PES Environmental, Inc.
Engineering & Environmental Services

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September 28, 1993

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
AUGUST 1993 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 August 19, 1993 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. PES also provides operation, maintenance and monitoring of a groundwater extraction and treatment system 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 on site underground storage tank (UST) in July 1987 and several offsite USTs in September and October 1989. Groundwater has been monitored since November, 1989. An activated carbon groundwater treatment system was installed and its operation was begun in December 1990. Discharges of treated groundwater are to the sanitary sewer under the authority of an East Bay Municipal Utility District wastewater discharge permit (Permit No.

502-45131). The present sampling is the sixteenth consecutive sampling event since groundwater monitoring was initiated, and the eighth 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.

Water levels have decreased in all wells since the May 20, 1993 sampling event except for MW-4. The water level in MW-4 increased slightly by 0.01 feet. Based on measured water levels on August 19, 1993, groundwater flow direction at the site was calculated to be toward the southwest, with an approximate gradient of 0.01 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 August 19, 1993 by Blaine Tech Services, Inc. (Blaine Tech) from Monitoring Wells MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7. A groundwater sample was collected from the extraction well, EW-1 on August 11, 1993. 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 for chemical analysis. 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.

A sample (Sample 93223A) was collected on August 11, 1993 by PES from the extraction well (Well EW-1), to monitor chemical conditions of extracted groundwater. The sample was collected from a sample tap located on piping upstream of the treatment system. Water was purged from the sample tap for approximately one minute prior to collection of the sample. Three 40-milliliter glass vials with teflon-lined caps were filled directly from the sample tap.

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 chemical analysis 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 8015 / 8020. The groundwater sample from the extraction well was analyzed by EPA Test Method 5030/8015 and Cal DHS Draft TPH (Modified).

Analytical Results

Detectable levels of TPH gas were found in wells EW-1, MW-2, MW-5 and MW-7. Detectable levels of BTEX were found in all wells except 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 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 August 19, 1993 is presented on Plate 4.

SUMMARY

Groundwater elevations have decreased in all but one well since the May 20, 1993 sampling. The groundwater flow direction continues to be southwest. Concentrations of petroleum hydrocarbons in groundwater samples did not change significantly from the last monitoring event.

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

Robert S. Creps, P. E.
Associate Engineer

Attachments:

Table 1	Summary of Groundwater Elevations
Table 2	Summary of Analytical Results for Groundwater Samples
Plate 1	Site Location Map
Plate 2	Well Location Map
Plate 3	Groundwater Elevation Contours on August 19, 1993
Plate 4	Dissolved Hydrocarbons in Groundwater on August 19, 1993
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 August 1993**
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**
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**
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
	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

Table 1. **Summary of Groundwater Elevations Through August 1993**
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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	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**
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**
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
	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**

Table 1. **Summary of Groundwater Elevations Through August 1993**
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-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**

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 August, 1993**
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-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**
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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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**
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
	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**

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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-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**
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

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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	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**
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
	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**
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

