PES Environmental, Inc.
Engineering & Environmental Services

June 30, 1994

131.0100.003

Alameda County Environmental Health Services
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

Attention: Ms. Susan Hugo

QUARTERLY GROUNDWATER MONITORING REPORT
JUNE 1994 SAMPLING EVENT
EMERY BAY PLAZA
1650 65TH STREET
EMERYVILLE, CALIFORNIA

Dear Ms. Hugo:

This letter presents data collected by PES Environmental, Inc. (PES) during the May 16, 1994 quarterly groundwater monitoring conducted at Emery Bay Plaza, located at 1650 65th Street in Emeryville, California (Plate 1). PES has been retained by Emery Bay Plaza to conduct groundwater monitoring at the site.

The purpose of the groundwater monitoring program at this site is to: (1) evaluate the presence of hydrocarbons in groundwater; (2) provide data to assess the performance and effectiveness of the groundwater remedial program; and (3) monitor seasonal water level variations at the site. The monitoring is performed in accordance with California Regional Water Quality Control Board (RWQCB) guidelines and the approved remedial action plan for this site.

BACKGROUND

Six monitoring wells and one extraction well were installed at the site (Plate 2) following removal of an onsite underground storage tank (UST) in July 1987 and several offsite USTs in September and October 1989. Groundwater monitoring has been conducted at this facility since November 1989. An activated carbon groundwater treatment system was installed and its operation was begun in December 1990. Discharges of treated groundwater have been conducted under the authority of an East Bay Municipal Utility District wastewater discharge permit (Permit # 502-45131). Groundwater extraction was discontinued on October 25, 1993 pending startup of a passive in-situ bioremediation pilot program. The present sampling is the nineteenth consecutive sampling event since groundwater monitoring was initiated, and the eleventh to be conducted by PES.

GROUNDWATER ELEVATIONS

Water-Level Measurement Procedures

Prior to sampling, the groundwater level in each of the six monitoring wells was measured to a precision of 0.01 feet using an electronic water-level indicator. Prior to each measurement, the portion of the water-level indicator that was submerged in the well was cleaned with a mild detergent solution and rinsed with de-ionized water.

Results

Water-level data were converted to water-level elevations referenced to mean sea level (MSL). A groundwater elevation map constructed from the data is presented on Plate 3. An historical summary of groundwater elevations for wells at the site is presented in Table 1.

Groundwater elevations have increased in all monitoring wells since the February 14, 1994 sampling event. Based on measured water levels on May 16, 1994, groundwater flow direction at the site was calculated to be toward the southwest, with an approximate gradient of 0.008 foot per foot. This is generally consistent with historical groundwater flow direction and gradient.

GROUNDWATER SAMPLING AND ANALYTICAL TESTING

Sampling Protocol

Groundwater samples were collected on May 16, 1994 by Blaine Tech Services, Inc. (Blaine Tech) from Monitoring Wells MW-2, MW-3, MW-4, MW-5, MW-6, and extraction well EW-1. MW-7 was inaccessible for sampling on May 16, 1994 and was sampled on May 17, 1994. Prior to sampling, the groundwater was visually inspected to assess the presence of floating product. A minimum of three well volumes were evacuated prior to sampling using a teflon bladder pump. During pumping the discharge water was measured for pH, temperature, electrical conductivity, and turbidity. Groundwater samples were collected with a clean teflon bailer and decanted into clean 40-milliliter glass vials with teflon lined caps.

Samples were immediately labeled to designate sample number, time and date collected, and analysis requested, and stored in a chilled, thermally-insulated cooler for transport to the analytical laboratory. The information collected during the groundwater sampling and the chain of custody records are presented in a groundwater sampling report prepared by Blaine Tech, provided in Appendix A.

Analytical Program

Groundwater samples from all wells including the extraction well were analyzed by Coast-to-Coast Analytical Services, Inc. (Coast-to-Coast) in San Jose, California, a State-certified analytical laboratory. Samples were analyzed for total petroleum hydrocarbons quantified as gasoline (TPH-gas) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Test Method 8015M/8020.

Analytical Results

Detectable levels of TPH-gas were found in wells MW-2, MW-3, MW-5, and EW-1. Detectable levels of BTEX were found in MW-2 and EW-1. Detectable concentrations of benzene, toluene and/or total xylenes were also detected in MW-3, MW-4, MW-5 and MW-7. No TPH-gas or BTEX was detected in MW-6. Consistent with historical monitoring data, Well MW-2, located within the backfill of the soil excavation at the former onsite UST, exhibited the highest levels of dissolved hydrocarbons (TPH-gas and BTEX).

Analytical results for all wells, including historical monitoring results for the previous sampling events and relevant federal and state standards, are presented in Table 2. Laboratory reports and chain of custody records are provided in Appendix B. The distribution of hydrocarbons in groundwater at the site on May 16 and 17, 1994 is presented on Plate 4.

SUMMARY

Groundwater elevations have increased in all wells since the February 14, 1994 sampling event. The groundwater flow direction continues to be toward the southwest.

The concentration of TPH-gas detected in MW-2 increased since the last sampling event. The increase in hydrocarbon concentrations may be due to the seasonal rise in water levels in the zone of residual soil contamination. Concentrations of petroleum hydrocarbons detected in all other groundwater samples did not change significantly from last quarter. Groundwater sampling results from this monitoring event are generally consistent with historical results.

If you have any questions or comments, please do not hesitate to call either of the undersigned.

Yours very truly,

PES ENVIRONMENTAL, INC.

Paul R. Lohman
Staff Engineer

Andrew A. Briefer, P. E.
Associate Engineer

Attachments:

Table 1	Summary of Groundwater Elevations Through May 1994
Table 2	Summary of Analytical Results for Groundwater Samples Through May 1994
Plate 1	Site Location Map
Plate 2	Well Location Map
Plate 3	Groundwater Elevation Contours on May 16, 1994
Plate 4	Dissolved Hydrocarbons in Groundwater on May 16 and 17, 1994
Appendix A	Groundwater Sampling Report
Appendix B	Analytical Laboratory Reports

pc: Mr. Thomas Gram - P. O. Partners
Ms. Lynn Tolin - Emery Bay Plaza
Mr. Matt Dulka - Hanson, Bridgett, Marcus, Vlahos & Rudy

Table 1. **Summary of Groundwater Elevations Through May 1994**
Emery Bay Plaza
1650 65th Street, Emeryville, California

Well Number	Date	Measured by	Top of Casing (feet MSL)	Depth to Water (feet)	Groundwater Elevations (feet MSL)
MW-2	21-Feb-90	ES	15.75	11.72	4.03
	25-May-90	ES	15.75	11.83	3.92
	29-Aug-90	ES	15.75	11.72	4.03
	29-Nov-90	ES	15.75	11.99	3.76
	1-Mar-91	ES	15.79	12.87	2.92
	28-May-91	ES	15.79	12.21	3.58
	1-Aug-91	ES	15.79	NA	NA
	27-Jan-92	PES	15.79	11.78	4.01
	28-Feb-92	PES	15.79	11.70	4.09
	28-May-92	PES	15.79	11.83	3.96
	27-Aug-92	PES	15.79	12.28	3.51
	10-Nov-92	PES	15.79	12.40	3.39
	18-Feb-93	PES	15.79	12.00	3.79
	20-May-93	PES	15.79	12.00	3.79
	19-Aug-93	PES	15.79	12.11	3.68
	15-Nov-93	PES	15.79	11.64	4.15
	14-Feb-94	PES	15.79	11.45	4.34
	16-May-94	**PES**	**15.79**	**11.25**	**4.54**
MW-3	21-Feb-90	ES	12.45	9.18	3.27
	25-May-90	ES	12.45	9.25	3.20
	29-Aug-90	ES	12.45	9.50	2.95
	29-Nov-90	ES	12.45	9.80	2.65
	1-Mar-91	ES	12.43	9.51	2.92
	28-May-91	ES	12.43	9.03	3.40
	1-Aug-91	ES	12.43	NA	NA
	27-Jan-92	PES	12.43	9.44	2.99
	28-Feb-92	PES	12.43	8.80	3.63
	28-May-92	PES	12.43	8.80	3.63
	27-Aug-92	PES	12.43	9.18	3.25
	10-Nov-92	PES	12.43	9.44	2.99
	18-Feb-93	PES	12.43	7.59	4.84
	20-May-93	PES	12.43	8.21	4.22
	19-Aug-93	PES	12.43	8.71	3.72
	15-Nov-93	PES	12.43	9.09	3.34
	14-Feb-94	PES	12.43	8.84	3.59
	16-May-94	**PES**	**12.43**	**8.18**	**4.25**
MW-4	21-Feb-90	ES	12.24	8.63	3.61
	25-May-90	ES	12.24	8.58	3.66
	29-Aug-90	ES	12.24	8.50	3.74
	29-Nov-90	ES	12.24	8.74	3.50

