

BP OIL

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

92 MAY 11 11:11 AM '92

May 11, 1992

Mr. Brian Oliva
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

RE: BP FACILITY #11266
1541 PARK STREET
ALAMEDA, CALIFORNIA

Dear Mr. Oliva,

Enclosed please find the **Quarterly Monitoring Report** which addresses the sampling methods and analytical results for the sampling events conducted March 30, 1992 at the above referenced facility.

Please call me at (916) 631-6919 with any questions regarding this submission.

Respectfully,

Peter J. DeSantis

Peter J. DeSantis *sm*
Environmental Resources Management

PJD/sml

Attachment

cc: Fred Moss, HETI
Eddie So, RWQCB San Francisco Bay Region
David Baker, Mobil Oil Co.
Site file

Quarterly Monitoring Report

**BP Oil Facility No. 11266,
1541 Park Street,
Alameda, California**

Sample Date: March 30, 1992

May 4, 1992

9-031

Introduction

Work performed by HETI included: (1) well gauging, (2) well purging, (3) collection of ground water samples from each of the wells, and (4) analyses of water samples for total low to medium boiling point petroleum hydrocarbons (TPHg), and benzene, toluene, ethylbenzene, and xylenes (BTEX), using EPA method 8015/8020 (DHS modified). All documentation related to the field work is appended to this report.

Background

The site is located at 1541 Park Street in Alameda, California (Figure 1). An environmental investigation has been in process at this site since hydrocarbons were first detected in the subsurface in October 1987. A preliminary investigation was completed by Kaprealian Engineering, Inc., with subsequent investigative tasks carried out by EMCON Associates and Hydro-Environmental Technologies, Inc. (HETI). Tasks completed to date have included the installation of 6 monitoring wells (5 on-site and 1 off-site) for groundwater sample collection and the installation of a 6-inch recovery well for the planned ground water remediation system. Figure 2, the site plan, provides the locations of these wells.

The extent of hydrocarbons in soil beneath the site has been defined. Soil samples collected during tank replacement and monitoring well installation verified that the extent of hydrocarbon impacted soil was not extensive. The lateral extent of hydrocarbons dissolved in groundwater has also been established. The only well where dissolved petroleum hydrocarbons have consistently been detected is MW-1, which is downgradient of the underground storage tanks.

Field Activities

HETI collected water samples from all six monitoring wells on March 30, 1992. Prior to sampling, the depth to water in the wells was gauged to the nearest hundredth of a foot with an interface probe. Separate phase petroleum was not detected in any of the wells with the probe or by means of visual inspection.

The wells were also checked for integrity and condition of the casing and wellhead. All wells appeared to be in satisfactory condition. Prior to sampling, the monitoring wells were purged of a minimum of three well volumes or until each well was dry. Temperature, conductivity, and pH levels were monitored during development. Purging data is attached in Appendix A.

Following recovery of the wells to at least 70 percent of their static water level, samples were collected with dedicated bailers. Each sample was transferred to 40 ml VOA glass vials and sealed with a teflon septum cap. Sample vials were documented, labeled and placed into a chilled cooler.

A chain of custody was prepared and accompanied the samples to the laboratory, and a copy is included in Appendix B. Water sample analyses were performed by PACE, a DHS certified laboratory, located in Novato, California.

A 6-inch diameter recovery well was drilled on April 13, 1992. This well was located downgradient of MW-1 and was installed to a depth of 30 feet. No soil samples were collected for laboratory analysis.

Ground Water Data

Depth to ground water in each of the wells ranged from approximately eight to ten feet below grade, according to the well gauging conducted for this investigation. Gauging data is attached as Appendix A. Ground water levels have risen 0.8 to 1.4 feet since last quarter. The depth to water data was combined with wellhead elevation data previously collected by HETI to calculate water surface elevations. These elevations were used to produce the ground water contour map shown in Figure 3. Ground water flow beneath the site is generally to the east.

Laboratory Analytical Results

Water samples from MW-3, MW-4, MW-5, and MW-6 contained no detectable concentrations of TPHg or BTEX compounds. Low levels of TPHg were present in the sample from MW-2. MW-1 contained TPHg and BTEX in concentrations of 5,800 and 290/570/500/1,100 ppb respectively. Table 1 summarizes and Figure 4 graphically displays the lab results. This quarters findings are generally consistent with previous quarters' results. Table 2 presents cumulative results to date.

Permitting and Remediation Activities

The recovery well has been installed, developed and enclosed in a precast concrete vault with a steel plate lid. The well can now be connected to the treatment equipment as described in the Remedial Action Plan (2/28/92); however, **no further work is scheduled until approval of a building permit is received.**

HETI is pleased to be of continued service to BP. If you have any questions or comments regarding this report, please do not hesitate to call.