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

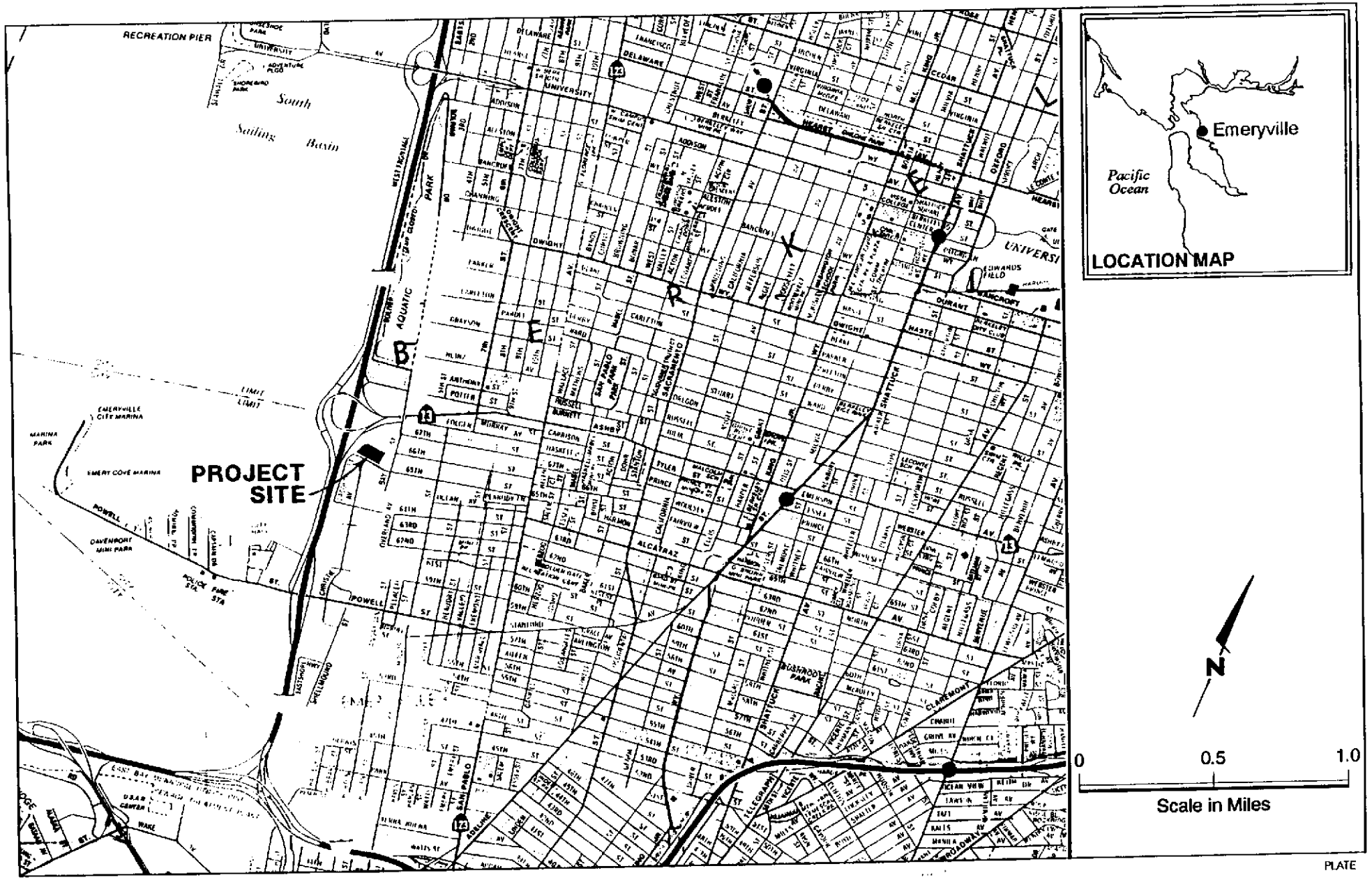
Well Number	Sample Date	Sampled by	TPH as Gasoline	TPH as Diesel	Benzene MCL = 0.001	Toluene DAL = 0.1	Ethyl-Benzene MCL = 0.68	Total Xylenes MCL = 1.75	Purgeable Halocarbons	Lead MCL = 0.005
EW-1	4-Jan-91	ES	NA	NA	3.2	2.8	ND	ND	NA	NA
	11-Jan-91	ES	NA	NA	3	2.4	0.2	1.8	NA	NA
	6-Feb-91	ES	NA	NA	0.47	0.23	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
	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**

Table 2. Summary of Analytical Results for Groundwater Samples Through August, 1993
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

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 method detection 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



