02/11/91	334.57	9.85	324.72	NR	NR	02/11/91	NR	NR	NR	NR
MW 9	05/06/91	334.57	10.05	324.52	NR	NR	05/06/91	NR	NR	NR	NR
MW 9	08/28/91	334.57	10.34	324.23	17.93	NR	08/28/91	7.00	2210	24*	NR
MW 9	02/25/92	334.57	7.18	327.39	17.9	ND	02/25/92	6.79	7600	68.6	>200
MW 11	11/20/90	334.20	8.83	325.37	NR	NR	11/20/90	NR	NR	NR	NR
MW 11	02/11/91	334.20	8.95	325.25	NR	NR	02/11/91	NR	NR	NR	NR
MW 11	05/06/91	334.20	7.71	326.49	NR	NR	05/06/91	NR	NR	NR	NR
MW 11	08/28/91	334.20	8.62	325.58	NR	NR	02/28/91	NR	NR	NR	NR
MW 11	02/25/92	334.20	7.21	326.99	16.4	ND	02/25/92	6.77	8870	69.2	>200
MW 12	11/20/90	332.53	8.80	323.73	NR	NR	11/20/90	NR	NR	NR	NR
MW 12	02/12/91	332.53	7.85	324.68	NR	NR	02/12/91	NR	NR	NR	NR
MW 12	05/06/91	332.53	7.35	325.18	NR	NR	05/06/91	NR	NR	NR	NR
MW 12	08/28/91	332.53	7.79	324.74	17.15	NR	08/28/91	6.15	970	22*	NR
MW 12	02/25/92	332.53	6.14	326.39	17.2	ND	02/25/92	6.98	2890	67.3	<200
MW 13	05/06/91	335.64	8.37	327.27	NR	NR	05/06/91	NR	NR	NR	NR
MW 13	08/28/91	335.64	9.82	325.82	17.13	NR	08/28/91	6.47	1380	22*	NR
MW 13	02/25/92	335.64	7.66	327.98	17.0	ND	02/25/92	6.88	5352	64.3	>200

TOC = top of casing
ft MSL = elevation in feet, relative to mean sea level
std units = standard pH units
micromhos/cm = micromhos per centimeter
degrees F = degrees Fahrenheit
NTU = nephelometric turbidity units
NR = not reported data not available
* = temperature measured in degrees centrigrade
ND none detected

Table 2
Summary of Analytical Results
First Quarter 1992
milligrams per liter (mg/l) or parts per million (ppm)

Shell Station 7194 Amador Valley Boulevard
Dublin, California
WIC # 204-2217-0105

Date: 03/24/92
Project Number: G67-66.01

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Total Xylenes (mg/l)
MW-1	11/20/90	NR	NR	NR	NR	NR
MW-1	02/12/91	1.5	0.180	0.039	0.0820	0.110
MW-1	05/06/91	0.51	0.041	0.011	0.025	0.035
MW-1	08/28/91	0.45	0.041	0.016	0.024	0.034
MW-1	02/25/92	0.24	0.024	0.0092	0.014	0.020
MW-2	11/20/90	0.06	0.0056	<0.0005	<0.0005	<0.0005
MW-2	02/12/91	0.13	0.014	<0.0005	0.0009	0.0005
MW-2	05/06/91	0.06	0.0015	<0.0005	0.005	<0.0005
MW-2	08/28/91	0.10	0.0063	<0.0005	0.001	0.0011
MW-2	02/25/92	<0.05	0.0038	<0.0005	<0.0005	<0.0005
MW-3	11/20/90	0.10	0.026	0.0007	0.0012	0.0019
MW-3	02/12/91	0.13	0.027	<0.0005	<0.0005	<0.0005
MW-3	05/06/91	0.12	0.031	0.0008	0.0021	0.0008
MW-3	08/28/91	0.34	0.087	0.0011	0.0065	0.0038
MW-3	02/25/92	0.08	0.017	<0.0005	<0.0005	<0.0005
MW-4	11/20/90	0.14	0.052	0.001	0.0008	0.0009
MW-4	02/12/91	0.13	0.048	<0.0005	0.0015	<0.0005
MW-4	05/06/91	0.14	0.049	0.0013	0.0041	0.0017
MW-4	08/28/91	0.09	0.013	<0.0005	0.001	0.0011
MW-4	02/25/92	0.12	0.047	<0.0005	0.0005	0.0007