Sincerely,
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

Frederick Moss

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

Henry Hurkmans

Henry Hurkmans
Staff Geologist



TABLES

Table 1
WATER SAMPLES
SUMMARY OF RECENT ANALYTICAL RESULTS
BP Oil Facility No. 11266

Sample date: March 30, 1992

MW No.	TPHg	B	T	E	X
MW-1	5,800	290	570	500	1,100
MW-2	91	0.7	ND	ND	ND
MW-3	ND	ND	ND	ND	ND
MW-4	ND	ND	ND	ND	ND
MW-5	ND	ND	ND	ND	ND
MW-6	ND	ND	ND	ND	ND

All hydrocarbon concentrations in $\mu\text{g/l}$ (ppb).

TPHg = Total petroleum hydrocarbons as gasoline by EPA method 8015/8020
(DHS modified)

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total Xylenes

ND = Not detected in concentrations exceeding the laboratory
method detection limit

TABLE 2
Cumulative Analytical Results of Water Samples
BP Oil Facility No. 11266
Alameda, California

Well No.	Sample Date	Consultant	TPHg	B	T	E	X
MW-1	3/4/88	KEI	95,000	2,000	5,900	1,100	10,000
	3/29/89	KEI	25,000	930	2,600	24	3,100
	11/28/89	EMCON	18,000	280	880	340	1,200
	2/13/91	EMCON	25,000	680	2,700	1,100	3,200
	1/8/92	HETI	10,000	280	1,100	570	2,000
	3/30/92	HETI	5,800	290	570	500	1,100
MW-2	3/4/88	KEI	ND	ND	ND	ND	ND
	3/29/89	KEI	ND	1.1	0.78	ND	1.7
	11/28/89	EMCON	170	ND	ND	ND	ND
	2/13/91	EMCON	150	1.4	ND	ND	0.9
	1/8/92	HETI	ND	1.4	ND	ND	1.1
	3/30/92	HETI	91	0.7	ND	ND	ND
MW-3	3/28/88	KEI	ND	ND	ND	ND	ND
	3/29/89	KEI	ND	ND	ND	ND	ND
	11/28/89	EMCON	ND	ND	ND	ND	ND
	2/13/91	EMCON	ND	ND	ND	ND	ND
	1/8/92	HETI	ND	ND	ND	ND	ND
	3/30/92	HETI	ND	ND	ND	ND	ND
MW-4	3/29/89	KEI	ND	ND	ND	ND	ND
	11/28/89	EMCON	ND	ND	ND	ND	ND
	2/13/91	EMCON	ND	6.2	0.6	12	3.3
	1/8/92	HETI	ND	ND	ND	ND	ND
	3/30/92	HETI	ND	ND	ND	ND	ND
MW-5	3/29/89	KEI	ND	ND	ND	ND	ND
	11/28/89	EMCON	ND	ND	ND	ND	ND
	2/13/91	EMCON	ND	ND	ND	ND	ND
	1/8/92	HETI	ND	ND	ND	ND	ND
	3/30/92	HETI	ND	ND	ND	ND	ND
MW-6	4/19/89	KEI	ND	ND	ND	ND	ND
	11/28/89	EMCON	ND	ND	ND	ND	ND
	2/13/91	EMCON	ND	ND	ND	ND	ND
	1/8/92	HETI	ND	ND	ND	ND	ND
	3/30/92	HETI	ND	ND	ND	ND	ND

All hydrocarbon concentrations in $\mu\text{g/l}$ (ppb)

TPHg = Total petroleum hydrocarbons as gasoline.

