enviros®

July 15, 1996

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

RE: **Quarterly Monitoring Report - Second Quarter 1996**
Former Shell Service Station
500 40th Avenue
Oakland, California
WIC #204-5508-4903

96 JUL 16 PM 2:27
ENVIRONMENTAL PROTECTION

Dear Mr. Granberry:

This Quarterly Monitoring Report describes the recently completed activities associated with ground water monitoring and sampling at the referenced site (Plates 1 and 2). This report was prepared to meet quarterly reporting guidelines issued by the Alameda County Health Care Services Agency and the Regional Water Quality Control Board, San Francisco Bay Region.

Quarterly Monitoring & Sampling Summary

Ground water monitoring and sampling for the second quarter of 1996 are summarized below:

- Blaine Tech Services Inc. (Blaine) of San Jose, measured ground water levels and collected ground water samples from Wells EW-1, MW-2 through MW-5, MW-8, OMW-10, and OMW-12 on May 4, 1996. The samples were transported to Sequoia Analytical (Sequoia) of Redwood City, California for chemical analysis.

- Ground water level measurement data were evaluated and used to prepare a ground water contour map (Plate 2). Ground water flow ranges from the southeast to the northwest with an approximate hydraulic gradient of 0.01 to 0.05.

Quarterly Sampling

Wells EW-1, MW-2 through MW-5, MW-8, OMW-10, and OMW-12 were sampled and analyzed for Total Purgeable Petroleum Hydrocarbons quantified as Gasoline (TPPH) according to EPA Method 8015 (Modified), benzene, toluene, ethylbenzene and xylenes (BTEX) according to EPA Method 8020, and Methyl-tertiary-butyl ether according to EPA Method 8020.

Enviros, Inc. 270 Perkins Street P.O. Box 259 Sonoma, California 95476-0259 Tel 707 / 935-4850 Fax 707 / 935-6649

Field monitoring data and chemical analytical data are summarized in Table 1. A benzene concentration map is presented as Plate 2. The Blaine Quarterly Ground Water Monitoring Report is presented in Appendix A.

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

Sincerely,

Enviros, Inc.

