enviros®

July 12, 1995

Mr. Lynn Walker
Shell Oil Company
P.O. Box 4023
Concord, California 94524

RE: **Quarterly Monitoring Report - Second Quarter 1995**
Former Shell Service Station
500 40th Avenue
Oakland, California
WIC #204-5508-4903

Dear Mr. Walker:

This Quarterly Monitoring Report describes the recently completed activities associated with groundwater monitoring and sampling at the referenced site (Plate 1). 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

Groundwater monitoring and sampling for the second quarter of 1995 are summarized below:

- Blaine Tech Services Inc. (Blaine Tech) of San Jose, measured groundwater levels and collected groundwater samples from Wells EW-1, MW-2 through MW-6, MW-8, and MW-10 through MW-12 on May 7, 1995. Monitoring Wells MW-9 and MW-13 were inaccessible due to parked cars over the wells. The samples were transported to National Environmental Testing, Inc. (NET) of Santa Rosa, California for chemical analysis.

- Groundwater level measurement data were evaluated and used to prepare a groundwater contour map (Plate 3). Groundwater flow is primarily to the southwest, with some localized variations. The hydraulic gradient was calculated to be 0.03.

Second Quarter Sampling

Wells EW-1, MW-2 through MW-6, MW-8, and MW-10 through MW-12 were sampled and analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-G) according to EPA Method 8015 (Modified) and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) according to EPA Method 8020. The sample collected from Well MW-11 was also analyzed for TPH as Diesel (TPH-D) according to EPA Method 3510/8015 (Modified).

Additionally, a trip blank, and a rinsate blank were prepared and analyzed for quality control purposes.

Field monitoring data are summarized in Table 2. The second quarter 1995 chemical analytical data for TPH-G, TPH-D, and BTEX have been included in the Historical Groundwater Quality Database (Table 3). A benzene concentration map is presented as Plate 4. The Blaine Tech Second Quarter 1995 Groundwater Monitoring Data Report is presented in Appendix A.

Quarterly monitoring, sampling, and reporting will continue on the established schedule for the next quarter.

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

Sincerely,

Enviros, Inc.

Joe Neely
Project Geologist

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

Attachments

Table 1. Field Monitoring Data
Table 2. Historical Groundwater Quality Database

Plate 1. Vicinity Map
Plate 2. Site Plan
Plate 3. Groundwater Contour Map
Plate 4. Benzene Concentration Map

Appendix A

Blaine Tech Services Inc. - Quarterly Groundwater Sampling Report
Chain-of-Custody Document
NET Chemical Analytical Report

cc: Mr. Brian Oliva, Alameda County Health Care Services, Environmental Protection Division

TABLE 1

FIELD MONITORING DATA

SHELL SERVICE STATION
500 40TH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-4903

WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
EW-1	6-Aug-91	6.0	78.26	---		---
	30-Oct-91			12.72		65.54
	18-Mar-92			11.71		66.55
	20-May-92			12.84		65.42
	19-Aug-92			13.04		65.22
	18-Nov-92			12.90		65.36
	11-Feb-93			11.28		66.98
	19-May-93			12.52		65.74
	18-Aug-93			12.48		65.78
	17-Nov-93			12.63		65.63
	18-Feb-94			11.38		66.88
	26-May-94			12.02		66.24
	29-Aug-94			12.76		65.50
	11-Nov-94			11.08		67.18
	3-Feb-95			10.88		67.38
	7-May-95			11.32		66.94
MW-2	6-Aug-91	4.0	80.80	12.12		68.68
	30-Oct-91			11.70		69.10
	18-Mar-92			11.10		69.70
	20-May-92			12.12		68.68
	19-Aug-92			12.18		68.62
	18-Nov-92			12.03		68.77
	11-Feb-93			11.15		69.65
	19-May-93			11.80		69.00
	18-Aug-93			a---		---
	17-Nov-93			12.00		68.80
	18-Feb-94			a---		---
	26-May-94			11.61		69.19
	29-Aug-94			11.96		68.84
	11-Nov-94			10.74		70.06
	3-Feb-95			11.58		69.22
	7-May-95			10.98		69.82
MW-3	6-Aug-91	4.0	79.60	11.12		68.48
	30-Oct-91			10.93		68.67
	18-Mar-92			10.54		69.06
	20-May-92			10.79		68.81
	19-Aug-92			11.23		68.37
	18-Nov-92			11.20		68.40
	11-Feb-93			11.00		68.60

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WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-3 (cont.)	19-May-93			11.16		68.44
	18-Aug-93			11.35		68.25
	17-Nov-93			11.10		68.50
	18-Feb-94			10.76		68.84
	26-May-94			11.85		67.75
	29-Aug-94			10.40		69.20
	11-Nov-94			10.04		69.56
	3-Feb-95			10.06		69.54
	7-May-95			10.11		69.49
MW-4	6-Aug-91	4.0	81.00	12.36		68.64
	30-Oct-91			12.02		68.98
	18-Mar-92			11.34		69.66
	20-May-92			12.35		68.65
	19-Aug-92			12.41		68.59
	18-Nov-92			12.28		68.72
	11-Feb-93			11.65		69.35
	19-May-93			11.92		69.08
	18-Aug-93			a---		---
	17-Nov-93			12.24		68.76
	18-Feb-94			11.69		69.31
	26-May-94			12.00		69.00
	29-Aug-94			12.30		68.70
	11-Nov-94			11.30		69.70
	3-Feb-95			10.99		70.01
	7-May-95			11.69		69.31
MW-5	6-Aug-91	4.0	81.50	13.02		68.48
	30-Oct-91			12.73		68.77
	18-Mar-92			12.52		68.98
	20-May-92			13.05		68.45
	19-Aug-92			13.04		68.46
	18-Nov-92			12.91		68.59
	11-Feb-93			12.44		69.06
	19-May-93			12.84		68.66
	18-Aug-93			12.88		68.62
	17-Nov-93			12.89		68.61
	18-Feb-94			12.30		69.20
	26-May-94			12.73		68.77
	29-Aug-94			12.88		68.62
	11-Nov-94			12.20		69.30

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WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-5 (cont.)	3-Feb-95			11.78		69.72
	7-May-95			12.47		69.03
MW-6	6-Aug-91	4.0	77.90	10.71		67.19
	30-Oct-91			10.50		67.40
	18-Mar-92			9.24		68.66
	20-May-92			10.13		67.77
	19-Aug-92			10.16		67.74
	18-Nov-92			9.94		67.96
	11-Feb-93			9.20		68.70
	19-May-93			10.64		67.86
	18-Aug-93			10.04		67.86
	17-Nov-93			10.12		67.78
	18-Feb-94			9.65		68.25
	26-May-94			---		---
	29-Aug-94			---		---
	11-Nov-94			---		---
	3-Feb-95			8.96		68.94
	7-May-95			8.64		69.26
MW-8	6-Aug-91	4.0	79.91	13.08		66.83
	30-Oct-91			12.87		67.04
	18-Mar-92			11.54		68.37
	20-May-92			12.32		67.59
	19-Aug-92			12.58		67.33
	18-Nov-92			12.47		67.44
	11-Feb-93			11.02		68.89
	19-May-93			11.78		68.13
	18-Aug-93			12.22		67.69
	17-Nov-93			12.25		67.66
	18-Feb-94			10.56		69.35
	26-May-94			11.30		68.61
	29-Aug-94			11.90		68.01
	11-Nov-94			10.12		69.79
	3-Feb-95			11.64		68.27
	7-May-95			10.77		69.14
MW-9	6-Aug-91		77.71	10.38		67.33
	30-Oct-91			---		---
	18-Mar-92			8.76		68.95
	20-May-92			a---		---
	19-Aug-92			9.98		67.73

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WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-9 (cont.)	18-Nov-92			9.81		67.90
	11-Feb-93			a---		---
	19-May-93			---		---
	18-Aug-93			9.75		67.96
	17-Nov-93			9.92		67.79
	02/18/94a			---		---
	26-May-94			---		---
	29-Aug-94			---		---
	11-Nov-94			---		---
	3-Feb-95			---		---
	7-May-95			a---		---
MW-10	6-Aug-91	4.0	77.91	10.00		67.91
	31-Oct-91			10.10		67.81
	18-Mar-92			9.55		68.36
	20-May-92			10.41		67.50
	19-Aug-92			10.46		67.45
	18-Nov-92			10.31		67.60
	11-Feb-93			9.68		68.23
	19-May-93			10.19		67.72
	18-Aug-93			10.29		67.62
	17-Nov-93			10.32		67.59
	18-Feb-94			9.60		68.31
	26-May-94			10.14		67.77
	9-Aug-94			10.38		67.53
	11-Nov-94			9.34		68.57
	3-Feb-95			10.17		67.74
	7-May-95			9.63		68.28
MW-11	22-Nov-91	4.0	75.76	11.90		63.86
	15-Feb-92			a---		---
	18-Mar-92			a---		---
	20-May-92			a---		---
	19-Aug-92			12.06		63.70
	18-Nov-92			12.01		63.75
	11-Feb-93			a---		---
	19-May-93			11.90		63.86
	18-Aug-93			11.90		63.86
	17-Nov-93			11.94		63.82
	18-Feb-94			a---		---
	26-May-94			---		---

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OAKLAND, CALIFORNIA
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WELL NO.	MONT. DATE	CASING DIA. (IN.)	WELL ELEV. (FT.)	DEPTH TO WATER (FT.)	PRODUCT THICKNESS (FT.)	WATER ELEV. (FT.)
MW-11 (cont.)	29-Aug-94			11.98		63.78
	11-Nov-94			10.88		64.88
	3-Feb-95			10.62		65.14
	7-May-95			11.49		64.27
MW-12	2-Dec-91	4.0	75.65	10.31		65.34
	18-Mar-92			8.93		66.72
	20-May-92			10.26		65.39
	19-Aug-92			10.53		65.12
	18-Nov-92			10.45		65.20
	11-Feb-93			8.90		66.75
	19-May-93			10.60		65.05
	18-Aug-93			10.28		65.37
	17-Nov-93			10.24		65.41
	18-Feb-94			8.97		66.68
	26-May-94			9.62		66.03
	29-Aug-94			10.20		65.45
	11-Nov-94			8.54		67.11
	3-Feb-95			8.28		67.37
	7-May-95			9.17		66.48
MW-13	22-Nov-91		76.36	11.96		64.40
	18-Mar-92			10.84		65.52
	20-May-92			a---		---
	19-Aug-92			12.12		64.24
	18-Nov-92			12.00		64.42
	11-Feb-93			a---		---
	19-May-93			12.26		64.10
	18-Aug-93			11.75		64.61
	17-Nov-93			11.78		64.58
	18-Feb-94			a---		---
	26-May-94			---		---
	29-Aug-94			---		---
	11-Nov-94			10.28		66.08
	3-Feb-95			10.01		66.35
	7-May-95			a---		---

Notes:
a = Not measured. Well inaccessible
Elevations referenced to Mean Sea Level
Depth to water measured from top of casing

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

SHELL SERVICE STATION
500 40TH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-4903

SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	TPH-D (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
EW-1	6-Aug-91	---	180	<50	5.4	<0.5	0.9	0.7
(2nd & 4th)	30-Oct-91	12.72	70	<50	2.6	<0.5	<0.5	<0.5
	15-Feb-92	11.28	<50	---	2.1	<0.5	<0.5	<0.5
	22-May-92	12.52	99	---	4.1	<0.5	<0.5	<0.5
	19-Aug-92	12.48	140	---	6.6	<0.5	<0.5	<0.5
	18-Nov-92	12.90	56	---	<0.5	<0.5	<0.5	<0.5
	11-Feb-93	11.28	63	---	<0.5	<0.5	<0.5	0.9
	11-Feb-93dup		63	---	<0.5	<0.5	<0.5	0.8
	19-May-93	12.52	60b	---	<0.5	<0.5	<0.5	<0.5
	17-Nov-93	12.63	170	---	17	<0.5	<0.5	<0.5
	17-Nov-93dup		190	---	17	<0.5	<0.5	<0.5
	26-May-94	12.02	<50	---	3.5	<0.5	<0.5	0.51
	11-Nov-94	11.08	200	---	13	0.88	<0.5	<0.5
	7-May-95	11.32	90	---	8.6	<0.5	<0.5	<0.5
MW-2	7-Aug-91	12.12	1,200	230	59	1.1	38	56
(2nd & 4th)	30-Oct-91	11.70	520	300	56	<0.5	56	100
	15-Feb-92		2,300	2,200a	87	<2.5	88	150
	21-May-92	12.12	700	---	24	1	34	48
	19-Aug-92	12.18	740	---	21	<2.5	24	26
	19-Aug-92dup		840	---	31	<2.5	36	43
	18-Nov-92	12.03	920	---	19	<2.5	30	51
	18-Nov-92dup		870	---	25	<2.5	34	52
	11-Feb-93	11.15	1,000	---	25	6	43	73
	19-May-93	11.80	570	---	19	<0.5	37	42
	17-Nov-93	12.00	250	---	10	<1.0	26	20
	26-May-94	11.61	620	---	17	1.4	25	31
	26-May-94dup		600	---	16	1.2	24	29
	11-Nov-94	10.74	1,100	---	28	3.1	39	65
	7-May-95	10.98	700	---	15	<0.5	35	39
MW-3	7-Aug-91	11.12	1,900	470	220	57	57	260
(2nd & 4th)	30-Oct-91	10.93	1,900	480	160	28	63	180
	15-Feb-92		2,300	780a	170	31	59	180
	21-May-92	10.79	1,500	---	160	20	44	140
	19-Aug-92	11.23	4,500	---	210	64	89	310
	18-Nov-92	11.20	2,400	---	81	14	39	140
	11-Feb-93	11.00	3,000	---	200	47	90	260
	19-May-93	11.16	2,100	---	240	44	100	330
	17-Nov-93	11.35	1,000	---	110	13	60	150
	26-May-94	11.10	1,100	---	200	17	29	58
	11-Nov-94	10.04	870	---	130	10	38	87

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SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	TPH-D (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-3 (cont.)	11-Nov-94dup		1,000	---	120	10	42	92
	7-May-95	10.11	1,300	---	180	7.5	54	110
MW-4	7-Aug-91	12.36	<50	<50	<0.5	<0.5	<0.5	<0.5
(2nd & 4th)	30-Oct-91	12.02	50	<50	<0.5	<0.5	<0.5	<0.5
	15-Feb-92		90	---	0.9	<0.5	<0.5	<0.5
	21-May-92	12.35	<50	---	<0.5	<0.5	<0.5	<0.5
	19-Aug-92	12.41	82b	---	<0.5	<0.5	<0.5	<0.5
	18-Nov-92	12.28	85b	---	<0.5	<0.5	<0.5	<0.5
	11-Feb-93	11.65	62b	---	<0.5	<0.5	<0.5	<0.5
	19-May-93	11.92	<50	---	<0.5	<0.5	<0.5	<0.5
	17-Nov-93	12.24	<50	---	<0.5	<0.5	<0.5	<0.5
	26-May-94	12.00	<50	---	<0.5	<0.5	<0.5	<0.5
	11-Nov-94	11.30	<50	---	<0.5	<0.5	<0.5	<0.5
	7-May-95	11.69	<50	---	<0.5	<0.5	<0.5	<0.5
MW-5	7-Aug-91	13.02	<50	<50	<0.5	<0.5	<0.5	<0.5
(2nd & 4th)	30-Oct-91	12.73	<50	<50	<0.5	<0.5	<0.5	<0.5
	15-Feb-92		<50	---	<0.5	<0.5	<0.5	<0.5
	20-May-92	13.05	<50	---	<0.5	<0.5	<0.5	<0.5
	19-Aug-92	13.04	55b	---	<0.5	<0.5	<0.5	<0.5
	18-Nov-92	12.91	<50	---	<0.5	<0.5	<0.5	<0.5
	11-Feb-93	12.44	59b	---	<0.5	<0.5	<0.5	<0.5
	19-May-93	12.84	<50	---	<0.5	<0.5	<0.5	<0.5
	19-May-93dup		<50	---	<0.5	<0.5	<0.5	<0.5
	17-Nov-93	12.89	<50	---	<0.5	<0.5	<0.5	<0.5
	26-May-94	12.73	<50	---	1.8	2.4	1.3	4.9
	11-Nov-94	12.20	<50	---	<0.5	<0.5	<0.5	<0.5
	7-May-95	12.47	<50	---	<0.5	<0.5	<0.5	<0.5
MW-6	6-Aug-91	10.71	26,000	3,600	910	420	560	1,900
(2nd & 4th)	30-Oct-91	10.50	20,000	4,600	710	240	410	1,700
	15-Feb-92		35,000	27,000	690	420	650	3,000
	21-May-92	10.13	15,000	---	460	110	300	1,600
	19-Aug-92	10.16	24,000	---	600	300	460	2,000
	18-Nov-92	9.94	29,000	---	480	250	450	2,300
	11-Feb-93	9.20	24,000	---	1,300	250	630	2,400
	19-May-93	10.64	18,000	---	750	180	520	2,500
	17-Nov-93	10.12	14,000	---	260	64	430	1,900
	26-May-94	---	c---	---	---	---	---	---
	11-Nov-94	---	c---	---	---	---	---	---
	7-May-95dup		14000	---	480	61	230	370
	7-May-95	8.64	11000	---	460	82	280	540

TABLE 2

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SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	TPH-D (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-8	6-Aug-91	13.08	90	<50	<0.5	<0.5	<0.5	<0.5
(2nd & 4th)	30-Oct-91	12.87	<50	<50	<0.5	<0.5	<0.5	<0.5
	15-Feb-92		<50	---	<0.5	<0.5	<0.5	<0.5
	20-May-92	12.32	<50	---	<0.5	<0.5	<0.5	<0.5
	19-Aug-92	12.58	60	---	<0.5	<0.5	<0.5	<0.5
	18-Nov-92	12.47	<50	---	<0.5	<0.5	<0.5	<0.5
	11-Feb-93	11.02	76b	---	<0.5	<0.5	<0.5	<0.5
	18-May-93	11.78	<50	---	<0.5	<0.5	<0.5	<0.5
	17-Nov-93	12.25	<50	---	<0.5	<0.5	<0.5	<0.5
	26-May-94	11.30	<50	---	<0.5	<0.5	<0.5	<0.5
	11-Nov-94	10.12	<50	---	<0.5	<0.5	<0.5	<0.5
	7-May-95	10.77	<50	---	<0.5	<0.5	<0.5	<0.5
MW-9	6-Aug-91	10.38	3,900	190	58	8.8	80	220
(2nd & 4th)	30-Oct-91c	---	---	---	---	---	---	---
	18-Mar-92	8.76	1,800d	210	84	11	49	60
	20-May-92c	a---	---	---	---	---	---	---
	19-Aug-92	9.98	4,600	22a	63	<25	48	70
	18-Nov-93	9.81	1,800	130a	30	9.2	46	61
	11-Feb-93c	a---	---	---	---	---	---	---
	19-May-93c	---	---	---	---	---	---	---
	17-Nov-93	9.92	5,900	2,400e	86	14	150	46
	26-May-94c	---	---	---	---	---	---	---
	11-Nov-94c	---	---	---	---	---	---	---
	7-May-95c	a---	---	---	---	---	---	---
MW-10	7-Aug-91	10.00	460	<50	73	1	18	8.4
(2nd & 4th)	31-Oct-91	10.10	630	150	100	<0.5	33	26
	15-Feb-92		810	570a	85	2.5	44	38
	21-May-92	10.41	280	---	47	0.7	4	3.1
	19-Aug-92	10.46	330	---	35	<1	6	4.1
	18-Nov-93	10.31	300	---	30	0.8	7.1	6.3
	11-Feb-93	9.68	510b	---	49	3.8	18	18
	19-May-93	10.19	<50	---	96	<0.5	3.4	1.5
	17-Nov-93	10.32	400	---	24	<1.0	2.8	1.9
	26-May-94	10.14	330	---	32	13	7.5	26
	11-Nov-94	9.34	110	---	7.8	<0.5	2.3	1.5
	7-May-95	9.63	1600	---	110	3.1	17	12
MW-11	22-Nov-91	11.90	450	240	1.1	<0.5	<0.5	<0.5
(Quarterly)	15-Feb-92c	a---	---	---	---	---	---	---
	18-Mar-92c	a---	---	---	---	---	---	---
	20-May-92c	a---	---	---	---	---	---	---

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

SHELL SERVICE STATION
500 40TH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-4903

SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	TPH-D (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)
MW-11	19-Aug-92	12.06	270b	<50	<0.5	<0.5	<0.5	<0.5
	18-Nov-92	12.01	400b	100	<0.5	<0.5	<0.5	<0.5
	11-Feb-93c	a---	---	---	---	---	---	---
	20-May-93	11.90	200b	<0.5	<0.5	<0.5	<0.5	<0.5
	18-Aug-93	11.90	180b	<50	<0.5	<0.5	<0.5	<0.5
	17-Nov-93	11.94	150b	<50e	<0.5	3.6	<0.5	<0.5
	18-Feb-94c	a---	---	---	---	---	---	---
	26-May-94c	---	---	---	---	---	---	---
	11-Nov-94	10.88	160	---	<0.5	<0.5	<0.5	<0.5
	5-Mar-95		220	100	0.7	<0.5	<0.5	<0.5
	7-May-95	11.49	160	<50	<0.5	<0.5	<0.5	<0.5
MW-12	2-Dec-91	10.31	<1,000	<50	<0.5	<0.5	<0.5	<0.5
(Quarterly)	18-Mar-92	8.93	<50	<50	<0.5	<0.5	<0.5	<0.5
	20-May-92	10.26	180b	---	<0.5	<0.5	<0.5	<0.5
	19-Aug-92	10.53	230b	---	<0.5	<0.5	<0.5	<0.5
	18-Nov-92	10.45	220b	---	<0.5	<0.5	<0.5	<0.5
	11-Feb-93	8.90	240	---	<0.5	<0.5	<0.5	<0.5
	19-May-93	10.60	110b	---	<0.5	<0.5	<0.5	<0.5
	18-Aug-93	10.28	140b	---	<0.5	<0.5	<0.5	<0.5
	17-Nov-93	10.24	120b	---	<0.5	<0.5	<0.5	<0.5
	18-Feb-94	8.97	180b	---	1.7	2.1	0.9	4.8
	26-May-94	9.62	150	---	<0.5	<0.5	<0.5	<0.5
	29-Aug-94	10.20	110	---	<0.5	<0.5	<0.5	<0.5
	11-Nov-94	8.54	90	---	<0.5	<0.5	<0.5	<0.5
	3-Feb-95dup		100	---	0.6	<0.5	0.7	1.1
	3-Feb-95	8.28	80	---	<0.5	<0.5	<0.5	<0.5
	7-May-95	9.17	110	---	<0.5	<0.5	<0.5	<0.5
MW-13	22-Nov-91	11.96	900	1,000	37	9.5	74	130
(2nd & 4th)	18-Mar-92	10.84	900d	590a	24	28	320	320
	20-May-92c	a---	---	---	---	---	---	---
	19-Aug-92	12.12	7,000	470a	180	36	150	150
	18-Nov-92c	12.00	---	---	---	---	---	---
	11-Feb-93c	a---	---	---	---	---	---	---
	20-May-93	12.26	9,200	---	320	83	490	950
	17-Nov-93	11.78	38,000	3,800	210	<130	1,000	2,500
	26-May-94c	---	---	---	---	---	---	---
	11-Nov-94c	10.28	---	---	---	---	---	---
	5-Mar-95	---	9100	3900	200	9.7	200	130
	7-May-95c	a---	---	---	---	---	---	---

TABLE 2

HISTORICAL GROUNDWATER QUALITY DATABASE

SHELL SERVICE STATION
500 40TH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-4903

SAMPLE POINT	SAMPLE DATE	DEPTH TO WATER (FT.)	TPH-G (PPB)	TPH-D (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENES (PPB)

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
TPH-D = Total petroleum hydrocarbons as diesel by Modified EPA Method 8015
PPB = Parts per billion
<x = Not detected at detection limit of x
--- = Not analyzed

Notes:

Benzene, Toluene, Ethylbenzene, Xylenes analyzed by EPA Method 8020
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 = Well inaccessible.
d = Compounds detected and calculated as gasoline do not match the standard gasoline chromatographic pattern
e = The concentrations reported as diesel are primarily due to the presence of a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline.

TABLE 2B

HISTORICAL GROUNDWATER QUALITY DATABASE
(VOLATILE ORGANIC COMPOUNDS)

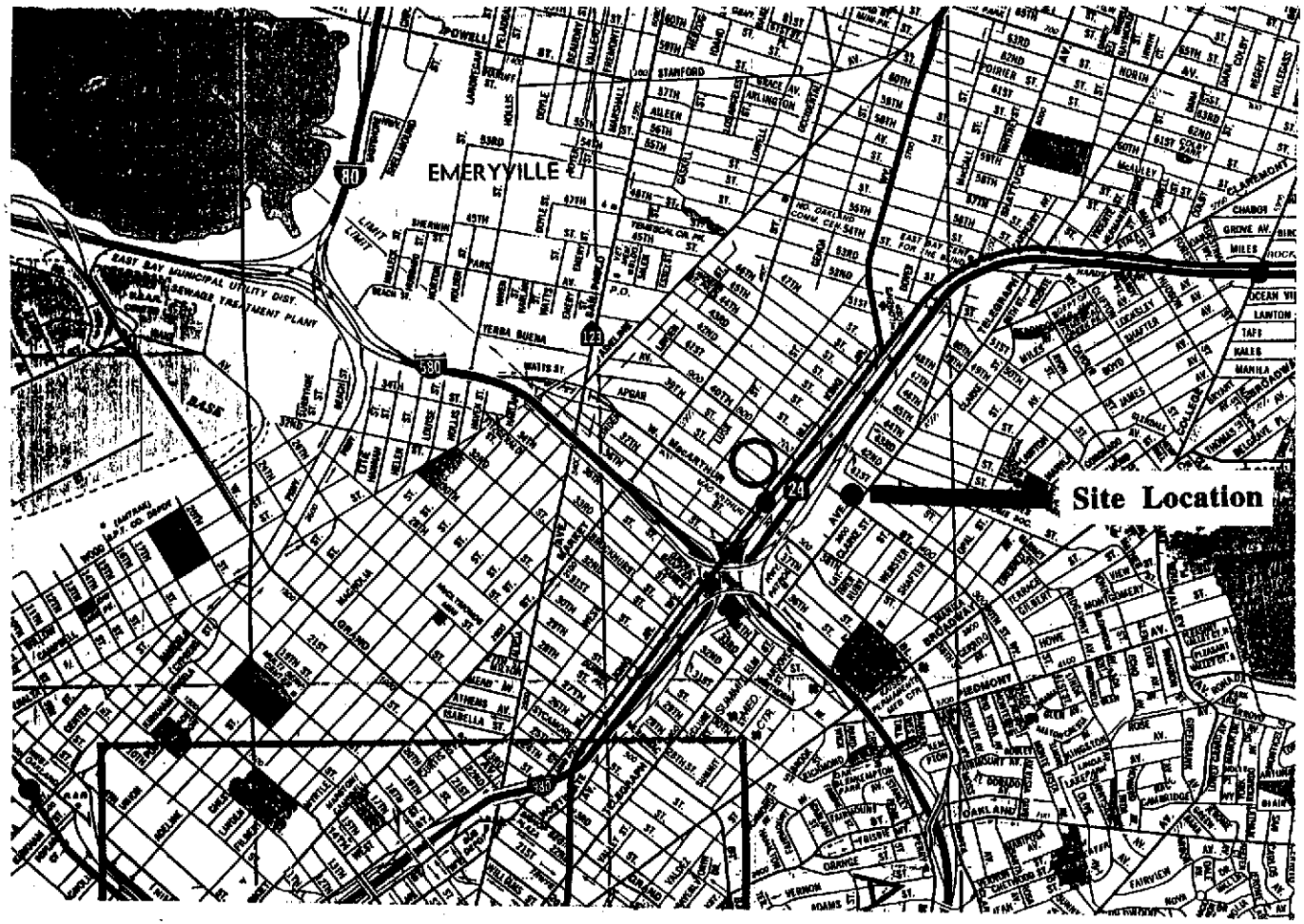
SHELL SERVICE STATION
500 40TH AVENUE
OAKLAND, CALIFORNIA
WIC 204-5508-4903

SAMPLE POINT	SAMPLE DATE	TCE (PPB)	PCE (PPB)	CHLOROFORM (PPB)	cis-1,2-DCE (PPB)	1,2-DCA (PPB)	1,1-DCA (PPB)
EW-1	18-Nov-93	5.5	<0.05	<0.05	6.8	2.4	0.69
	18-Nov-93dup	5.1	---	---	6.5	2.3	0.63
MW-4	18-Nov-93	2.5	36	1.3	3.5	<0.5	<0.5
MW-5	18-Nov-93	2.0	34	1.0	1.2	<0.5	<0.5
MW-8	18-Nov-93	1.8	50	1.1	1.1	<1.0	<1.0
MW-9	18-Nov-93	<0.5	<0.5	<0.5	0.68	<0.05	<0.05
MW-10	18-Nov-93	1.7	1.9	<0.5	3.9	<0.5	<0.5
MW-11	18-Nov-93	40	<10	<10	42	<10	<10
MW-12	18-Nov-93	13	400	<10	11	<10	<10
	18-Feb-94	14	430	<10	11	<10	<10
MW-13	18-Nov-93	<10	<10	<10	<10	<10	<10

Abbreviations:

<x = Not detected at detection limit of x
PPB = Parts per billion
--- = Not analyzed

Notes:
Volatile Organic Compounds (VOCs) by EPA Method 601/8010 or 8240



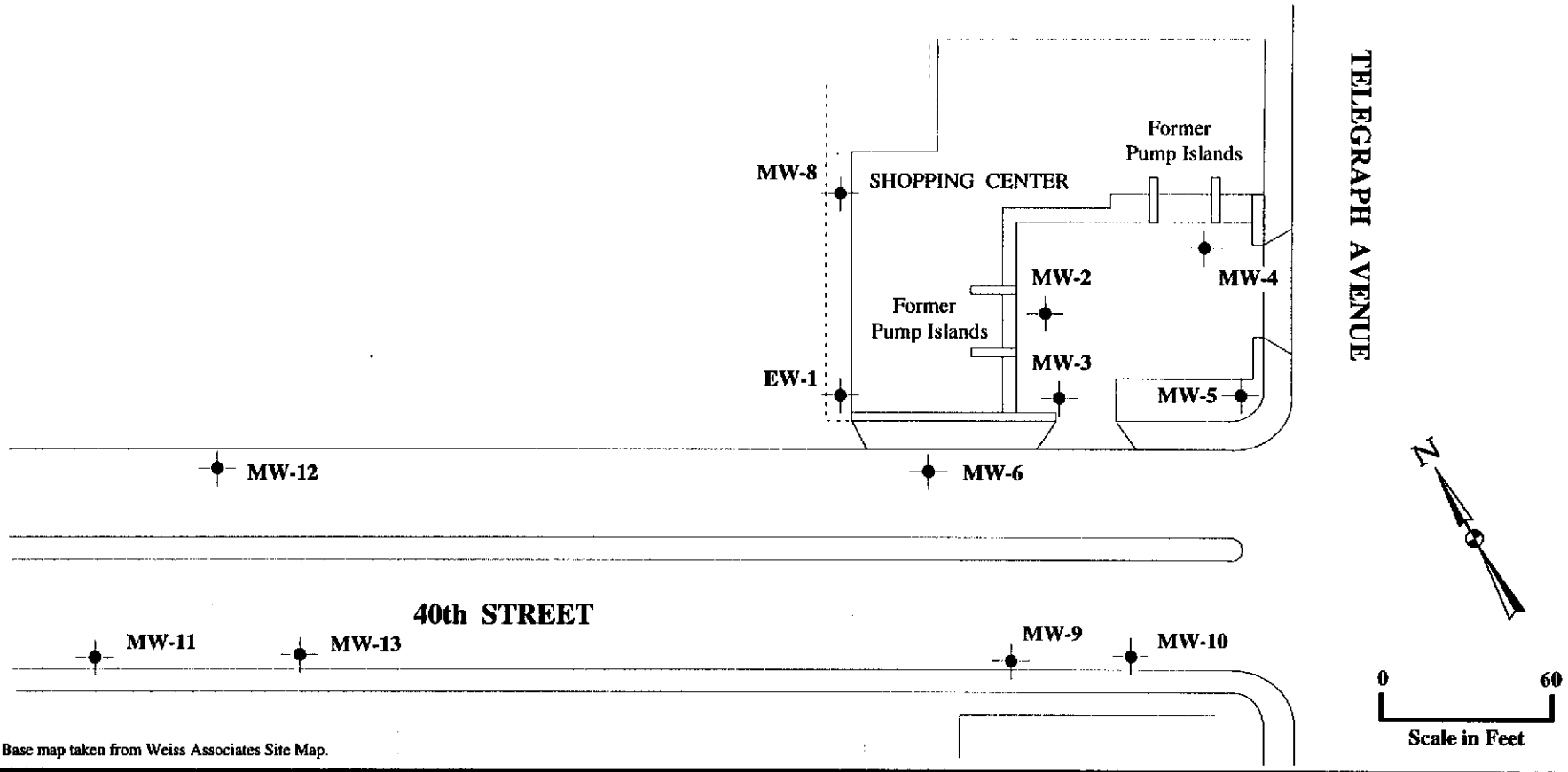
Note: Vicinity Map taken from California State AAA map.

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: DL	Date: 7-12-95

EXPLANATION

Groundwater Monitoring Well



Base map taken from Weiss Associates Site Map.

PLATE

2

SITE PLAN

Former Shell Service Station
500 40th Avenue
Oakland, California

enviros ®
95289

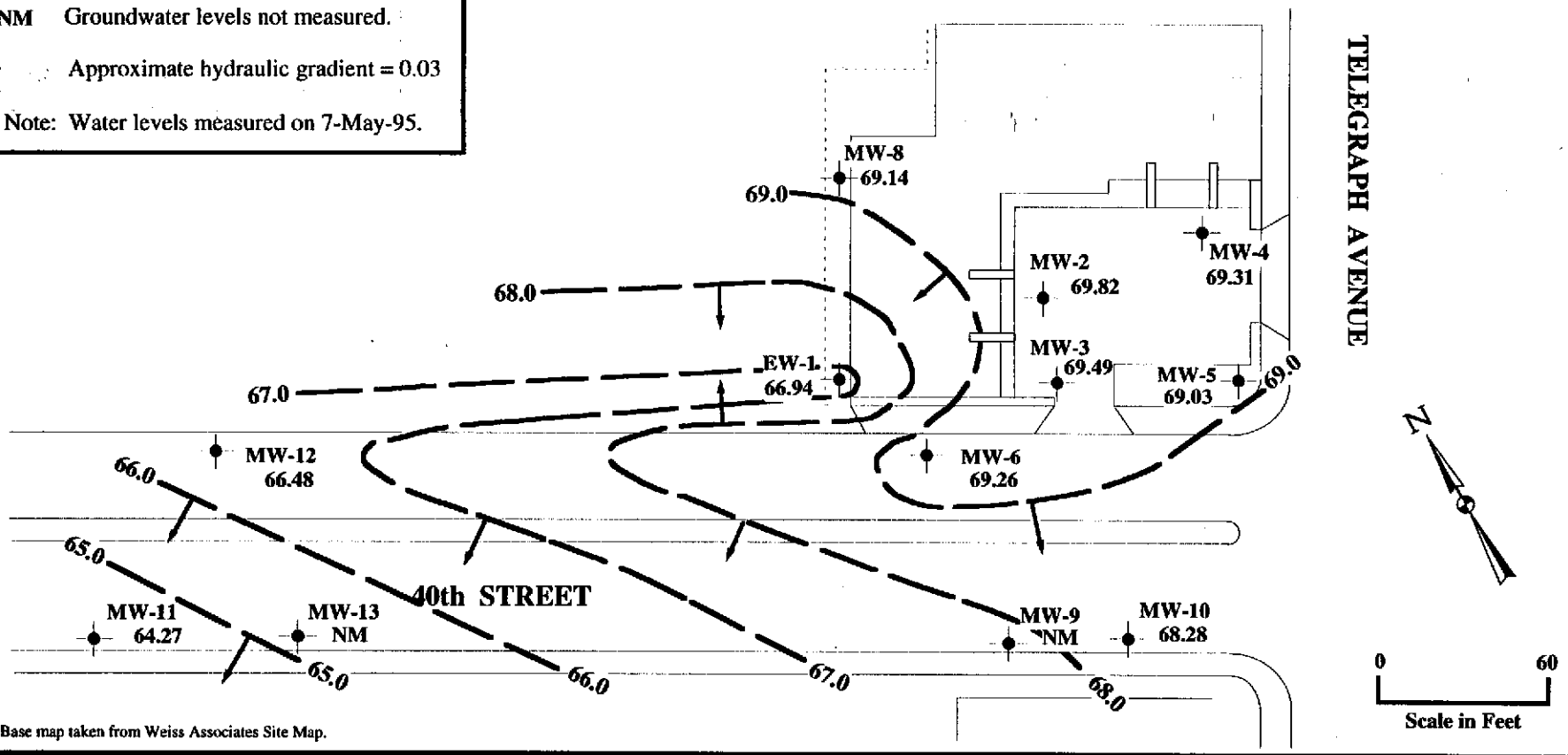
Drawn By: JLP Date: 6-24-95

Approved By: _____ Date: 7-12-95

EXPLANATION

- Groundwater Monitoring Well
- **66.94** Groundwater elevation contour referenced to mean sea level.
- Groundwater elevation contour in feet. Arrows indicate approximate groundwater flow direction
- **NM** Groundwater levels not measured.
- Approximate hydraulic gradient = 0.03

Note: Water levels measured on 7-May-95.



Base map taken from Weiss Associates Site Map.

PLATE

3

GROUNDWATER CONTOUR MAP
Former Shell Service Station
500 40th Avenue
Oakland, California

enviros ®
95289

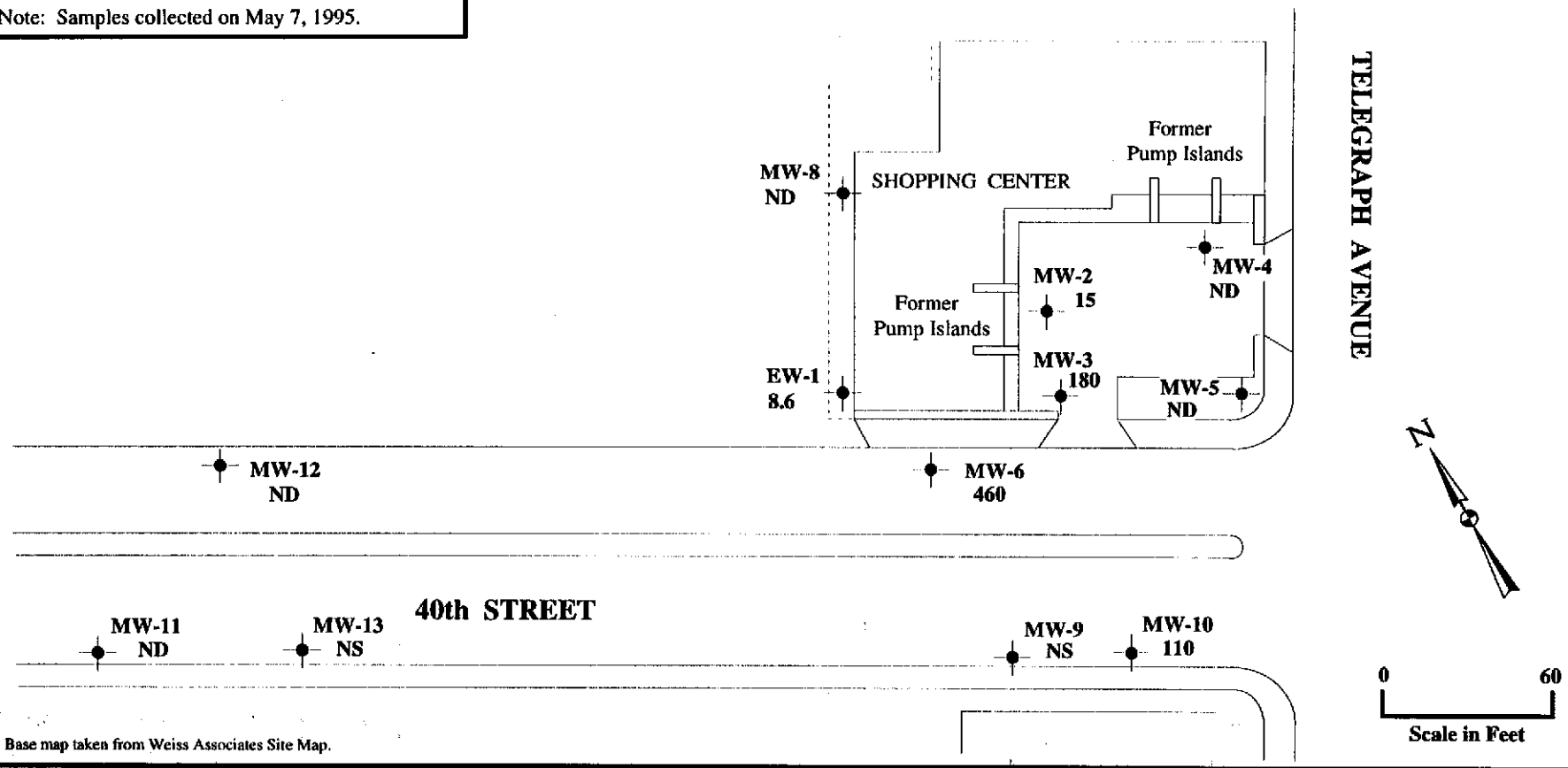
Drawn By: JLP Date: 6-24-95

Approved By: _____ Date: 7-12-95

EXPLANATION

- Groundwater Monitoring Well
- **8.6** Concentration of benzene in groundwater in parts per billion.
- **ND** None Detected
- **NS** Not Sampled

Note: Samples collected on May 7, 1995.



Base map taken from Weiss Associates Site Map.

PLATE

4

BENZENE CONCENTRATION MAP
Former Shell Service Station
500 40th Avenue
Oakland, California

enviros ®
95289

Drawn By: JPW Date: 6-24-95

Approved By: _____ Date: 7-12-95

Appendix A

BLAINE TECH SERVICES INC.
Quarterly Groundwater Sampling Report

Chain-of-Custody Record

National Environmental Testing, Inc.
Certified Chemical Analytical Report

BLAINE
TECH SERVICES INC.

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

May 30, 1995

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

Attn: Lynn Walker

SITE:
Shell WIC #204-5508-4903
500 40th Street
Oakland, California

QUARTER:
2nd quarter of 1995

QUARTERLY GROUNDWATER SAMPLING REPORT 950507-K-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water are removed in cases where more evacuation is needed to achieve stabilization of water parameters and when requested by the local implementing agency. Less water may be obtained in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site. Effluent water from purging and on-site equipment cleaning is collected and transported to Shell's Martinez Manufacturing Complex in Martinez, California.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This

recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such site is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to National Environmental Testing, Inc. in Santa Rosa, California. NET is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1386.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/lp

attachments: table of well gauging data
chain of custody
certified analytical report

cc: Enviros, Inc.
19411 Riverside Dr.
P.O. Box 259
Sonoma, CA 95476-0259
ATTN: Diane Lundquist

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	5/7/95	TOC	--	NONE	--	--	11.32	38.02
MW-2	5/7/95	TOC	ODOR	NONE	--	--	10.98	19.18
MW-3	5/7/95	TOC	ODOR	NONE	--	--	10.11	18.43
MW-4	5/7/95	TOC	ODOR	NONE	--	--	11.69	14.85
MW-5	5/7/95	TOC	--	NONE	--	--	12.47	19.86
OMW-6 *	5/7/95	TOC	ODOR	NONE	--	--	8.64	19.85
MW-8	5/7/95	TOC	--	NONE	--	--	10.77	38.16
OMW-9	5/7/95	INACCESSIBLE						
OMW-10	5/7/95	TOC	--	NONE	--	--	9.63	15.91
OMW-11	5/7/95	TOC	--	NONE	--	--	11.49	19.45
OMW-12	5/7/95	TOC	--	NONE	--	--	9.17	19.20
OMW-13	5/7/95	INACCESSIBLE						

* Sample DUP was a duplicate sample taken from well OMW-6.

#6682

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950502-161

Date: 5/7/95
Page 1 of 2

Site Address: 500 40th Street, Oakland

WIC#: 204-5508-4903

Shell Engineer: 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: NET

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			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
EW1	5/7			W		3						X								
MW2												X								
MW3												X								
MW4												X								
MW5												X								
OMW6												X								
MW8												X								
OMW10												X								

CHECK ONE (1) BOX ONLY — CT/01

Quarterly Monitoring	X	8441
Site Investigation		8441
Soil Closure/Disposal		8442
Water Closure/Disposal		8443
Soil/Air Rem. or Syst. O & M		8452
Water Rem. or Syst. O & M		8453
Other		

TURN AROUND TIME

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

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

Relinquished By (signature):	Printed Name: Keith Brown	Date: 5/8 Time: 10:50	Received (signature):
Relinquished By (signature):	Printed Name: G. Lemmore	Date: 5/8 Time: 15:00	Received (signature):
Relinquished By (signature):	Printed Name: PAM GREENE	Date: 5/8/95 Time: 16:00	Received (signature):

Printed Name: G. Lemmore	Date: 5/8 Time: 10:50	
Printed Name: PAM GREENE	Date: 5/8/95 Time: 15:00	
Printed Name: PAM GREENE	Date: 5/8/95 Time: 16:00	

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

#66682

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: 950507-1C1

Date: 5/7/95

Site Address: 500 40th Street, Oakland

WIC#: 204-5508-4903

Shell Engineer: 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: Ver

CHECK ONE (1) BOX ONLY | C/DI | TURN AROUND TIME

- Quarterly Monitoring [X] 6461 — 24 hours [ ]
- Site Investigation [ ] 6461 — 48 hours [ ]
- Soil Classify/Disposal [ ] 6462 — 15 days [X] (Normal)
- Water Classify/Disposal [ ] 6463 — Other [ ]
- Soil/Air Rem. or Sys. O & M [ ] 6462
- Water Rem. or Sys. O & M [ ] 6463
- Other [ ]

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

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			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
OMW11	5/7			W		5		X				X								
OMW12	↓			↓		3						X								
DUP						↓						X								
EB												X								
TB						2						X								

	Printed Name:	Date:	Received (Signature):	Printed Name:	Date:
Relinquished By (signature):	Keith Brown	5/8		GP Lumara	5/8
Relinquished By (signature):	GP Lumara	Time: 08:30	Received (signature):		Time: 10:15
		Date: 5/8			Date: 5/8/95
Relinquished By (signature):		Time: 16:00	Received (signature):		Time: 08:35:00
	PAM GREENE	Date: 5/8/95		PAM GREENE	Date: 5/8/95
		Time: 16:00			Time: 16:00

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

VIA NCS

NET NATIONAL ENVIRONMENTAL TESTING, INC.®

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

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

Date: 05/23/1995
NET Client Acct. No: 1821
NET Job No: 95.01850
Received: 05/08/1995

Client Reference Information

Shell 500 40th Street, Oakalnd, CA./950507-K1

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Results apply only to the samples analyzed. Reproduction of this report is permitted only in its entirety. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Ken Larson
Division Manager

Jennifer L. Roseberry
Project Manager

Enclosure(s)

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: EW1
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241548

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	90		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	8.6		0.5	ug/L	8020		05/13/1995	2833
Toluene	ND		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	ND		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	ND		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	93			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: MW2
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241549

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/15/1995	2834
Purgeable TPH	700		50	ug/L	5030/M8015		05/15/1995	2834
Carbon Range: C6 to C12	--						05/15/1995	2834
METHOD 8020 (GC, Liquid)	--						05/15/1995	2834
Benzene	15		0.5	ug/L	8020		05/15/1995	2834
Toluene	ND		0.5	ug/L	8020		05/15/1995	2834
Ethylbenzene	35		0.5	ug/L	8020		05/15/1995	2834
Xylenes (Total)	39		0.5	ug/L	8020		05/15/1995	2834
SURROGATE RESULTS	--						05/15/1995	2834
Bromofluorobenzene (SURR)	116			% Rec.	8020		05/15/1995	2834

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: MW3
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241550

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	1,300		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/15/1995	2834
Benzene	180	FC	0.5	ug/L	8020		05/15/1995	2834
Toluene	7.5	FC	0.5	ug/L	8020		05/15/1995	2834
Ethylbenzene	54	FC	0.5	ug/L	8020		05/15/1995	2834
Xylenes (Total)	110	FC	0.5	ug/L	8020		05/15/1995	2834
SURROGATE RESULTS	--						05/15/1995	2834
Bromofluorobenzene (SURR)	92			% Rec.	8020		05/15/1995	2834

FC : Compound quantitated at a 10X dilution factor.

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: MW4
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241551

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	ND		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	ND		0.5	ug/L	8020		05/13/1995	2833
Toluene	ND		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	ND		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	ND		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	101			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: MW5
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241552

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	ND		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	ND		0.5	ug/L	8020		05/13/1995	2833
Toluene	ND		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	ND		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	ND		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	99			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: OMW6
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241553

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	10						05/13/1995	2833
Purgeable TPH	11,000		500	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	460		5	ug/L	8020		05/13/1995	2833
Toluene	82		5	ug/L	8020		05/13/1995	2833
Ethylbenzene	280		5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	540		5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	114			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: MW8
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241554

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	ND		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	ND		0.5	ug/L	8020		05/13/1995	2833
Toluene	ND		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	ND		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	ND		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	100			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: OMW10
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241555

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	1,600		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	110	FC	0.5	ug/L	8020		05/20/1995	2848
Toluene	3.1		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	17		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	12		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/20/1995	2848
Bromofluorobenzene (SURR)	71			% Rec.	8020		05/20/1995	2848

FC : Compound quantitated at a 10X dilution factor.

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: OMW11
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241556

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	160		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	ND		0.5	ug/L	8020		05/13/1995	2833
Toluene	ND		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	ND		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	ND		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	104			% Rec.	8020		05/13/1995	2833
METHOD 3510/8015-M (Shell)						05/11/1995		
DILUTION FACTOR*	1						05/11/1995	987
Extractable TPH	ND		50	ug/L	3510/M8015		05/11/1995	987
Carbon range: C10 to C28	--						05/11/1995	987

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: OMW12
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241557

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	110		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	ND		0.5	ug/L	8020		05/13/1995	2833
Toluene	ND		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	ND		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	ND		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	100			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: DUP
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241558

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	100						05/13/1995	2833
Purgeable TPH	14,000		5,000	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	480		50	ug/L	8020		05/13/1995	2833
Toluene	61		50	ug/L	8020		05/13/1995	2833
Ethylbenzene	230		50	ug/L	8020		05/13/1995	2833
Xylenes (Total)	370		50	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	99			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: EB
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241559

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	ND		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	ND		0.5	ug/L	8020		05/13/1995	2833
Toluene	ND		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	ND		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	ND		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	100			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

SAMPLE DESCRIPTION: TB
Date Taken: 05/07/1995
Time Taken:
NET Sample No: 241560

Parameter	Results	Flags	Reporting Limit	Units	Method	Date Extracted	Date Analyzed	Run Batch No.
METHOD 5030/8015-M (Shell)								
DILUTION FACTOR*	1						05/13/1995	2833
Purgeable TPH	ND		50	ug/L	5030/M8015		05/13/1995	2833
Carbon Range: C6 to C12	--						05/13/1995	2833
METHOD 8020 (GC, Liquid)	--						05/13/1995	2833
Benzene	ND		0.5	ug/L	8020		05/13/1995	2833
Toluene	ND		0.5	ug/L	8020		05/13/1995	2833
Ethylbenzene	ND		0.5	ug/L	8020		05/13/1995	2833
Xylenes (Total)	ND		0.5	ug/L	8020		05/13/1995	2833
SURROGATE RESULTS	--						05/13/1995	2833
Bromofluorobenzene (SURR)	102			% Rec.	8020		05/13/1995	2833

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

CONTINUING CALIBRATION VERIFICATION STANDARD REPORT

Parameter	CCV Standard % Recovery	CCV Standard Amount Found	CCV Standard Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)							
Purgeable TPH	107.6	0.538	0.50	mg/L	05/13/1995	aal	2833
Benzene	98.4	4.92	5.00	ug/L	05/13/1995	aal	2833
Toluene	90.0	4.50	5.00	ug/L	05/13/1995	aal	2833
Ethylbenzene	95.0	4.75	5.00	ug/L	05/13/1995	aal	2833
Xylenes (Total)	93.7	14.06	15.0	ug/L	05/13/1995	aal	2833
Bromofluorobenzene (SURR)	110.0	110	100	% Rec.	05/13/1995	aal	2833
METHOD 5030/8015-M (Shell)							
Purgeable TPH	110.8	0.554	0.50	mg/L	05/15/1995	pbg	2834
Benzene	111.4	5.57	5.00	ug/L	05/15/1995	pbg	2834
Toluene	100.6	5.03	5.00	ug/L	05/15/1995	pbg	2834
Ethylbenzene	104.8	5.24	5.00	ug/L	05/15/1995	pbg	2834
Xylenes (Total)	103.1	15.46	15.0	ug/L	05/15/1995	pbg	2834
Bromofluorobenzene (SURR)	104.0	104	100	% Rec.	05/15/1995	pbg	2834
METHOD 5030/8015-M (Shell)							
Purgeable TPH	104.0	0.52	0.50	mg/L	05/20/1995	lss	2848
Benzene	100.6	5.03	5.00	ug/L	05/20/1995	lss	2848
Toluene	94.4	4.72	5.00	ug/L	05/20/1995	lss	2848
Ethylbenzene	95.6	4.78	5.00	ug/L	05/20/1995	lss	2848
Xylenes (Total)	90.0	13.5	15.0	ug/L	05/20/1995	lss	2848
Bromofluorobenzene (SURR)	84.0	84	100	% Rec.	05/20/1995	lss	2848
METHOD 3510/8015-M (Shell)							
Extractable TPH	97.0	970	1000	mg/L	05/11/1995	tdn	987

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

METHOD BLANK REPORT

Parameter	Method Blank Amount Found	Reporting Limit	Units	Date Analyzed	Analyst Initials	Run Batch Number
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	05/13/1995	aal	2833
Benzene	ND	0.5	ug/L	05/13/1995	aal	2833
Toluene	ND	0.5	ug/L	05/13/1995	aal	2833
Ethylbenzene	ND	0.5	ug/L	05/13/1995	aal	2833
Xylenes (Total)	ND	0.5	ug/L	05/13/1995	aal	2833
Bromofluorobenzene (SURR)	94		% Rec.	05/13/1995	aal	2833
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	05/15/1995	pbg	2834
Benzene	ND	0.5	ug/L	05/15/1995	pbg	2834
Toluene	ND	0.5	ug/L	05/15/1995	pbg	2834
Ethylbenzene	ND	0.5	ug/L	05/15/1995	pbg	2834
Xylenes (Total)	ND	0.5	ug/L	05/15/1995	pbg	2834
Bromofluorobenzene (SURR)	88		% Rec.	05/15/1995	pbg	2834
METHOD 5030/8015-M (Shell)						
Purgeable TPH	ND	0.05	mg/L	05/20/1995	lss	2848
Benzene	ND	0.5	ug/L	05/20/1995	lss	2848
Toluene	ND	0.5	ug/L	05/20/1995	lss	2848
Ethylbenzene	ND	0.5	ug/L	05/20/1995	lss	2848
Xylenes (Total)	ND	0.5	ug/L	05/20/1995	lss	2848
Bromofluorobenzene (SURR)	72		% Rec.	05/20/1995	lss	2848
METHOD 3510/8015-M (Shell)						
Extractable TPH	ND	0.05	mg/L	05/11/1995	tdn	987

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

Parameter	Matrix Spike % Rec.	Matrix Spike Dup % Rec.	RPD	Spike Amount	Sample Conc.	Matrix Spike Conc.	Matrix Spike Dup. Conc.	Units	Date Analyzed	Run Batch	Sample Spiked
METHOD 5030/8015-M (Shell)											241548
Purgeable TPH	106.0	108.0	1.9	0.50	0.09	0.62	0.63	mg/L	05/13/1995	2833	241548
Benzene	114.3	112.8	1.3	8.6	8.6	18.43	18.3	ug/L	05/13/1995	2833	241548
Toluene	105.9	107.4	1.4	29.9	ND	31.65	32.11	ug/L	05/13/1995	2833	241548
METHOD 5030/8015-M (Shell)											241549
Purgeable TPH	78.0	86.0	9.8	0.50	0.70	1.09	1.13	mg/L	05/15/1995	2834	241549
Benzene	47.3	50.4	6.3	9.52	15	19.5	19.8	ug/L	05/15/1995	2834	241549
Toluene	91.3	96.3	5.3	32.3	ND	29.5	31.1	ug/L	05/15/1995	2834	241549
METHOD 5030/8015-M (Shell)											241758
Purgeable TPH	86.0	90.0	4.5	0.50	ND	0.43	0.45	mg/L	05/20/1995	2848	241758
Benzene	85.7	89.9	4.8	7.61	ND	6.52	6.84	ug/L	05/20/1995	2848	241758
Toluene	86.8	90.0	3.6	28.0	ND	24.3	25.2	ug/L	05/20/1995	2848	241758
METHOD 3510/8015-M (Shell)											241665
Extractable TPH	84.0	86.5	2.9	2.00	ND	1.68	1.73	mg/L	05/11/1995	987	241665

Ref: Shell 500 40th Street, Oakalnd, CA./950507-K1

LABORATORY CONTROL SAMPLE REPORT

Parameter	LCS % Recovery	Duplicate LCS % Recovery	RPD	LCS Amount Found	Duplicate LCS Amount Found	LCS Amount Expected	Units	Date Analyzed	Analyst Initials	Run Batch
METHOD 3510/8015-M (Shell)										
Extractable TPH	66.4			0.664		1.00	mg/L	05/11/1995	tdn	987

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KEY TO ABBREVIATIONS and METHOD REFERENCES

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

Method References

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

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

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

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

COOLER RECEIPT FORM

Project: 960507-K1 Log No: 6682

Cooler received on: 5-8-95 and checked on 5-9-95 by _____
(signature)

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

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

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

Was sufficient ice used?.....~~YES~~ NO TEMP.: 1.0°C

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

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

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

Correct preservatives used?.....~~YES~~ NO

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

Sample descriptor:	Number of vials:
QMW6	1
DB	1
	1

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

List here all other jobs received in the same cooler:

Client Job #	NET log #

(coolerrec)