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1650 65th Street, Emeryville, California

Well Number	Date	Measured by	Top of Casing (feet MSL)	Depth to Water (feet)	Groundwater Elevations (feet MSL)
MW-4	1-Mar-91	ES	12.24	8.65	3.59
	28-May-91	ES	12.24	8.57	3.67
	1-Aug-91	ES	12.24	NA	NA
	27-Jan-92	PES	12.24	8.62	3.62
	28-Feb-92	PES	12.24	8.52	3.72
	28-May-92	PES	12.94	8.35	3.89
	27-Aug-92	PES	12.24	9.00	3.24
	10-Nov-92	PES	12.24	8.85	3.39
	18-Feb-93	PES	12.24	8.17	4.07
	20-May-93	PES	12.24	8.21	4.03
	19-Aug-93	PES	12.24	8.20	4.04
	15-Nov-93	PES	12.24	8.33	3.91
	14-Feb-94	PES	12.24	8.30	3.94
	16-May-94	**PES**	**12.24**	**8.20**	**4.04**
MW-5	21-Feb-90	ES	12.81	6.91	5.90
	25-May-90	ES	12.81	7.58	5.23
	29-Aug-90	ES	12.81	7.75	5.06
	29-Nov-90	ES	12.81	8.17	4.64
	1-Mar-91	ES	12.82	8.11	4.71
	28-May-91	ES	12.82	7.39	5.43
	1-Aug-91	ES	12.82	NA	NA
	27-Jan-92	PES	12.82	7.90	4.92
	28-Feb-92	PES	12.82	7.73	5.09
	28-May-92	PES	12.82	7.18	5.64
	27-Aug-92	PES	12.82	7.54	5.28
	10-Nov-92	PES	12.82	7.90	4.92
	18-Feb-93	PES	12.82	6.58	6.24
	20-May-93	PES	12.82	6.29	6.53
	19-Aug-93	PES	12.82	6.89	5.93
	15-Nov-93	PES	12.82	7.43	5.39
	14-Feb-94	PES	12.82	7.16	5.66
	16-May-94	**PES**	**12.82**	**6.50**	**6.32**
MW-6	1-Mar-91	ES	12.03	8.59	3.44
	28-May-91	ES	12.03	8.35	3.68
	1-Aug-91	ES	12.03	NA	NA
	27-Jan-92	PES	12.03	8.32	3.71
	28-Feb-92	PES	12.03	8.08	3.95
	28-May-92	PES	12.03	8.04	3.99
	27-Aug-92	PES	12.03	8.48	3.55
	10-Nov-92	PES	12.03	8.52	3.51

Table 1. **Summary of Groundwater Elevations Through May 1994**
Emery Bay Plaza
1650 65th Street, Emeryville, California

Well Number	Date	Measured by	Top of Casing (feet MSL)	Depth to Water (feet)	Groundwater Elevations (feet MSL)
MW-6	18-Feb-93	PES	12.03	8.14	3.89
	20-May-93	PES	12.03	8.46	3.57
	19-Aug-93	PES	12.03	8.61	3.42
	15-Nov-93	PES	12.03	8.30	3.73
	14-Feb-94	PES	12.03	8.09	3.94
	16-May-94	**PES**	**12.03**	**7.82**	**4.21**
MW-7	1-Mar-91	ES	12.9	7.51	5.39
	28-May-91	ES	12.9	7.07	5.83
	1-Aug-91	ES	12.9	NA	NA
	27-Jan-92	PES	12.9	7.28	5.62
	28-Feb-92	PES	12.9	7.04	5.86
	28-May-92	PES	12.9	6.81	6.09
	27-Aug-92	PES	12.9	7.12	5.78
	10-Nov-92	PES	12.9	7.80	5.10
	18-Feb-93	PES	12.9	6.54	6.36
	20-May-93	PES	12.9	6.17	6.73
	19-Aug-93	PES	12.9	6.60	6.30
	15-Nov-93	PES	12.9	6.89	6.01
	14-Feb-94	PES	12.9	6.50	6.40
	17-May-94	**PES**	**12.9**	**6.07**	**6.83**

NOTES:
Ft MSL = feet above Mean Sea Level
ES = Engineering-Science, Inc.
PES = PES Environmental, Inc.
NA = Information not available at this date.

Table 2. Summary of Analytical Results for Groundwater Samples Through May 1994
Emery Bay Plaza
1650 65th Street, Emeryville, California

Concentrations expressed in milligrams per liter (mg/l) - equivalent to parts per million (ppm)

Well Number	Sample Date	Sampled by	TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Purgeable Halocarbons	Lead
					MCL = 0.001	DAL = 0.1	MCL = 0.68	MCL = 1.75		MCL = 0.005
MW-2	Nov-89	ES	100	NA	8.4	7.4	2.4	13	0.015 *	0.05
	Feb-90	ES	54	NA	7.8	5.6	1.6	8.4	0.032 *	0.021
	May-90	ES	40	NA	7.8	7.5	1.6	7.6	0.076 *	0.025
	Aug-90	ES	49	4.6	9	8	ND	8.9	0.040 *	0.0059
	Nov-90	ES	73	3.5	6.9	5.9	1.4	7.4	NA	NA
	Mar-91	ES	72	1.8	5.5	6.6	1	7.7	NA	NA
	May-91	ES	31	ND	8.4	4.7	1.7	6.3	NA	NA
	Aug-91	ES	47	ND	7.6	1.6	7.3	7.8	NA	NA
	29-Jan-92	PES	77.000	NA	10.000	8.700	2.000	7.600	NA	NA
	28-Feb-92	PES	70.000	NA	9.100	6.400	0.530	7.400	NA	NA
	28-May-92	PES	54.000	NA	8.000	4.800	2.400	6.200	NA	NA
	27-Aug-92	PES	47.000	NA	2.700	2.900	3.400	9.200	NA	NA
	10-Nov-92	PES	45.000	<20.000	6.600	4.000	2.000	5.800	<0.050	NA
	18-Feb-93	PES	14.000	NA	2.300	0.810	0.670	1.400	NA	NA
	20-May-93	PES	43.000	NA	7.300	5.200	1.500	5.500	NA	NA
	19-Aug-93	PES	45.000	NA	4.900	3.700	1.300	3.400	NA	NA
	15-Nov-93	PES	97.000	NA	6.100	1.700	1.700	4.100	NA	NA
	14-Feb-94	PES	27.000	NA	5.000	0.830	1.200	3.100	NA	NA
	16-May-94	**PES**	**77.000**	**NA**	**6.800**	**1.100**	**1.400**	**3.300**	**NA**	**NA**
MW-3	Nov-89	ES	0.13	NA	0.0022	ND	ND	0.003	ND	ND
	Feb-90	ES	ND	NA	0.0025	ND	ND	ND	NA	0.011
	May-90	ES	ND	ND	0.002	ND	ND	ND	ND	NA
	Aug-90	ES	ND	0.8	0.0044	0.0029	ND	0.0054	NA	NA
	Nov-90	ES	0.9	0.8	0.0034	ND	ND	ND	NA	NA
	Mar-91	ES	ND	ND	0.025	0.025	0.0053	0.32	NA	NA
	May-91	ES	ND	ND	0.0026	ND	ND	ND	NA	NA
	Aug-91	ES	ND	ND	0.0019	ND	ND	ND	NA	NA

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Concentrations expressed in milligrams per liter (mg/l) - equivalent to parts per million (ppm)