Clyde J. Galantine
Project Geologist

Diane M. Lundquist, P.E.
Senior Engineer
C46725

Attachments

Table 1. Well Concentrations

Plate 1. Vicinity Map
Plate 2. Ground Water Contour/Benzene Concentration Map

Appendix A

Blaine Tech Services Inc. - Quarterly Ground Water Monitoring Report

cc: Ms Susan L. Hugo, Alameda County Health Care Services Agency

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
EW-1	**Top casing elevation (ft):**			**78.26**							
06-Aug-91	NA	NA	NA	180	<50	5.4	<0.5	0.9	0.7	NA	
30-Oct-91	12.72	65.54	0.00	70	<50	2.6	<0.5	<0.5	<0.5	NA	
15-Feb-92	NA	NA	NA	<50	NA	2.1	<0.5	<0.5	<0.5	NA	
18-Mar-92	11.71	66.55	0.00	NA	NA	NA	NA	NA	NA	NA	
22-May-92	12.84	65.42	0.00	99	NA	4.1	<0.5	<0.5	<0.5	NA	
19-Aug-92	13.04	65.22	0.00	140	NA	6.6	<0.5	<0.5	<0.5	NA	
18-Nov-92	12.90	65.36	0.00	56	NA	<0.5	<0.5	<0.5	<0.5	NA	
11-Feb-93	11.28	66.98	0.00	63	NA	<0.5	<0.5	<0.5	0.9	NA	
19-May-93	12.52	65.74	0.00	60 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Aug-93	12.48	65.78	0.00	NA	NA	NA	NA	NA	NA	NA	
17-Nov-93	12.63	65.63	0.00	170	NA	17	<0.5	<0.5	<0.5	NA	
18-Feb-94	11.38	66.88	0.00	NA	NA	NA	NA	NA	NA	NA	
26-May-94	12.02	66.24	0.00	<50	NA	3.5	<0.5	<0.5	0.51	NA	
29-Aug-94	12.76	65.50	0.00	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	11.08	67.18	0.00	200	NA	13	0.88	<0.5	<0.5	NA	
03-Feb-95	10.88	67.38	0.00	NA	NA	NA	NA	NA	NA	NA	
07-May-95	11.32	66.94	0.00	90	NA	8.6	<0.5	<0.5	<0.5	NA	
02-Aug-95	11.76	66.50	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Nov-95	12.80	65.46	0.00	240	NA	12	• 1.5	0.6	1.9	NA	
24-Feb-96	10.15	68.11	0.00	NA	NA	NA	NA	NA	NA	NA	
04-May-96	12.26	66.00	0.00	<50	NA	1.4	<0.50	<0.50	<0.50	4.1	
EW-1 (DUP)											
11-Feb-93	NA	NA	NA	63	NA	<0.5	<0.5	<0.5	0.8	NA	
17-Nov-93	NA	NA	NA	190	NA	17	<0.5	<0.5	<0.5	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
MW-2	**Top casing elevation (ft):**			**80.80**							
06-Aug-91	12.12	68.68	0.00	1200	230	59	1.1	38	56	NA	
30-Oct-91	11.70	69.10	0.00	520	300	56	<0.5	56	100	NA	
15-Feb-92	NA	NA	NA	2300	2200 (a)	87	<2.5	88	150	NA	
18-Mar-92	11.10	69.70	0.00	NA	NA	NA	NA	NA	NA	NA	
22-May-92	12.12	68.68	0.00	700	NA	24	1.0	34	48	NA	
19-Aug-92	12.18	68.62	0.00	740	NA	21	<2.5	24	26	NA	
18-Nov-92	12.03	68.77	0.00	920	NA	19	<2.5	30	51	NA	
11-Feb-93	11.15	69.65	0.00	1000	NA	25	6.0	43	73	NA	
19-May-93	11.80	69.00	0.00	570	NA	19	<0.5	37	42	NA	
18-Aug-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
17-Nov-93	12.00	68.80	0.00	250	NA	10	<1.0	26	20	NA	
18-Feb-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
26-May-94	11.61	69.19	0.00	620	NA	17	1.4	25	31	NA	
29-Aug-94	11.96	68.84	0.00	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	10.74	70.06	0.00	1100	NA	28	3.1	39	65	NA	
03-Feb-95	11.58	69.22	0.00	NA	NA	NA	NA	NA	NA	NA	
07-May-95	10.98	69.82	0.00	700	NA	15	<0.5	35	39	NA	
02-Aug-95	11.90	68.90	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Nov-95	12.12	68.68	0.00	140	NA	2.3	<0.5	4.4	3.7	NA	
24-Feb-96	10.25	70.55	0.00	NA	NA	NA	NA	NA	NA	NA	
04-May-96	11.30	69.50	0.00	140	NA	2.1	<0.50	4.6	4.9	6.2	
MW-2 (DUP)											
19-Aug-92	NA	NA	NA	840	NA	31	<2.5	36	43	NA	
18-Nov-92	NA	NA	NA	870	NA	25	<2.5	34	52	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
26-May-94	NA	NA	NA	600	NA	16	1.2	24	29	NA	
MW-3	**Top casing elevation (ft):**			**79.60**							
06-Aug-91	11.12	68.48	0.00	1900	470	220	57	57	260	NA	
30-Oct-91	10.93	68.67	0.00	1900	480	160	28	63	180	NA	
15-Feb-92	NA	NA	NA	2300	780 (a)	170	31	59	180	NA	
18-Mar-92	10.54	69.06	0.00	NA	NA	NA	NA	NA	NA	NA	
22-May-92	10.79	68.81	0.00	1500	NA	160	20	44	140	NA	
19-Aug-92	11.23	68.37	0.00	4500	NA	210	64	89	310	NA	
18-Nov-92	11.20	68.40	0.00	2400	NA	81	14	39	140	NA	
11-Feb-93	11.00	68.60	0.00	3000	NA	200	47	90	260	NA	
19-May-93	11.16	68.44	0.00	2100	NA	240	44	100	330	NA	
18-Aug-93	11.35	68.25	0.00	NA	NA	NA	NA	NA	NA	NA	
17-Nov-93	11.10	68.50	0.00	1000	NA	110	13	60	150	NA	
18-Feb-94	10.76	68.84	0.00	NA	NA	NA	NA	NA	NA	NA	
26-May-94	11.85	67.75	0.00	1100	NA	200	17	29	58	NA	
29-Aug-94	10.40	69.20	0.00	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	10.04	69.56	0.00	870	NA	130	10	38	87	NA	
03-Feb-95	10.06	69.54	0.00	NA	NA	NA	NA	NA	NA	NA	
07-May-95	10.11	69.49	0.00	1300	NA	180	7.5	54	110	NA	
02-Aug-95	11.02	68.58	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Nov-95	10.97	68.63	0.00	370	NA	36	1.8	16	21	NA	
24-Feb-96	9.61	69.99	0.00	NA	NA	NA	NA	NA	NA	NA	
04-May-96	10.40	69.20	0.00	460	NA	54	1.9	18	28	20	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
MW-3 (DUP)											
11-Nov-94	NA	NA	NA	1000	NA	120	10	42	92	NA	
MW-4	**Top casing elevation (ft):**			**81.00**							
06-Aug-91	12.36	68.64	0.00	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	
30-Oct-91	12.02	68.98	0.00	50	<50	<0.5	<0.5	<0.5	<0.5	NA	
15-Feb-92	NA	NA	NA	90	NA	0.9	<0.5	<0.5	<0.5	NA	
18-Mar-92	11.34	69.66	0.00	NA	NA	NA	NA	NA	NA	NA	
22-May-92	12.35	68.65	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
19-Aug-92	12.41	68.59	0.00	82 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Nov-92	12.28	68.72	0.00	85 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
11-Feb-93	11.65	69.35	0.00	62 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
19-May-93	11.92	69.08	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Aug-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
17-Nov-93	12.24	68.76	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Feb-94	11.69	69.31	0.00	NA	NA	NA	NA	NA	NA	NA	
26-May-94	12.00	69.00	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
11-Nov-94	11.30	69.70	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
03-Feb-95	10.99	70.01	0.00	NA	NA	NA	NA	NA	NA	NA	
07-May-95	11.69	69.31	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
02-Aug-95	11.72	69.28	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Nov-95	12.23	68.77	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
24-Feb-96	11.13	69.87	0.00	NA	NA	NA	NA	NA	NA	NA	
04-May-96	11.80	69.20	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
MW-5	**Top casing elevation (ft):**			**81.50**							
06-Aug-91	13.02	68.48	0.00	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	
30-Oct-91	12.73	68.77	0.00	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	
15-Feb-92	NA	NA	NA	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Mar-92	12.52	68.98	0.00	NA	NA	NA	NA	NA	NA	NA	
22-May-92	13.05	68.45	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
19-Aug-92	13.04	68.46	0.00	55 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Nov-92	12.91	68.59	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
11-Feb-93	12.44	69.06	0.00	59 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
19-May-93	12.84	68.66	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
17-Nov-93	12.89	68.61	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Feb-94	12.30	69.20	0.00	NA	NA	NA	NA	NA	NA	NA	
26-May-94	12.73	68.77	0.00	<50	NA	1.8	2.4	1.3	4.9	NA	
29-Aug-94	12.88	68.62	0.00	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	12.20	69.30	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
03-Feb-95	11.78	69.72	0.00	NA	NA	NA	NA	NA	NA	NA	
07-May-95	12.47	69.03	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
02-Aug-95	12.83	68.67	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Nov-95	13.02	68.48	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
24-Feb-96	12.11	69.39	0.00	NA	NA	NA	NA	NA	NA	NA	
04-May-96	13.20	68.30	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	
