BP OIL

BP Oil Marketing Co.
Aetna Bldg., Suite 360
2868 Prospect Park Drive
Rancho Cordova, CA 95670-6020
(916) 631-0733

August 28, 1992

Ms. Penny Silzer
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

RE: BP OIL FACILITY #11117
7210 BANCROFT AVENUE
OAKLAND, CA 94605

Dear Ms. Silzer,

Attached please find the Groundwater Sampling Report for above referenced facility. The sampling event occurred on June 5, 1992.

Please call me at (206) 394-5246 with any questions regarding this submission.

Respectfully,

Peter J. DeSantis

Peter J. DeSantis sml
Environmental Resources Management

PJD:sml

cc: Ron Owcarz - Alameda County Dept. of Environmental Health
Craig Hartman - HETI
David Baker - Mobil Oil Co.
Jim Givens - Eastmont Mall
Site File

HYDRO
ENVIRONMENTAL
TECHNOLOGIES, INC.

QUARTERLY MONITORING REPORT

BP Oil Facility No. 11117

7210 Bancroft Avenue
Oakland, California

Sample Date: June 5, 1992

Prepared by:

Hydro-Environmental Technologies, Inc.
2363 Mariner Square Drive, Suite No. 243
Alameda, California 94501

HYDRO
ENVIRONMENTAL
TECHNOLOGIES, INC.

CERTIFICATION

This report was prepared under the supervision of a registered professional engineer. All statements, conclusions and recommendations are based solely upon field observations and analytical test results related to the work performed by Hydro-Environmental Technologies, Inc.

Site conditions are subject to change with time; therefore, our conclusions result only from the interpretation of present conditions and available site information. This report was prepared in accordance with accepted professional standards and technical procedures as certified below.

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

Prepared by:

Henry Hurkmans
Staff Geologist

Reviewed by:

Frederick G. Moss, P.E., No. 35162
Senior Engineer

July 1, 1992 9-029

1.0 Introduction

The following report presents the results of Hydro-Environmental Technologies, Inc.'s (HETI's) first quarterly ground water sampling at the subject site. Quarterly water sampling was performed on June 5, 1992.

Work performed at the site by HETI included: (1) ground water gauging, (2) monitoring well purging, and (3) monitoring well sampling. Ground water samples collected from the wells were analyzed for total low to medium boiling point petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA method 8015/8020 (DHS modified). All documentation related to the field work is appended to this report.

2.0 Background

The subject facility is located on the northern corner of the intersection of 73rd. Avenue and Bancroft Avenue in Oakland, California (Figure 1). As shown in Figure 2, the BP site is currently configured as a fuel-only convenience store. Fuel stored and dispensed at the site includes leaded gasoline, unleaded gasoline and diesel fuel. The site was previously operated by Mobil Oil Company as a service station. The former Mobil station configuration is shown in dashed outline in Figure 2.

The site occupies an out-parcel of the Eastmont shopping mall, with stores located approximately 150 feet behind the BP property. Mr. Steve Gardner, of Topa Savings Bank retained Hunter Environmental Services (Hunter) to conduct a Phase II Environmental Audit of the Eastmont Mall property, prior to this assessment. The results of this investigation was presented in a Hunter report dated December 20, 1989.

Hunter activities relevant to the BP site included the installation of a monitoring well just outside of the west corner of the station property. Water samples from this well collected on December 11, 1989 contained detectable concentrations TPHg and BTEX compounds. No detectable concentrations of other volatile organic compounds were found in the water samples.

BP subsequently retained Hydro-Environmental Technologies, Inc. (HETI) to conduct a Phase I Environmental Investigation. On December 27, 1991 HETI installed two 2-inch diameter monitoring wells on BP's site. The wells were

identically constructed of schedule 40 PVC casing, 40 feet in depth, and screened from 20 to 40 feet below grade.

On January 5, 1992 HETI collected water samples from MW-1 and MW-3. MW-2 was dry and no sample was collected. Table 2 contains the results of the January 5, 1992 ground water sampling. A more detailed account of Phase I activites will be submitted after the completion of the next phase of investigation.