Well Number	Sample Date	Sampled by	TPH as Gasoline	TPH as Diesel	Benzene MCL = 0.001	Toluene DAL = 0.1	Ethyl-Benzene MCL = 0.68	Total Xylenes MCL = 1.75	Purgeable Halocarbons	Lead MCL = 0.005
MW-3	29-Jan-92	PES	0.092	NA	0.0024	<0.0003	0.0006	<0.0003	NA	NA
	28-Feb-92	PES	0.160***	NA	0.0028	<0.0003	0.0007	0.0005	NA	NA
	28-May-92	PES	<0.050	NA	0.0025	<0.0005	<0.0005	<0.0005	NA	NA
	27-Aug-92	PES	0.370	NA	0.0040	<0.001	<0.0005	<0.0005	NA	NA
	10-Nov-92	PES	0.240	<0.100	0.0042	<0.0003	<0.0003	<0.0006	<0.0003	NA
	18-Feb-93	PES	0.140	NA	0.0018	<0.0005	<0.0005	<0.0005	NA	NA
	20-May-93	PES	0.072	NA	0.0031	<0.0005	<0.0005	<0.0005	NA	NA
	19-Aug-93	PES	<0.050	NA	0.0032	<0.0005	<0.0005	0.0007	NA	NA
	15-Nov-93	PES	0.070	NA	0.0023	0.0007	<0.0005	0.0015	NA	NA
	14-Feb-94	PES	0.120	NA	0.0053	0.0023	0.0012	0.0042	NA	NA
	16-May-94	**PES**	**0.120**	**NA**	**0.0031**	**<0.0005**	**<0.0005**	**0.0017**	**NA**	**NA**
MW-4	Nov-89	ES	0.2	NA	0.0023	ND	ND	ND	ND	ND
	Feb-90	ES	ND	NA	ND	ND	ND	ND	NA	0.006
	May-90	ES	ND	ND	0.001	ND	ND	ND	ND	NA
	Aug-90	ES	ND	0.8	0.0089	0.0071	ND	0.0094	NA	NA
	Nov-90	ES	ND	0.7	0.0027	ND	ND	ND	NA	NA
	Mar-91	ES	NA	ND	0.003	ND	ND	ND	NA	NA
	May-91	ES	NA	ND	0.0024	ND	ND	ND	NA	NA
	Aug-91	ES	NA	ND	0.0015	ND	ND	ND	NA	NA
	29-Jan-92	PES	<0.050	NA	0.0022	0.0004	<0.0003	0.0007	NA	NA
	28-Feb-92	PES	<0.050	NA	0.0016	<0.0003	<0.0003	0.0003	NA	NA
	28-May-92	PES	<0.050	NA	0.0015	<0.0005	<0.0005	<0.0005	NA	NA
	27-Aug-92	PES	0.080	NA	0.003	<0.001	<0.0005	0.0005	NA	NA

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Emery Bay Plaza
1650 65th Street, Emeryville, California

Concentrations expressed in milligrams per liter (mg/l) - equivalent to parts per million (ppm)

Well Number	Sample Date	Sampled by	TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Purgeable Halocarbons	Lead
					MCL = 0.001	DAL = 0.1	MCL = 0.68	MCL = 1.75		MCL = 0.005
MW-4	10-Nov-92	PES	0.180	<0.100	0.060	0.0009	<0.0003	<0.0006	<0.0003	NA
	18-Feb-93	PES	0.060	NA	0.0017	<0.0005	<0.0005	<0.0005	NA	NA
	20-May-93	PES	<0.050	NA	0.0022	<0.0005	<0.0005	<0.0005	NA	NA
	19-Aug-93	PES	<0.050	NA	0.0020	0.0006	<0.0005	0.0005	NA	NA
	15-Nov-93	PES	<0.050	NA	0.0020	0.0005	<0.0005	0.0009	NA	NA
	14-Feb-94	PES	<0.050	NA	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
	16-May-94	**PES**	**<0.050**	**NA**	**0.0017**	**0.0009**	**<0.0005**	**0.0011**	**NA**	**NA**
MW-5	Nov-89	ES	ND	NA	0.074	ND	ND	0.0042	ND	ND
	Feb-90	ES	ND	NA	0.2	ND	ND	ND	NA	0.012
	May-90	ES	ND	ND	0.11	ND	ND	ND	ND	NA
	Aug-90	ES	ND	0.7	0.066	0.0022	ND	0.0038	NA	NA
	Nov-90	ES	0.6	0.9	0.069	ND	ND	ND	NA	NA
	Mar-91	ES	ND	1.1	0.066	0.0023	ND	ND	NA	NA
	May-91	ES	ND	ND	0.11	ND	ND	ND	NA	NA
	Aug-91	ES	ND	ND	0.078	0.0021	ND	ND	NA	NA
	29-Jan-92	PES	0.190	NA	0.090	0.0005	<0.0003	0.0006	NA	NA
	28-Feb-92	PES	0.230***	NA	0.110	0.0009	<0.0003	0.0005	NA	NA
	28-May-92	PES	0.130	NA	0.100	<0.0005	<0.0005	<0.0005	NA	NA
	27-Aug-92	PES	0.520	NA	0.083	0.002	<0.0005	<0.0005	NA	NA
	10-Nov-92	PES	0.240	<0.100	0.074	0.0010	<0.0003	<0.0006	<0.0003	NA
	18-Feb-93	PES	0.190	NA	0.056	0.0006	<0.0005	<0.0005	NA	NA
	20-May-93	PES	<0.200	NA	0.056	<0.002	<0.002	<0.002	NA	NA
	19-Aug-93	PES	0.170	NA	0.050	0.0007	<0.0005	<0.0005	NA	NA
	15-Nov-93	PES	0.220	NA	0.049	0.001	<0.001	<0.001	NA	NA
	14-Feb-94	PES	0.140	NA	0.062	<0.0005	<0.0005	<0.0005	NA	NA
	16-May-94	**PES**	**0.310**	**NA**	**0.140**	**0.003**	**<0.003**	**<0.003**	**NA**	**NA**

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Concentrations expressed in milligrams per liter (mg/l) - equivalent to parts per million (ppm)

Well Number	Sample Date	Sampled by	TPH as Gasoline	TPH as Diesel	Benzene MCL = 0.001	Toluene DAL = 0.1	Ethyl-Benzene MCL = 0.68	Total Xylenes MCL = 1.75	Purgeable Halocarbons	Lead MCL = 0.005
MW-6	May-90	ES	NA	ND	ND	ND	ND	ND	ND	ND**
	Aug-90	ES	NA	ND	NA	NA	NA	NA	NA	ND**
	Nov-90	ES	1.2	1.4	0.0012	ND	ND	ND	0.0012	NA
	Mar-91	ES	ND	ND	ND	ND	ND	ND	NA	NA
	May-91	ES	ND	ND	ND	ND	ND	ND	NA	NA
	Aug-91	ES	ND	ND	ND	ND	ND	ND	NA	NA
	29-Jan-92	PES	<0.050	NA	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA
	28-Feb-92	PES	<0.050	NA	<0.0003	<0.0003	<0.0003	<0.0003	NA	NA
	28-May-92	PES	<0.050	NA	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
	27-Aug-92	PES	0.050***	NA	<0.0005	<0.001	<0.0005	<0.0005	NA	NA
	10-Nov-92	PES	<0.050	<0.100	<0.0003	<0.0003	<0.0003	<0.0006	<0.0003	NA
	18-Feb-93	PES	<0.050	NA	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
	20-May-93	PES	<0.050	NA	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
	19-Aug-93	PES	<0.050	NA	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
	15-Nov-93	PES	<0.050	NA	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
	14-Feb-94	PES	<0.050	NA	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
	16-May-94	**PES**	**<0.050**	**NA**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**NA**	**NA**
MW-7	May-90	ES	NA	0.6	0.24	ND	ND	ND	0.24	ND**
	Aug-90	ES	ND	ND	0.081	0.0018	ND	ND	0.0844	ND**
	Nov-90	ES	ND	0.8	0.054	ND	ND	ND	0.054	NA
	Mar-91	ES	ND	ND	0.1	0.0036	ND	ND	NA	NA
	May-91	ES	ND	ND	0.12	0.0027	ND	ND	NA	NA
	Aug-91	ES	ND	ND	0.074	0.0033	ND	ND	NA	NA
	29-Jan-92	PES	0.270	NA	0.025	0.0005	<0.0003	0.0008	NA	NA
	28-Feb-92	PES	0.100***	NA	0.033	0.0007	<0.0003	0.0007	NA	NA
	28-May-92	PES	0.150	NA	0.021	<0.0005	<0.0005	<0.0005	NA	NA
	27-Aug-92	PES	0.440	NA	0.011	0.001	<0.0005	<0.0005	NA	NA

Table 2. Summary of Analytical Results for Groundwater Samples Through May 1994
Emery Bay Plaza
1650 65th Street, Emeryville, California