MW-5 (DUP)											
19-May-93	NA	NA	NA	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
OMW-6	**Top casing elevation (ft):**			**77.90**							
06-Aug-91	10.71	67.19	0.00	26000	3600	910	420	560	1900	NA	
30-Oct-91	10.50	67.40	0.00	20000	4600	710	240	410	1700	NA	
15-Feb-92	NA	NA	NA	35000	27000	690	420	650	3000	NA	
18-Mar-92	9.24	68.66	0.00	NA	NA	NA	NA	NA	NA	NA	
22-May-92	10.13	67.77	0.00	15000	NA	460	110	300	1600	NA	
19-Aug-92	10.16	67.74	0.00	24000	NA	600	300	460	2000	NA	
18-Nov-92	9.94	67.96	0.00	29000	NA	480	250	450	2300	NA	
11-Feb-93	9.20	68.70	0.00	24000	NA	1300	250	630	2400	NA	
19-May-93	10.64	67.86	0.00	18000	NA	750	180	520	2500	NA	
18-Aug-93	10.04	67.86	0.00	NA	NA	NA	NA	NA	NA	NA	
17-Nov-93	10.12	67.78	0.00	14000	NA	260	64	430	1900	NA	
18-Feb-94	9.65	68.25	0.00	NA	NA	NA	NA	NA	NA	NA	
26-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
29-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
03-Feb-95	8.96	68.94	0.00	NA	NA	NA	NA	NA	NA	NA	
07-May-95	8.64	69.26	0.00	11000	NA	460	82	280	540	NA	
02-Aug-95	12.09	65.81	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Feb-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
04-May-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
OMW-6 (DUP)											
07-May-95	NA	NA	NA	14000	NA	480	61	230	370	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
MW-8	**Top casing elevation (ft):**			**79.91**							
06-Aug-91	13.08	66.83	0.00	90	<50	<0.5	<0.5	<0.5	<0.5	NA	
30-Oct-91	12.87	67.04	0.00	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	
15-Feb-92	NA	NA	NA	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Mar-92	11.54	68.37	0.00	NA	NA	NA	NA	NA	NA	NA	
22-May-92	12.32	67.59	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
19-Aug-92	12.58	67.33	0.00	60	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Nov-92	12.47	67.44	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
11-Feb-93	11.02	68.89	0.00	76 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
19-May-93	11.78	68.13	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Aug-93	12.22	67.69	0.00	NA	NA	NA	NA	NA	NA	NA	
17-Nov-93	12.25	67.66	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Feb-94	10.56	69.35	0.00	NA	NA	NA	NA	NA	NA	NA	
26-May-94	11.30	68.61	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
29-Aug-94	11.90	68.01	0.00	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	10.12	69.79	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
03-Feb-95	11.64	68.27	0.00	NA	NA	NA	NA	NA	NA	NA	
07-May-95	10.77	69.14	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
02-Aug-95	10.92	68.99	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Nov-95	11.93	67.98	0.00	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	
24-Feb-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
04-May-96	11.66	68.25	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	
OMW-9	**Top casing elevation (ft):**			**77.71**							
06-Aug-91	10.38	67.33	0.00	3900	190	58	8.8	80	220	NA	
30-Oct-91	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
18-Mar-92	8.76	68.95	0.00	1800 (c)	210	84	11	49	60	NA	
20-May-92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
19-Aug-92	9.98	67.73	0.00	4600	22 (a)	63	<25	48	70	NA	
18-Nov-92	9.81	67.90	0.00	1800	130 (a)	30	9.2	46	61	NA	
11-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
19-May-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
18-Aug-93	9.75	67.96	0.00	NA	NA	NA	NA	NA	NA	NA	
17-Nov-93	9.92	67.79	0.00	5900	2400 (d)	86	14	150	46	NA	
18-Feb-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
26-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
29-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
03-Feb-95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
07-May-95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
02-Aug-95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
24-Feb-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
04-May-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
OMW-10	**Top casing elevation (ft):**			**77.91**							
07-Aug-91	10.00	67.91	0.00	460	<50	73	1.0	18	8.4	NA	
31-Oct-91	10.10	67.81	0.00	630	150	100	<0.5	33	26	NA	
15-Feb-92	NA	NA	NA	810	570 (a)	85	2.5	44	38	NA	
18-Mar-92	9.55	68.36	0.00	NA	NA	NA	NA	NA	NA	NA	
21-May-92	10.41	67.50	0.00	280	NA	47	0.7	4.0	3.1	NA	
19-Aug-92	10.46	67.45	0.00	330	NA	35	<1	6.0	4.1	NA	
18-Nov-93	10.31	67.60	0.00	300	NA	30	0.8	7.1	6.3	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
11-Feb-93	9.68	68.23	0.00	510 (b)	NA	49	3.8	18	18	NA	
19-May-93	10.19	67.72	0.00	<50	NA	96	<0.5	3.4	1.5	NA	
18-Aug-93	10.29	67.62	0.00	NA	NA	NA	NA	NA	NA	NA	
17-Nov-93	10.32	67.59	0.00	400	NA	24	<1.0	2.8	1.9	NA	
18-Feb-94	9.30	68.61	0.00	NA	NA	NA	NA	NA	NA	NA	
26-May-94	10.14	67.77	0.00	330	NA	32	13	7.5	26	NA	
09-Aug-94	10.38	67.53	0.00	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	9.34	68.57	0.00	110	NA	7.8	<0.5	2.3	1.5	NA	
03-Feb-95	10.17	67.74	0.00	NA	NA	NA	NA	NA	NA	NA	
07-May-95	9.63	68.28	0.00	1600	NA	110	3.1	17	12	NA	
02-Aug-95	10.07	67.84	0.00	NA	NA	NA	NA	NA	NA	NA	
02-Nov-95	9.74	68.17	0.00	1200	NA	47	0.8	1.4	2.4	NA	
24-Feb-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
04-May-96	9.97	67.94	0.00	1100	NA	76	16	7.4	32	57	
OMW-10 (DUP)											
02-Nov-95	NA	NA	NA	1300	NA	50	0.8	1.5	2.5	NA	
04-May-96	NA	NA	NA	700	NA	63	13	6.4	25	21	
OMW-11	**Top casing elevation (ft):**			**75.76**							
22-Nov-91	11.90	63.86	0.00	450	240	1.1	<0.5	<0.5	<0.5	NA	
15-Feb-92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
18-Mar-92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
20-May-92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
19-Aug-92	12.06	63.70	0.00	270 (b)	<50	<0.5	<0.5	<0.5	<0.5	NA	
18-Nov-92	12.01	63.75	0.00	400 (b)	100	<0.5	<0.5	<0.5	<0.5	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
11-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
20-May-93	11.90	63.86	0.00	200 (b)	<0.5	<0.5	<0.5	<0.5	<0.5	NA	
18-Aug-93	11.90	63.86	0.00	180 (b)	<50	<0.5	<0.5	<0.5	<0.5	NA	
17-Nov-93	11.94	63.82	0.00	150 (b)	<50 (d)	<0.5	3.6	<0.5	<0.5	NA	
18-Feb-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
26-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
29-Aug-94	11.98	63.78	0.00	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	10.88	64.88	0.00	160	NA	<0.5	<0.5	<0.5	<0.5	NA	
3-Feb-95	10.62	65.14	0.00	NA	NA	NA	NA	NA	NA	NA	
5-Mar-95	NA	NA	NA	220	100	0.7	<0.5	<0.5	<0.5	NA	
7-May-95	11.49	64.27	0.00	160	<50	<0.5	<0.5	<0.5	<0.5	NA	
2-Aug-95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
24-Feb-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
4-May-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
OMW-12	**Top casing elevation (ft):**			**75.65**							
2-Dec-91	10.31	65.34	0.00	<1000	<50	<0.5	<0.5	<0.5	<0.5	NA	
18-Mar-92	8.93	66.72	0.00	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	
20-May-92	10.26	65.39	0.00	180 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
19-Aug-92	10.53	65.12	0.00	230 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Nov-92	10.45	65.20	0.00	220 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
11-Feb-93	8.90	66.75	0.00	240	NA	<0.5	<0.5	<0.5	<0.5	NA	
19-May-93	10.60	65.05	0.00	110 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Aug-93	10.28	65.37	0.00	140 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
17-Nov-93	10.24	65.41	0.00	120 (b)	NA	<0.5	<0.5	<0.5	<0.5	NA	
18-Feb-94	8.97	66.68	0.00	180 (b)	NA	1.7	2.1	0.9	4.8	NA	