B = Benzene

ND = Not detected in concentrations exceeding the method detection limit

E = Ethylbenzene

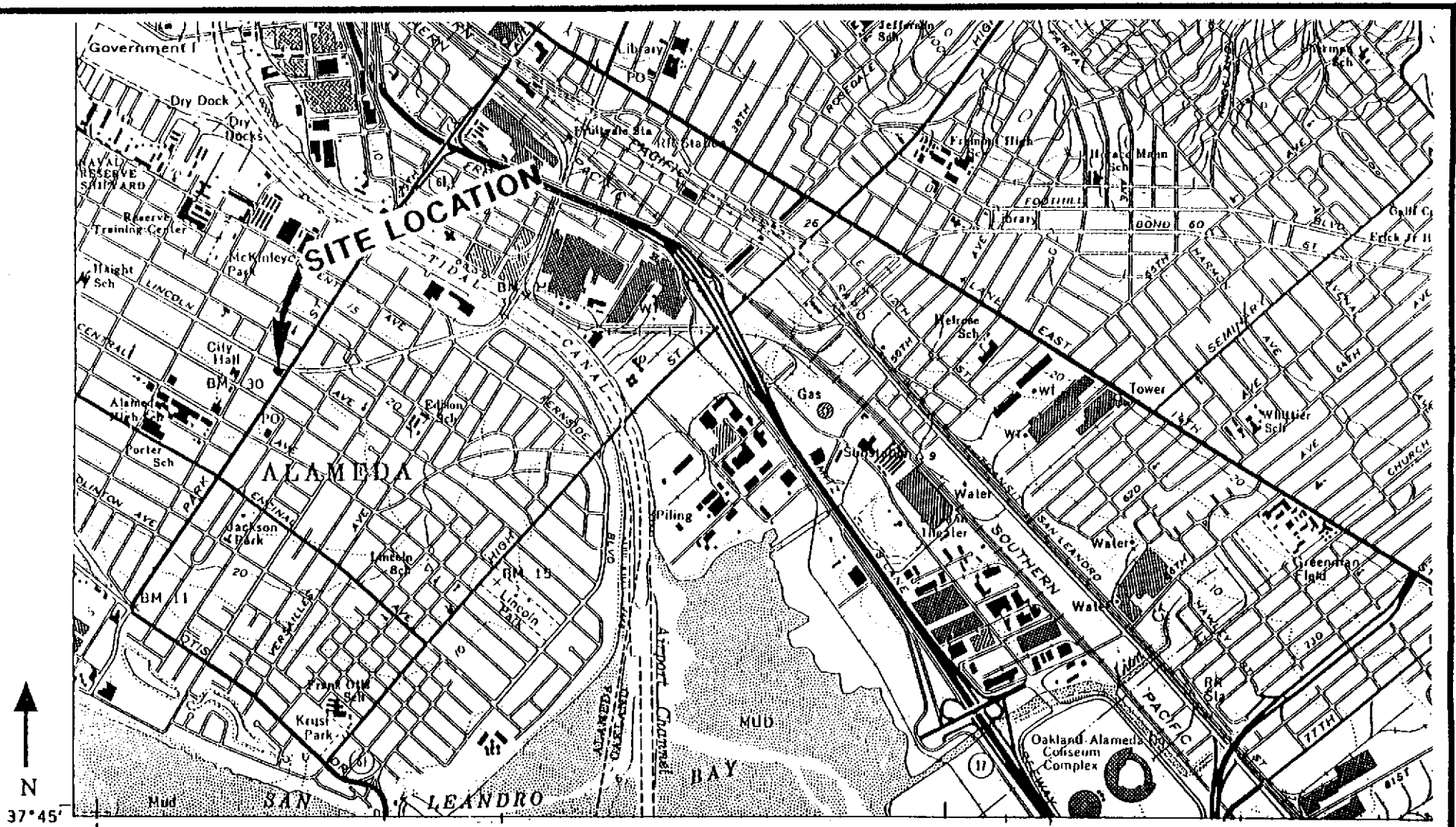
T = Toluene

X = Total Xylenes

KEI = Kaprealian Engineering, Inc.

EMCON = EMCON Associates

FIGURES



Scale 1: 24000
 0 2000'

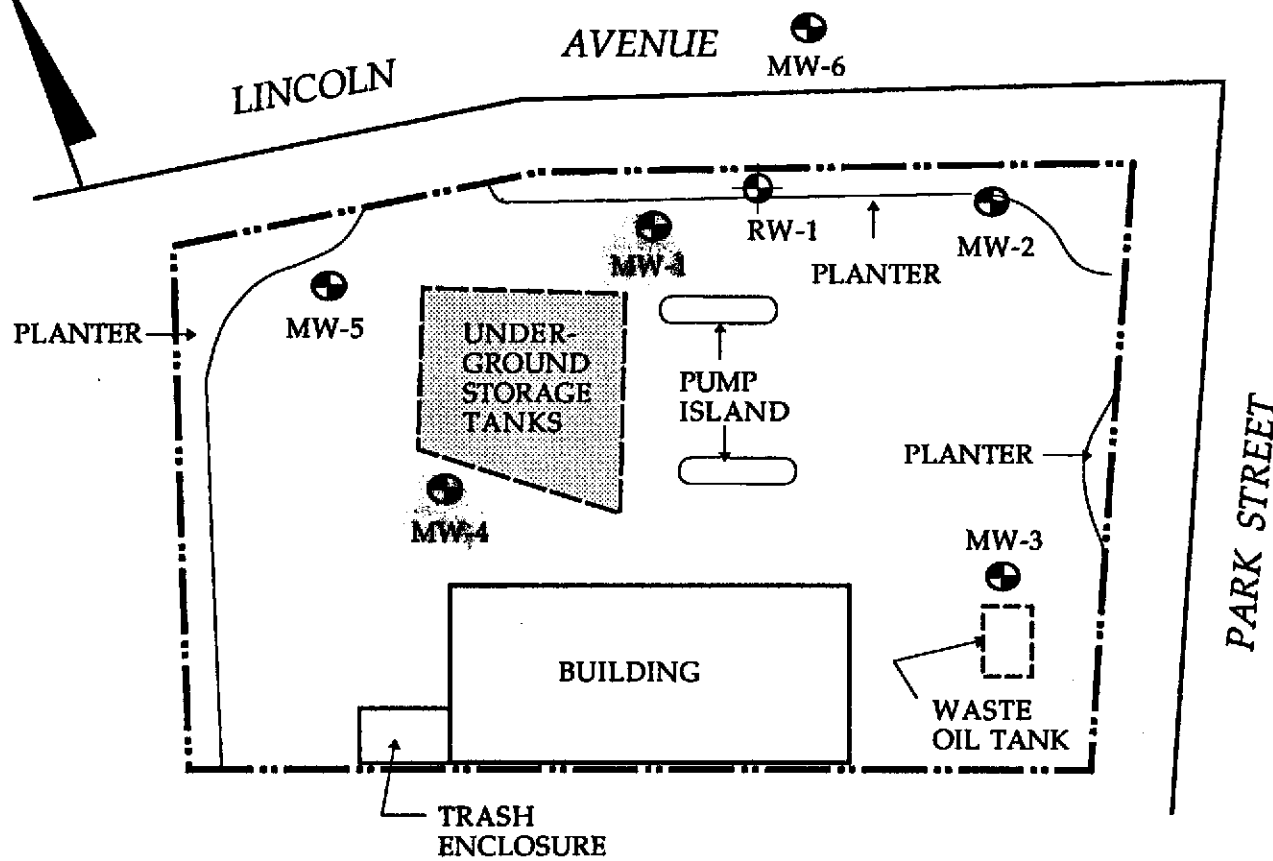
Source: U.S.G.S. Oakland East Quadrangle, CA
 7.5 Minute Series (Topographic)