Concentrations expressed in milligrams per liter (mg/l) - equivalent to parts per million (ppm)

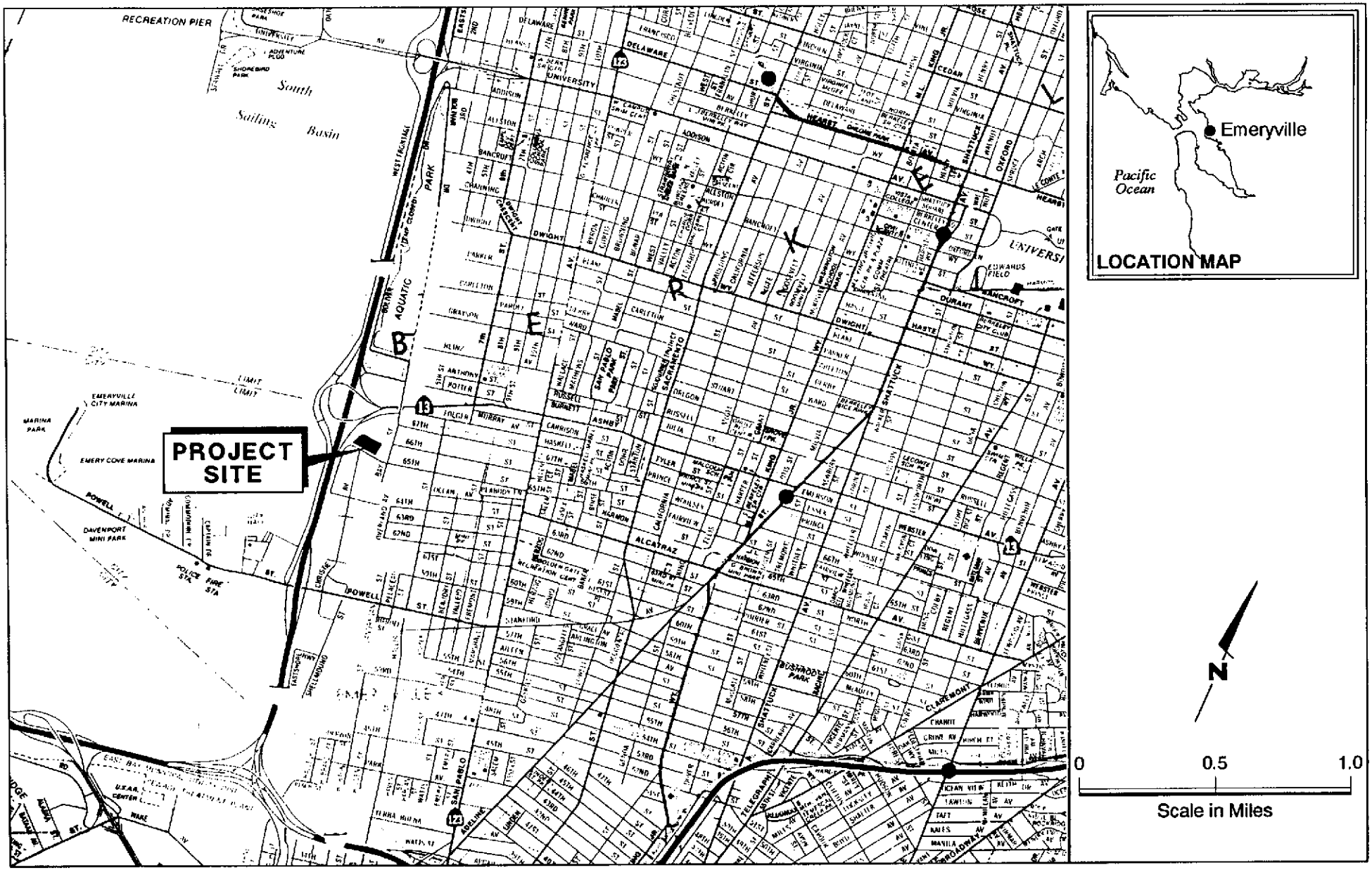
Well Number	Sample Date	Sampled by	TPH as Gasoline	TPH as Diesel	Benzene MCL = 0.001	Toluene DAL = 0.1	Ethyl-Benzene MCL = 0.68	Total Xylenes MCL = 1.75	Purgeable Halocarbons	Lead MCL = 0.005
MW-7	10-Nov-92	PES	0.370	<0.100	0.031	0.0012	<0.0003	0.0012	<0.0003	NA
	18-Feb-93	PES	0.270	NA	0.077	0.0013	<0.0005	0.0014	NA	NA
	20-May-93	PES	0.300	NA	0.150	0.003	<0.002	0.003	NA	NA
	19-Aug-93	PES	0.110	NA	0.040	0.0010	<0.0005	0.0011	NA	NA
	15-Nov-93	PES	0.120	NA	0.015	0.0006	<0.0005	0.0023	NA	NA
	14-Feb-94	PES	0.120	NA	0.038	<0.0005	<0.0005	<0.0005	NA	NA
	17-May-94	**PES**	**<0.300**	**NA**	**0.061**	**<0.003**	**<0.003**	**<0.003**	**NA**	**NA**
EW-1	May-90	ES	20	ND	7.5	4.5	1	6.3	0.068	ND**
	Aug-90	ES	NA	3.5	6	4.2	ND	4.6	0.016 *	ND**
	Nov-90	ES	47	3.1	6	3.4	1	4.7	NA	NA
	17-Dec-90	ES	NA	NA	11	7.9	2.2	10	NA	NA
	19-Dec-90	ES	NA	NA	3.7	2.5	ND	2.3	NA	NA
	21-Dec-90	ES	NA	NA	3.2	2.2	ND	1.7	NA	NA
	27-Dec-90	ES	NA	NA	2.9	2.1	0.16	1.5	NA	NA
	4-Jan-91	ES	NA	NA	3.2	2.8	ND	ND	NA	NA
	11-Jan-91	ES	NA	NA	3	2.4	0.2	1.8	NA	NA
	6-Feb-91	ES	NA	NA	0.47	0.23	0.011	0.39	NA	NA
	13-Feb-91	ES	NA	NA	1.2	0.28	ND	0.36	NA	NA
	15-Mar-91	ES	NA	NA	0.13	0.085	0.006	0.17	NA	NA
	3-Jul-91	ES	NA	NA	1.3	0.95	0.22	1.4	NA	NA
	1-Aug-91	ES	NA	NA	0.22	0.19	0.013	0.27	NA	NA
	16-Aug-91	ES	NA	NA	0.17	0.16	0.013	0.19	NA	NA
	13-Nov-91	ES	NA	NA	3.1	0.27	0.04	0.22	NA	NA
	29-Jan-92	PES	2.700	NA	0.570	0.150	0.0070	0.260	NA	NA
	26-Mar-92	PES	25.000	NA	3.600	2.600	0.530	2.600	NA	NA
	28-May-92	PES	16.000	NA	3.300	3.200	0.750	2.600	NA	NA
	29-Jun-92	PES	7.000	NA	2.200	3.100	0.270	1.400	NA	NA

Table 2. Summary of Analytical Results for Groundwater Samples Through May 1994
Emery Bay Plaza
1650 65th Street, Emeryville, California

Concentrations expressed in milligrams per liter (mg/l) - equivalent to parts per million (ppm)

Well Number	Sample Date	Sampled by	TPH as Gasoline	TPH as Diesel	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Purgeable Halocarbons	Lead
					MCL = 0.001	DAL = 0.1	MCL = 0.68	MCL = 1.75		MCL = 0.005
EW-1	21-Jul-92	PES	1.600	NA	0.220	0.017	<0.0005	0.100	NA	NA
	27-Aug-92	PES	NS	NS	NS	NS	NS	NS	NS	NS
	23-Sep-92	PES	5.200	NA	1.100	0.590	0.100	1.000	NA	NA
	27-Oct-92	PES	1.300	NA	0.220	0.061	0.0053	0.110	NA	NA
	24-Nov-92	PES	7.100	NA	1.400	1.100	0.120	0.890	NA	NA
	18-Feb-93	PES	7.200	NA	1.400	0.930	0.210	1.000	NA	NA
	09-Mar-93	PES	4.600	NA	0.990	0.750	0.062	0.840	NA	NA
	21-Apr-93	PES	4.900	NA	0.270	0.180	0.020	0.190	NA	NA
	13-May-93	PES	2.600	NA	0.520	0.110	0.023	0.330	NA	NA
	28-Jun-93	PES	9.500	NA	1.900	0.460	0.230	1.000	NA	NA
	11-Aug-93	PES	1.300	NA	<0.002	<0.002	<0.002	0.400	NA	NA
	15-Nov-93	PES	46.000	NA	2.900	0.380	0.500	1.700	NA	NA
	14-Feb-94	PES	21.000	NA	4.500	0.860	1.000	2.800	NA	NA
	16-May-94	**PES**	**19.000**	**NA**	**7.300**	**0.930**	**1.300**	**3.300**	**NA**	**NA**

