Brunsing Associates, Inc.

March 7, 2000 Project No. 29.7

Mr. Larry Seto
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Subject: Semi-Annual Groundwater Monitoring Report: First Quarter- 2000 Pacific Supply Company, 1735 24th Street, Oakland, California

Dear Mr. Seto:

This report has been prepared to document groundwater monitoring performed by Brunsing Associates, Inc. (BAI) at the Pacific Supply Company property at 1735 24th Street, Oakland, California. Groundwater monitoring was conducted on January 28, 2000. A brief description of the site history is included in Appendix A.

Scope of Work

The scope of work performed during this reporting period included testing for the existence of free product, calculating groundwater elevations and groundwater flow direction, and collecting groundwater samples from onsite monitoring wells MW-1, MW-2, MW-3, MW-4, and MW-5, and offsite monitoring well MW-7 (Plate 1). The current groundwater schedule includes: 1) annual sampling of six wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7) in the first quarter, 2) semi-annual sampling of well MW-2 (first and third quarters), 3) semi-annual water-level measurements (first and third quarters), 4) semi-annual reporting, and 5) deletion of well MW-6 from the monitoring program.

Groundwater Elevations

The depth to groundwater in wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7 were measured on January 28, 2000. The measured groundwater depths and calculated elevations relative to mean sea level (MSL) are listed in Table 1. The potentiometric surface contours and groundwater elevations are presented on Plate 1. The groundwater flow direction near the former underground storage tank (UST) location is primarily to the north, with a gradient of approximately 0.006 foot

per foot, based on the calculated groundwater elevations for wells MW-1 through MW-5. Monitoring well MW-7 continues to indicate an anomalously low groundwater elevation by a magnitude of several feet.

Groundwater Sampling

Wells MW-1, MW-2, MW-3, MW-4, MW-5, and well MW-7 were sampled on January 28, 2000, using the methods described in Appendix B. Free product was not observed in any well. The groundwater samples were transported to BACE Analytical and Field Services (BAFS) for the following analyses:

- Total petroleum hydrocarbons (TPH) as gasoline by EPA Test Method 8015;
- Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Test Method 8020;
- MTBE by EPA Test Method 8020.

Groundwater Analytical Results

TPH as gasoline was reported in the groundwater samples collected from wells MW-2 and MW-4 at concentrations of 1.3 and 0.072 milligrams per liter (mg/l). It is BAI's understanding that the TPH as gasoline concentrations reported in the MW-4 sample are resulting from an upgradient offsite source. The offsite source location is shown on Plate 1. BTEX constituents were also reported in the groundwater sample collected from well MW-2 at concentrations of 22, 6.4, 1.5, and 11 micrograms per liter (µg/l), respectively. Groundwater samples collected from well MW-2 indicate that the TPH as gasoline concentrations in that well have been relatively stable, ranging from 1.3 to 3.4 mg/l, since July 1993. The benzene concentrations reported in the MW-2 samples show a decreasing trend over time. The TPH as gasoline and benzene concentrations versus time at well MW-2 are shown on Figures 1 and 2.

Analytical laboratory results for the January 28, 2000, groundwater monitoring event and previous sampling events are summarized in Table 1, and the TPH as gasoline concentrations reported for this sampling event are presented on Plate 2. The laboratory report and chain-of-custody form are included as Appendix C.

Recommendations

1. BAI has prepared a workplan for the installation of three borings to collect grab groundwater samples in the verified downgradient direction from the former UST. The workplan will be submitted to Larry Seto for approval, prior to starting work. O.K.

2. BAI recommends that the presence of MTBE be verified in the next groundwater sample collected from well MW-2, using EPA Test Method 8260. All wells were tested for the presence of MTBE on January 28, 2000, using EPA Test Method 8020.

3. BAI recommends that wells MW-4 and MW-5 be deleted from the monitoring plan given the proximity of the wells relative to the former UST location, and the reported TPH as gasoline and BTEX concentrations at those wells. O.K.

If you have any questions, please contact Tom Allan at (415) 391-6840, or Diana Dickerson at (707) 838-3027.

Respectfully Submitted,

Tom Allan
Project Engineer

Diana M. Dickerson R.G., R.E.A
Senior Geologist

cc: Ms. Normita Callison, Pacific Coast Building Products, 5550 Roseville Road, North Highlands, California 95660

List of Attachments

Table 1 - Analytical Data Summary
Plate 1 - Groundwater Elevations, January 28, 2000
Plate 2 - Total Petroleum Hydrocarbons as Gasoline, January 28, 2000
Figure 1 - Total Petroleum Hydrocarbons as Gasoline Concentration in Well MW-2 Versus Time
Figure 2 - Benzene Concentration in MW-2 Versus Time
Appendix A - Site History and Background
Appendix B - Monitoring Well Sampling Protocol and Field Reports
Appendix C - Analytical Laboratory Report

TABLE 1. ANALYTICAL DATA SUMMARY
Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline mg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	Lead mg/L	MTBE µg/L
MW-1	10/14/88	7.99	0.88	1.1	1.1	ND	–	ND	–	–
MW-1	12/29/89	7.74	1.13	ND	ND	ND	ND	ND	ND (1)	–
MW-1	5/28/92	7.81	1.06	ND	ND	ND	ND	ND	0.003(2)	–
MW-1	9/3/92	7.90	0.97	ND	ND	ND	ND	ND	0.12 (2)	–
MW-1	11/24/92	7.90	0.97	ND	ND	ND	ND	ND	0.017 (2)	–
MW-1	3/9/93	7.38	1.49	ND	ND	ND	ND	ND	ND (1)	–
MW-1	7/21/93	7.68	1.19	ND	ND	ND	ND	ND	ND (1)	–
MW-1	11/3/93	7.83	1.04	ND	ND	ND	ND	ND	ND (1)	–
MW-1	2/1/94	7.30	1.57	ND	ND	ND	ND	ND	ND (1)	–
MW-1	6/2/94	7.43	1.44	ND	ND	ND	ND	ND	ND (1)	–
MW-1	9/1/94	7.70	1.17	ND	ND	ND	ND	ND	ND (1)	–
MW-1	12/13/94	6.90	1.97	ND	ND	ND	ND	ND	–	–
MW-1	3/7/95	7.30	1.57	0.06	3.8	ND	ND	ND	–	–
MW-1	6/9/95	7.87	1.00	0.09	12	0.8	0.5	1.3	–	–
MW-1	9/21/95	7.67	1.20	ND	4.1	ND	ND	ND	–	–
MW-1	12/18/95	7.15	1.72	ND	ND	ND	ND	ND	–	–
MW-1	2/29/96	6.74	2.13	0.09	1.4	0.5	ND	0.8	–	–
MW-1	7/15/96	7.76	1.11		–	–	–	–	–	–
MW-1	1/7/97	6.80	2.07	0.06	0.6	<0.5	<0.5	<0.5	–	–
MW-1	7/12/97	7.67	1.20	–	–	–	–	–	–	–
MW-1	1/26/98	6.93	1.94	<0.05	<0.5	<0.5	<0.5	1.1	–	–
MW-1	7/3/98	7.51	1.36	–	–	–	–	–	–	–
MW-1	1/13/99	7.63	1.24	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-1	9/27/99	7.77	1.10	–	–	–	–	–	–	–
MW-1	**1/28/00**	**6.85**	**2.02**	**<0.05**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**–**	**<5.0**

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Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline mg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	Lead mg/L	MTBE µg/L
MW-2	10/14/88	7.29	0.85	11	23	20	–	16	–	–
MW-2	12/29/89	6.87	1.27	4	200	6.7	ND	ND	0.22 (1)	–
MW-2	5/28/92	6.92	1.22	8.9	550	48	ND	13	ND (2)	–
MW-2	9/3/92	7.26	0.88	2.1	760	6.2	1.8	5.1	0.006 (2)	–
MW-2	11/24/92	7.28	0.86	4.2	370	15	3.4	9.5	ND (2)	–
MW-2	3/9/93	6.73	1.41	4.3	280	14	3.7	7.1	ND (1)	–
MW-2	7/21/93	7.02	1.12	3.4	250	9.6	2.5	11	ND(1)	–
MW-2	11/4/93	7.22	0.92	2.5	230	7.8	2.1	9.9	ND(1)	–
MW-2	2/1/94	6.93	1.21	3.4	240	17	ND	15	ND(1)	–
MW-2	6/2/94	6.86	1.28	3.0	150	9.8	3.0	10	ND(1)	–
MW-2	9/1/94	7.10	1.04	2.1	120	9.8	2.0	9.6	ND(1)	–
MW-2	12/13/94	6.58	1.56	2.0	200	10	2.7	11	–	–
MW-2	3/7/95	6.69	1.45	3.0	500	15	5.8	16	–	–
MW-2	6/9/95	7.00	1.14	2.1	300	14	5.8	13	–	–
MW-2	9/21/95	6.91	1.23	1.6	120	9.6	ND	15	–	–
MW-2	12/18/95	6.73	1.41	2.8	120	16	5.2	19	–	–
MW-2	2/29/96	6.36	1.78	1.7	170	15	2.9	17	–	–
MW-2	7/15/96	7.11	1.03	2.8	160	22	3.5	17	–	–
MW-2	1/7/97	6.40	1.74	3.0	350	25	8.1	24	–	–
MW-2	7/12/97	6.98	1.16	2.1	55	11	<2.5	18	–	–
MW-2	1/26/98	6.45	1.69	1.8	310	29	5.0	15	–	–
MW-2	7/3/98	6.91	1.23	1.9	85	9.3	1.8	17	–	–
MW-2	1/13/99	7.07	1.07	2.1	48	33	2.0	16	–	–
MW-2	9/27/99	7.22	0.92	1.5	20	6.8	2.6	11	–	–
MW-2	**1/28/00**	**6.61**	**1.53**	**1.3**	**22**	**6.4**	**1.5**	**11**	**–**	**<5.0**

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Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline mg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	Lead mg/L	MTBE µg/L
MW-3	10/14/88	8.25	0.88	3.4	ND	ND	–	2.8	–	–
MW-3	12/29/89	7.79	1.34	ND	ND	ND	ND	ND	0.205 (1)	–
MW-3	5/28/92	7.83	1.30	ND	0.8	0.5	ND	ND	0.016 (2)	–
MW-3	9/3/92	8.22	0.91	ND	ND	ND	ND	ND	0.033 (2)	–
MW-3	11/24/92	8.29	0.84	ND	ND	ND	ND	ND	0.011 (2)	–
MW-3	3/9/93	7.30	1.83	0.1	1.8	ND	ND	ND	ND(1)	–
MW-3	7/21/93	7.87	1.26	ND	ND	ND	ND	ND	ND(1)	–
MW-3	11/4/93	8.23	0.90	0.07	0.6	0.5	ND	ND	ND(1)	–
MW-3	2/1/94	7.56	1.57	ND	ND	ND	ND	ND	ND(1)	–
MW-3	6/2/94	7.46	1.67	0.06	ND	ND	ND	ND	ND(1)	–
MW-3	9/1/94	7.83	1.30	0.07	1.7	0.9	ND	ND	ND(1)	–
MW-3	12/13/94	7.07	2.06	0.06	1.4	ND	ND	ND	–	–
MW-3	3/8/95	7.27	1.86	0.06	1.5	ND	ND	ND	–	–
MW-3	6/9/95	7.79	1.34	0.10	5.7	ND	ND	ND	–	–
MW-3	9/21/95	7.87	1.26	ND	1.5	ND	ND	ND	–	–
MW-3	12/18/95	7.30	1.83	ND	1.3	ND	ND	ND	–	–
MW-3	2/29/96	6.84	2.29	ND	2.1	0.6	ND	0.7	–	–
MW-3	7/15/96	7.79	1.34	–	–	–	–	–	–	–
MW-3	1/7/97	6.62	2.51	0.05	1.0	<0.5	<0.5	<0.5	–	–
MW-3	7/12/97	7.83	1.30	–	–	–	–	–	–	–
MW-3	1/26/98	6.60	2.53	<0.05	0.8	<0.5	<0.5	<0.5	–	–
MW-3	7/3/98	7.48	1.65	–	–	–	–	–	–	–
MW-3	1/13/99	7.63	1.50	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-3	9/27/99	7.94	1.19	–	–	–	–	–	–	–
MW-3	**1/28/00**	**7.12**	**2.01**	**<0.05**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**–**	**<5.0**

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MW-4	10/14/88	8.33	0.74	4.6	1.2	ND	–	2.2	–	–
MW-4	12/29/89	8.08	0.99	0.5	0.7	ND	ND	ND	ND (1)	–
MW-4	5/28/92	8.19	0.88	0.27	8.8	1	ND	3.2	0.030 (2)	–
MW-4	9/3/92	8.37	0.70	0.20	4.5	4.4	ND	1.9	0.022 (2)	–
MW-4	11/24/92	8.28	0.79	0.14	3.2	3.2	ND	1.0	0.005 (2)	–
MW-4	3/9/93	7.98	1.09	0.47	10	ND	ND	2.5	ND (1)	–
MW-4	7/21/93	8.17	0.90	0.28	4.4	5.9	ND	ND	ND(1)	–
MW-4	11/4/93	8.14	0.93	0.08	1.3	1.6	ND	ND	ND(1)	–
MW-4	2/1/94	7.79	1.28	0.08	ND	ND	ND	ND	ND(1)	–
MW-4	6/2/94	7.53	1.54	0.30	3.1	2.9	ND	0.8	ND(1)	–
MW-4	9/1/94	7.69	1.38	0.12	1.6	ND	ND	ND	ND(1)	–
MW-4	12/13/94	6.70	2.37	ND	ND	ND	ND	ND	–	–
MW-4	3/8/95	6.83	2.24	0.09	ND	ND	ND	ND	–	–
MW-4	6/9/95	7.66	1.41	0.19	ND	ND	ND	ND	–	–
MW-4	9/21/95	7.93	1.14	0.09	ND	ND	ND	ND	–	–
MW-4	12/18/95	6.98	2.09	–	–	–	–	–	–	–
MW-4	2/29/96	6.54	2.53	0.14	1.6	1.0	ND	0.6	–	–
MW-4	7/15/96	7.74	1.33	–	–	–	–	–	–	–
MW-4	1/7/97	6.46	2.61	0.09	1.0	0.5	<0.5	<0.5	–	–
MW-4	7/12/97	7.82	1.25	–	–	–	–	–	–	–
MW-4	1/26/98	6.67	2.40	0.09	1.1	0.8	<0.5	<0.5	–	–
MW-4	7/3/98	7.45	1.62	–	–	–	–	–	–	–
MW-4	1/13/99	7.51	1.56	0.12	1.1	0.62	<0.5	0.57	–	–
MW-4	9/27/99	7.88	1.19	–	–	–	–	–	–	–
MW-4	**1/28/00**	**6.73**	**2.34**	**0.072**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**–**	**<5.0**

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MW-5	10/14/88	8.04	0.89	3.2	ND	ND	–	ND	–	–
MW-5	12/29/89	7.40	1.53	ND	ND	ND	ND	ND	ND (1)	–
MW-5	5/28/92	7.53	1.40	ND	ND	ND	ND	ND	0.008 (2)	–
MW-5	9/3/92	8.02	0.91	ND	ND	ND	ND	ND	0.034 (2)	–
MW-5	11/24/92	7.75	1.18	ND	ND	ND	ND	ND	0.011 (2)	–
MW-5	3/9/93	6.91	2.02	ND	ND	ND	ND	ND	ND (1)	–
MW-5	7/21/93	7.57	1.36	ND	ND	ND	ND	ND	ND(1)	–
MW-5	11/4/93	7.77	1.16	ND	ND	ND	ND	ND	ND(1)	–
MW-5	2/1/94	7.05	1.88	ND	ND	ND	ND	ND	ND(1)	–
MW-5	6/2/94	7.18	1.75	ND	ND	ND	ND	ND	ND(1)	–
MW-5	9/1/94	7.53	1.40	ND	ND	ND	ND	ND	–	–
MW-5	3/8/95	6.67	2.26	ND	ND	ND	ND	ND	–	–
MW-5	6/9/95	7.33	1.60	ND	ND	ND	ND	ND	–	–
MW-5	9/21/95	7.67	1.26	ND	ND	ND	ND	ND	–	–
MW-5	12/18/95	6.62	2.31	–	–	–	–	–	–	–
MW-5	2/29/96	6.16	2.77	ND	ND	ND	ND	ND	–	–
MW-5	7/15/96	7.47	1.46	–	–	–	–	–	–	–
MW-5	1/7/97	6.11	2.82	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-5	7/12/97	7.61	1.32	–	–	–	–	–	–	–
MW-5	1/26/98	6.17	2.76	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-5	7/3/98	7.23	1.70	–	–	–	–	–	–	–
MW-5	1/13/99	7.27	1.66	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-5	9/27/99	7.76	1.17	–	–	–	–	–	–	–
MW-5	**1/28/00**	**6.43**	**2.50**	**<0.05**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**–**	**<5.0**

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Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline mg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	Lead mg/L	MTBE µg/L
MW-6	12/29/89	5.02	1.11	1.1	5.4	4.5	ND	ND	ND (1)	–
MW-6	3/9/93	5.10	1.03	2.3	2.3	2.8	ND	3.1	ND (1)	–
MW-6	7/21/93	5.23	0.90	0.59	ND	7.6	ND	ND	ND(1)	–
MW-6	11/4/93	5.25	0.88	1.5	ND	1.2	ND	0.7	ND(1)	–
MW-6	2/1/94	5.05	1.08	1.9	2.5	3.9	1.6	1.1	ND(1)	–
MW-6	6/2/94	4.49	1.64	1.3	ND	1	ND	ND	ND(1)	–
MW-6	9/1/94	4.53	1.60	2.2	ND	1.7	ND	ND	ND(1)	–
MW-6	12/13/94	4.27	1.86	0.66 (3)	ND	ND	ND	ND	–	–
MW-6	3/8/95	3.37	2.76	1.0 (3)	ND	ND	ND	ND	–	–
MW-6	6/9/95	4.40	1.73	1.5	ND	3.3	ND	ND	–	–
MW-6	9/21/95	4.69	1.44	0.28	ND	ND	ND	ND	–	–
MW-6	12/18/95	4.42	1.71	–	–	–	–	–	–	–

Note: Based on the February 6, 1996 letter from Jennifer Eberle, monitoring of well MW-6 is no longer required.

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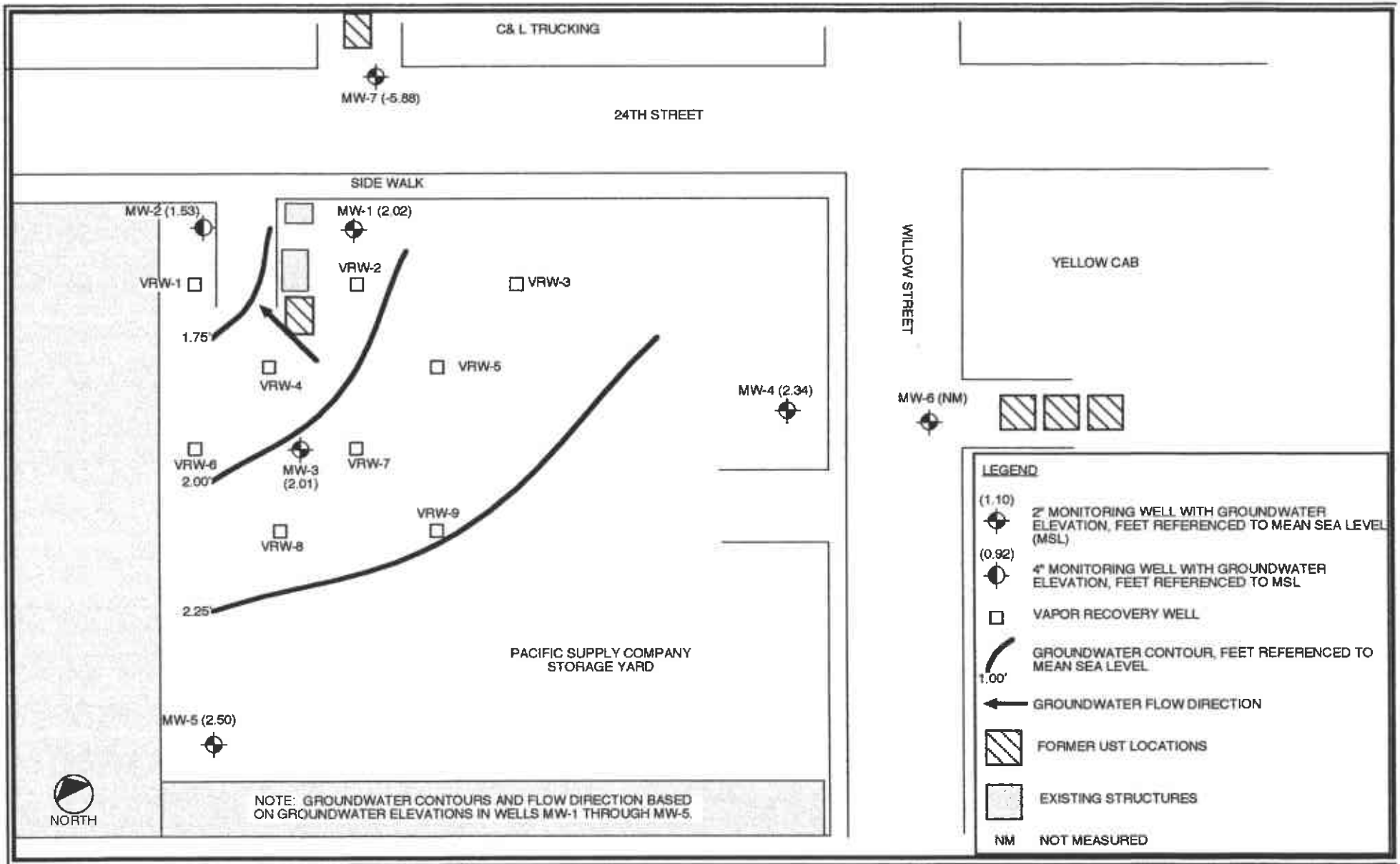
Well Name	Sampling Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline mg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	Lead mg/L	MTBE µg/L
MW-7	12/29/89	8.35	-3.32	ND	ND	ND	ND	ND	0.235 (1)	–
MW-7	3/9/93	13.60	-8.57	ND	ND	ND	ND	ND	ND (1)	–
MW-7	7/21/93	12.59	-7.56	ND	ND	ND	ND	ND	ND(1)	–
MW-7	11/4/93	9.84	-4.81	ND	ND	ND	ND	ND	ND(1)	–
MW-7	2/1/94	10.38	-5.35	ND	ND	ND	ND	ND	ND(1)	–
MW-7	6/2/94	10.10	-5.07	ND	ND	ND	ND	ND	ND(1)	–
MW-7	9/1/94	9.63	-4.60	ND	ND	ND	ND	ND	ND(1)	–
MW-7	12/13/94	11.27	-6.24	ND	ND	ND	ND	ND	–	–
MW-7	3/7/95	9.68	-4.65	ND	ND	ND	ND	ND	–	–
MW-7	6/9/95	9.37	-4.34	ND	ND	ND	ND	ND	–	–
MW-7	9/21/95	9.43	-4.40	ND	ND	ND	ND	ND	–	–
MW-7	12/18/95	13.28	-8.25	–	–	–	–	–	–	–
MW-7	2/29/96	11.70	-6.67	ND	ND	ND	ND	ND	–	–
MW-7	7/15/96	11.12	-6.09	–	–	–	–	–	–	–
MW-7	1/7/97	14.35	-9.32	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-7	7/12/97	15.12	-10.09	–	–	–	–	–	–	–
MW-7	1/26/98	15.28	-10.25	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-7	7/3/98	14.10	-9.07	–	–	–	–	–	–	–
MW-7	1/13/99	14.55	-9.52	<0.05	<0.5	<0.5	<0.5	<0.5	–	–
MW-7	9/27/99	14.03	-9.00	–	–	–	–	–	–	–
MW-7	**1/28/00**	**10.91**	**-5.88**	**<0.05**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	–	**<5.0**

Notes:
MTBE = methyl tertiary butyl ether. TPH = total petroleum hydrocarbons.
(1)=Organic Lead, (2)=Total Lead, and (3)=chromatographic peak array does not match gasoline standard.
ND = not detected at laboratory reporting limit, <= less than given laboratory reporting limit.
µg/L = micrograms per liter. mg/l = milligrams per liter. – = not analyzed.
MSL = mean seal level
Groundwater elevations based on the following well casing elevations in feet above MSL:
MW-1 (8.87'), MW-2 (8.14'), MW-3 (9.13'), MW-4 (9.07'), MW-5 (8.93'), MW-6 (6.13') and MW-7 (5.03').



PROJECT NUMBER: 29.7 PACIFIC SUPPLY COMPANY OAKLAND, CALIFORNIA		
DRAWING NUMBER: 29.7-02		
DRAWN BY:	TFA	2/1/2000
APPROVED BY:	DMD	
SCALE: 1 inch = 50 Feet		

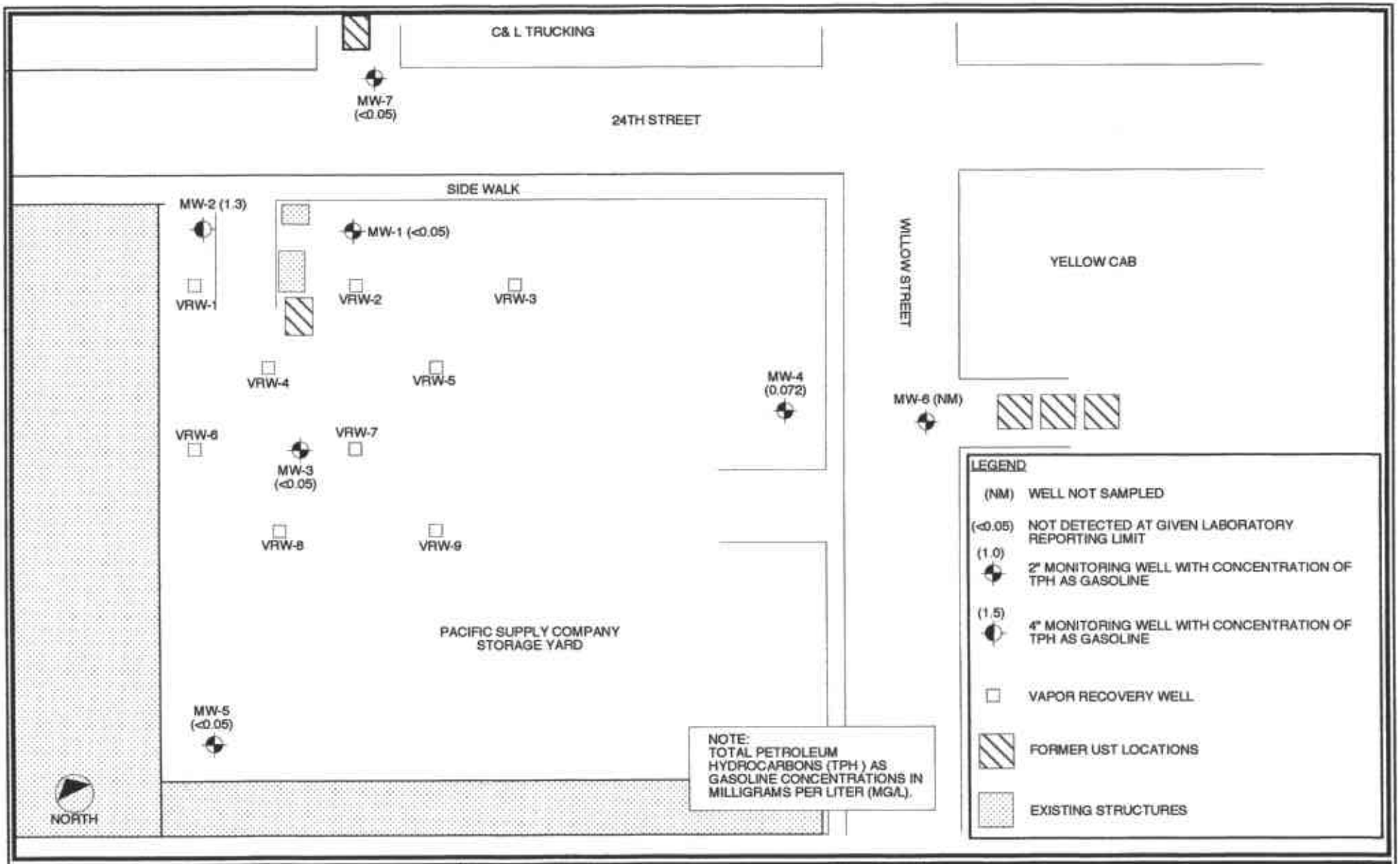
BACE Environmental

A Division of

Brunsing Associates, Inc.

PLATE 1

GROUNDWATER ELEVATIONS
JANUARY 28, 2000
PACIFIC SUPPLY COMPANY
1735 24TH STREET
OAKLAND, CALIFORNIA



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DRAWING NUMBER: 29.7		
REVISED BY:	TFA	2/17/2000
APPROVED BY:	DMD	
SCALE: 1 Inch = 50 Feet		

BACE Environmental

A Division of

Brunsing Associates, Inc.

PLATE 2

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE IN GROUNDWATER
JANUARY 28, 2000
PACIFIC SUPPLY COMPANY
1735 24TH STREET
OAKLAND, CALIFORNIA

FIGURE 1. TOTAL PETROLEUM HYDROCARBONS AS GASOLINE CONCENTRATION IN WELL MW-2 VERSUS TIME

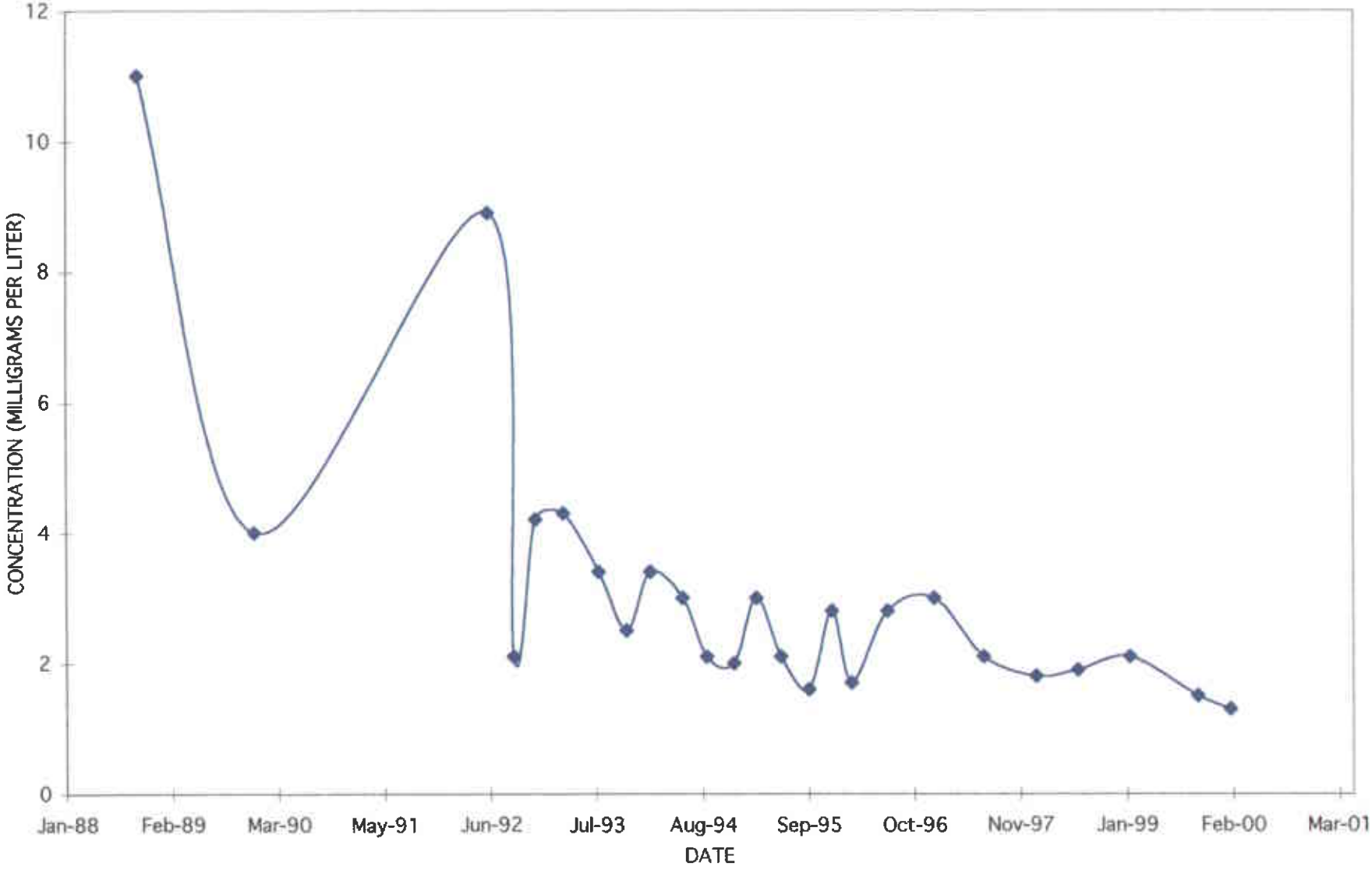
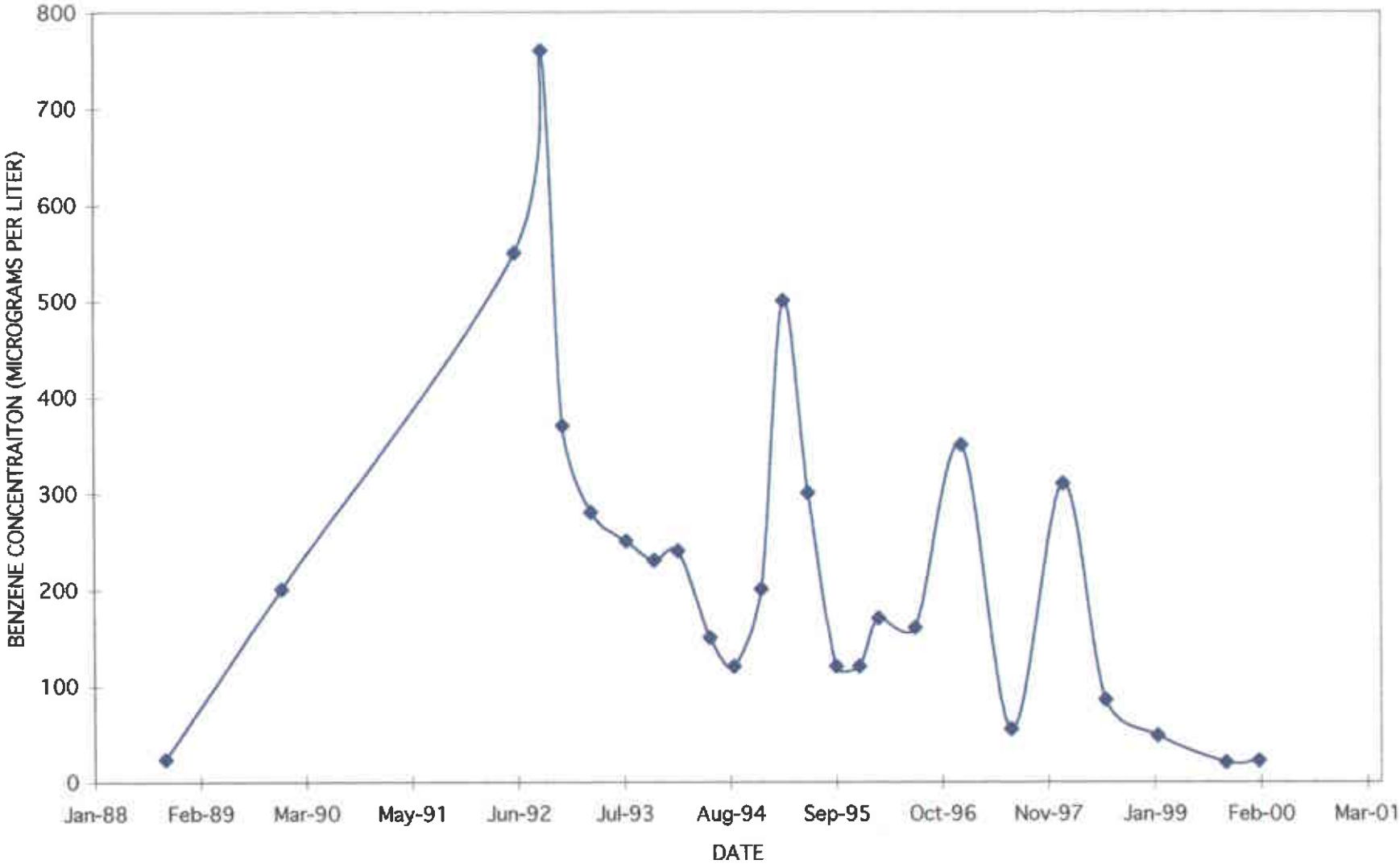


FIGURE 2. BENZENE CONCENTRATION IN WELL MW-2 VERSUS TIME



APPENDIX A
Site History and Background

Site History and Background

Monitoring wells MW-1 through MW-5 were constructed in September 1988 as the first phase of a soil and groundwater investigation. Monitoring wells MW-6 and MW-7 were constructed on December 19, 1989 during Phase II of the same investigation. The construction and sampling of these wells are documented in BAI's Report of Findings, dated March 23, 1990.

Vapor recovery wells VRW-1 through VRW-9 were constructed in August 1993 as part of a vapor recovery system. Installation of these wells were documented in a February 7, 1994 report. A vapor extraction system was installed in the Fall of 1993 and began operation on December 26, 1993. This system consisted of an internal combustion engine with a spray aeration tank for treatment of groundwater and activated carbon treatment of groundwater prior to discharge. The internal combustion unit and spray aeration unit was manufactured by Remediation Service International (RSI), under the trade name Spray Aeration Vapor Extraction (SAVE) system.

On June 28, 1996, the treatment system was shut down with the concurrence of Pacific Supply Company. Prior to shut down, the system had destroyed an estimated 6,550 pounds of petroleum hydrocarbons since start of operations on December 26, 1993. After shut down, the water in the water tank was treated and discharged to the sanitary sewer under the existing permit and the inside of the tank was cleaned on July 15, 1996.

The permit with the Bay Area Air Quality Management District (BAAQMD) expired on September 1, 1996, and was not renewed. The water discharge permit was discontinued on July 31, 1996. The total volume of water discharged to the sanitary sewer was 151,089 gallons. In December 1996, the shut down and decommissioning of the system was authorized by Jennifer Eberle of the Alameda County Department of Health Services. Decommissioning of the system hardware is complete.

APPENDIX B

Monitoring Well Sampling Protocol and Field Reports

Monitoring Well Sampling Protocol

Prior to purging of each monitoring well, the groundwater level is measured and a single bailer full of water is retrieved from the well to check for floating product. The monitoring well is then purged until a minimum of three casing volumes of water are removed, water is relatively clear of sediment, and pH, conductivity, and temperature measurements of the water stabilizes. If wells go dry during purging, the wells are allowed to recover to 80 percent of original water level prior to sampling.

A single groundwater sample is collected from each monitoring well following re-equilibration of each well after purging. Individual log sheets are maintained throughout the sampling operations. The following information is recorded:

- Sample number
- Date and time sampled and purged
- Sampling location
- Types of sampling equipment used
- Name of sampler(s)
- Volume of water purged.

The sample is collected in the following manner:

- A hand-operated, factory-sealed, disposable, polyethylene bailer with sampling port is used for collecting all water samples.

- The sample container(s) are obtained directly from the analytical laboratory. Sample bottles, bottle caps, and septa are protected from solvent contact, dust or other contamination between time of receipt by the field sampler and time of actual usage at the sampling site.

The sample container is labeled with a self-adhesive tag. Field personnel label the tag, using waterproof ink, with the following information:

- Project number
- Sample number
- Date and time sample is obtained
- Initials of sample collector(s).

Following collection, the sample is immediately stored on blue ice in an appropriate container. A Chain-of-Custody Record is completed with the following information:

- Date the sample was taken
- Sample number and the number of containers

- Analyses required
- Remarks including preservatives added and any special conditions.

The original copy of the Chain-of-Custody Record accompanies the sample containers to a California-certified laboratory. The duplicate copy is retained by the BAI representative who sampled the well.

Sampling equipment is cleaned both before and after their use at the sampling location. Thermometers, pH electrodes, and conductivity probes are also cleaned.

The following cleaning procedures are used:

- Scrub with a detergent-potable water solution or other solutions deemed appropriate using a hard bristle brush
- Rinse with potable water
- Double-rinse with organic-free or deionized water

Water Levels

Sheet 1 of 1

Project: PACIFIC SUPPLY Job No.: 29.7

Instrument Type: SOLINST Measured By: TFA Date: 1/28/2000

Well Number	Depth to Product (feet)	Depth to Groundwater (feet)	Time (24-hour)	Equilibrated (check for yes)	Notes
MW-1	~15	6.85'			
MW-2		6.61			
MW-3		7.12			
MW-4		6.73			
MW-5		6.43			
MW-6	—	—	—	—	omit from sampling plan
MW-7		10.91'			
2ND Round WATER MEASUREMENTS					
MW-1		6.85'			
MW-2		6.61			
MW-3		7.12'			
MW-4		6.73			
MW-5		6.43			
MW-7		10.91'			

x5 x2 x1
x3 x1
x4
x6
SITE LAYOUT

UST Fund Site: ☑ Yes ☐ No

Field Report

Sheet 1 of ____

Job No.: 29.7 Project: PACIFIC SUPPLY Total Time: ____

Init.: TFA Subject: GROUNDWATER SAMPLING End. Mileage: ____

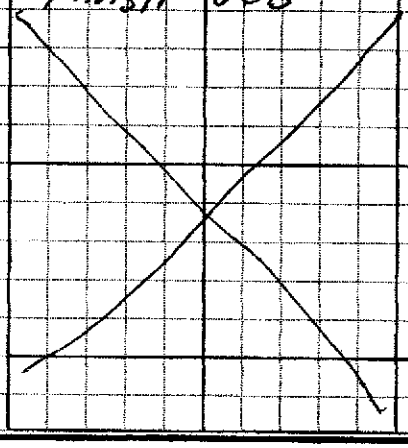
Date: 1/28/2000 Project Phase No.: ____ - Beg. Mileage: ____

Vehicle Used (if *Personal*, see → Reverse): ____ Tot. Mileage: ____

Activities by Quarter Hour:			2225	Field Equipment Decon.	hrs	2275	Soil Stockpile Sampling	hrs
1101	Staff Briefing	hrs	**2231**	**Groundwater Elev. (DTW)**	hrs	2281	Treatment Sys. Monitoring	hrs
1203	Prep Equip/Supplies	hrs	2234	Collect Air Samples	hrs	2284	Treatment Sys. Sampling	hrs
1205	Prefield Planning	hrs	**2235**	**Groundwater Sampling**	hrs			hrs
2105	**Equip Load/Unload**	hrs	2236	Soil Sampling	hrs			hrs
2107	Mob/Demobilization	hrs	2241	Bail Product	hrs			hrs
2201	**Travel**	hrs	2247	Well Development	hrs			hrs
2207	**Prepare Field Notes**	hrs	2271	Log & Sample Borings	hrs			hrs

Description of Work and Conversation Record:

- 1045 LOAD TRUCK
- 1100 TRAVEL TO SITE
- 1145 ARRIVE AT SITE, MEET WITH SITE PERSONNEL
- 1200 OPEN ALL WELLS
- 1220 & MEASURE DEPTH TO WATER IN ALL WELLS
- 1250 REMEASURE DEPTHS (WELL MW-7 UNDER PRESSURE)
- 1310 SAMPLE WELL MW-1 (PREP)
- 1355 PREP TO SAMPLE WELL MW-4
- 1400 REQUEST SITE PERSONNEL TO MOVE TRAIL TO ALLOW ACCESS TO WELL MW-4
- 1445 PREP TO SAMPLE WELL MW-5
- 1520 SAMPLE WELL MW-5
- 1530 PREP TO SAMPLE WELL MW-3
- 1605 SAMPLE WELL MW-3
- 1615 PURGE MW-2
- 1645 SAMPLE WELL MW-2
- 1700 PURGE WELL MW-7
- 1735 SAMPLE WELL MW-7
- 1755 LEAVE JOB SITE
- 1900 ARRIVE HOME, UNLOAD TRUCK
- 1915 FINISH JOB



Brunsing Associates, Inc.

APPENDIX C
Analytical Laboratory Report

BACE Analytical & Field Services
A Division of Brunsing Associates, Inc.

February 11, 2000
Log No: 3353
Laboratory Certificate Number: 1264

BACE Environmental
a division of
Brunsing Associates, Inc.
P.O. Box 588
Windsor, CA 95492

ATTN: Tom Allan

RE: **Results of the analyses of groundwater samples obtained for project number 29.7 on January 28, 2000.**

Dear Mr. Allan,

This letter serves to confirm the analytical results previously communicated to you. Should any questions arise concerning procedure or results, please feel free to contact us.

Sincerely,

William G. Rotz
Director, Mobile Analytical Services

Client: BACE Environmental
Client Contact: Tom Allan

Sample Date: 1/28/99
Analysis Date: 2/9&10/00

BAFS Log No: 3353

METHOD: EPA 5030/8020

Matrix: Water
Results - µg/L

Parameter	Reporting Limit µg/L	Lab No: Descriptor:	3353-1 (MW-1)	3353-2 (MW-2)
Benzene	0.5		ND	22
Toluene	0.5		ND	6.4
Ethylbenzene	0.5		ND	1.5
Xylenes (total)	0.5		ND	11
MTBE	5.0		ND	ND
Dilution Factor			1	1

METHOD: EPA 5030 / GC FID

Results - mg/L

Parameter	Reporting Limit mg/L	Lab No.: Descriptor:	3353-1 (MW-1)	3353-2 (MW-2)
TPH - gasoline	0.05		ND	1.3
Dilution Factor			1	1

Note: *ND = not detected*

Client: BACE Environmental
Client Contact: Tom Allan

Sample Date: 1/28/99
Analysis Date: 2/9/00

BAFS Log No: 3353

METHOD: EPA 5030/8020

Matrix: Water
Results - µg/L

Parameter	Reporting Limit µg/L	Lab No: Descriptor:	3353-3 (MW-3)	3353-4 (MW-4)
Benzene	0.5		ND	ND
Toluene	0.5		ND	ND
Ethylbenzene	0.5		ND	ND
Xylenes (total)	0.5		ND	ND
MTBE	5.0		ND	ND
Dilution Factor			1	1

METHOD: EPA 5030 / GC FID

Results - mg/L

Parameter	Reporting Limit mg/L	Lab No.: Descriptor:	3353-3 (MW-3)	3353-4 (MW-4)
TPH - gasoline	0.05		ND	0.072
Dilution Factor			1	1

Note: *ND = not detected*

Client: BACE Environmental
Client Contact: Tom Allan

Sample Date: 1/28/99
Analysis Date: 2/9/00

BAFS Log No: 3353

METHOD: EPA 5030/8020

Matrix: Water
Results - µg/L

Parameter	Reporting Limit µg/L	Lab No: Descriptor:	3353-5 (MW-5)	3353-6 (MW-7)
Benzene	0.5		ND	ND
Toluene	0.5		ND	ND
Ethylbenzene	0.5		ND	ND
Xylenes (total)	0.5		ND	ND
MTBE	5.0		ND	ND
Dilution Factor			1	1

METHOD: EPA 5030 / GC FID

Results - mg/L

Parameter	Reporting Limit mg/L	Lab No.: Descriptor:	3353-5 (MW-5)	3353-6 (MW-7)
TPH - gasoline	0.05		ND	ND
Dilution Factor			1	1

Note: *ND = not detected*

QUALITY CONTROL SUMMARY

Client: BACE Environmental
Client Contact: Tom Allan
Sample Date: 1/28/00
Analysis Date: 2/9&10/00

BAFS Log No: 3353

Matrix: Water

Parameter	% RECOVERY				
	CCV%*	Blank	Spike	Spike Dup	RPD
Gasoline	102	ND	94	103	9.0
Benzene	96	ND	95	91	4.3
Toluene	95	ND	91	89	2.2
Ethylbenzene	93	ND	93	89	4.3
Xylenes	92	ND	89	88	1.1
MTBE	88	ND	98	90	8.5

* Continuous Calibration Verification Standard

PROJ. NO. 29.7

PROJECT NAME: PACIFIC SUPPLY

L.P. NO.

SAMPLERS: (Signature) Tom Allen

№ 2907

DATE	SAMPLE I.D.	TYPE	NO. OF CONTAINERS	ANALYSIS: TPH GASOLINE	BTEX	MTBE	REMARKS
1/28/2000	MW-1	WATER	3	X	X	X	3 each 40ml bottles 3353-1
	MW-2						-2
	MW-3						-3
	MW-4						-4
	MW-5						-5
↓	MW-7	↓	↓	↓	↓	↓	-6

LABORATORY: BAFS

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Remarks
Tom Allen	1/31/2000 0830		STD TAT
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	RESULTS TO TA
Relinquished by: (Signature)	Date/Time 2/2/00 1400	Received for Laboratory by: (Signature)	

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