3.0 Field Activities

Depth to water in each well was gauged to the nearest hundredth of a foot using an interface probe. No separate-phase petroleum was identified in the wells with the probe or by means of visual inspection. The wells were also visually inspected for integrity and condition of the casing and wellhead. All wells were observed to be in satisfactory condition. Prior to sampling, the monitoring wells were purged of at least three well volumes or until dry. Monitoring well MW-2 was previously dry but contained nine and a half feet of water at this gauging. Because this was the first time ground water had been observed in MW-2, the well was developed by surging along the screened interval and then purging ten well volumes. Gauging and field sampling data are presented in Appendix A.

Water samples were collected with dedicated bailers and transferred to a 40 ml VOA vials sealed with teflon lined septum caps. Sample containers were labeled, documented and placed in a chilled cooler. A chain-of-custody was prepared and accompanied the samples to the laboratory; a copy is included in Appendix A. All sampling was performed according to guidelines established by the lead regulatory agencies. The water samples were analyzed by PACE Inc., a State DHS-Certified Laboratory, located in Novato, California.

4.0 Results of Investigation

4.1 Ground Water Data

Depth to ground water in the monitoring wells ranged from 29.01 to 30.05 feet below grade. Gauging data is attached in Appendix B. The depth to water data was combined with wellhead elevation data (previously collected by HETI) to produce Figure 3, the Groundwater Contour Map. Ground water flow is approximately towards the northwest. As previously noted, MW-2 was observed to be a dry well prior to this sampling. During the period from January 10, 1992 and June 5, 1992 ground water levels rose 4.15 and 4.09 feet in MW-1 and MW-3 respectively. In the same period, MW-2 went from dry to having a 9.51 foot water column. The

anomalous nature of data produced to date (cumulative ground water elevation data contained in Table 2) from gauging MW-2, enables only an estimate of ground water flow direction.

4.2 Laboratory Analytical Results

Ground water samples collected from the three monitoring wells contained detectable concentrations of dissolved petroleum hydrocarbons. Concentrations of TPHg ranged from 2,000 parts per billion (ppb) in the sample collected from MW-3 to 31,000 ppb in the sample collected from MW-1. Concentrations of benzene ranged from 130 ppb in the sample collected from MW-3 to 2,800 ppb in the sample collected from MW-1. Analytical results are summarized in Table 1, and are graphically illustrated on Figure 4.

5.0 Summary

HETI sampled three ground water monitoring wells at the subject site on June 5, 1992. Monitoring well MW-2, which had been previously dry, contained water and was susequently guaged, developed, and sampled. Depth to ground water in the monitoring wells ranged from approximately 29 to 30 feet below grade. Ground water flow is estimated to be towards the northwest. TPHg and BTEX were identified in the water samples from the three wells.

Table 1
WATER SAMPLES
SUMMARY OF ANALYTICAL RESULTS
BP Oil Facility No. 11117
7210 Bancroft Avenue
Oakland, California

Sample date: June 5, 1992

MW No.	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)
MW-1	31,000	2,800	2,100	800	2,300
MW-2	11,000	2,000	180	490	1,900
MW-3	2,000	130	5.3	93	20

TPHg = Total petroleum hydrocarbons as gasoline

B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes

ND = Not detected above the laboratory method detection limit

TPHg and BTEX analyses EPA 8015/8020 (DHS modified)

Table 2
WATER SAMPLES
CUMULATIVE ANALYTICAL RESULTS
BP Oil Facility No. 11117
7210 Bancroft Avenue
Oakland, California

MW No.		GW elev (ft)	TPHg (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TPHd (ppb)	O-Pb (ppm)
MW-1	1/5/92	16.65	57,000	2,400	1,000	1,100	3,100	50,000	ND
	6/5/92	20.8	31,000	2,800	2,100	800	2,300	NT	NT
MW-2	1/5/92	dry	NT	NT	NT	NT	NT	NT	NT
	6/5/92	21.01	11,000	2,000	180	490	1,900	NT	NT
MW-3	1/5/92	16.26	7,400	790	23	210	40	4,000	ND
	6/5/92	20.35	2,000	130	5.3	93	20	NT	NT