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
26-May-94	9.62	66.03	0.00	150	NA	<0.5	<0.5	<0.5	<0.5	NA	
29-Aug-94	10.20	65.45	0.00	110	NA	<0.5	<0.5	<0.5	<0.5	NA	
11-Nov-94	8.54	67.11	0.00	90	NA	<0.5	<0.5	<0.5	<0.5	NA	
3-Feb-95	8.28	67.37	0.00	80	NA	<0.5	<0.5	<0.5	<0.5	NA	
7-May-95	9.17	66.48	0.00	110	NA	<0.5	<0.5	<0.5	<0.5	NA	
2-Aug-95	10.06	65.59	0.00	90	NA	<0.5	<0.5	<0.5	<0.5	NA	
2-Nov-95	10.09	65.56	0.00	130	NA	<0.5	<0.5	<0.5	<0.5	NA	
24-Feb-96	7.81	67.84	0.00	80	NA	<0.5	<0.5	<0.5	<0.5	NA	
4-May-96	11.72	63.93	0.00	61	NA	<0.50	<0.50	<0.50	<0.50	<2.5	C7-C8 Chromatogram Pattern
OMW-12 (DUP)											
3-Feb-95	NA	NA	NA	100	NA	0.6	<0.5	0.7	1.1	NA	
2-Aug-95	NA	NA	NA	120	NA	<0.5	<0.5	<0.5	<0.5	NA	
OMW-13	**Top casing elevation (ft):**			**76.36**							
22-Nov-91	11.96	64.40	0.00	900	1000	37	9.5	74	130	NA	
18-Mar-92	10.84	65.52	0.00	900 (c)	590 (a)	24	28	320	320	NA	
20-May-92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
19-Aug-92	12.12	64.24	0.00	7000	470 (a)	180	36	150	150	NA	
18-Nov-92	12.00	64.36	0.00	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
11-Feb-93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
20-May-93	12.26	64.10	0.00	9200	NA	320	83	490	950	NA	
18-Aug-93	11.75	64.61	0.00	NA	NA	NA	NA	NA	NA	NA	
17-Nov-93	11.78	64.58	0.00	38000	3800	210	<130	1000	2500	NA	
18-Feb-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
26-May-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible

TABLE 1

WELL CONCENTRATIONS
Shell Oil Products Company
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TPH-D (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
29-Aug-94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
11-Nov-94	10.28	66.08	0.00	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
3-Feb-95	10.01	66.35	0.00	1.0	NA	NA	NA	NA	NA	NA	
5-Mar-95	NA	NA	NA	9100	3900	200	9.7	200	130	NA	
7-May-95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
2-Aug-95	11.80	64.56	0.00	8000	2900	180	6.6	190	55	NA	
24-Feb-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
4-May-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible

Abbreviations:

TPPH = Total Purgeable Petroleum Hydrocarbons carbon range C6 to C12 by Modified EPA Method 8015
(previously reported as Total Petroleum Hydrocarbons as Gasoline)

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

<x = Not detected at detection limit of x

NA = Not analyzed or not available

(DUP) = Duplicate sample

Notes:

(a) = Concentration reported as diesel is primary due to the presence of a lighter petroleum product, possible gasoline or kerosene.

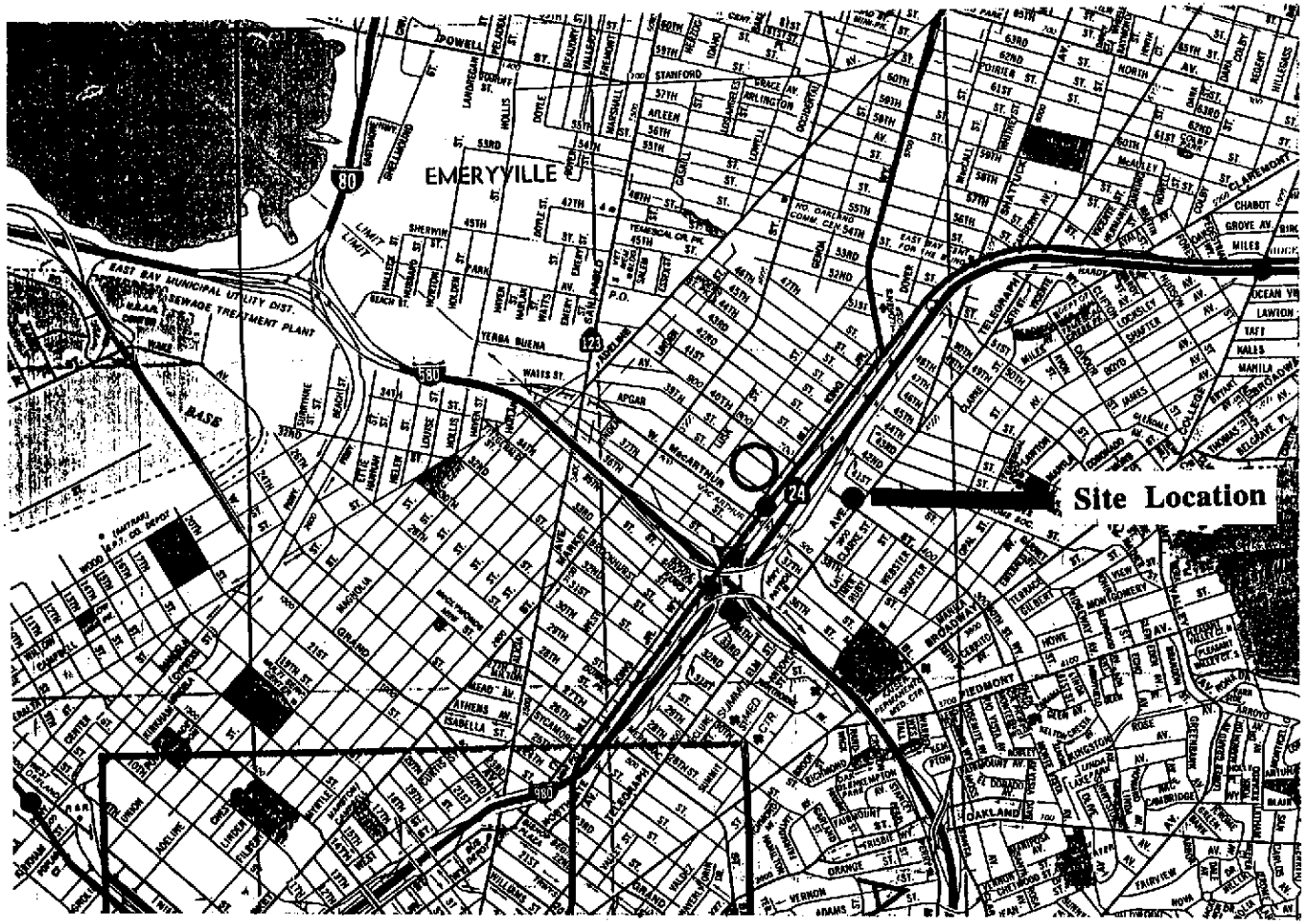
(b) = Concentration reported as gasoline is primarily due to the presence of discrete hydrocarbon peaks not indicative of gasoline.

(c) = Compounds detected and calculated as gasoline do not match the standard gasoline chromatographic pattern.

(d) = The concentrations reported as diesel are primarily due to the presence of a lighter petroleum product of hydrocarbon, range C6-C12, possibly gasoline.