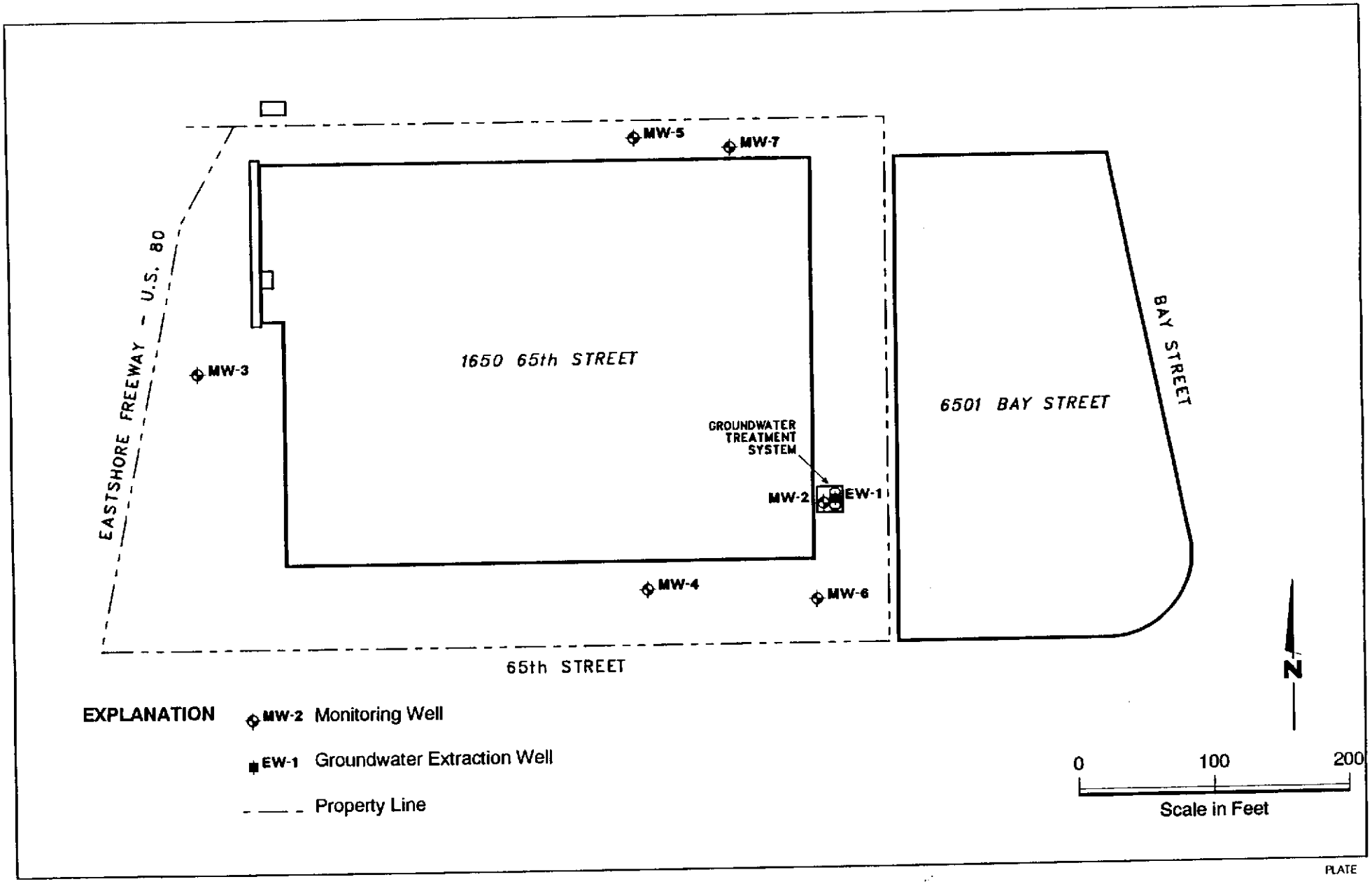
PLATE

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		9/93		



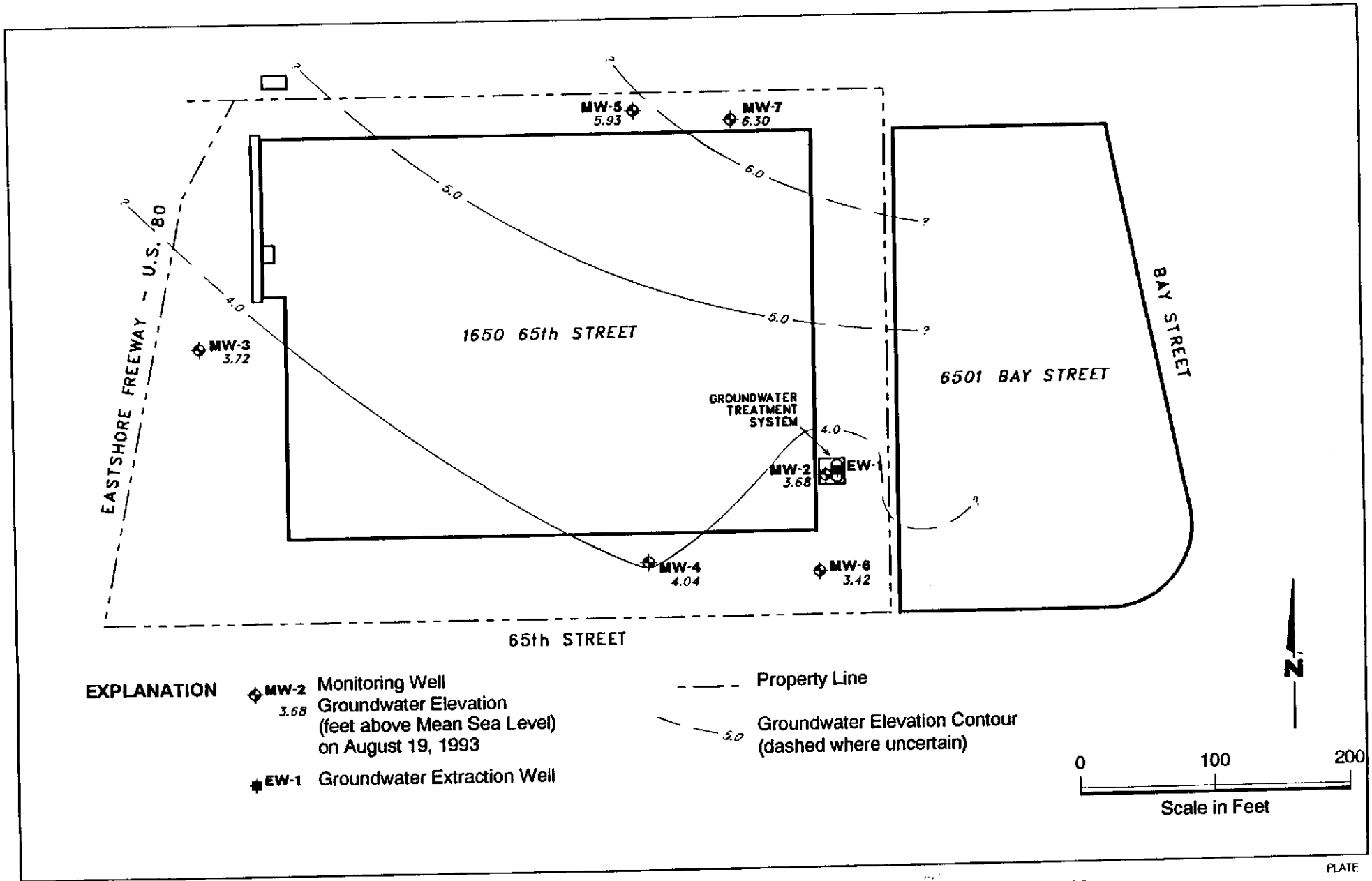
PLATE

PES Environmental, Inc.
Engineering & Environmental Services

Well Location Map
1650 65th Street
Emeryville, California

2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
131.01.003		9/93		



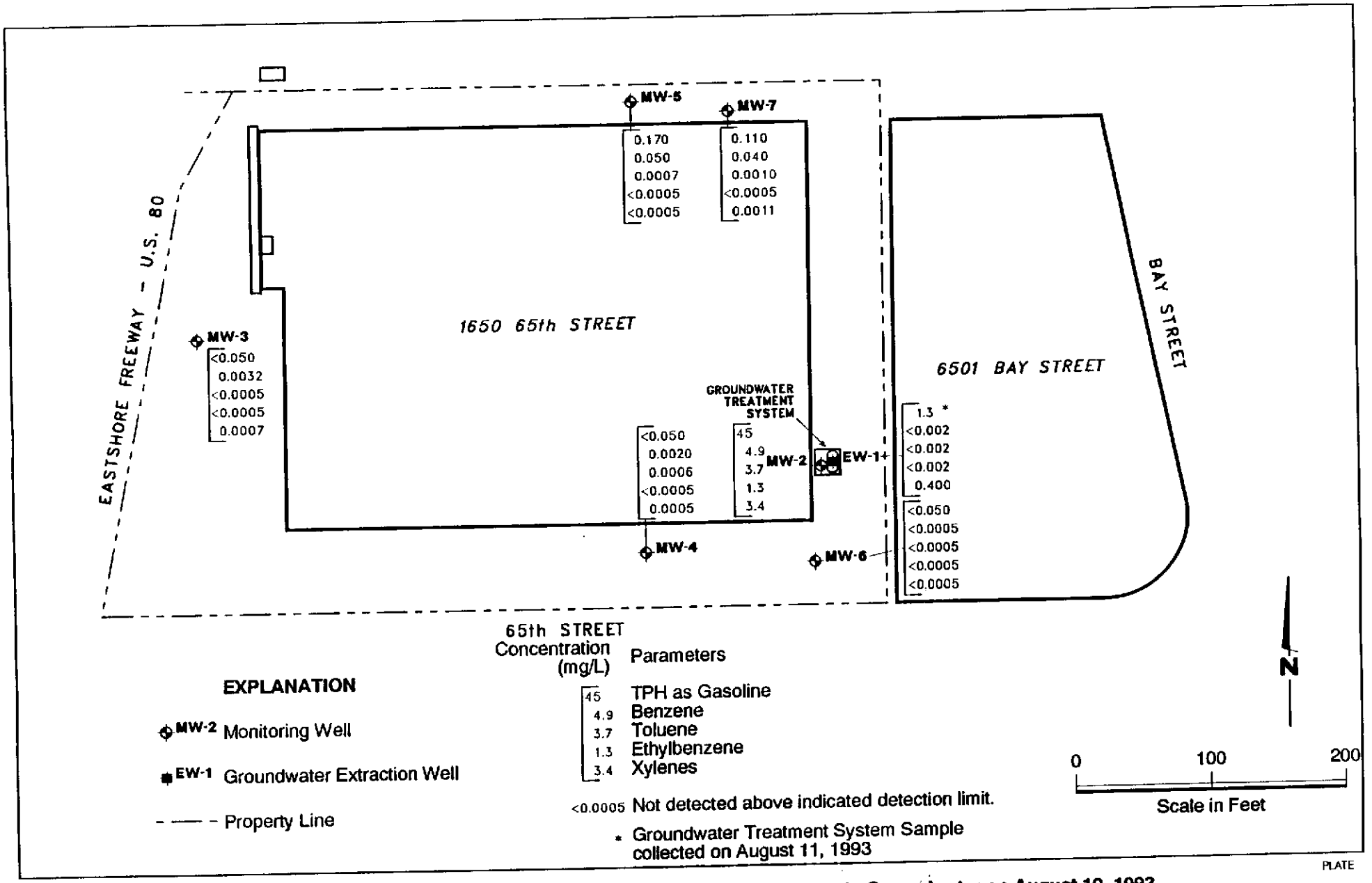
PLATE

3

PES Environmental, Inc.
Engineering & Environmental Services

Groundwater Elevation Contours on August 19, 1993
1650 65th Street
Emeryville, California

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
131.01.003		9.93		



PLATE

PES Environmental, Inc.
Engineering & Environmental Services

Dissolved Hydrocarbons in Groundwater on August 19, 1993
1650 65th Street
Emeryville, California

4

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
131.01.003		9/93		

BLAINE
TECH SERVICES INC.

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

August 30, 1993

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

Attn: Paul Lohman

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

DATE:
August 19, 1993

GROUNDWATER SAMPLING REPORT 930819-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 August 15, 1993, 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	08/19/93			08/19/93			08/19/93			08/19/93	
Well Diameter (in.)	2			4			4			4	
Total Well Depth (ft.)	26.62			18.28			17.90			18.03	
Depth To Water (ft.)	12.11			8.71			8.20			6.89	
Free Product (in.)	NONE			NONE			NONE			NONE	
Reason If Not Sampled	--			--			--			--	
1 Case Volume (gal.)	2.36			6.22			6.30			7.24	
Did Well Dewater?	NO			YES @ 12.5 gals.			NO			NO	
Gallons Actually Evacuated	7.5			12.5			19.0			22.0	
Purging Device	BAILER			MIDDLEBURG			MIDDLEBURG			MIDDLEBURG	
Sampling Device	BAILER			BAILER			BAILER			BAILER	
Time	14:24	14:29	14:34	10:00	10:12	13:40	13:00	13:10	13:20	10:39	10:49	11:00
Temperature (Fahrenheit)	67.9	67.7	67.5	68.1	67.6	69.1	74.5	75.3	75.3	71.9	72.0	71.7
pH	8.8	8.6	8.5	7.6	7.8	8.8	8.1	8.6	8.7	8.2	8.0	7.9
Conductivity (micromhos/cm)	2600	2600	2400	3400	3000	3300	4200	5200	5200	2000	1800	1700
Nephelometric Turbidity Units	>200	>200	>200	13.09	30.9	20.3	12.95	5.78	2.93	11.01	7.04	6.21
BTS Chain of Custody	930819-A-1			930819-A-1			930819-A-1			930819-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		
Date Sampled	08/19/93			08/19/93		
Well Diameter (in.)	4			4		
Total Well Depth (ft.)	18.80			18.78		
Depth To Water (ft.)	6.61			6.60		
Free Product (in.)	NONE			NONE		
Reason If Not Sampled	--			--		
1 Case Volume (gal.)	6.62			7.91		
Did Well Dewater?	NO			NO		
Gallons Actually Evacuated	20.0			24.0		
Purging Device	MIDDLEBURG			MIDDLEBURG		
Sampling Device	BAILER			BAILER		
Time	12:17	12:26	12:36	11:25	11:35	11:45
Temperature (Fahrenheit)	69.8	68.6	68.0	69.5	68.4	65.9
pH	7.6	7.3	7.2	7.9	8.0	8.0
Conductivity (micromhos/cm)	5000	3900	4200	1100	1000	1000
Nephelometric Turbidity Units	13.1	9.87	70.7	7.47	5.58	5.45
BTS Chain of Custody	930819-A-1			930819-A-1		
BTS Sample I.D.	MW-6			MW-7		
DHS HMTL Laboratory	COAST TO COAST			COAST TO COAST		
Analysis	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 or a middleburg pumps.

Samples were collected using stainless steel bailers.

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

The samples obtained at this site were transported in cooled ice chest to the office of Blaine Tech Services, Inc. to be stored in a refrigerator overnight. The following day, the samples were released into the custody of a courier for delivery to Coast to Coast Analytical Services.

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.

Richard C. Blaine

RCB/skt

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 9308191

CLIENT PES ENVIRONMENTAL

SITE PO PARTNERS
1650 65TH AVE
EMERYVILLE CA

SAMPLE I.D.	MATRIX S = SOIL W = H2O	CONTAINERS TOTAL		C = COMPOSITE ALL CONTAINERS	CONDUCT ANALYSIS TO DETECT: GAS, BTEX 8015/8020	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW2	W	3	VOAS		/				
MW3		3	NaHSO4		/				
MW4		3			/				
MW5		3			/				
MW6		3			/				
MW7	↓	3	↓		/				

LAB COAST TO COAST DHS #

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

- ☐ EPA
- ☐ LIA
- ☐ OTHER
- ☑ RWQCB REGION 2

SPECIAL INSTRUCTIONS

Bill / send results to:
PES Environmental
ATTN: Andrew Briker

RESULTS NEEDED NO LATER THAN ROUTINE

SAMPLING COMPLETED	DATE 8/19/93	TIME 1500	SAMPLING PERFORMED BY	Jeff Curtis	
RELEASED BY	Jeff Curtis	DATE 8-20-93	TIME 1118	RECEIVED BY	DATE 8-20-93 TIME 1115
RELEASED BY		DATE	TIME	RECEIVED BY	DATE TIME
RELEASED BY		DATE	TIME	RECEIVED BY	DATE TIME

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	

COAST - TO - COAST ANALYTICAL SERVICES

Air, Water & Hazardous Waste Sampling, Analysis & Consultation
Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

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

Lab Number : JJ-1482-1
Project : PO Partners, Emeryville

CLIENT: Andrew Briefer
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Analyzed : 08/26/93
Analyzed by: CB
Method : E602/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
MW2	Monitoring Water	Jeff Curtis	08/19/93	08/20/93

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		200.	4900.	
Toluene		300.	3700.	
Ethylbenzene		300.	1300.	
Xylenes		300.	3400.	
Total Petroleum Hydrocarbons (Gasoline)		30000.	45000.	
Percent Surrogate Recovery			85.	

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)

09/02/93
GC#2-826B326
MC/mcc/lmd
W-BTX-082693

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

Marissa Coronel
Laboratory Director

COAST - TO - COAST ANALYTICAL SERVICES

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

Lab Number : JJ-1482-2
Project : PO Partners, Emeryville

CLIENT: Andrew Briefer
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Analyzed : 08/31/93
Analyzed by: LD
Method : E602/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
MW3	Monitoring Water	Jeff Curtis	08/19/93	08/20/93

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		0.5	3.2	
Toluene		0.5	ND	
Ethylbenzene		0.5	ND	
Xylenes		0.5	0.7	
Total Petroleum Hydrocarbons (Gasoline)		50.	ND	
Percent Surrogate Recovery			100.	

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)

09/02/93
GC#2-831B316
MC/mcc/lmd
W-BTX-083193

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

Marissa Coronel
Laboratory Director

COAST - TO - COAST ANALYTICAL SERVICES

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Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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

CLIENT: Andrew Briefer
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JJ-1482-3
Project : PO Partners, Emeryville

Analyzed : 08/31/93
Analyzed by: LD
Method : E602/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
MW4	Monitoring Water	Jeff Curtis	08/19/93	08/20/93

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		0.5	2.0	
Toluene		0.5	0.6	
Ethylbenzene		0.5	ND	
Xylenes		0.5	0.5	
Total Petroleum Hydrocarbons (Gasoline)		50.	ND	
Percent Surrogate Recovery			94.	

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)

09/02/93
GC#2-831B315
MC/mcc/lmd
W-BTX-083193

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

Marissa Coronel
Laboratory Director

COAST - TO - COAST ANALYTICAL SERVICES

Air, Water & Hazardous Waste Sampling, Analysis & Consultation
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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

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

Lab Number : JJ-1482-4
Project : PO Partners, Emeryville

CLIENT: Andrew Briefer
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Analyzed : 08/26/93
Analyzed by: CB
Method : E602/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
MW5	Monitoring Water	Jeff Curtis	08/19/93	08/20/93

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		0.5	50.	
Toluene		0.5	0.7	
Ethylbenzene		0.5	ND	
Xylenes		0.5	ND	
Total Petroleum Hydrocarbons (Gasoline)		50.	170.	
Percent Surrogate Recovery			89.	

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)

09/02/93
GC#2-826B329
MC/mcc/lmd
W-BTX-082693

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

Marissa Coronel
Laboratory Director

COAST - TO - COAST ANALYTICAL SERVICES

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

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

CLIENT: Andrew Briefer
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JJ-1482-5
Project : PO Partners, Emeryville

Analyzed : 08/26/93
Analyzed by: CB
Method : E602/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
MW6	Monitoring Water	Jeff Curtis	08/19/93	08/20/93

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			87.	

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)

09/02/93
GC#2-826B330
MC/mcc/lmd
W-BTX-082693

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

Marissa Coronel
Laboratory Director

COAST - TO - COAST ANALYTICAL SERVICES

Air, Water & Hazardous Waste Sampling, Analysis & Consultation
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NorCal Division (San Jose Laboratory)
2059 Junction Ave.
San Jose, CA 95131
(408) 955-9077

CLIENT: Andrew Briefer
PES Environmental Inc
1682 Novato Boulevard, Suite 100
Novato, CA 94947

Lab Number : JJ-1482-6
Project : PO Partners, Emeryville

Analyzed : 08/31/93
Analyzed by: LD
Method : E602/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
MW7	Monitoring Water	Jeff Curtis	08/19/93	08/20/93

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		0.5	40.	
Toluene		0.5	1.0	
Ethylbenzene		0.5	ND	
Xylenes		0.5	1.1	
Total Petroleum Hydrocarbons (Gasoline)		50.	110.	
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)

09/02/93
GC#2-831B317
MC/mcc/lmd
W-BTX-083193

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

Marissa Coronel
Laboratory Director

COAST - TO - COAST ANALYTICAL SERVICES

Air, Water & Hazardous Waste Sampling, Analysis & Consultation
Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

QC Batch ID: W-BTX-083193

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

Analyzed : 08/31/93
Analyzed by: LD
Method : E602/8015M

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			100.	

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)

09/02/93
GC#2/831A310
MC/mcc/lmd
JJ1482-3

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

Marissa Coronel
Laboratory Director

COAST - TO - COAST ANALYTICAL SERVICES

Air, Water & Hazardous Waste Sampling, Analysis & Consultation
Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

San Luis Obispo, CA • Benicia, CA • Camarillo, CA • San Jose, CA • Goleta, CA
Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

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

QC Batch ID: W-BTX-083193

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

Analyzed : 08/31/93
Analyzed by: LD
Method : E602/8015M

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	2.0	10.	12.	100.	
Toluene	0.6	10.	10.	94.	
Ethylbenzene	ND	10.	10.	100.	
Xylenes	0.5	30.	30.	98.	
Total Petroleum Hydrocarbons (Gasoline)	ND	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)

09/02/93
GC#2/831A311
MC/mcc/lmd
JJ1482-3

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

Marissa Coronel
Laboratory Director

BLAINE TECH SERVICES INC.

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

CHAIN OF CUSTODY 930819AI

CLIENT PES ENVIRONMENTAL

SITE PO PARTNERS
1650 65TH AVE
EMERYVILLE CA

SAMPLE I.D.		MATRIX S = SOIL W = H2O	CONTAINERS TOTAL		C = COMPOSITE ALL CONTAINERS	CONDUCT ANALYSIS TO DETECT: GAS, BTEX SOIS/BOZO
MW 2	8-19-93	W	3	VOAS		/
MW 3			3	NaHSO4		/
MW 4			3			/
MW 5			3			/
MW 6			3			/
MW 7		↓	3	↓		/

LAB COAST TO COAST DHS #

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

- ☐ EPA
- ☐ LIA
- ☐ OTHER
- ☑ RWQCB REGION 2

SPECIAL INSTRUCTIONS

Bill / send results to:
PES Environmental
ATTN: Andrew Briefer

JJ1482

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

RESULTS NEEDED NO LATER THAN ROUTINE

	DATE	TIME
SAMPLING COMPLETED	8.19.93	1500
SAMPLING PERFORMED BY Jeff Curtis		
RELEASED BY Jeff Curtis	8.20.93	1118
RECEIVED BY		
RELEASED BY Jack R Murray	8-20-93	1135
RECEIVED BY Phillip Hoyt		
RELEASED BY		
RECEIVED BY	8-20-93	1115
	8-20-93	1135

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

COAST-TO-COAST ANALYTICAL SERVICES

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

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

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

Lab Number : JJ-1382-1
Project : 131.0100.002

Analyzed : 08/23/93
Analyzed by: CB
Method : E602/8015M

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED	DATE RECEIVED
93223A	Aqueous	Paul Lohman	08/11/93	08/12/93

CONSTITUENT	(CAS RN)	*PQL µg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				1
Benzene		2.	ND	
Toluene		2.	ND	
Ethylbenzene		2.	ND	
Xylenes		2.	400.	
Total Petroleum Hydrocarbons (Gasoline)		200.	1300.	
Percent Surrogate Recovery			94.	

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)

08/23/93
GC#2-823B318
MC/mcc
W-BTX-082393

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

Marissa Coronel
Laboratory Director

COAST-TO-COAST ANALYTICAL SERVICES

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Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

QC Batch ID: W-BTX-082093

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

Analyzed : 08/20/93
Analyzed by: CB
Method : E602/8015M

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			87.	

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)

08/23/93
GC#2-820B314
MC/mcc
JJ1392-1

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

Marissa Coronel
Laboratory Director

COAST-TO-COAST ANALYTICAL SERVICES

Air, Water & Hazardous Waste Sampling, Analysis & Consultation
Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

NorCal Division (San Jose Laboratory)
2059 Junction Ave.

San Jose, CA 95131
(408) 955-9077

QC Batch ID: W-BTX-082093

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

Analyzed : 08/20/93
Analyzed by: CB
Method : E602/8015M

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.	8.1	81.	
Toluene	ND	10.	8.2	82.	
Ethylbenzene	ND	10.	7.8	78.	
Xylenes	ND	30.	24.	80.	
Total Petroleum Hydrocarbons (Gasoline)	ND	250.	280.	112.	

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)

08/23/93
GC#2-820B320
MC/mcc
JJ1392-1

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

Marissa Coronel
Laboratory Director

COAST-TO-COAST ANALYTICAL SERVICES

Air, Water & Hazardous Waste Sampling, Analysis & Consultation
Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

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Anaheim, CA • Tempe, AZ • Valparaiso, IN • Westbrook, ME • Indianapolis, IN

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

QC Batch ID: W-BTX-082093

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

Analyzed : 08/20/93
Analyzed by: CB
Method : E602/8015M

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.	8.4	84.	3.6	
Toluene	ND	10.	8.5	85.	3.6	
Ethylbenzene	ND	10.	8.2	82.	5.	
Xylenes	ND	30.	26.	87.	8.	
Total Petroleum Hydrocarbons (Gasoline)	ND	250.	300.	120.	6.9	

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)

08/23/93
GC#2-820B321
MC/mcc
JJ1392-1

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

Marissa Coronel
Laboratory Director

PES Environmental, Inc.
Engineering & Environmental Services

16[redacted] Novato[redacted] Eva[redacted] Suite 1[redacted]
Novato, California 94947
(415) 899-1600 FAX (415) 899-1601

CHAIN OF CUSTODY RECORD

SAMPLERS: PAUL LOHMAN

JOB NUMBER: 131.0120.002

NAME/LOCATION: P.O. PARTNERS

PROJECT MANAGER: ANDY BRIEFER

RECORDER: Paul Rothe (Signature Required)

DATE				SAMPLE NUMBER OR LAB NUMBER			SOURCE CODE	MATRIX					# CONTAINERS & PRESERV.					DEPTH IN FEET	COL MTD CD	QA CODE	ANALYSIS REQUESTED													
YR	MO	DY	TIME	YR	WK	SEQ		Water	Sedim't	Soil	Oil		Unpres.	H_2SO_4	HNO_3	Filtered	HCl				EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	Priority Pollutant Metals	Benzene/Toluene/Xylene	Total Petrol. Hydrocarb.	BTEX BY 8020	TPH$_d$ BY 8015				
93	08	11	0835	93	22	3A		X									2										X	X			-1		
			0840			C		X									3														-2		
			0845			1		X									3														-3		

NOTES

NORMAL TURN AROUND

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Paul Rothe			RECEIVED BY: (Signature) Brenda Drake	DATE 8/12/03	TIME 9:50
RELINQUISHED BY: (Signature) Brenda Drake			RECEIVED BY: (Signature)	DATE 8/12/03	TIME 4:00
RELINQUISHED BY: (Signature)			RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)			RECEIVED BY: (Signature)	DATE	TIME
DISPATCHED BY: (Signature)	DATE	TIME	RECEIVED FOR LAB BY: (Signature) Corene Kato	DATE 8-12-03	TIME 1830

METHOD OF SHIPMENT: FedEx Pick up By Coast To Coast

Laboratory Copy White — Project Office Copy Yellow — Field or Office Copy Pink