NOTES:
* = 1,2-Dichlorethane concentration (only 1,2-Dichloroethane detected).
** = Organic Lead
*** = TPH quantified as gasoline but chromatogram pattern was not typical of gasoline.
**** = Small amount of Diesel 2 was detected in sample.
ES = Engineering-Science, Inc.
PES = PES Environmental, Inc.
NA = Not analyzed
ND = Not detected above method detection limit.
NS = Not sampled.
<0.0005 = Not detected above indicated laboratory reporting limit.
MCL = California Maximum Contaminant level, current as of January 1991.
DAL = Department of Health Services Action Levels, current as of January 1991.
TPH = Total Petroleum Hydrocarbons



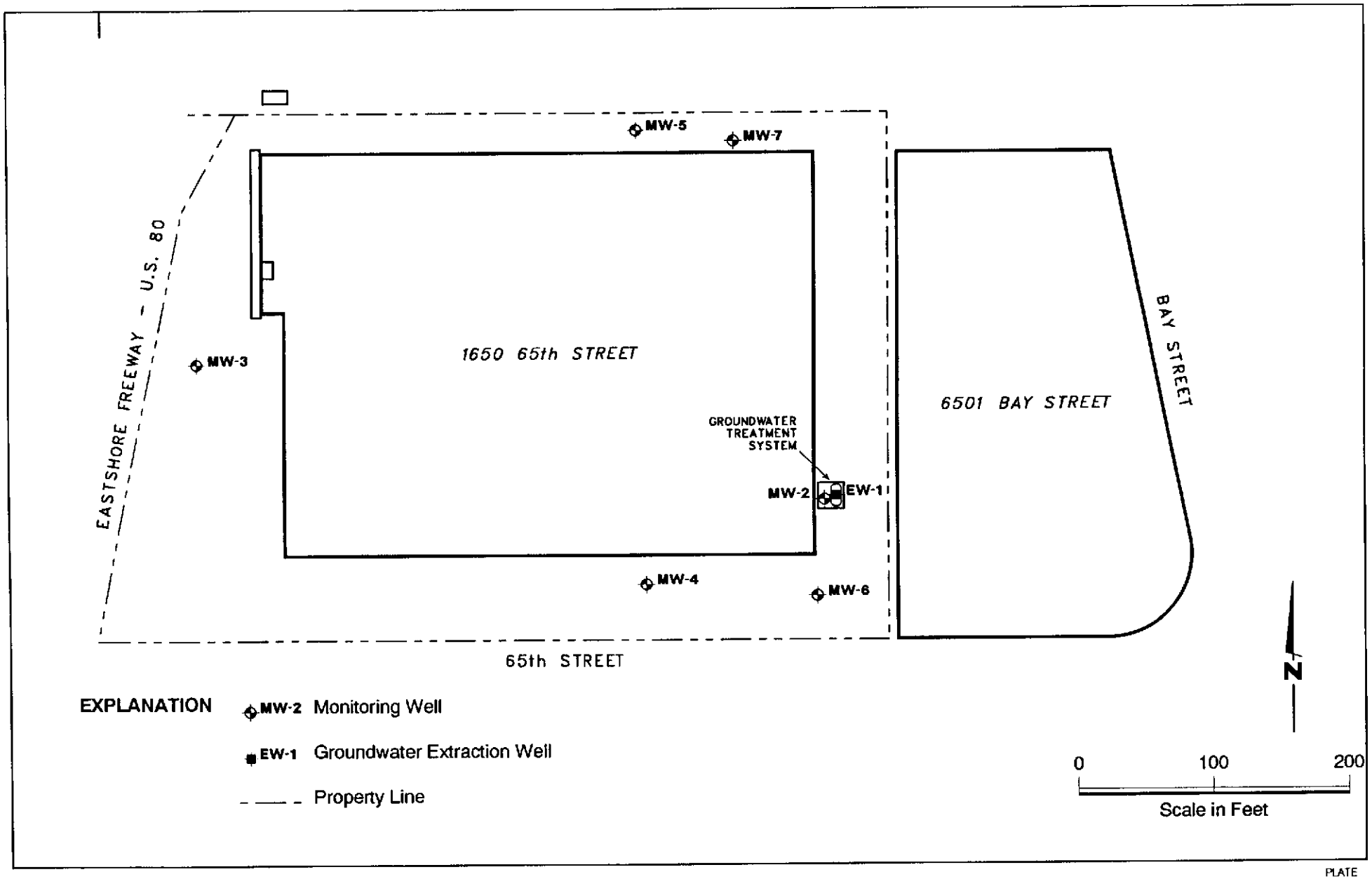
PLATE

1

PES Environmental, Inc.
Engineering & Environmental Services

Site Location Map
1650 65th Street
Emeryville, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
131.01.003	MW	6/94		

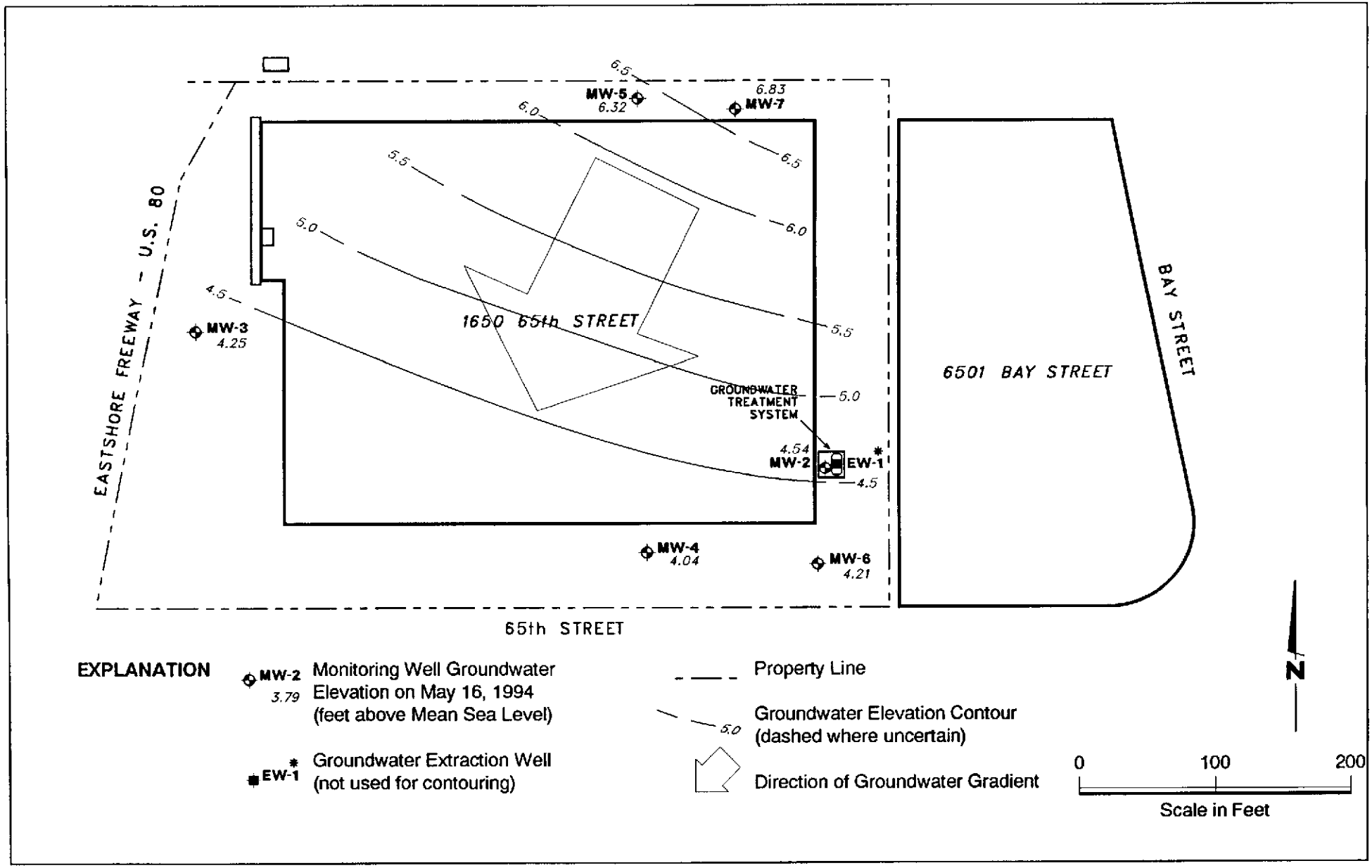


PES Environmental, Inc.
Engineering & Environmental Services

Well Location Map
1650 65th Street
Emeryville, California

PLATE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
131.01.003	MW	6/94		

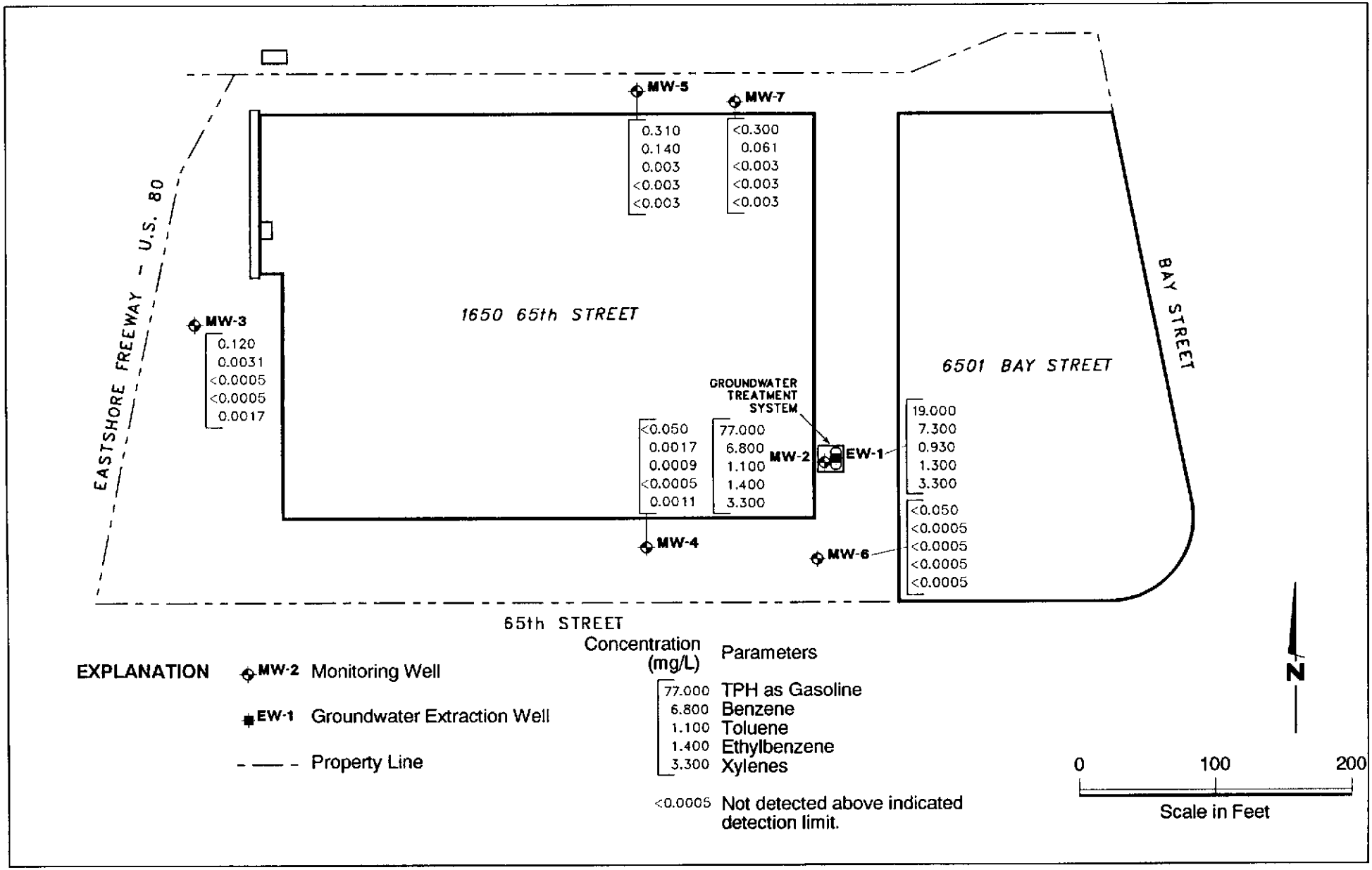


PES Environmental, Inc.
Engineering & Environmental Services

Groundwater Elevation Contours on May 16, 1994
1650 65th Street
Emeryville, California

PLATE
3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
131.0100.003	MW	6/94		



PES Environmental, Inc.
Engineering & Environmental Services

Dissolved Hydrocarbons in Groundwater on May 16 and 17, 1994
1650 65th Street
Emeryville, California

PLATE
4

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
131.0100.003	MW	6/94		

BLAINE
TECH SERVICES INC.

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

May 31, 1994

PES Environmental, Inc.
1682 Novato Blvd., Suite 100
Novato, CA 94947

Attn: Paul Lohman

SITE:
P.O. Partners
1650 65th Street
Emeryville, California

DATE:
May 16, 1994

GROUNDWATER SAMPLING REPORT 940516-A-1

Blaine Tech Services, Inc. perform 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. does not participate in the interpretation of analytical results or become involved with the marketing or installation of remedial systems.

This report deals with the groundwater well sampling performed by our firm on May 16, 1994, in response to your request. Data collected in the course of our work at the site are presented in the TABLE OF WELL MONITORING DATA. This information was collected during our inspection, well evacuation, and sample collection. Measurements include the total depth of the well and depth to water. Water surfaces were further inspected for the presence of immiscibles. A series of electrical conductivity, pH, and temperature readings were obtained during well evacuation and at the time of sample collection.

TABLE OF WELL MONITORING DATA

Well I.D.	MW-2			MW-3			MW-4			MW-5		
Date Sampled	05/16/94			05/16/94			05/16/94			05/16/94		
Well Diameter (in.)	2			4			4			4		
Total Well Depth (ft.)	25.80			18.24			15.92			18.00		
Depth To Water (ft.)	11.25			8.18			8.20			6.50		
Free Product (in.)	NONE			NONE			NONE			NONE		
Reason If Not Sampled	--			--			--			--		
1 Case Volume (gal.)	2.32			6.54			5.0			7.47		
Did Well Dewater?	NO			NO			NO			NO		
Gallons Actually Evacuated	7.0			20.0			15.0			23.0		
Purging Device	BAILER			MIDDLEBURG			MIDDLEBURG			MIDDLEBURG		
Sampling Device	BAILER			BAILER			BAILER			BAILER		
Time	15:49	15:59	16:15	14:31	14:40	14:55	12:01	12:06	12:12	12:37	12:45	12:53
Temperature (Fahrenheit)	64.8	63.8	64.1	63.6	63.5	63.9	66.8	66.7	66.0	62.3	62.6	62.2
pH	7.9	8.0	8.0	7.6	7.6	7.8	7.8	8.1	8.3	8.2	8.1	8.1
Conductivity (micromhos/cm)	3900	2800	2600	3200	3200	3200	8200	8200	8200	2200	1900	2000
Nephelometric Turbidity Units	>200	>200	>200	20.1	13.29	33.0	31.3	44.6	51.5	49.4	58.5	--
BTS Chain of Custody	940516-A-1			940516-A-1			940516-A-1			940516-A-1		
BTS Sample I.D.	MW-2			MW-3			MW-4			MW-5		
DHS HMTL Laboratory	COAST TO COAST			COAST TO COAST			COAST TO COAST			COAST TO COAST		
Analysis	TPH (GAS), BTEX			TPH (GAS), BTEX			TPH (GAS), BTEX			TPH (GAS), BTEX		

TABLE OF WELL MONITORING DATA

Well I.D.	MW-6			MW-7			EW-1		
Date Sampled	05/16/94			05/16/94			05/16/94		
Well Diameter (in.)	4			4			4		
Total Well Depth (ft.)	18.80			18.77			27.82		
Depth To Water (ft.)	7.82			6.07			11.22		
Free Product (in.)	NONE			NONE			NONE		
Reason If Not Sampled	--			--			--		
1 Case Volume (gal.)	7.13			8.25			10.79		
Did Well Dewater?	NO			NO			NO		
Gallons Actually Evacuated	22.0			25.0			33.0		
Purging Device	MIDDLEBURG			MIDDLEBURG			MIDDLEBURG		
Sampling Device	BAILER			BAILER			BAILER		
Time	13:45	13:53	14:00	09:54	10:04	10:15	15:38	15:48	16:01
Temperature (Fahrenheit)	64.9	64.6	65.3	61.2	61.3	60.5	64.6	63.9	63.9
pH	7.5	7.5	7.3	7.4	7.9	8.1	8.1	7.9	7.9
Conductivity (micromhos/cm)	>10000	8900	>10000	1500	1500	1600	2100	2300	2700
Nephelometric Turbidity Units	30.2	75.7	44.4	33.5	17.37	18.55	93.1	43.9	25.9
BTS Chain of Custody	940516-A-1			940516-A-1			940516-A-1		
BTS Sample I.D.	MW-6			MW-7			EW-1		
DHS HMTL Laboratory	COAST TO COAST			COAST TO COAST			COAST TO COAST		
Analysis	TPH (GAS), BTEX			TPH (GAS), BTEX			TPH (GAS), BTEX		

STANDARD PRACTICES

Evacuation and Sampling Equipment

As shown in the TABLE OF MONITORING DATA the wells at this site were evacuated according to a protocol requirement for three case volumes. The wells were evacuated using either bailers, USGS/Middleburg Pumps or Electric Submersible Pumps.

Samples were collected using stainless steel bailers.

Bailers: A bailer, in its simplest form, is a hollow tube which has been fitted with a check valve at the lower end. The device can be lowered into a well by means of a cord. When the bailer enters the water, the check valve opens and liquid flows into the interior of the bailer. The bottom check valve prevents water from escaping when the bailer is drawn up out of the well.

Two types of bailers are used in groundwater wells at sites where fuel hydrocarbons are of concern. The first type of bailer is made of a clear material such as acrylic plastic and is used to obtain a sample of the surface and the near surface liquids in order to detect the presence of visible or measurable fuel hydrocarbon floating on the surface. The second type of bailer is made of Teflon or stainless steel and is used as an evacuation and/or sampling device.

Bailers are inexpensive and relatively easy to clean. Because they are manually operated, variations in operator technique may have a greater influence than would be found with more automated sampling equipment. Also where fuel hydrocarbons are involved, the bailer may include near surface contaminants that are not representative of water deeper in the well.

USGS/Middleburg Positive Displacement Sampling Pumps: USGS/Middleburg positive displacement sampling pumps are EPA approved pumps appropriate for use in wells down to two inches in diameter and depths up to several hundred feet. The pump contains a flexible Teflon bladder which is alternately allowed to fill with well water and then collapsed. Actuation of the pump is accomplished with compressed air supplied by a single hose to one side of the Teflon membrane. Water on the other side of the membrane is squeezed out of the pump and up a Teflon conductor pipe to the surface. Evacuation and sampling are accomplished as a continuum. The rate of water removal is relatively slow and loss of volatiles almost non-existent. There is only positive pressure on the water being sampled and there is no impeller cavitation or suction. The pumps can be placed at any location within the well, can draw water from the very bottom of the well case, and are virtually immune to the erosive effects of silt or lack of water which destroy other types of pumps.

Disadvantages associated with Middleburg pumps include their high cost, low flow rate, temperamental operation, and cleaning requirements which are both elaborate and time consuming.

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 Materials

The evacuation process creates a volume of effluent water which must be contained. Purge water from this sampling event was discharged through the carbon filtration system on site.

Sampling Methodology

Samples were obtained by standardized sampling procedures that follow an evacuation and sample collection protocol. The sampling methodology conforms both State and Regional Water Quality Control Board standards and specifically adheres to EPA requirements for apparatus, sample containers and sample handling as specified in publication SW 846 and the T.E.G.D. which is published separately.

Sample Containers

Sample containers are supplied by the laboratory performing the analyses.

Sample Handling Procedures

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.

Sample Designations

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days as jobs and projects often do.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under our standard 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 person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

After completion of the field work, the sample containers were delivered to Coast to Coast Analytical Services in Benecia, California. Coast to Coast is certified by the California Department of Health Services as a Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1204.

Personnel

All Blaine Tech Services, Inc. personnel receive 29 CFR 1910.120(e)(2) training as soon after being hired as is practical. In addition, many of our personnel have additional certifications that include specialized training in level B supplied air apparatus and the supervision of employees working on hazardous materials sites. Employees are not sent to a site unless we are confident they can adhere to any site safety provisions in force at the site and unless we know that they can follow the written provisions of an SSP and the verbal directions of an SSO.

In general, employees sent to a site to perform groundwater well sampling will assume an OSHA level D (wet) environment exists unless otherwise informed. The use of gloves and double glove protocols protects both our employees and the integrity of the samples being collected. Additional protective gear and procedures for higher OSHA levels of protection are available.

Please call if we can be of any further assistance.

James Clifton for:
Richard C. Blaine

RCB/dk

attachments: chain of custody

BLAINE TECH SERVICES INC.

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

CHAIN OF CUSTODY

CLIENT PES

SITE P.O. Partners
1650 65th St
Emeryville CA

IC = COMPOSITE ALL CONTAINERS

SAMPLE I.D.	MATRIX S = SOIL W = H2O	CONTAINERS TOTAL		CONDUCT ANALYSIS TO DETECT TPH/BTEX 8015/8020	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW2	W	3	VOAs	X				
MW3	W	3		X				
MW4	W	3		X				
MW5	W	3		X				
MW6	W	3		X				
EW1	W	3		X				
MW7	W	3	↓	X				

LAB Coast to Coast DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

☐ EPA ☐ RWQCB REGION _____
☐ LIA
☐ OTHER

SPECIAL INSTRUCTIONS
Invoice & Report to: PES
Attn: Paul Lohman
cc Report to BTS
PES Proj # 131.0100.003

SAMPLING COMPLETED	DATE	TIME
	5/17/94	1100

SAMPLING PERFORMED BY Jeff Curtis

RESULTS NEEDED NO LATER THAN

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Jeff Curtis	5/18/94	11:14 AM	[illegible]	5/18/94	11:14 AM

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.
San Jose, CA 95131
(408) 955-9077

CLIENT: Paul Lohman
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JK-1597-1
Project : 131.0100.003, P.O. Partners
Analyzed : 05/26/94
Analyzed by: CB
Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	RECEIVED
MW 2	Aqueous	J.C.	05/16/94 1620	05/18/94

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1,2
Benzene		500.	6800.	
Toluene		500.	1100.	
Ethylbenzene		500.	1400.	
Xylenes		500.	3300.	
Total Petroleum Hydrocarbons (Gasoline)		50000.	77000.	
Percent Surrogate Recovery			98.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)
(2) Elevated PQLs due to sample dilution.

05/31/94
GC#2\526B313
DT/etet/jst/mcc
W-BTX-052594
CC: 408/995-5535*Richard Blaine
Blaine Tech Services
985 Timothy Drive
San Jose, CA 95133

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.
San Jose, CA 95131
(408) 955-9077

CLIENT: Paul Lohman
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JK-1597-2
Project : 131.0100.003, P.O. Partners
Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	RECEIVED
MW 3	Aqueous	J.C.	05/16/94 1500	05/18/94

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		0.5	3.1	
Toluene		0.5	ND	
Ethylbenzene		0.5	ND	
Xylenes		0.5	1.7	
Total Petroleum Hydrocarbons (Gasoline)		50.	120.	
Percent Surrogate Recovery			105.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94
GC#2\525B324
DT/etet/jst
W-BTX-052594
CC: 408/995-5535*Richard Blaine
Blaine Tech Services
985 Timothy Drive
San Jose, CA 95133

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Paul Lohman
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JK-1597-3
Project : 131.0100.003, P.O. Partners
Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	RECEIVED
MW 4	Aqueous	J.C.	05/16/94 1215	05/18/94

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		0.5	1.7	
Toluene		0.5	0.9	
Ethylbenzene		0.5	ND	
Xylenes		0.5	1.1	
Total Petroleum Hydrocarbons (Gasoline)		50.	ND	
Percent Surrogate Recovery			104.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94
GC#2\525B312
DT/etet/jst
W-BTX-052594
CC: 408/995-5535*Richard Blaine
Blaine Tech Services
985 Timothy Drive
San Jose, CA 95133

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres for
Organics Manager

COAST-TO-COAST ANALYTICAL SERVICES, INC.

EXCELLENCE IN ANALYSIS

NorCal Division (San Jose Laboratory)
2059 Junction Ave.
San Jose, CA 95131
(408) 955-9077

CLIENT: Paul Lohman
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JK-1597-4
Project : 131.0100.003, P.O. Partners
Analyzed : 05/24/94
Analyzed by: CB
Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	RECEIVED
MW 5	Aqueous	J.C.	05/16/94 1300	05/18/94

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1,2
Benzene		3.	140.	
Toluene		3.	3.	
Ethylbenzene		3.	ND	
Xylenes		3.	ND	
Total Petroleum Hydrocarbons (Gasoline)		300.	310.	
Percent Surrogate Recovery			78.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)
(2) Elevated PQLs due to sample dilution.

05/31/94
GC#2\524B329
DT/etet/jst/mcc
W-BTX-052494
CC: 408/995-5535*Richard Blaine
Blaine Tech Services
985 Timothy Drive
San Jose, CA 95133

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

CLIENT: Paul Lohman
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JK-1597-5
Project : 131.0100.003, P.O. Partners
Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	RECEIVED
MW 6	Aqueous	J.C.	05/16/94 1400	05/18/94

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		0.5	ND	
Toluene		0.5	ND	
Ethylbenzene		0.5	ND	
Xylenes		0.5	ND	
Total Petroleum Hydrocarbons (Gasoline)		50.	ND	
Percent Surrogate Recovery			105.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94
GC#2\525B313
DT/etet/jst
W-BTX-052594
CC: 408/995-5535*Richard Blaine
Blaine Tech Services
985 Timothy Drive
San Jose, CA 95133

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.
San Jose, CA 95131
(408) 955-9077

CLIENT: Paul Lohman
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JK-1597-7
Project : 131.0100.003, P.O. Partners
Analyzed : 05/26/94
Analyzed by: CB
Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	RECEIVED
MW 7	Aqueous	J.C.	05/17/94 1020	05/18/94

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1,2
Benzene		3.	61.	
Toluene		3.	ND	
Ethylbenzene		3.	ND	
Xylenes		3.	ND	
Total Petroleum Hydrocarbons (Gasoline)		300.	ND	
Percent Surrogate Recovery			101.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)
(2) Elevated PQLS due to sample dilution.

05/31/94
GC#2\526B317
DT/etet/jst/mcc
W-BTX-052694
CC: 408/995-5535*Richard Blaine
Blaine Tech Services
985 Timothy Drive
San Jose, CA 95133

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.
San Jose, CA 95131
(408) 955-9077

CLIENT: Paul Lohman
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JK-1597-6
Project : 131.0100.003, P.O. Partners
Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	RECEIVED
EW 1	Aqueous	J.C.	05/16/94 1605	05/18/94

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1,2
Benzene		100.	7300.	
Toluene		100.	930.	
Ethylbenzene		100.	1300.	
Xylenes		100.	3300.	
Total Petroleum Hydrocarbons (Gasoline)		10000.	19000.	
Percent Surrogate Recovery			103.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)
(2) Elevated PQLs due to sample dilution.

05/31/94
GC#2\525B321
DT/etet/jst/mcc
W-BTX-052594
CC: 408/995-5535*Richard Blaine
Blaine Tech Services
985 Timothy Drive
San Jose, CA 95133

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

QC Batch ID: W-BTX-052594

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

METHOD BLANK
REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
METHOD BLANK	Aqueous			

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		0.5	ND	
Toluene		0.5	ND	
Ethylbenzene		0.5	ND	
Xylenes		0.5	ND	
Total Petroleum Hydrocarbons (Gasoline)		50.	ND	
Percent Surrogate Recovery			103.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94
GC#2\525B314
DT/etet/jst
JK1597-5

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

QC Batch ID: W-BTX-052594

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

QC MATRIX SPIKE
REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
MATRIX SPIKE	Aqueous			

CONSTITUENT	ORIGINAL RESULT	SPIKE AMOUNT	RESULT µg/L	%REC	NOTE
BTEX + TPH (Gasoline)					1
Benzene	ND	10.	12.	120.	
Toluene	ND	10.	11.	110.	
Ethylbenzene	ND	10.	11.	110.	
Xylenes	ND	30.	33.	110.	
Total Petroleum Hydrocarbons (Gasoline)	ND	250.	242.	97.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94
525B317
DT/etet/jst
JK1597-5

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

QC Batch ID: W-BTX-052594

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

QC MATRIX SPIKE
REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
MATRIX SPIKE DUPLICATE	Aqueous			

CONSTITUENT	ORIGINAL RESULT	SPIKE AMOUNT	RESULT µg/L	%REC	%DIFF	NOTE
BTEX + TPH (Gasoline)						1
Benzene	ND	10.	12.	120.	0.	
Toluene	ND	10.	11.	110.	0.	
Ethylbenzene	ND	10.	11.	110.	0.	
Xylenes	ND	30.	33.	110.	0.	
Total Petroleum Hydrocarbons (Gasoline)	ND	250.	236.	94.	2.5	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94
GC#2\525B318
DT/etet/jst
JK1597-5

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

QC Batch ID: W-BTX-052594

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

QC SPIKE
REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
QC SPIKE	Aqueous			

CONSTITUENT	*PQL µg/L	SPIKE AMOUNT	RESULT µg/L	%REC	NOTE
BTEX + TPH (Gasoline)					1
Benzene	0.5	10.	12.	120.	
Toluene	0.5	10.	11.	110.	
Ethylbenzene	0.5	10.	10.	100.	
Xylenes	0.5	30.	32.	107.	
Total Petroleum Hydrocarbons (Gasoline)	50.	250.	260.	104.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94
GC#2\525B326
DT/etet/jst
JK1597-5

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

EXCELLENCE IN ANALYSIS

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

QC Batch ID: W-BTX-052594

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/25/94
Analyzed by: CB
Method : EPA 8020/8015M

QC SPIKE
REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
QC SPIKE DUPLICATE	Aqueous			

CONSTITUENT	*PQL µg/L	SPIKE AMOUNT	RESULT µg/L	%REC	%DIFF	NOTE
BTEX + TPH (Gasoline)						1
Benzene	0.5	10.	12.	120.	0.	
Toluene	0.5	10.	11.	110.	0.	
Ethylbenzene	0.5	10.	11.	110.	9.5	
Xylenes	0.5	30.	34.	113.	6.1	
Total Petroleum Hydrocarbons (Gasoline)	50.	250.	235.	94.	10.	

San Jose Lab Certifications: CAELAP #1204
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)
(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94
GC#2\525B307
DT/etet/jst
JK1597-5

Respectfully submitted,
COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres
Organics Manager

BLAINE TECH SERVICES INC.

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

CHAIN OF CUSTODY

CLIENT PES

SITE P.O. Partners
1650 65th St
Emeryville CA

SAMPLE I.D.			MATRIX S = SOIL W = H2O	CONTAINERS TOTAL		C = COMPOSITE ALL CONTAINERS	TPH/BTEX 8015/8020							
MW 2	5/16	1620	W	3	VOAs		X							
MW 3		1500	W	3			X							
MW 4		1215	W	3			X							
MW 5		1300	W	3			X							
MW 6		1400	W	3			X							
EW 1		1605	W	3			X							
MW 7	5/17	1020	W	3			X							

CONDUCT ANALYSIS TO DETECT

LAB Coast to Coast DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

- ☐ EPA
- ☐ LIA
- ☐ OTHER
- ☐ RWQCB REGION

SPECIAL INSTRUCTIONS

Invoice & Report to: PES
Attn: Paul Lohman
cc Report to BTS
PES Proj # 131.0100.003

ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
JK1597-1			
-2			
-3			
-4			
-5			
-6			
-7			

SAMPLING COMPLETED	DATE	TIME
	5/17/94	1100

SAMPLING PERFORMED BY Jeff Whitson

RESULTS NEEDED NO LATER THAN

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Jeff Whitson	5/18/94	11:14 AM	[signature]	5/18/94	11:14 AM
[signature]	5/18/94	12:14 PM	[signature]	5/18/94	12:14
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

Temperature of cooler upon receipt: 46°F
Cool, intact