Elevations referenced to Mean Sea Level

Depth to water measured from top of casing



Note: Vicinity Map taken from California State AAA map.

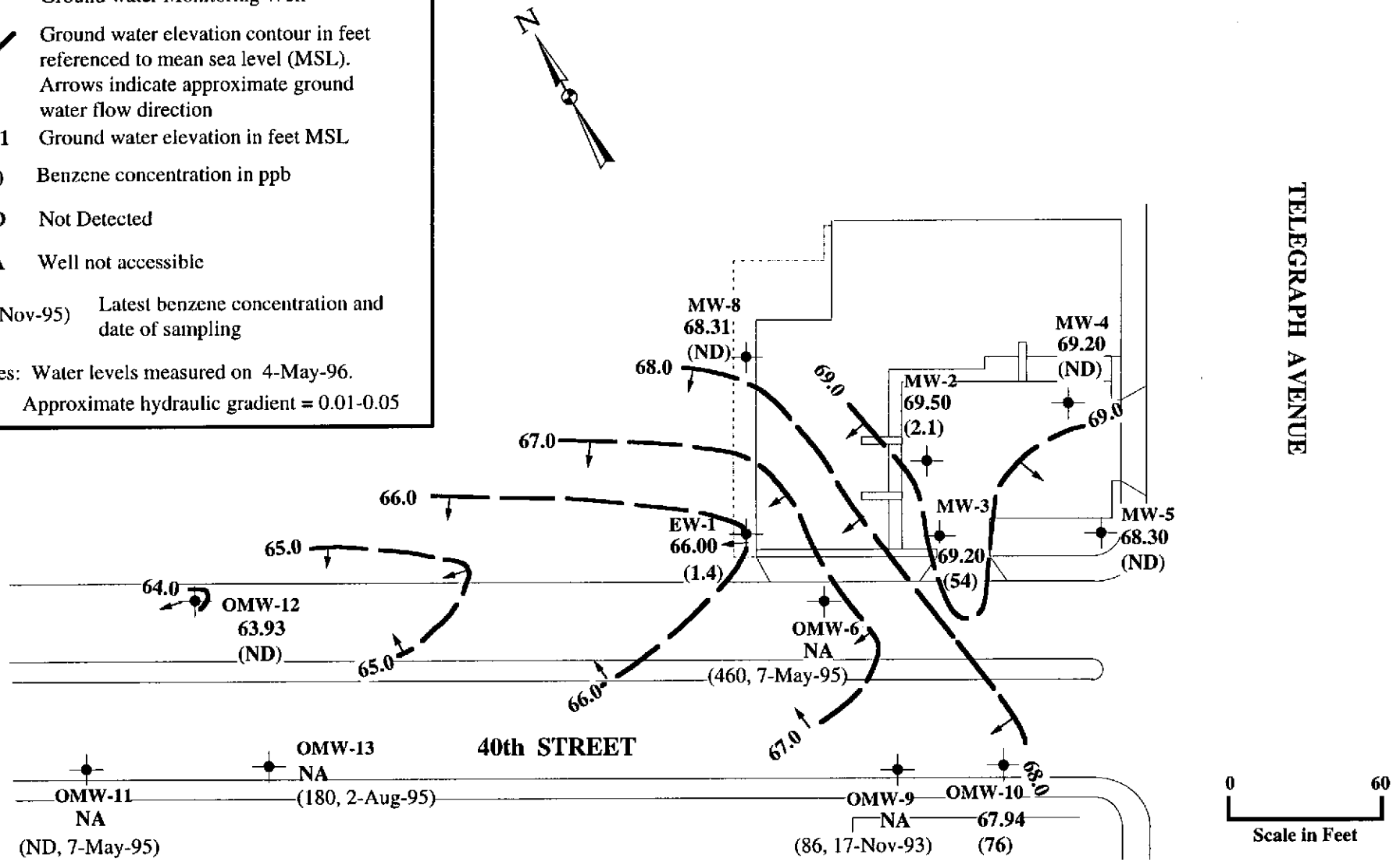
PLATE	SITE VICINITY MAP	enviros®
1	Former Shell Service Station 500 40th Avenue Oakland, California	95289

Drawn By: JLP Date: 5-15-95 Approved By: CJG Date: 7/15/96

EXPLANATION

- Ground water Monitoring Well
- Ground water elevation contour in feet referenced to mean sea level (MSL). Arrows indicate approximate ground water flow direction
- **68.11** Ground water elevation in feet MSL
- **(1.4)** Benzene concentration in ppb
- **ND** Not Detected
- **NA** Well not accessible
- (12, 2-Nov-95) Latest benzene concentration and date of sampling

Notes: Water levels measured on 4-May-96.
Approximate hydraulic gradient = 0.01-0.05



Base map taken from Weiss Associates Site Map.

PLATE **2**

GROUND WATER CONTOUR/BENZENE CONCENTRATION MAP
Former Shell Service Station
500 40th Avenue
Oakland, California

enviros ®
96289

Drawn By: CJG Date: 7-May-96

Approved By: CJG Date: 7/15/96

Appendix A

Blaine Tech Services Inc.
Quarterly Ground Water Monitoring Report

BLAINE
TECH SERVICES INC.