**HYDRO-
 ENVIRONMENTAL
 TECHNOLOGIES, INC.**

SITE LOCATION MAP
 BP SERVICE STATION No. 11266
 1541 PARK STREET
 ALAMEDA, CA

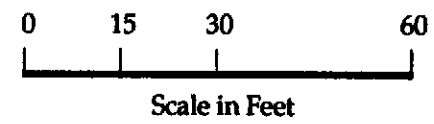
**FIGURE:
 1**
 Job No. 9-031

North



EXPLANATION

- MW-1
- = 2-inch monitoring well
- ⊕ = 6-inch recovery well
- RW-1



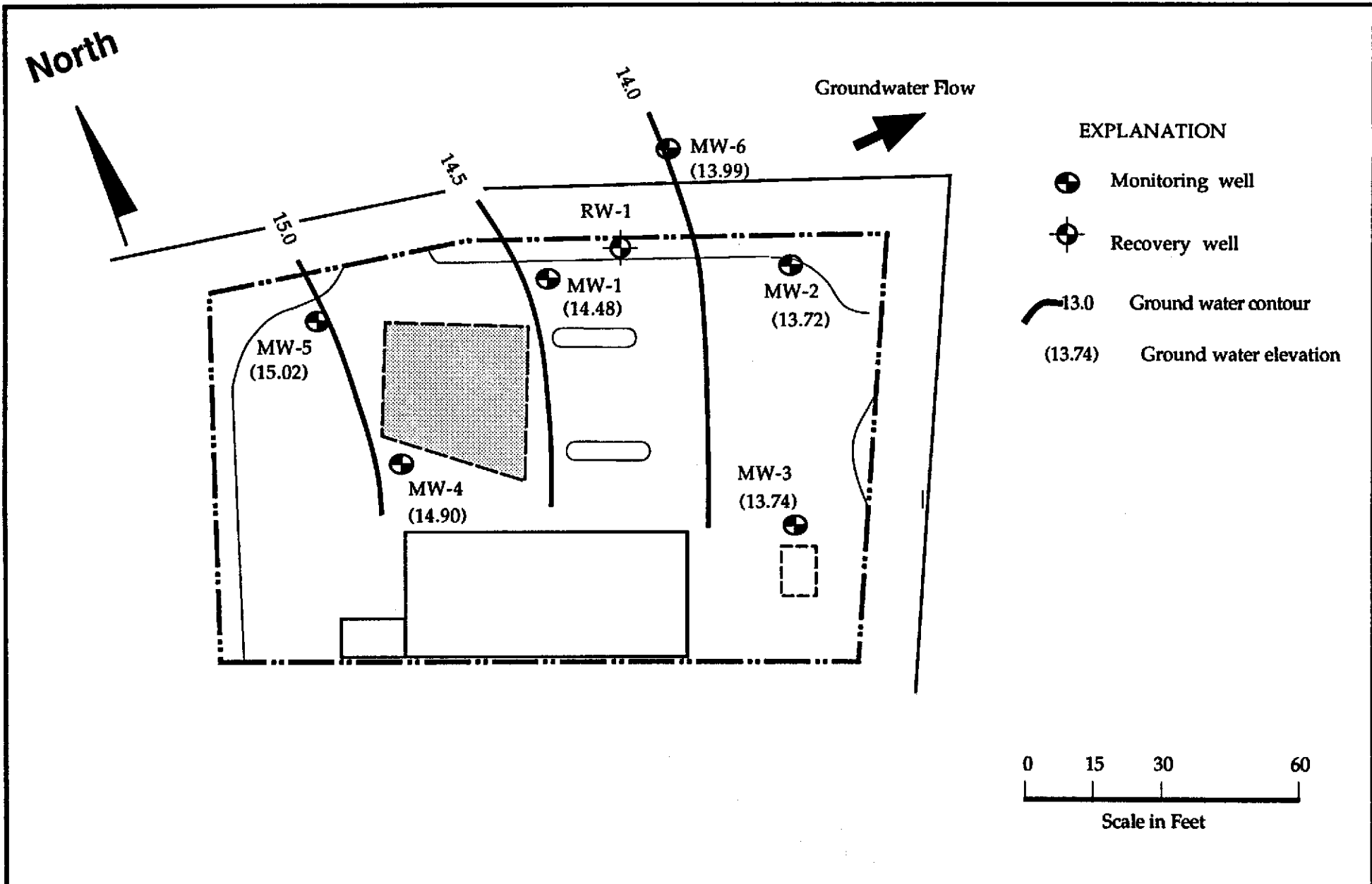
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SITE PLAN