GW elev = Ground water elevation in feet

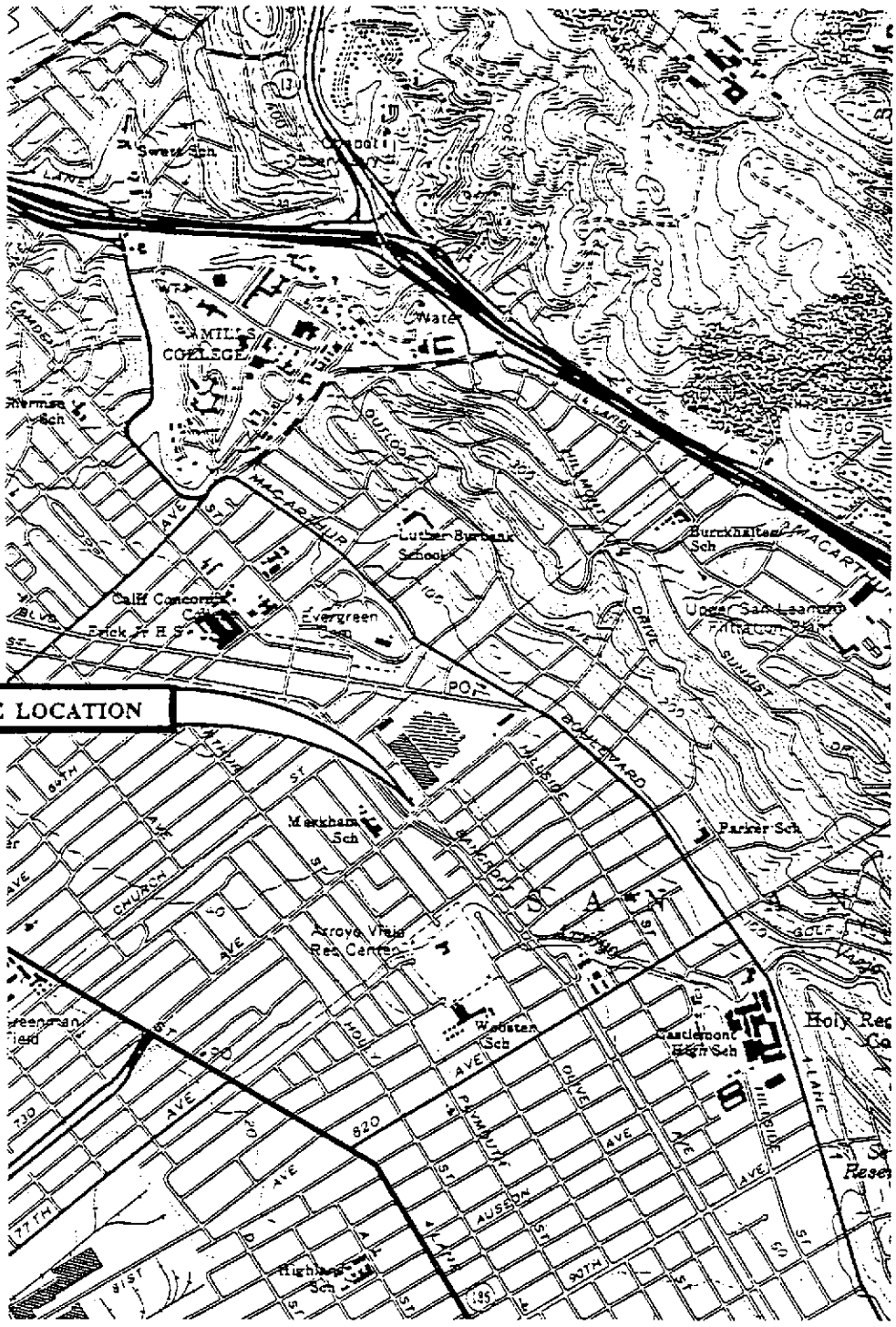
TPHg = Total petroleum hydrocarbons as gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes

TPHd = Total petroleum hydrocarbons as diesel

O-Pb = Organic Lead

ND = Not detected above the laboratory method detection limit
NT = Not tested

FIGURES

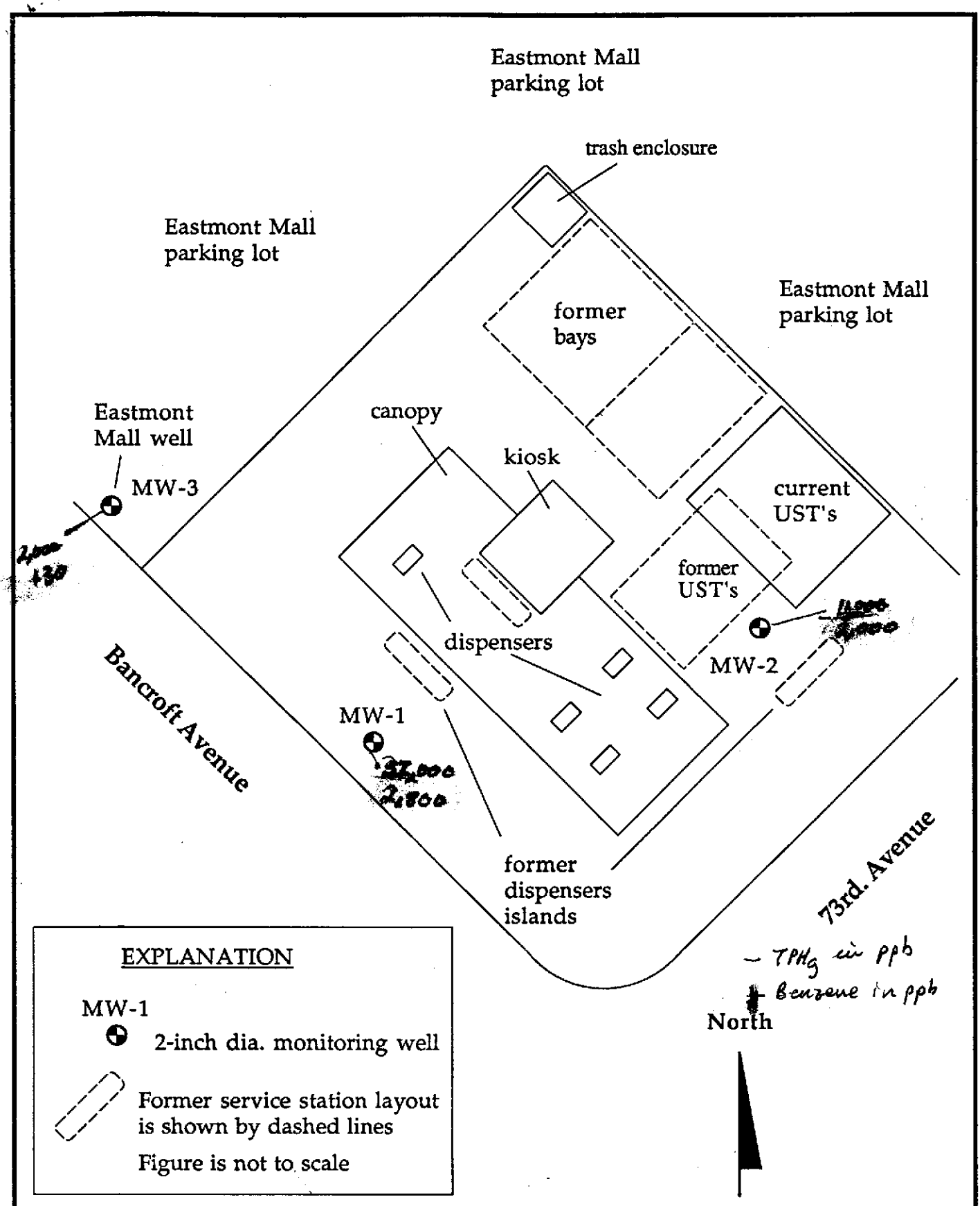


North

Source: U.S.Geological Survey
7.5 Minute Topographic Map of the
"Oakland East, California" Quadrangle
1959 - Photorevised 1980

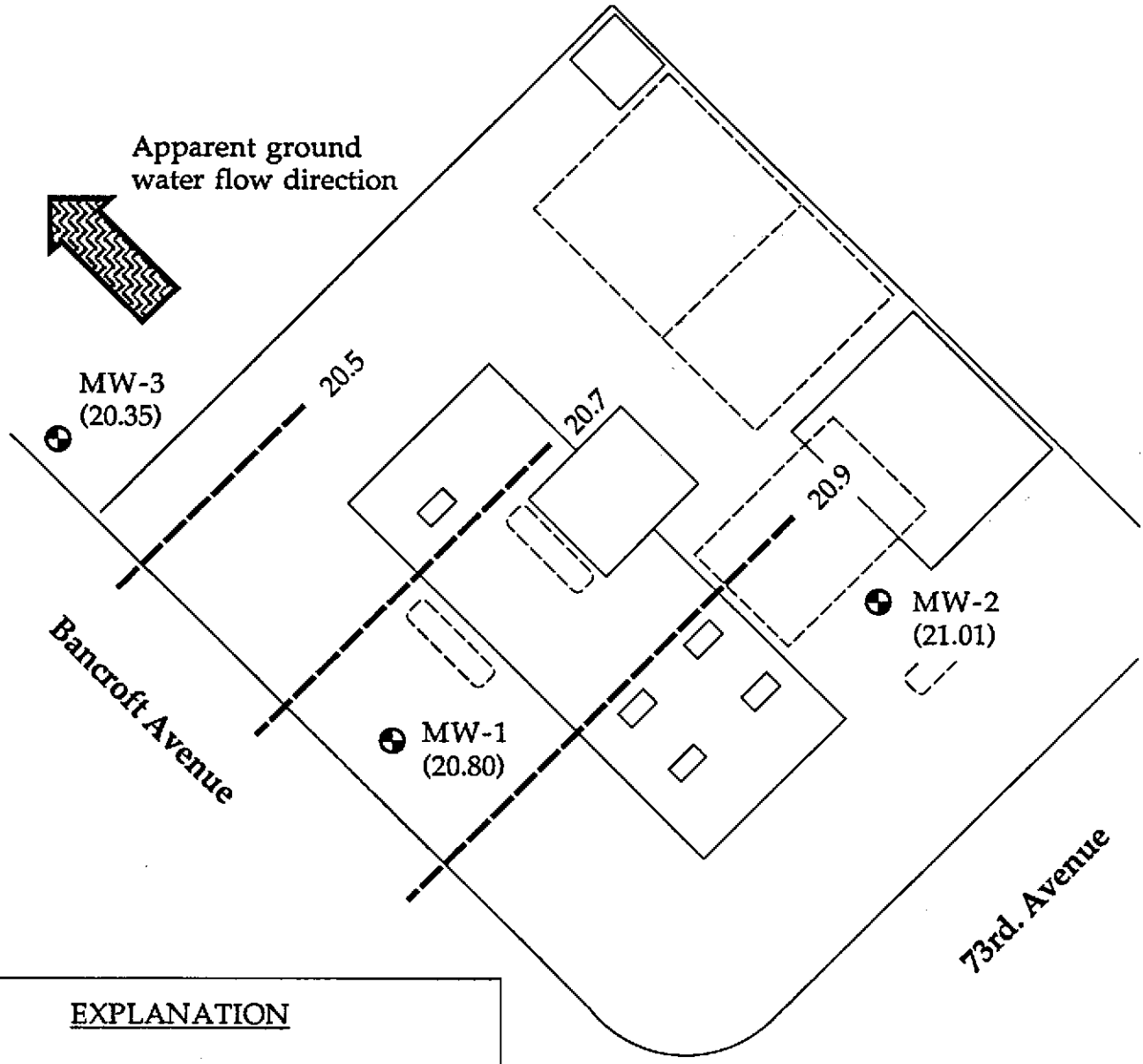
0 2000 4000 6000
FEET

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.	SITE LOCATION MAP BP OIL COMPANY SERVICE STATION Nº 11117 7210 BANCROFT AVENUE OAKLAND, CALIFORNIA	Job No. 9-029 Figure 1



HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.	**SITE PLAN** BP OIL COMPANY SERVICE STATION Nº 11117 7210 BANCROFT AVENUE OAKLAND, CALIFORNIA	Job No. 9-029 Figure **2**