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

May 22, 1996

RECEIVED
JUN 06 1996

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

Attn: R. Jeff Granberry

Shell WIC #204-5508-4903
500 40th/Telegraph
Oakland, California

2nd Quarter 1996

Quarterly Groundwater Monitoring Report 960504-K-2

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: Enviros, Inc.
P.O. Box 259
Sonoma, CA 95476-0259
Attn: Joe Neely

(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)
EW-1	5/4/96	TOC	--	NONE	--	--	12.26	38.48
MW-2	5/4/96	TOC	--	NONE	--	--	11.30	19.45
MW-3	5/4/96	TOC	ODOR	NONE	--	--	10.40	18.63
MW-4	5/4/96	TOC	--	NONE	--	--	11.80	14.83
MW-5	5/4/96	TOC	--	NONE	--	--	13.20	20.08
OMW-6	5/4/96	INACCESSIBLE						
MW-8	5/4/96	TOC	--	NONE	--	--	11.66	38.80
OMW-9	5/4/96	INACCESSIBLE						
OMW-10 *	5/4/96	TOC	ODOR	NONE	--	--	9.97	16.02
OMW-11	5/4/96	INACCESSIBLE						
OMW-12	5/4/96	TOC	--	NONE	--	--	11.72	19.44
OMW-13	5/4/96	INACCESSIBLE						

* Sample DUP was a duplicate sample taken from well OMW-10.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 960504-K2

Date: 5/4/96

Page 1 of 2

Site Address: 500 40th/ Telegraph , Oakland

WIC#: 204-5508-4903

Shell Engineer: R. Jeff Granberry ~~Lynn Walker~~

Phone No.: (510) 675-6169
Fax #: 675-6172

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: KCB

Printed Name: Keith Brown

Analysis Required

LAB: Seq

CHECK ONE (1) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring [X]	5461	24 hours [ ]
Site Investigation [ ]	5441	48 hours [ ]
Soil Classify/Disposal [ ]	5442	15 days [X] (Normal)
Water Classify/Disposal [ ]	5443	Other [ ]
Soil/Air Rem. or Sys. O & M [ ]	5452	NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.
Water Rem. or Sys. O & M [ ]	5453	
Other [ ]		

9605415

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MTBE		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1 EW1	5/4			X		3						X	X							
2 MW2	↓			↓		↓						X	X							
3 MW3												X	X							
4 MW4												X	X							
5 MW5												X	X							
6 MW8												X	X							
7 OMW10												X	X							
8 OMW12	↓			↓		↓						X	X							

Relinquished By (signature):	Printed Name:	Date / Time	Received (signature):	Printed Name:	Date / Time
[signature]	Keith Brown	Date: 5-6-96 Time: 1120	[signature]	M. Hall	Date: 5-6-96 Time: 1120
[signature]		Date: 5-6-96 Time: 12:45	[signature]	Scot Ross	Date: 5-7-96 Time: 1157
		Date: Time:			Date: Time:

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

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 960504-102

Date: 5/4
Page 2 of 2

Site Address: 500 40th/ Telegraph , Oakland

WIC#: 204-5508-4903

Shell Engineer: R. Jeff Granberg ~~Lynn Walker~~ Phone No.: (510) 675-6169 Fax #: 675-6172

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: KCB

Printed Name: Keith Brown

LAB: Sey

Analysis Required

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	MTBE		Asbestos	Container Size	Preparation Used	Composite Y/N	9605415 MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
9 DUP	5/4			W		3						X	X							Lab 5 12 4
10 EB	5/4			W		3						X	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 Syst. O & M [ ] 6462
- Water Rem. or Syst. O & M [ ] 6463
- Other [ ]

TURN AROUND TIME

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

NOTE: Notify Lab as soon as Possible of 24/48 hr. TAT.

Relinquished By (signature):	Printed Name: Keith Brown	Date: 5-6-96 Time: 1120	Received (signature):	Printed Name: M. Herd	Date: 5-6-96 Time: 1120
Relinquished By (signature):	Printed Name:	Date: 5-6-96 Time: 12:45	Received (signature):	Printed Name: Scott Ross	Date: 5-7-96 Time: 1147
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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Project: Shell Oakland 960504-K2

Enclosed are the results from samples received at Sequoia Analytical on May 7, 1996. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE COLLECTED	TEST METHOD
9605415 -01	LIQUID, EW1	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -02	LIQUID, MW2	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -03	LIQUID, MW3	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -04	LIQUID, MW4	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -05	LIQUID, MW5	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -06	LIQUID, MW8	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -07	LIQUID, OMW10	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -08	LIQUID, OMW12	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -09	LIQUID, DUP	05/04/96	TPGBMW Purgeable TPH/BTEX
9605415 -10	LIQUID, EB	05/04/96	TPGBMW Purgeable TPH/BTEX

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: EW1	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/10/96
Attention: Jim Keller	Lab Number: 9605415-01	Reported: 05/15/96

QC Batch Number: GC051096BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**4.1**
Benzene	**0.50**	**1.4**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: MW2	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/09/96
Attention: Jim Keller	Lab Number: 9605415-02	Reported: 05/15/96

QC Batch Number: GC050996BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**140**
Methyl t-Butyl Ether	**2.5**	**6.2**
Benzene	**0.50**	**2.1**
Toluene	0.50	N.D.
Ethyl Benzene	**0.50**	**4.6**
Xylenes (Total)	**0.50**	**4.9**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: MW3	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/09/96
Attention: Jim Keller	Lab Number: 9605415-03	Reported: 05/15/96

QC Batch Number: GC050996BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	460
Methyl t-Butyl Ether	2.5	20
Benzene	0.50	54
Toluene	0.50	1.9
Ethyl Benzene	0.50	18
Xylenes (Total)	0.50	28
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: MW4	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/09/96
Attention: Jim Keller	Lab Number: 9605415-04	Reported: 05/15/96

QC Batch Number: GC050996BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	85

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: MW5	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/09/96
Attention: Jim Keller	Lab Number: 9605415-05	Reported: 05/15/96