BP SERVICE STATION No. 11266
1541 Park Street, Alameda, California

Figure
2

9-031 | 3/30/92

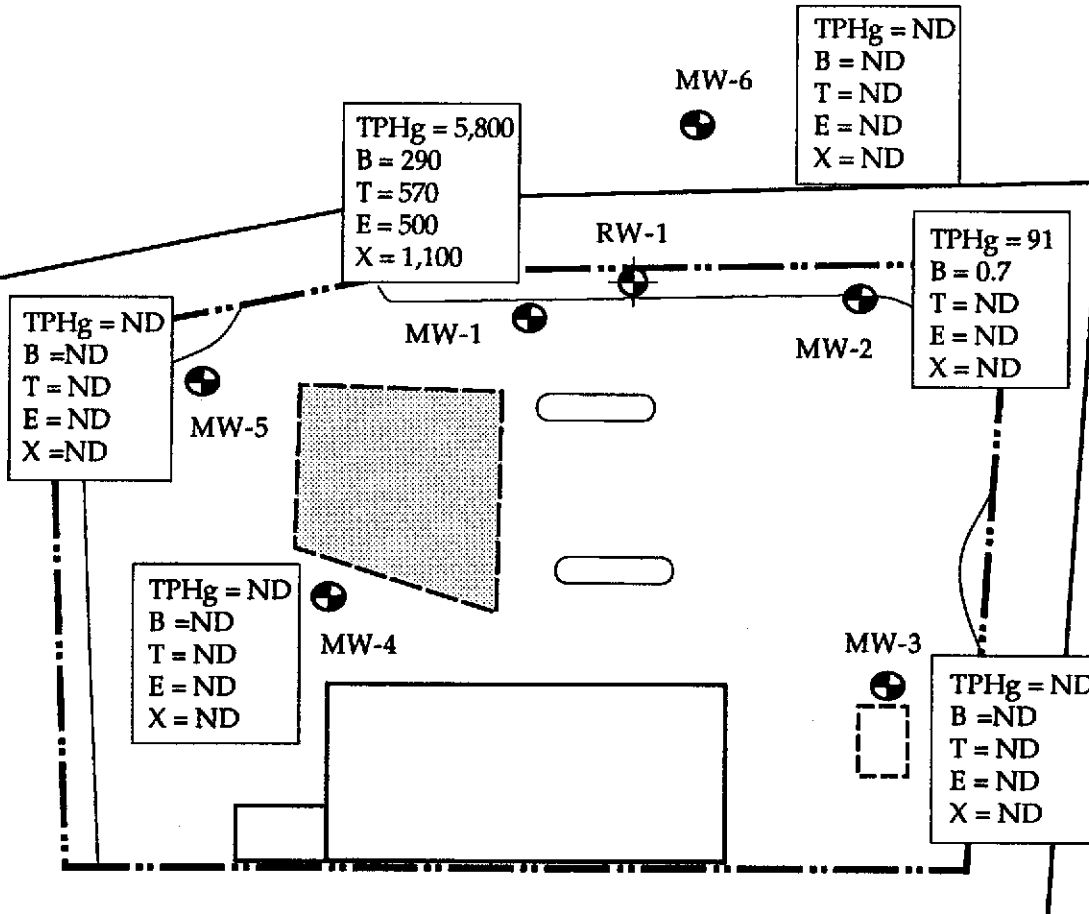


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GROUND WATER CONTOUR MAP
 BP SERVICE STATION No. 11266
 1541 Park Street, Alameda, California

Figure
3
 9-031 | 3/30/92

North



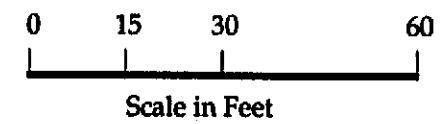
EXPLANATION

- Monitoring well
- Recovery well

TPHg = ND = TPHg=Total Petroleum Hydrocarbon as gasoline
 B = ND B=Benzene
 T = ND T=Toluene
 E = ND E=Ethylbenzene
 X = ND X=Total xylenes
 ND=analyte concentration did not exceed method detection limit

All analytes are in ppb (µg/L)

Sample date: March 30, 1992



HYDR-
 ENVIRONMENTAL
 TECHNOLOGIES, INC.