TPH-g = total petroleum hydrocarbons as gasoline
NR = not reported, data not available

Table 2
Summary of Analytical Results
First Quarter 1992
milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 7194 Amador Valley Boulevard
Dublin, California
WIC #: 204-2217-0105

Date: 03/24/92
Project Number: G67 66 01

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Total Xylenes (mg/l)
MW-5	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	0.001
MW-5	02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-5	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-5	08/28/91	<0.05	<0.0005	<0.0005	<0.0005	0.001
MW-5	02/25/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-6	11/20/90	0.73	0.120	0.012	0.039	0.0210
MW-6	02/12/91	0.55	0.065	0.010	0.033	0.0160
MW-6	05/06/91	0.55	0.072	0.011	0.038	0.023
MW-6	08/28/91	0.58	0.082	0.0076	0.028	0.0200
MW-6	02/25/92	0.40	0.052	0.0066	0.018	0.011
MW-7	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-7	02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-7	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-7	02/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-7	02/25/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-8	11/20/91	NR	NR	NR	NR	NR
MW-8	02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-8	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-8	08/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-8	02/25/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TPH-g = total petroleum hydrocarbons as gasoline
NR = not reported, data not available

Table 2
Summary of Analytical Results
First Quarter 1992
milligrams per liter (mg/l) or parts per million (ppm)

Shell Station: 7184 Amador Valley Boulevard
Dublin, California
WIC #: 204-2217-0105

Date: 03/24/92
Project Number: G67-66.01

Sample Designation	Water Sample Field Date	TPH-g (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl-benzene (mg/l)	Total Xylenes (mg/l)
MW-9	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	08/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	02/25/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	02/11/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-11	02/28/91	<0.05	<0.0005	<0.0005	<0.0005	<0.001
MW-11	02/25/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-12	11/20/90	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-12	02/12/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-12	05/06/91	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-12	08/28/91	<0.05	<0.0005	<0.0005	<0.0005	0.001
MW-12	02/25/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-13	05/06/91	1.1	0.43	0.03	0.041	0.13
MW-13	08/28/91	1.0	0.35	0.0064	0.044	0.043
MW-13	02/25/92	0.78	0.26	0.0035	0.026	0.015
TB	02/25/92	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

TPH-g = total petroleum hydrocarbons as gasoline

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Shell Oil Company
Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
David Larsen

Date: 03/24/92

Work Order: T2-02-213 P.O. Number: MOH 880-021 Vendor #I0002402

This is the Certificate of Analysis for the following samples:

Client Work ID: G6766, 7194 Amador Valley Rd.
Date Received: 02/26/92
Number of Samples: 9
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

PAGES	LABORATORY #	SAMPLE IDENTIFICATION
	T2-02-213-01	MW-1
	T2-02-213-02	MW-7
	T2-02-213-03	MW-8
	T2-02-213-04	MW-9
	T2-02-213-05	MW-11
	T2-02-213-06	MW-12
	T2-02-213-07	MW-13
	T2-02-213-08	MW-6
	T2-02-213-09	Quality Control

Reviewed and Approved:

Thomas L. Paulson
Project Manager

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/24/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-1**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202213-01**
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		03/04/92
Low Boiling Hydrocarbons	Mod.8015		03/04/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.24
BTEX		
Benzene	0.0005	0.024
Toluene	0.0005	0.0092
Ethylbenzene	0.0005	0.014
Xylenes (total)	0.0005	0.020