QC Batch Number: GC050996BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: MW8	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/09/96
Attention: Jim Keller	Lab Number: 9605415-06	Reported: 05/15/96

QC Batch Number: GC050996BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	87

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: OMW10	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/09/96
Attention: Jim Keller	Lab Number: 9605415-07	Reported: 05/15/96

QC Batch Number: GC050996BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit 130	Sample Results 130
TPPH as Gas	50	1100
Methyl t-Butyl Ether	2.5	57
Benzene	0.50	76
Toluene	0.50	16
Ethyl Benzene	0.50	7.4
Xylenes (Total)	0.50	32
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	115

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: OMW12	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/09/96
Attention: Jim Keller	Lab Number: 9605415-08	Reported: 05/15/96

QC Batch Number: GC050996BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**61**
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**C7-C8**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: DUP	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/09/96
Attention: Jim Keller	Lab Number: 9605415-09	Reported: 05/15/96

QC Batch Number: GC050996BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	700
Methyl t-Butyl Ether	2.5	21
Benzene	0.50	63
Toluene	0.50	13
Ethyl Benzene	0.50	6.4
Xylenes (Total)	0.50	25
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Sampled: 05/04/96
985 Timothy Drive	Sample Descript: EB	Received: 05/07/96
San Jose, CA 95133	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/10/96
Attention: Jim Keller	Lab Number: 9605415-10	Reported: 05/15/96

QC Batch Number: GC051096BTEX03A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**2.9**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Technical Services	Client Proj. ID: Shell Oakland 960504-K2	Received: 05/07/96
985 Timothy Drive		
San Jose, CA 95133	Lab Proj. ID: 9605415	Reported: 05/15/96
Attention: Jim Keller		

LABORATORY NARRATIVE

Please Note:

The MTBE result for sample ID EB was confirmed by EPA method 8020 on a second instrument.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Client Project ID: Shell, Oakland/ 960504-K2
Matrix: Liquid
Work Order #: 9605415 -01

Reported: May 15, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC051096BTEX02A	GC051096BTEX02A	GC051096BTEX02A	GC051096BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	960506701	960506701	960506701	960506701
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/10/96	5/10/96	5/10/96	5/10/96
Analyzed Date:	5/10/96	5/10/96	5/10/96	5/10/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.8	9.9	10	30
MS % Recovery:	98	99	100	100
Dup. Result:	10	10	10	30
MSD % Recov.:	103	102	103	100
RPD:	5.0	3.0	3.0	0.30
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK051096	BLK051096	BLK051096	BLK051096
Prepared Date:	5/10/96	5/10/96	5/10/96	5/10/96
Analyzed Date:	5/10/96	5/10/96	5/10/96	5/10/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	11	31
LCS % Recov.:	100	104	108	104
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Reggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Client Project ID: Shell, Oakland / 960504-K2
Matrix: Liquid
Work Order #: 9605415-02-07

Reported: May 15, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC050996BTEX21A	GC050996BTEX21A	GC050996BTEX21A	GC050996BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9604K8702	9604K8702	9604K8702	9604K8702
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/9/96	5/9/96	5/9/96	5/9/96
Analyzed Date:	5/9/96	5/9/96	5/9/96	5/9/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	8.5	8.9	8.7	27
MS % Recovery:	85	89	87	90
Dup. Result:	10	11	11	33
MSD % Recov.:	100	110	110	110
RPD:	16	21	23	20
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK050996	BLK050996	BLK050996	BLK050996
Prepared Date:	5/9/96	5/9/96	5/9/96	5/9/96
Analyzed Date:	5/9/96	5/9/96	5/9/96	5/9/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	10	9.5	29
LCS % Recov.:	110	100	95	97
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Client Project ID: Shell, Oakland / 960504-K2
Matrix: Liquid
Work Order #: 9605415-08-09

Reported: May 15, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC050996BTEX20A	GC050996BTEX20A	GC050996BTEX20A	GC050996BTEX20A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9604K8702	9604K8702	9604K8702	9604K8702
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/9/96	5/9/96	5/9/96	5/9/96
Analyzed Date:	5/9/96	5/9/96	5/9/96	5/9/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.8	10	9.9	30
MS % Recovery:	98	100	99	100
Dup. Result:	9.7	10	10	30
MSD % Recov.:	97	100	100	100
RPD:	1.0	0.0	1.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25
LCS #:	BLK050996	BLK050996	BLK050996	BLK050996
Prepared Date:	5/9/96	5/9/96	5/9/96	5/9/96
Analyzed Date:	5/9/96	5/9/96	5/9/96	5/9/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	30
LCS % Recov.:	100	100	100	100
MS/MSD Control Limits	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Jim Keller

Client Project ID: Shell, Oakland/ 960504-K2
Matrix: Liquid
Work Order #: 9605415-10

Reported: May 15, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC051096BTEX03A	GC051096BTEX03A	GC051096BTEX03A	GC051096BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	960506701	960506701	960506701	960506701
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/10/96	5/10/96	5/10/96	5/10/96
Analyzed Date:	5/10/96	5/10/96	5/10/96	5/10/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	10	9.9	9.7	30
MS % Recovery:	100	99	97	99
Dup. Result:	9.7	9.7	9.9	30
MSD % Recov.:	97	97	99	100
RPD:	3.0	2.0	2.0	0.70
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK051096	BLK051096	BLK051096	BLK051096
Prepared Date:	5/10/96	5/10/96	5/10/96	5/10/96
Analyzed Date:	5/10/96	5/10/96	5/10/96	5/10/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	31
LCS % Recov.:	101	102	101	102

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130
Control Limits				

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference