

ENVIRONMENTAL
PROTECTION

JAN 16 3:58
January 15, 1997

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

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

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 fourth quarter of 1996 are summarized below:

- Blaine Tech Services Inc. (Blaine) of San Jose, measured ground water levels in and collected samples from Wells EW-1, MW-2 through MW-5, MW-8, OMW-10, OMW-12 and OMW-13 on November 24, 1996. An equipment blank and duplicate sample were also collected for quality control purposes. 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 is generally southwest at an approximate hydraulic gradient of 0.025.

Fourth Quarter Sampling

Wells EW-1, MW-2 through MW-5, MW-8, OMW-10, OMW-12 and OMW-13 were sampled and analyzed for Total Purgeable Petroleum Hydrocarbons quantitated 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. Well OMW-13 was also analyzed for Total Extractable Petroleum Hydrocarbons quantitated as Diesel (TEPH) according to EPA Method 8015 (Modified).

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.

Jeffrey L. Peterson

Jeffrey L. Peterson
Hydrogeologist

Diane M. Lundquist

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)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
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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	
07-Sep-96	13.43	64.83	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Nov-96	12.24	66.02	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	

EW-1 (DUP)											
11-Feb-93	NA	NA	NA	63	NA	<0.5	<0.5	<0.5	0.8	NA	

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**WELL CONCENTRATIONS
Shell Oil Products Company
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Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
17-Nov-93	NA	NA	NA	190	NA	17	<0.5	<0.5	<0.5	NA	
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	
07-Sep-96	15.10	65.70	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Nov-96	12.13	68.67	0.00	620	NA	9.7	<0.50	2.0	46	<2.5	

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Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
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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	
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	

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Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
04-May-96	10.40	69.20	0.00	460	NA	54	1.9	18	28	20	
07-Sep-96	13.55	66.05	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Nov-96	11.83	67.77	0.00	2800	NA	290	<10	29	39	<50	
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	

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Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
04-May-96	11.80	69.20	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	
07-Sep-96	13.27	67.73	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Nov-96	12.42	68.58	0.00	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	

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	
07-Sep-96	14.24	67.26	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Nov-96	13.58	67.92	0.00	<50	NA	<0.50	<0.5	<0.50	<0.50	<2.5	

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Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
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MW-5 (DUP)											
19-May-93	NA	NA	NA	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	

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
07-Sep-96	14.45	63.45	0	NA	NA	NA	NA	NA	NA	NA	
24-Nov-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible

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500 40th Avenue
Oakland, California
WIC #204-5508-4903**

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
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OMW-6 (DUP)											
07-May-95	NA	NA	NA	14000	NA	480	61	230	370	NA	

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	

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Oakland, California
WIC #204-5508-4903**

Sample Date	Measured GW Depth (ft)	Corrected GW Elev (ft)	SP (ft)	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
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	
07-Sep-96	9.84	70.07	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Nov-96	11.53	68.38	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
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

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)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
04-May-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
07-Sep-98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well inaccessible
24-Nov-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessilbe
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	
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

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)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
04-May-96	9.97	67.94	0.00	1100	NA	76	16	7.4	32	57	
07-Sep-96	13.00	64.91	0.00	NA	NA	NA	NA	NA	NA	NA	
24-Nov-96	12.56	65.35	0.00	540	NA	13	2.7	1.3	1.7	16	
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	
24-Nov-96	NA	NA	NA	490	NA	25	<2.0	<2.0	<2.0	66	
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	
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	

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)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
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
7-Sep-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
24-Nov-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	
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	

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)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
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
7-Sep-96	12.65	63.00	0.00	66	NA	<0.50	<0.50	<0.50	<0.50	<2.5	
24-Nov-96	11.54	64.11	0.00	70	NA	<0.50	<0.50	<0.50	<0.50	<2.5	
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
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	

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)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	Comments
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
7-Sep-96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Well Inaccessible
24-Nov-96	12.35	64.01	0	15000	7700	50	<20	74	60	<100	

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

BTEX = benzene, toluene, methylbenzene, xylenes by EPA Method 8020

MTBE = methyl-tertiary-butyl ether by EPA Method 8020.

<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.

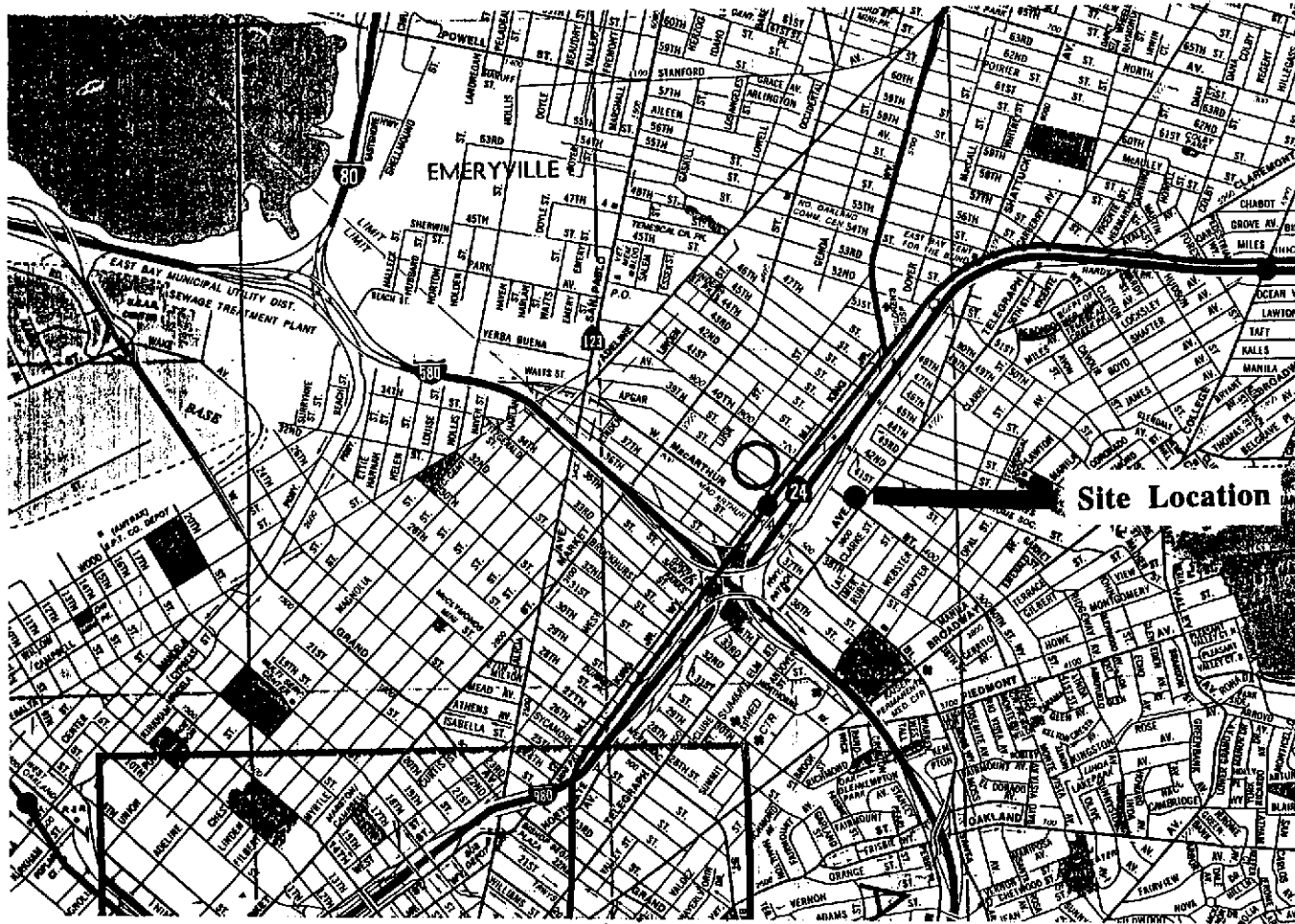
(b) = Concentration reported as gasoline is primarily due to the presence of discrete hydrocarbon peaks not indicative of gasoline.

(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

1

SITE VICINITY MAP
 Former Shell Service Station
 500 40th Avenue
 Oakland, California

enviros[®]
 95289

Drawn By: JLP

Date: 5-15-95

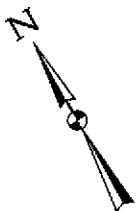
Approved By: *JLP*

Date: 1-15-97

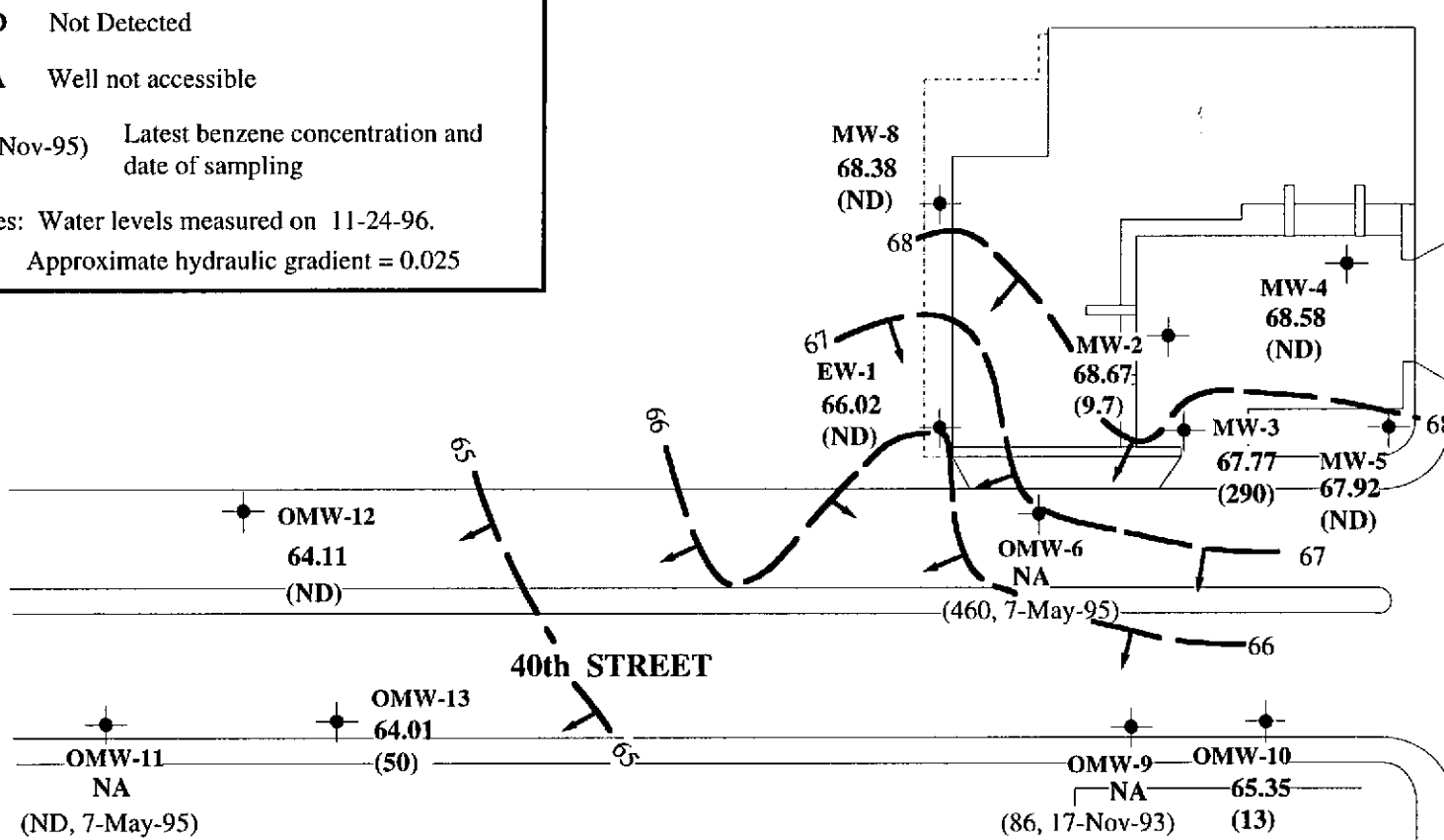
EXPLANATION

- ◆ Ground water Monitoring Well
- Ground water elevation contour in feet referenced to mean sea level (MSL). Arrows indicate approximate ground water flow direction
- 66.02 Ground water elevation in feet MSL
- (50) 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 11-24-96.
Approximate hydraulic gradient = 0.025



TELEGRAPH AVENUE



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: JLP

Date: 1-6-97

Approved By: *JLP*

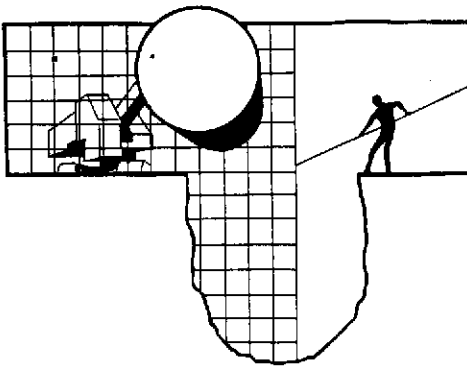
Date: 1-15-97

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



December 16, 1996

RECEIVED
DEC 18 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

4th Quarter 1996

Quarterly Groundwater Monitoring Report 961124-K-1

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	11/24/96	TOC	--	NONE	--	--	12.24	38.23
MW-2	11/24/96	TOC	--	NONE	--	--	12.13	19.42
MW-3	11/24/96	TOC	ODOR	NONE	--	--	11.83	18.67
MW-4	11/24/96	TOC	--	NONE	--	--	12.42	14.86
MW-5	11/24/96	TOC	--	NONE	--	--	13.58	20.13
OMW-6	11/24/96	INACCESSIBLE						
MW-8	11/24/96	TOC	--	NONE	--	--	11.53	38.61
OMW-9	11/24/96	INACCESSIBLE						
OMW-10 *	11/24/96	TOC	ODOR	NONE	--	--	12.56	15.90
OMW-11	11/24/96	INACCESSIBLE						
OMW-12	11/24/96	TOC	--	NONE	--	--	11.54	19.57
OMW-13	11/24/96	TOC	SHEEN/ODOR	--	--	--	12.35	21.20

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



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 781124-161

Date: 11/24/96
Page 1 of 2

Silo Address: 500 40th/ Telegraph, Oakland

WIC#: 204-5508-4903

Shell Engineer: R. Jeff Granberry Phone No.: (510) 675-6168
Fax #: 675-6172

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

Consultant Contact: Fran Thie Phone No.: (408) 995-5535
Fax #: 293-8773

Comments:

Sampled by: KCB
Printed Name: Keith Brown

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.
1 EW1	11/24			X		3
2 MW2						
3 MW3						
4 MW4						
5 MW5						
6 MW8						
7 OMW10						
8 OMW12						

Analysis Required									
TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N

LAB: Sequin

CHECK ONE (1) BOX ONLY	CI/DI	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Cleanup/Disposal <input type="checkbox"/>	6442	15 days <input checked="" type="checkbox"/> (Normal)
Water Cleanup/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. or Sys. O & M <input type="checkbox"/>	6462	
Water Rem. or Sys. O & M <input type="checkbox"/>	6463	
Other <input type="checkbox"/>		

NOTE: Holly Lab as soon as possible of 24/48 hr. TAT.

MATERIAL DESCRIPTION	9611616 SAMPLE CONDITION/COMMENTS

Relinquished By (Signature): <u>[Signature]</u>	Printed Name: <u>Keith Brown</u>	Date: <u>11/28/96</u>	Time: <u>10:43</u>	Received (Signature): <u>[Signature]</u>	Printed Name: <u>F. H. H. C. V.</u>	Date: <u>11/28/96</u>	Time: <u>10:45</u>
Relinquished By (Signature): <u>[Signature]</u>	Printed Name:	Date: <u>11/28/96</u>	Time:	Received (Signature): <u>[Signature]</u>	Printed Name:	Date:	Time:
Relinquished By (Signature): <u>[Signature]</u>	Printed Name:	Date:	Time:	Received (Signature): <u>[Signature]</u>	Printed Name: <u>P-UE</u>	Date: <u>11/28/96</u>	Time: <u>10:42</u>

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: 961724-161

Date: 11/24/96

Page 2 of 2

Site Address: 500 40th/ Telegraph, Oakland

WIC#: 204-5508-4903

Shell Engineer: R. Jeff Granberry Phone No.: (510) 675-6168
Fax #: 675-6172

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

Consultant Contact: Fran Thie Phone No.: (408) 995-5535
Fax #: 293-8773

Comments:

Sampled by: KCSB
Printed Name: Keith Brown

Analysis Required

LAB: Squibb

CHECK ONE (1) BOX ONLY	CT/DI	TURN AROUND TIME
Quarterly Monitoring <input checked="" type="checkbox"/>	6441	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	6441	48 hours <input type="checkbox"/>
Soil Clarity/Disposal <input type="checkbox"/>	6442	16 days <input checked="" type="checkbox"/> (Normal)
Water Clarity/Disposal <input type="checkbox"/>	6443	Other <input type="checkbox"/>
Soil/Air Rem. of Sys. O & M <input type="checkbox"/>	6452	
Water Rem. of Sys. O & M <input type="checkbox"/>	6453	
Other <input type="checkbox"/>		

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

9/6/11/6/16

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020	Asbestos	Container Size	Preparation Used	Composite Y/N
	X				X				
					X				
					X				

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	MATERIAL DESCRIPTION		SAMPLE CONDITION/ COMMENTS	
9 <u>ORW13</u>	<u>11/24</u>			<u>W</u>		<u>5</u>				
10 <u>DUP</u>	<u>↓</u>			<u>↓</u>		<u>3</u>				
11 <u>EB</u>	<u>↓</u>			<u>↓</u>		<u>3</u>				

Relinquished By (signature): <u>[Signature]</u>	Printed Name: <u>Keith Brown</u>	Date: <u>11/25/96</u>	Time: <u>10:45</u>	Received (signature): <u>[Signature]</u>	Printed Name: <u>FUTCHER</u>	Date: <u>11/25/96</u>	Time: <u>10:45</u>
Relinquished By (signature): <u>[Signature]</u>	Printed Name:	Date:	Time:	Received (signature): <u>[Signature]</u>	Printed Name:	Date:	Time:
Relinquished By (signature): <u>[Signature]</u>	Printed Name:	Date:	Time:	Received (signature): <u>[Signature]</u>	Printed Name: <u>P. LE</u>	Date: <u>11-25-96</u>	Time: <u>12:02</u>

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



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834

(415) 364-9600
(510) 988-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 988-9673
FAX (916) 921-0100

Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Project: Shell Oakland/961124-K1

Enclosed are the results from samples received at Sequoia Analytical on November 25, 1996.
The requested analyses are listed below:

<u>SAMPLE #</u>	<u>SAMPLE DESCRIPTION</u>	<u>DATE COLLECTED</u>	<u>TEST METHOD</u>
9611G16 -01	LIQUID, EW1	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -02	LIQUID, MW2	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -03	LIQUID, MW3	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -04	LIQUID, MW4	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -05	LIQUID, MW5	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -06	LIQUID, MW8	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -07	LIQUID, OMW10	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -08	LIQUID, OMW12	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -09	LIQUID, OMW13	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -09	LIQUID, OMW13	11/24/96	TPHD_W Extractable TPH
9611G16 -10	LIQUID, DUP	11/24/96	TPGBMW Purgeable TPH/BTEX
9611G16 -11	LIQUID, EB	11/24/96	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





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: EW1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-01	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/04/96 Reported: 12/09/96
--	---	---


QC Batch Number: GC120496BTEX07A
Instrument ID: GCHO07

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	107

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: MW2 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-02	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/03/96 Reported: 12/09/96
--	---	---

QC Batch Number: GC120396BTEX20A
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	620
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	9.7
Toluene	0.50	N.D.
Ethyl Benzene	0.50	2.0
Xylenes (Total)	0.50	46
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	90

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: MW3 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-03	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/03/96 Reported: 12/09/96
--	---	---

QC Batch Number: GC120396BTEX20A
Instrument ID: GCHP20

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	1000	2800
Methyl t-Butyl Ether	50	N.D.
Benzene	10	290
Toluene	10	N.D.
Ethyl Benzene	10	29
Xylenes (Total)	10	39
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	80

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: MW4 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-04	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/03/96 Reported: 12/09/96
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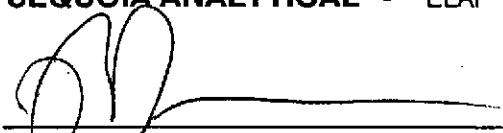
QC Batch Number: GC120396BTEX20A
Instrument ID: GCHP20

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	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	83

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

SEQUOIA ANALYTICAL - ELAP #1210



Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: MW5 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-05	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/03/96 Reported: 12/09/96
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QC Batch Number: GC120396BTEX20A
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	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	78

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Renner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: MW8 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-06	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/03/96 Reported: 12/09/96
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QC Batch Number: GC120296BTEX03B
Instrument ID: GCHP3

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	93

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: OMW10 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-07	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/04/96 Reported: 12/09/96
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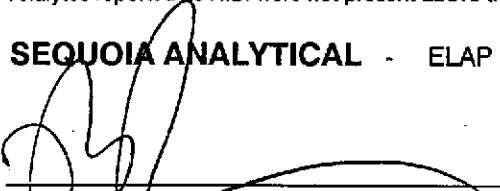
QC Batch Number: GC120596BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	540
Methyl t-Butyl Ether	2.5	16
Benzene	0.50	13
Toluene	0.50	2.7
Ethyl Benzene	0.50	1.3
Xylenes (Total)	0.50	1.7
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	316 Q

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: OMW12 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-08	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/03/96 Reported: 12/09/96
--	---	---

QC Batch Number: GC120396BTEX20A
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	70
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:		C6-C8
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	78

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services	Client Proj. ID: Shell Oakland/961124-K1	Sampled: 11/24/96
985 Timothy Drive	Sample Descript: OMW13	Received: 11/25/96
San Jose, CA 95133	Matrix: LIQUID	
Attention: Fran Thie	Analysis Method: 8015Mod/8020	Analyzed: 12/05/96
	Lab Number: 9611G16-09	Reported: 12/09/96

QC Batch Number: GC120596BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	2000	15000
Methyl t-Butyl Ether	100	N.D.
Benzene	20	50
Toluene	20	N.D.
Ethyl Benzene	20	74
Xylenes (Total)	20	60
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	99

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: OMW13 Matrix: LIQUID Analysis Method: EPA 8015 Mod Lab Number: 9611G16-09	Sampled: 11/24/96 Received: 11/25/96 Extracted: 12/04/96 Analyzed: 12/08/96 Reported: 12/09/96
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QC Batch Number: GC1204960HBPEXD
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	200	7700 C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50 150	% Recovery 128

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

SEQUOIA ANALYTICAL - ELAP #1210



Peggy Penner
Project Manager





Blaine Technical Services 985 Timothy Drive San Jose, CA 95133 Attention: Fran Thie	Client Proj. ID: Shell Oakland/961124-K1 Sample Descript: DUP Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9611G16-10	Sampled: 11/24/96 Received: 11/25/96 Analyzed: 12/05/96 Reported: 12/09/96
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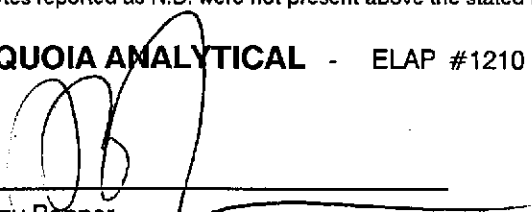
QC Batch Number: GC120596BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	200	490
Methyl t-Butyl Ether	10	66
Benzene	2.0	25
Toluene	2.0	N.D.
Ethyl Benzene	2.0	N.D.
Xylenes (Total)	2.0	N.D.
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	122

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Penner
Project Manager





Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133

Client Proj. ID: Shell Oakland/961124-K1
Sample Descript: EB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9611G16-11

Sampled: 11/24/96
Received: 11/25/96
Analyzed: 12/03/96
Reported: 12/09/96

QC Batch Number: GC120396BTEX20A
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	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	78

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

SEQUOIA ANALYTICAL - ELAP #1210


Peggy Renner
Project Manager





Blaine Technical Services
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Proj. ID: Shell Oakland/961124-K1

Received: 11/25/96

Lab Proj. ID: 9611G16

Reported: 12/09/96

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 22 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager





Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell, Oakland / 961124-K1
Matrix: Liquid

Work Order #: 9611G16 -01

Reported: Dec 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120496BTEX07A	GC120496BTEX07A	GC120496BTEX07A	GC120496BTEX07A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9611E4803	9611E4803	9611E4803	9611E4803
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/4/96	12/4/96	12/4/96	12/4/96
Analyzed Date:	12/4/96	12/4/96	12/4/96	12/4/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	11	11	34
MS % Recovery:	110	110	110	113
Dup. Result:	11	11	11	33
MSD % Recov.:	110	110	110	110
RPD:	0.0	0.0	0.0	3.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120496	BLK120496	BLK120496	BLK120496
Prepared Date:	12/4/96	12/4/96	12/4/96	12/4/96
Analyzed Date:	12/4/96	12/4/96	12/4/96	12/4/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	11	11	11	33
LCS % Recov.:	110	110	110	110

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

9611G16.BLA <1>





Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell, Oakland / 961124-K1
Matrix: Liquid

Work Order #: 9611G16-02-05, 08, 11

Reported: Dec 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120396BTEX20A	GC120396BTEX20A	GC120396BTEX20A	GC120396BTEX20A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9611D7902	9611D7902	9611D7902	9611D7902
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/3/96	12/3/96	12/3/96	12/3/96
Analyzed Date:	12/3/96	12/3/96	12/3/96	12/3/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.6	9.2	8.8	27
MS % Recovery:	96	92	88	90
Dup. Result:	9.8	8.9	8.9	27
MSD % Recov.:	98	89	89	90
RPD:	2.1	3.3	1.1	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120396	BLK120396	BLK120396	BLK120396
Prepared Date:	12/3/96	12/3/96	12/3/96	12/3/96
Analyzed Date:	12/3/96	12/3/96	12/3/96	12/3/96
Instrument I.D.#:	GCHP20	GCHP20	GCHP20	GCHP20
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	8.9	8.4	8.4	25
LCS % Recov.:	89	84	84	83

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

9611G16.BLA <2>





Blaine Tech Services, Inc. Client Project ID: Shell, Oakland / 961124-K1
 985 Timothy Drive Matrix: Liquid
 San Jose, CA 95133
 Attention: Fran Thie Work Order #: 9611G16-06 Reported: Dec 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120296BTEX03B	GC120296BTEX03B	GC120296BTEX03B	GC120296BTEX03B
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9611D7902	9611D7902	9611D7902	9611D7902
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/2/96	12/2/96	12/2/96	12/2/96
Analyzed Date:	12/2/96	12/2/96	12/2/96	12/2/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	8.6	8.0	8.1	25
MS % Recovery:	86	80	81	83
Dup. Result:	9.1	8.5	8.6	27
MSD % Recov.:	91	85	86	90
RPD:	5.6	6.1	6.0	7.7
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120296	BLK120296	BLK120296	BLK120296
Prepared Date:	12/2/96	12/2/96	12/2/96	12/2/96
Analyzed Date:	12/2/96	12/2/96	12/2/96	12/2/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.7	9.2	9.2	29
LCS % Recov.:	97	92	92	97

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

9611G16.BLA <3>





Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell, Oakland / 961124-K1
Matrix: Liquid

Work Order #: 9611G16-07

Reported: Dec 10, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120496BTEX06A	GC120496BTEX06A	GC120496BTEX06A	GC120496BTEX06A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	A. Porter	A. Porter	A. Porter	A. Porter
MS/MSD #:	9611E4803	9611E4803	9611E4803	9611E4803
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/4/96	12/4/96	12/4/96	12/4/96
Analyzed Date:	12/4/96	12/4/96	12/4/96	12/4/96
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.5	9.4	9.1	28
MS % Recovery:	95	94	91	93
Dup. Result:	10	9.7	9.6	30
MSD % Recov.:	100	110	96	100
RPD:	5.1	3.1	5.3	6.9
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120496	BLK120496	BLK120496	BLK120496
Prepared Date:	12/4/96	12/4/96	12/4/96	12/4/96
Analyzed Date:	12/4/96	12/4/96	12/4/96	12/4/96
Instrument I.D.#:	GCHP6	GCHP6	GCHP6	GCHP6
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	9.4	9.3	8.9	28
LCS % Recov.:	94	93	89	93

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

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

9611G16.BLA <4>





Blaine Tech Services, Inc. Client Project ID: Shell, Oakland / 961124-K1
 985 Timothy Drive Matrix: Liquid
 San Jose, CA 95133 Work Order #: 9611G16-09-10 Reported: Dec 10, 1996
 Attention: Fran Thie

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC120596BTEX21A	GC120596BTEX21A	GC120596BTEX21A	GC120596BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:	9611G1504	9611G1504	9611G1504	9611G1504
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/5/96	12/5/96	12/5/96	12/5/96
Analyzed Date:	12/5/96	12/5/96	12/5/96	12/5/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	11	9.6	9.4	28
MS % Recovery:	110	96	94	93
Dup. Result:	10	9.1	9.1	28
MSD % Recov.:	100	91	91	93
RPD:	9.5	5.3	3.2	0.0
RPD Limit:	0-25	0-25	0-25	0-25

LCS #:	BLK120596	BLK120596	BLK120596	BLK120596
Prepared Date:	12/5/96	12/5/96	12/5/96	12/5/96
Analyzed Date:	12/5/96	12/5/96	12/5/96	12/5/96
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	9.6	9.6	29
LCS % Recov.:	100	96	96	97

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.





Blaine Tech Services, Inc.
985 Timothy Drive
San Jose, CA 95133
Attention: Fran Thie

Client Project ID: Shell, Oakland / 961124-K1
Matrix: Liquid

Work Order #: 9611G16-09

Reported: Dec 10, 1996

QUALITY CONTROL DATA REPORT

Analyte: Diesel

QC Batch#: GC1204960HBPEXD
Analy. Method: EPA 8015M
Prep. Method: EPA 3510

Analyst: J. Minkel
MS/MSD #: 961112909
Sample Conc.: N.D.
Prepared Date: 12/4/96
Analyzed Date: 12/5/96
Instrument I.D.#: GCHP5
Conc. Spiked: 1000 µg/L

Result: 1200
MS % Recovery: 120

Dup. Result: 1300
MSD % Recov.: 130

RPD: 8.0
RPD Limit: 0-50

LCS #: BLK120496

Prepared Date: 12/4/96
Analyzed Date: 12/5/96
Instrument I.D.#: GCHP5
Conc. Spiked: 1000 µg/L

LCS Result: 1100
LCS % Recov.: 110

MS/MSD 50-150
LCS 60-140
Control Limits

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:

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

9611G16.BLA <6>