TPHg/BTEX CONCENTRATION MAP

BP SERVICE STATION No. 11266
 1541 Park Street, Alameda, California

Figure
 4

9-031 | 3/30/92

APPENDIX A

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

WATER TABLE ELEVATION DATA

Location: 1541 PARK STREET ALAMEDA, CALIFORNIA

Client: BP OIL COMPANY

Job No. 9-031

MW No.	Elev. T.C.*	DTW	Date Measured	Elev. Water	Remarks/Observations
MW-1	22.63	8.15	3/30/92	14.48	2-inch dia.
MW-2	22.75	9.03	3/30/92	13.72	2-inch dia.
MW-3	23.45	9.71	3/30/92	13.74	2-inch dia.
MW-4	23.63	8.73	3/30/92	14.90	2-inch dia.
MW-5	22.87	7.85	3/30/92	15.02	2-inch dia.
MW-6	22.85	8.86	3/30/92	13.99	2-inch dia.

T. C.* = Top of PVC Casing -- North Edge

PURGED/SAMPLED BY: TR

DATE: 3-30-92

GAUGING DATA:

Depth to bottom: 21.88 ft.
 Depth to water: 8.15 ft.
 Saturated Thickness: 13.73 ft.

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

Well casing volume 2.20 gallons
 # volumes to purge x 3 vols.
 *Total volume to purge = 6.60 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
<u>1:08</u>	<u>0</u>			
<u>1:12</u>	<u>2</u>	<u>61.0</u>	<u>0.97</u>	<u>7.69</u>
<u>1:15</u>	<u>4</u>	<u>61.0</u>	<u>1.00</u>	<u>7.59</u>
<u>1:18</u>	<u>6</u>	<u>61.1</u>	<u>0.90</u>	<u>7.54</u>
<u>1:21</u>	<u>7</u>	<u>61.1</u>	<u>0.91</u>	<u>7.53</u>
Sample at				
After sampling				

Color: black w/ sheen Turbidity: slight

Recharge: good Petroleum hydrocarbon odor: v. strong SPP _____ ft.

SAMPLING DATA:

Sample for: (circle)

Sampling method: Dedicated bailer

- TPH_g/STEX
- METALS
- TOC
- 8010
- IPHA
- O-Pb
- DEL
- 8028
- IPH no.
- Total Pb
- EDS
- 8240
- 601
- 602
- Nitroes
- 8260
- 8270
- Other: _____



MONITORING WELL PURGE/SAMPLE SHEET
 WELL # MW 1
 LOCATION BP/Alameda - Park St.

JOB NO.
9-031

PURGED/SAMPLED BY: TR DATE: 3-30-92

GAUGING DATA:

Depth to bottom: 23.01 ft.

Depth to water: 9.03 ft.

Saturated Thickness: 13.98 ft.

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

Well casing volume 2.24 gallons

volumes to purge x 3 vols.

Total volume to purge = 6.72 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
10:58	0			
11:08	5	60.4	0.85	7.88
11:11	7	62.1	0.84	7.49
Sample at				
After sampling				

Color: Tan-Brown Turbidity: Moderate
 Recharge: mod Petroleum hydrocarbon odor: NO or SPP 6 ft.

SAMPLING DATA:

Sampling method: Dedicated bailer

Sample for: (circle)

- TPH_g/STEX
- METALS
- TOC
- BOD
- IPHA
- O-Pb
- TEL
- BZP
- TPH_{no}
- Total Pb
- EDB
- BZP
- GFL
- GFL
- Nitrates
- BZP
- BZP

	MONITORING WELL PURGE/SAMPLE SHEET WELL # <u>MW2</u> LOCATION <u>BP/Alameda-Park St.</u>	JOB NO. <u>9-031</u>
--	--	-------------------------

PURGED/SAMPLED BY: TR

DATE: 3-30-92

GAGING DATA:

Depth to bottom: 19.59 ft

Depth to water: 9.71 ft

Saturated Thickness: 9.88 ft

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

Well casing volume 1.58 gallons

volumes to purge x 3 vols.

*Total volume to purge = 4.74 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
9:40 am	0			
9:49 am	5	64.5	1.05	7.78

Sample at
After sampling

Color: beige/brown

Turbidity: Moderate

Recharge: good

Petroleum hydrocarbon odor: NONE or SPP 1 ft.

SAMPLING DATA:

Sample for: (circle)

Sampling method: (Dedicated bailer)

- TPH₆/BTEX
- METALS
- TOC
- 3010
- TPH₄
- O-Pb
- TEL
- 8225
- TPH₃₀₀
- Total Pb
- EDS
- 8240
- 601
- 602
- Nitrates
- 8260
- 8270
- Other: _____

<p>HYDRO ENVIRONMENTAL TECHNOLOGIES, INC.</p>	MONITORING WELL PURGE/SAMPLE SHEET	JOB NO. <u>9-031</u>
	WELL # <u>MW 3</u>	
	LOCATION <u>BP/Alameda - Park St.</u>	

PURGED/SAMPLED BY: TR

DATE: 3-30-92

GAUGING DATA:

Depth to bottom: 19.92 ft

Depth to water: 8.73 ft

Saturated Thickness: 11.19 ft

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

Well casing volume 1.79 gallons

volumes to purge x 3 vols.

*Total volume to purge = 5.37 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
12:42	0			
12:45	1	61.6	0.78	7.47
12:48	2	61.9	0.80	7.47
12:50	3	62.5	0.81	7.44
12:52	4	62.7	0.86	7.54
12:54	5.5	62.4	0.80	7.47
Sample at				
After sampling				

Color: Tan

Turbidity: moderate

Recharge: good

Petroleum hydrocarbon odor: None or SPP 1 ft.

SAMPLING DATA:

Sample for: (circle)

- TPH_g/STED METALS TOC 8010
- TPH_M C-Pb TEL 8020
- TPH_{no} Total Pb EDS 8240
- 601 602 Nitrates 8260 8270
- Other: _____

Sampling method: Dedicated bailer / _____

**HYDR
ENVIRONMENTAL
TECHNOLOGIES, INC.**

MONITORING WELL PURGE/SAMPLE SHEET

WELL # MW4

LOCATION BP/Alameda - Park St

JOB NO.

9-031

PURGED/SAMPLED BY: TR DATE: 3-30-92

GAUGING DATA:

Depth to bottom: 24.24 ft
 Depth to water: 7.65 ft
 Saturated Thickness: 16.39 ft

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

Well casing volume 2.62 gallons
 # volumes to purge x 3 vols.
 *Total volume to purge = 7.87 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
12:19	0			
12:23	2	61.2	1.67	7.54
12:25	4	61.9	1.78	7.48
12:27	6	62.8	1.71	7.45
12:30	8	62.6	1.74	7.43
Sample at				
After sampling				

Color: TAN Turbidity: Moderate
 Recharge: good Petroleum hydrocarbon odor: None or SPF 0 ft.

SAMPLING DATA:

Sample for: (circle)

Sampling method: Dedicated bailer / _____

- TPH_g/STEX
 - METALS
 - TOC
 - 8010
 - TPH_h
 - C-Pb
 - TEL
 - 8025
 - TPH_{ms}
 - Total Pb
 - EDS
 - 8240
 - 601
 - 602
 - Nitrate
 - 8260
 - 8270
- Other: _____



MONITORING WELL PURGE/SAMPLE SHEET
 WELL # MW5
 LOCATION BP/Alameda - Park St.

JOB NO.
9-031

PURGED/SAMPLED BY: TR/HH DATE: 3-30-92

GAUGING DATA:

Depth to bottom: 16.95 ft.
 Depth to water: 8.86 ft.
 Saturated Thickness: 8.09 ft.

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

Well casing volume 1.29 gallons
 # volumes to purge x 3 vols.
 *Total volume to purge = 3.88 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
1200	0	—	—	—
1204	1	61.5	1.16	7.69
1206	2	62.6	1.19	7.54
1210	3	62.6	1.11	7.49
1215	4	62.6	1.10	7.48
Sample at				
After sampling				

Color: tan Turbidity: moderate
 Recharge: fair Petroleum hydrocarbon odor: none or SPP 0 ft.

SAMPLING DATA:

Sampling method: Dedicated bailer / _____

- Sample for: (circle)
- IPEH/STEX
 - METALS
 - TOC
 - 8010
 - IPEH
 - O-Pb
 - TEL
 - 8020
 - IPEH and
 - Total Pb
 - EDS
 - 8240
 - 601
 - 602
 - Nitrate
 - 8260
 - 8270
- Other: _____



MONITORING WELL PURGE/SAMPLE SHEET
 WELL # MW 6
 LOCATION BP/Alameda - Park St.

JOB NO.
7-031

APPENDIX B

SAMPLER
PRINTED NAME

Tony Ramirez

CHAIN OF CUSTODY RECORD

SEND RESULTS TO:

HYDRO-ENVIRONMENTAL
TECHNOLOGIES, INC.

2363 MARINER SQUARE DR., SUITE 243
ALAMEDA, CA 94501

Signature:

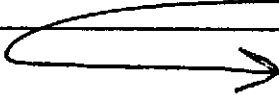
Tony Ramirez

DELIVER TO:

PACE

ATTENTION: *CAREN Sontag*

ATTENTION: *Markus Niebanck*

Relinquished by: (Signature) <i>Tony Ramirez</i>	Received by: (Signature) <i>Ed Kelly - Pace</i>	Date <i>3/31/92</i>	Time <i>1448</i>
Relinquished by: <i>Ed Kelly - Pace</i>	Received by:	<i>3/31</i>	<i>1545</i>
Relinquished by:	Received by:		
Relinquished by: 	Received by: LABORATORY <i>Jina Meyers/Pace</i>	<i>3/31/92</i>	<i>1545</i>

HETICAL JOB No.-- *9-031*

PAGE 1 OF 1

Sample Number	DATE & TIME	No. & Type Container	Analysis Requested						Lab Remarks
			TPH (BTEX) (DIS mod)	TPH (DIS mod)	Total O & G (50%)	8070 or 8240	Organic Lead		
<i>MW 1</i>	<i>3/30/92</i>	<i>3 YOACHU</i>	<i>X</i>						<i>6436.8</i>
<i>2</i>	<i> </i>	<i> </i>	<i>X</i>						<i>37.6</i>
<i>3</i>	<i> </i>	<i> </i>	<i>X</i>						<i>38.4</i>
<i>4</i>	<i> </i>	<i> </i>	<i>X</i>						<i>39.2</i>
<i>5</i>	<i> </i>	<i> </i>	<i>X</i>						<i>40.6</i>
<i>6</i>	<i>↓</i>	<i>↓</i>	<i>X</i>						<i>41.4</i>
<i>10/5</i>									

420331.503

Special Instructions: _____

Turnaround:

- STANDARD 72 HOURS
 5 DAY 24 HOURS

REPORT OF LABORATORY ANALYSIS

Hydro-Environmental Tech., Inc.	Client Project ID: 9-031	Date Received: March 31, 1992
2363 Mariner Square Dr., Ste. 243	Matrix Description: Water	
Alameda, CA 94501	Analysis Method: Mod.EPA 8015/8020	Date Reported: April 8, 1992
Attention: Mr. Markus Niebanck	PACE Project #: 420331.503	

TOTAL PETROLEUM FUEL HYDROCARBONS-GASOLINE/BTEX

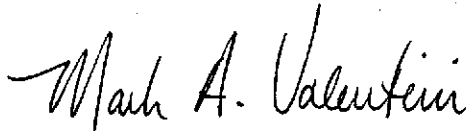
Sample Number	Sample Description	Purgeable Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)	Date Sampled	Date Analyzed
700064376	MW-2	91	0.7	ND	ND	ND	3/30/92	4/7/92
700064384	MW-3	ND	ND	ND	ND	ND	3/30/92	4/3/92
700064392	MW-4	ND	ND	ND	ND	ND	3/30/92	4/3/92
700064406	MW-5	ND	ND	ND	ND	ND	3/30/92	4/3/92
70004414	MW-6	ND	ND	ND	ND	ND	3/30/92	4/3/92

Detection Limits:	50	0.5	0.5	0.5	0.5
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700064368	MW-1	5800	290	570	500	1100	3/30/92	4/3/92
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Detection Limits:	620	6.2	6.2	6.2	6.2
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These data have been reviewed and are approved for release.



Mark A. Valentini, Ph.D.
Regional Director



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QUALITY CONTROL DATA

April 08, 1992
PACE Project Number: 420331503

Client Reference: 9-031

TPH GASOLINE/BTEX

Batch: 70 11324

Samples: 70 0064368, 70 0064384, 70 0064392, 70 0064406, 70 0064414

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	Dup1 Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	313	98%	98%	0%
Benzene	ug/L	0.5	40.0	101%	102%	0%
Toluene	ug/L	0.5	40.0	107%	106%	0%
Ethylbenzene	ug/L	0.5	40.0	107%	105%	1%
Xylenes, Total	ug/L	0.5	80.0	113%	112%	0%

MDL Method Detection Limit
 ND Not detected at or above the MDL.
 RPD Relative Percent Difference



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QUALITY CONTROL DATA

April 08, 1992
PACE Project Number: 420331503

Client Reference: 9-031

TPH GASOLINE/BTEX
Batch: 70 11351
Samples: 70 0064376

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	Dupl		
			Value	Recv	Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	354	109%	110%	0%
Benzene	ug/L	0.5	40.0	110%	106%	3%
Toluene	ug/L	0.5	40.0	110%	105%	4%
Ethylbenzene	ug/L	0.5	40.0	110%	106%	3%
Xylenes, Total	ug/L	0.5	80.0	110%	106%	3%

MDL Method Detection Limit
 ND Not detected at or above the MDL.
 RPD Relative Percent Difference