DATA COLLECTED ON 6/5/92



EXPLANATION

MW-1 — 2-inch dia. monitoring well

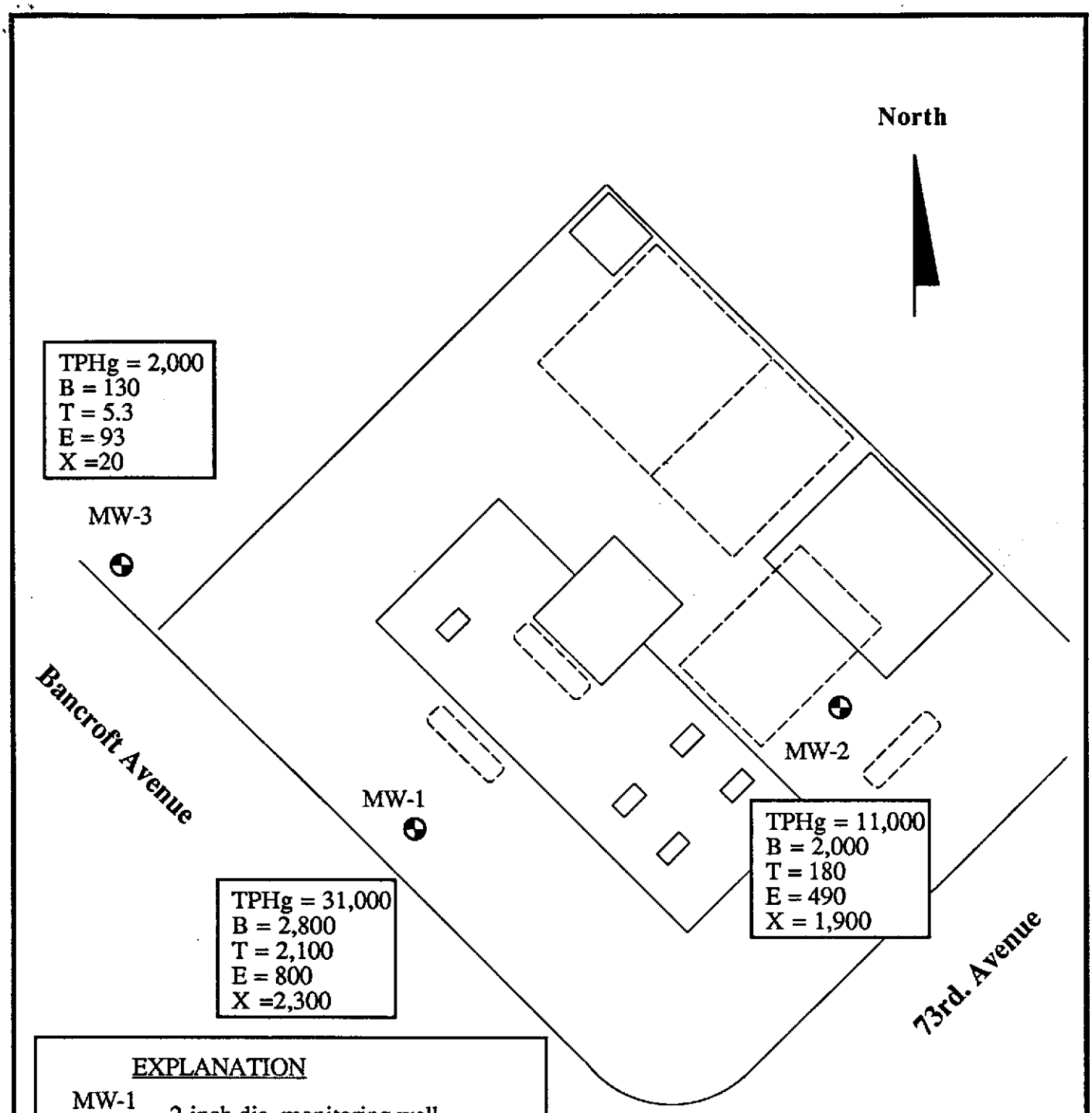
(20.80) — Ground water elevation (ft)

20.5 — Ground water contour (ft) - Dashed where inferred

Figure is not to scale

North

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.	GROUND WATER CONTOUR MAP BP SERVICE STATION Nº 11117 7210 BANCROFT AVENUE OAKLAND, CALIFORNIA	Job No. 9-029 Figure 3



HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.	**HYDROCARBONS IN GROUND WATER MAP** BP SERVICE STATION Nº 11117 7210 BANCROFT AVENUE OAKLAND, CALIFORNIA	Job No. **9-029** Figure **4**

APPENDIX A

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

WATER TABLE ELEVATION DATA

Location: 7210 Bancroft Avenue, Oakland , California

Client: BP **Job No.** 9-029

MW No.	Elev. T.C.*	DTW	Date Measured	Elev. Water	Remarks/Observations
1	49.81	29.01	6/5/92	20.08	2 inch dia. monitoring well
2	51.06	30.05	6/5/92	21.01	2 inch dia. monitoring well
3	50.00	29.65	6/592	20.35	2 inch dia. monitoring well

Survey based on pre-existing benchmark by others at NE corner 73rd & Bancroft
50.0 ft. arbitrary datum

T. C.* = Top of PVC Casing -- North Edge
All measurements in feet & hundredths

PURGED/SAMPLED BY: HH DATE: 6-5-92

GAUGING DATA:

Depth to bottom: 39.52 ft.

Depth to water: 29.01 ft.

Saturated Thickness: 10.51 ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 1.68 gallons

volumes to purge x 3 vols.

*Total volume to purge = 5 gallons

* unless chemical parameters stabilize earlier

PURGING DATA:

Purge method: PVC bailer/ Submersible pump/ Suction lift pump/ _____ (circle one)

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
12:30	0	—	—	—
	2	71.0	1.15	7.48
↓	4	70.6	1.17	7.25
12:45	6	70.7	1.17	7.17
Sample at				
After sampling				

Color: tan Turbidity: high green on soil water

Recharge: poor Petroleum hydrocarbon odor: _____ or SPP 0 ft.

SAMPLING DATA:

Sampling method: Dedicated bailer/ _____

Sample for: (circle)

(TPHg/BTEX) METALS TOC 8010

TPHd O-Pb TEL 8021

TPH ext Total Pb EDB 8240

601 602 Nitrates 8260 8270

Other: _____

HYDRO ENVIRONMENTAL TECHNOLOGIES, INC.

MONITORING WELL PURGE/SAMPLE SHEET

WELL # MW-1

LOCATION 73rd & Bancroft

JOB NO. 9029

PURGED/SAMPLED BY: HH DATE: 6-5-92

GAUGING DATA:

Depth to bottom: 39.5 ft.

Depth to water: 30.05 ft.

Saturated Thickness: 9.5 ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 1.52 gallons

volumes to purge x 10 vols.

*Total volume to purge = 15.2 gallons

* unless chemical parameters stabilize earlier

PURGING DATA:

Purge method: PVC bailer/ Submersible pump/ Suction lift pump/ _____ (circle one)

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
11:45	0	—	—	—
	2	74.4	1.06	7.49
	4	73.5	1.06	7.21
	6	72.4	1.20	7.13
dry →	8	72.8	1.19	7.20
	10	72.5	1.16	7.24
↓	12	72.2	1.15	7.06
dry →	12:22	14 ~~72.2~~	1.17 ~~1.18~~	7.11 ~~7.10~~
		16 72.0		
Sample at				
After sampling				

Color: olive-tan Turbidity: moderate

Recharge: fair Petroleum hydrocarbon odor: — or SPP 0 ft.

SAMPLING DATA:

Sampling method: Dedicated bailer /_____

Sample for: (circle)

(TPHg/BTEX)	METALS	TOC	8010
TPHd	O-Pb	TEL	8020
TPH mo	Total Pb	EDB	8240
601	602	Nitrates	8260 8270

Other: _____

HYDRO ENVIRONMENTAL TECHNOLOGIES, INC.

MONITORING WELL PURGE/SAMPLE SHEET

WELL # MW-2

LOCATION 7th & Bancroft

JOB NO. 9-029

PURGED/SAMPLED BY: HH DATE: 12-5-92

GAUGING DATA:

Depth to bottom: 43.36 ft.

Depth to water: 29.65 ft.

Saturated Thickness: 13.71 ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 2.2 gallons

volumes to purge x 3 vols.

*Total volume to purge = 6.6 gallons

* unless chemical parameters stabilize earlier

PURGING DATA:

Purge method: PVC bailer / Submersible pump/ Suction lift pump/ _____ (circle one)

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
11:15	0	—	—	—
	~~2~~ 2	73.2	0.88	7.87
	4	71.3	0.94	7.67
↓	6	70.7	0.94	7.69
11:27	7	71.4	0.83	7.69
Sample at				
After sampling				

Color: tan Turbidity: moderate

Recharge: good Petroleum hydrocarbon odor: — or SPP Ø ft.

SAMPLING DATA:

Sampling method: Dedicated bailer / _____

Sample for: (circle)

TPHg/BTEX	METALS	TOG	8010
TPHd	O-Pb	TEL	8021
TPH mo	Total Pb	EDB	8240
601	602	Nitrates	8260 8270

Other: _____

HYDRO ENVIRONMENTAL TECHNOLOGIES, INC.

MONITORING WELL PURGE/SAMPLE SHEET

WELL # MW-3

LOCATION 73rd & Bancroft

JOB NO. 9-029

APPENDIX B

9-029

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Hydro-Environmental Tech., Inc.	Client Project ID:	9-029	Date Received:	June 8, 1992
2363 Mariner Square Dr., Ste. 243	Matrix Description:	Water		
Alameda, CA 94501	Analysis Method:	Mod. EPA 8015/8020	Date Reported:	June 15, 1992
Attention: Mr. Craig Hartman	PACE Project #:	420608.517		

TOTAL PETROLEUM FUEL HYDROCARBONS-GASOLINE/BTEX

Sample Number	Sample Description	Purgeable Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)	Date Sampled	Date Analyzed
70 0159504	MW-1	31000	2800	2100	800	2300	06/05/92	06/11/92
Detection Limits:		2500	25	25	25	25		
70 0159512	MW-2	11000	2000	180	490	1900	06/05/92	06/11/92
Detection Limits:		1200	12	12	12	12		
70 0159520	MW-3	2000	130	5.3	93	20	06/05/92	06/11/92
Detection Limits:		50	0.5	0.5	0.5	0.5		

These data have been reviewed and are approved for release.

Darrell Cain for

Mark A. Valentini, Ph.D.
Regional Director

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

Mr. Craig Hartman | QUALITY CONTROL DATA | June 15, 1992
Page 2 | PACE Project Number: 420608517

Client Reference: 73rd/Bancroft/9-029

TPH GASOLINE/BTEX
Batch: 70 13076
Samples: 70 0159504, 70 0159512, 70 0159520

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	337	108%	104%	3%
Benzene	ug/L	0.5	40.0	98%	96%	2%
Toluene	ug/L	0.5	40.0	104%	99%	4%
Ethylbenzene	ug/L	0.5	40.0	103%	99%	3%
Xylenes, Total	ug/L	0.5	80.0	106%	102%	3%

MDL Method Detection Limit
RPD Relative Percent Difference

CHAIN OF CUSTODY RECORD

SAMPLER
Printed Name: Henry Huckmans
Signature:

DELIVER TO: PACE

ATTENTION: Caren Gontas

SEND RESULTS TO:
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.
2363 MARINER SQUARE DR., SUITE 243
ALAMEDA, CA 94501
(510) 521-2684, (FAX) 521-5078
ATTENTION:

SEND INVOICE TO: Craig Hartman of above

HETICAL JOB No.: 9-029

Relenquished by: (Signature)	Received by: (Signature)	Date	Time
	Ed Hatty / Pace	6/8/92	1615
Relenquished by: Ed Hatty - Pace VIA COURIER FX	Received by: C Grantz / PACE	6/8	1843
Relenquished by:	Received by: LABORATORY		

PROJECT NAME: 73rd & Bancroft BP

PAGE 1 OF 1

Sample Number	DATE & TIME	No. & Type Container	Analysis Requested: TPH (g+BTEX (DHS mod))	TPH (DHS mod)	Organic Lead					Lab Remarks
MW-1	6-5-92	3VOA's HCl	X							15950.4
MW-2	↓	↓	↓							51.2
MW-3	↓	↓	↓							52.0
9/3										

Special Instructions:

Turnaround:
- [X] 5 DAY
- [X] 10 DAY
- [ ] 72 HOURS
- [ ] 24 HOURS

4206.8.117