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	105.
1,3-Dichlorobenzene (BTEX)	102.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-7**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202213-02**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		03/04/92
Low Boiling Hydrocarbons	Mod.8015		03/04/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	103.
1,3-Dichlorobenzene (BTEX)	100.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: MW-8
SAMPLE DATE: 02/25/92
LAB SAMPLE ID: T202213-03
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		03/04/92
Low Boiling Hydrocarbons	Mod.8015		03/04/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	105.
1,3-Dichlorobenzene (BTEX)	98.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-9**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202213-04**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		03/04/92
Low Boiling Hydrocarbons	Mod.8015		03/04/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	102.
1,3-Dichlorobenzene (BTEX)	99.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-11**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202213-05**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		03/04/92
Low Boiling Hydrocarbons	Mod.8015		03/04/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	100.
1,3-Dichlorobenzene (BTEX)	97.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-12**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202213-06**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		03/04/92
Low Boiling Hydrocarbons	Mod.8015		03/04/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	105.
1,3-Dichlorobenzene (BTEX)	100.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-13**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202213-07**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		03/04/92
Low Boiling Hydrocarbons	Mod.8015		03/04/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.25	0.78
BTEX		
Benzene	0.0025	0.26
Toluene	0.0025	0.0035
Ethylbenzene	0.0025	0.026
Xylenes (total)	0.0025	0.015

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	107.
1,3-Dichlorobenzene (BTEX)	104.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: MW-6
SAMPLE DATE: 02/25/92
LAB SAMPLE ID: T202213-08
SAMPLE MATRIX: aqueous
RECEIPT CONDITION: Cool pH < 2

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		03/04/92
Low Boiling Hydrocarbons	Mod.8015		03/04/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.40
BTEX		
Benzene	0.0005	0.052
Toluene	0.0005	0.0066
Ethylbenzene	0.0005	0.018
Xylenes (total)	0.0005	0.011

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	111.
1,3-Dichlorobenzene (BTEX)	101.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T202213-09A**
EXTRACTION DATE:
ANALYSIS DATE: **03/03/92**
ANALYSIS METHOD: **8020**

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per lter

PARAMETER	Sample Amt	Spike Amt	MS Result	MSD Result	MS %Rec	MSD %Rec	RPD
Benzene	None	50.0	57.6	54.3	115	109	5
Toluene	None	50.0	53.7	50.7	107	101	6
Ethylbenzene	None	50.0	54.6	51.5	109	103	6
Total Xylenes	None	150	159	149	106	99	7

SURROGATES	MS %Rec	MSD %Rec
1,3-Dichlorobenzene	102	102

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/10/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-213

TEST CODE QC TEST NAME Quality Control

Quality control (QC) samples are analyzed and used to assess the laboratory control measures. Routine QC samples include method blanks, spikes and duplicates. The purpose of the method blank (MB) analysis is to demonstrate that artifacts of the test do not yield false positives. The laboratory control spike (LS) and /or matrix spike (MS) analysis is used to evaluate the ability of the test to recover analytes of interest, i.e. accuracy. Accuracy is expressed as percent (%) recovery. The laboratory spike duplicate (LSD), matrix spike duplicate (MSD), or duplicate sample (DUP) is used to determine the precision of the test, by comparing the result from the original spike (or sample) to the duplicate spike (or sample). Precision is expressed as relative percent difference (RPD).

The results of appropriate QC samples from QC batches associated with the listed samples are included in this report.

TEST CODE TPHVB TEST NAME TPH Gas,BTEX by 8015/8020

The method of analysis for low boiling hydrocarbons is taken from EPA Methods modified 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector in series with a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No.: 72-02-213

Date: 2-26-92

Site Address: 7194 Amador Valley Blvd, Dublin, CA

WIC#: 204-2217-0105

Shell Engineer: Kurt Miller — Phone No. (510) — Fax #: 685-3853

Consultant Name & Address: EMCON Assoc. — 1938 Junction Ave. San Jose, CA 95131

Consultant Contact: David Larsen — Phone No. (408) — Fax #: 453-2269

Comments:

Sampled By: J Butera / B. Stafford

Printed Name: J Butera / B. Stafford

Analysis Required

LAB: IT Analytical - San Jose

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	X	5461
Site Investigation	[ ]	5441
Soil for disposal	[ ]	5442
Water for disposal	[ ]	5443
Air Sample- Sys O&M	[ ]	5452
Water Sample - Sys O&M	[ ]	5453
Other	[ ]	

TURN AROUND TIM

- 24 hours [ ]
- 48 hours [ ]
- 15 days X (Norma
- Other [ ] ____

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

Sample ID	Date	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	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
~~1-24-92 (ext)~~															
~~MW-5~~ MW-1	2-25		X		3	X		X			40 ml	HCl	No		Cool
MW-7						X		X							
MW-8						X		X							
MW-9						X		X							
MW-11						X		X							
MW-12						X		X							
MW-13						X		X							
MW-6						X		X							

Relinquished By (signature): Bart Stafford — Printed name: Bart Stafford — Date: 2-26-92 Time: 8:53

Received (signature): Josephine DeCarli — Printed name: Josephine DeCarli — Date: 2/26/92 Time: 08:58

Relinquished By (signature): — Printed name: — Date: — Time:

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

Relinquished By (signature): — Printed name: — Date: — Time:

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

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

Last Revision Date: 10/15/91

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

Shell Oil Company
Emcon Associates
1938 Junction Ave.
San Jose, CA 95131
David Larsen

Date: 03/24/92

Work Order: T2-02-214

P.O. Number: MOH 880-021 Vendor #I0002402

This is the Certificate of Analysis for the following samples:

Client Work ID: G6766, 7194 Amador Valley Rd.
Date Received: 02/26/92
Number of Samples: 6
Sample Type: aqueous

TABLE OF CONTENTS FOR ANALYTICAL RESULTS

Reviewed and Approved:

Thomas L. Paulson
Project Manager

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/24/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-214

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-5**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202214-01**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/29/92
Low Boiling Hydrocarbons	Mod.8015		02/29/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	106.
1,3-Dichlorobenzene (BTEX)	100.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/11/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-214

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-4**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202214-02**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/29/92
Low Boiling Hydrocarbons	Mod.8015		02/29/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.12
BTEX		
Benzene	0.0005	0.047
Toluene	0.0005	None.
Ethylbenzene	0.0005	0.0005
Xylenes (total)	0.0005	0.0007

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	104.
1,3-Dichlorobenzene (BTEX)	97.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/11/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-214

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-3**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202214-03**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/29/92
Low Boiling Hydrocarbons	Mod.8015		02/29/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	0.08
BTEX		
Benzene	0.0005	0.017
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	108.
1,3-Dichlorobenzene (BTEX)	97.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/11/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-214

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **MW-2**
SAMPLE DATE: **02/25/92**
LAB SAMPLE ID: **T202214-04**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/29/92
Low Boiling Hydrocarbons	Mod.8015		02/29/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	0.0038
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	118.
1,3-Dichlorobenzene (BTEX)	99.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/11/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-214

TEST NAME: **Petroleum Hydrocarbons**

SAMPLE ID: **TRIP BLANK**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T202214-05**
SAMPLE MATRIX: **aqueous**
RECEIPT CONDITION: **Cool pH < 2**

RESULTS in Milligrams per Liter:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020		02/29/92
Low Boiling Hydrocarbons	Mod.8015		02/29/92

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	0.05	None.
BTEX		
Benzene	0.0005	None.
Toluene	0.0005	None.
Ethylbenzene	0.0005	None.
Xylenes (total)	0.0005	None.

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	106.
1,3-Dichlorobenzene (BTEX)	100.

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/11/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-214

TEST NAME: **Spike and Spike Duplicates**

SAMPLE ID: **Quality Control**
SAMPLE DATE: **not spec**
LAB SAMPLE ID: **T202214-06A**
EXTRACTION DATE:
ANALYSIS DATE: **02/28/92**
ANALYSIS METHOD: **8020**

QUALITY CONTROL REPORT

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Analyses

RESULTS in Micrograms per Liter

PARAMETER	Sample Amt	Spike Amt	MS Result	MSD Result	MS %Rec	MSD %Rec	RPD
Benzene	None	50.0	55.1	56.4	110	113	3
Toluene	None	50.0	52.0	53.4	104	107	3
Ethylbenzene	None	50.0	53.3	54.9	107	110	3
Total Xylenes	None	150	161	169	107	113	4

SURROGATES	MS %Rec	MSD %Rec
1,3-Dichlorobenzene	101	102

IT ANALYTICAL SERVICES
SAN JOSE, CA

Company: Shell Oil Company
Date: 03/11/92
Client Work ID: G6766, 7194 Amador Valley Rd.

Work Order: T2-02-214

TEST CODE QC TEST NAME Quality Control

Quality control (QC) samples are analyzed and used to assess the laboratory control measures. Routine QC samples include method blanks, spikes and duplicates. The purpose of the method blank (MB) analysis is to demonstrate that artifacts of the test do not yield false positives. The laboratory control spike (LS) and /or matrix spike (MS) analysis is used to evaluate the ability of the test to recover analytes of interest, i.e. accuracy. Accuracy is expressed as percent (%) recovery. The laboratory spike duplicate (LSD), matrix spike duplicate (MSD), or duplicate sample (DUP) is used to determine the precision of the test, by comparing the result from the original spike (or sample) to the duplicate spike (or sample). Precision is expressed as relative percent difference (RPD).

The results of appropriate QC samples from QC batches associated with the listed samples are included in this report.

TEST CODE TPHVB TEST NAME TPH Gas,BTEX by 8015/8020

The method of analysis for low boiling hydrocarbons is taken from EPA Methods modified 8015, 8020 and 5030. The sample is examined using the purge and trap technique. Final detection is by gas chromatography using a flame ionization detector in series with a photoionization detector. The result for total low boiling hydrocarbons is calculated as gasoline. Results in soils are corrected for moisture content and are reported on a dry soil basis unless otherwise noted.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: T2-02-214

Date: 2-26-92
Page 2 of 2

Site Address: 7194 Amador Valley Blvd, Dublin, CA

WIC#: 204-2217-0105

Shell Engineer: Kurt Miller — **Phone No.** (510) — **Fax #:** 685-3853

Consultant Name & Address: EMCON Assoc. — 1938 Junction Ave. San Jose, CA 95131

Consultant Contact: David Larsen — **Phone No.** (408) — **Fax #:** 453-2269

Comments:

Sampled By: J Butler / B. Stafford

Printed Name: J Butler / B. Stafford

LAB: IT Analytical - San Jose

Sample ID	Date	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				Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
3-24-92																		
MW-1 MW-5	2-25		X		3	X		X						40 ml	HCl	No		Cool
MW-4						X		X										
MW-3						X		X										
MW-2						X		X										
TB					1	X		X										

Relinquished By (signature): Bart Stafford — **Printed name:** Bart Stafford — **Date:** 2-25-92 — **Time:** 853 — **Received (signature):** Josephine DeCarli — **Printed name:** Josephine DeCarli — **Date:** 2/26/92 — **Time:** 08:58

Relinquished By (signature): — **Printed name:** — **Date:** — **Time:** — **Received (signature):** — **Printed name:** — **Date:** — **Time:**

Relinquished By (signature): — **Printed name:** — **Date:** — **Time:** — **Received (signature):** — **Printed name:** — **Date:** — **Time:**

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

Last Revision Date: 10/15/91

Analysis Required

CHECK ONE (1) BOX ONLY

		CT/DT
Quarterly Monitoring	XX	5461
Site Investigation	[ ]	5441
Soil for disposal	[ ]	5442
Water for disposal	[ ]	5443
Air Sample- Sys O&M	[ ]	5452
Water Sample - Sys O&M	[ ]	5453
Other	[ ]	

TURN AROUND TIME

- 24 hours [ ]
- 48 hours [ ]
- 15 days XX (Normal)
- Other [ ] _____

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

RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No.: 72-02-213

Date: 2-26-92

Page 1 of 2

Site Address: 7194 Amador Valley Blvd, Dublin, CA

WIC#: 204-2217-0105

Shell Engineer: Kurt Miller — Phone No. (510) — Fax #: 685-3853

Consultant Name & Address: EMCON Assoc. — 1938 Junction Ave. San Jose, CA 95131

Consultant Contact: David Larsen — Phone No. (408) — Fax #: 453-2269

Comments:

Sampled By: JButera / B. Stafford

Printed Name: J Butera / B. Stafford

LAB: IT Analytical - San Jose

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	XX	5461
Site Investigation	[ ]	5441
Soil for disposal	[ ]	5442
Water for disposal	[ ]	5443
Air Sample- Sys O&M	[ ]	5452
Water Sample - Sys O&M	[ ]	5453
Other	[ ]	

TURN AROUND TIME: 24 hours [ ]; 48 hours [ ]; 15 days XX (Normal); Other [ ] ____

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

Sample ID	Date	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	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
~~1-24-92 (2 of 2)~~ ~~MW-5~~ MW-1	2-25		X		3	X		X			40 ml	HCl	No		Cool
MW-7						X		X							
MW-8						X		X							
MW-9						X		X							
MW-11						X		X							
MW-12						X		X							
MW-13						X		X							
MW-6						X		X							

Relinquished By (signature): Bart Stafford — Printed name: Bart Stafford — Date: 2-26-92 — Time: 8:53

Relinquished By (signature): ____ — Printed name: ____ — Date: ____ — Time: ____

Relinquished By (signature): ____ — Printed name: ____ — Date: ____ — Time: ____

Received (signature): Josephine DeCarli — Printed name: Josephine DeCarli — Date: 2/26/92 — Time: 08:5

Received (signature): ____ — Printed name: ____ — Date: ____ — Time: ____

Received (signature): ____ — Printed name: ____ — Date: ____ — Time: ____

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

Last Revision Date: 10/15/91

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: 72-02-214

Date: 2-26-92
Page 2 of 2

Site Address: 7194 Amador Valley Blvd, Dublin, CA

WIC#: 204-2217-0105

Shell Engineer: Kurt Miller
Phone No. (510)
Fax #: 685-3853

Consultant Name & Address: EMCON Assoc. 1938 Junction Ave. San Jose, CA 95131

Consultant Contact: David Larsen
Phone No. (408)
Fax #: 453-2269

Comments:

Sampled By: J Butler / B. Stafford

Printed Name: J Butler / B. Stafford

Analysis Required

LAB: IT Analytical - San Jose

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	XX	5461
Site Investigation	[ ]	5441
Soil for disposal	[ ]	5442
Water for disposal	[ ]	5443
Air Sample- Sys O&M	[ ]	5452
Water Sample - Sys O&M	[ ]	5453
Other	[ ]	

TURN AROUND TIM
24 hours [ ]
48 hours [ ]
15 days XX (Normal
Other [ ] ____
NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.

Sample ID	Date	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	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
3-24-92															
MW-1 MW-5	2-25		X		3	X		X			40 ml	HCl	No		Cool
MW-4						X		X							
MW-3						X		X							
MW-2						X		X							
TB					1	X		X							

Relinquished By (signature): Bart Stafford
Printed name: Bart Stafford
Date: 2-25-92
Time: 853
Received (signature): Josephine DiCarli
Printed name: Josephine DeCarli
Date: 2/26/92
Time: 08:58

Relinquished By (signature):
Printed name:
Received (signature):
Printed name:
Date:
Time:

Relinquished By (signature):
Printed name:
Date:
Time:
Received (signature):
Printed name:
Date:
Time:

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

Last Revision Date: 10/15/91