BP OIL

95.03960
PE

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0667
Fax No: (425) 251-0736

October 27, 1997

Alameda County Health Care Services Agency
Attention Ms. Juliet Shin
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

RE: Former BP Oil Site No. 11117
7210 Bancroft Avenue (at 73rd)
Oakland, CA

Dear Ms. Shin:

Enclosed find Off Site Well Installation Report dated 20 October 1997 and Groundwater Monitoring and Sampling Report dated 25 August 1997.

By copy of this letter to Brady Nagle at Alisto Engineering Group, please include well MW-10 into future groundwater sampling and monitoring work.

At this time, future site plans include groundwater monitoring and sampling. Please give me a call at (425) 251-0689 if you have questions or concerns regarding these submittals.

Sincerely,

Scott Hooton

attachments

cc: site file
Tina Berry - Tosco (w/attachments)
Brady Nagle - Alisto (w/Pacific report)
Mr. Robert K. Barth, Bancroft Oakland Investment Company, 9454 Wilshire Boulevard, STE 901, Beverly Hills, CA 90212 (w/attachments)

PACIFIC
ENVIRONMENTAL
GROUP, INC.

October 20, 1997
Project 360-016.1A

Mr. Scott Hooton
BP Oil Company
295 SW 41st Street, Bldg. 13, Suite N
Renton, Washington 98055-4931

Re: Off Site Well Installation Report
BP Oil Facility #11117
7210 Bancroft Avenue
Oakland, California

Dear Mr. Hooton:

Pacific Environmental Group, Inc. (PACIFIC) has prepared this letter report to document the results of the off-site well installation activities performed adjacent to the above referenced BP service station (Figure 1). The purpose of this work was to further delineate the lateral and downgradient extent of a hydrocarbon release in the vicinity of the site.

SUMMARY OF FIELD ACTIVITIES

On July 7, 1997, one well boring (MW-10) was drilled off-site to a maximum depth of about 37.5 feet below ground surface (bgs). Boring MW-10 was drilled adjacent to the BP facility, in a parking lot of the Eastmont Mall, approximately 25 feet northeast of the site (Figure 2).

Undisturbed soil samples were collected from the borings at approximately 5-foot depth intervals for field hydrocarbon vapor screening and laboratory analysis. The samples were logged by a geologist using the Unified Soil Classification System (ASTM C2488-69). Soil samples were then labeled, stored in an ice-cooled insulated container, and transported under standard chain-of-custody protocols to a certified, BP contract laboratory for analysis. Upon completion of sampling, Boring MW-10 was converted into a groundwater monitoring well by installing 2-inch diameter Schedule 40 PVC blank and 0.02-inch slotted casing to a depth approximately 35 feet bgs. Drilling and well

installation procedures are presented as Attachment A, and the boring logs and well completion details are presented as Attachment B.

On July 24, 1997, groundwater samples were collected from monitoring well MW-10 using a clean disposable bailer. The samples were transferred from the bailer and placed in containers appropriate to each US EPA analytical method being employed. The groundwater samples were then labeled, stored in an ice-cooled insulated container, and transported under standard chain-of-custody protocols to a certified, BP contract laboratory for analysis.

Groundwater and soil samples collected from the well borings were analyzed for total purgeable petroleum hydrocarbons quantified as gasoline (TPPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), and methyl tert-butyl ether (MtBE) by US EPA Methods 8015 modified and 8020. Field and laboratory procedures are presented in Attachment A, and the certified analytical reports and chain-of-custody documentation are included in Attachment C. Analytical results for the soil and groundwater samples are summarized in Tables 1 and 2.

Soil cuttings and equipment rinseate generated during drilling activities were stored in Department of Transportation (DOT) approved 55-gallon drums that were stored on the service station property pending characterization and disposal at a licensed disposal facility.

FINDINGS

Subsurface Conditions

Details regarding the soils encountered in Boring MW-10 are shown on the boring log in Attachment B. Units of sandy gravel, sandy clay, and sandy silt were encountered in Boring MW-10 from the ground surface to a depth of approximately 12 feet bgs. Sandy gravel was encountered below 12 feet to a depth of approximately 30 feet bgs. Below 30 feet, sandy silt was encountered to the total depth explored of approximately 37.5 feet bgs.

No hydrocarbon stained soils or odors were encountered in the soil samples collected from the borings. No soil was recovered at about 20 feet bgs, and only 2 gravel fragments were recovered at about 15 feet bgs, due to the gravely nature of the subsurface at these depths. Groundwater was first encountered in well boring MW-10 at a depth of approximately 26 feet bgs.

Organic Vapor Analysis

Soil samples collected at 5-foot depth intervals from Borings MW-10 were field screened for volatile organic compounds (VOCs) using a photo-ionization detector (PID) calibrated to 100 parts per million by volume isobutylene gas. The highest measured concentrations of VOCs were recorded on the boring logs (Attachment B).

Soil Analytical Results

Soil analytical data are presented in Table 1 and on the certified analytical reports in Attachment C. A total of four soil samples collected from Borings MW-10 (6, 11, 30, and 35 feet bgs) were analyzed for TPPH-g, BTEX compounds, and MtBE. TPPH-g was not detected in any samples at concentrations above the laboratory detection limit of 0.1 milligrams per kilogram (mg/kg). In addition, neither BTEX compounds nor MtBE were not detected at concentrations above their respective detection limits. Certified analytical reports (CARs) and chain-of-custody documentation are presented in Attachment C.

Table 1
Summary of Soil Analytical Data

Sample ID - Depth	TPPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MtBE
MW-10 - 6'	<0.1 mg/kg	<1 µg/kg	<2 µg/kg	<2 µg/kg	<2 µg/kg	<100 µg/kg
MW-10 - 11'	<0.1 mg/kg	<1 µg/kg	<2 µg/kg	<2 µg/kg	<2 µg/kg	<100 µg/kg
MW-10 - 30'	<0.1 mg/kg	<1 µg/kg	<2 µg/kg	<2 µg/kg	<2 µg/kg	<100 µg/kg
MW-10 - 35'	<0.1 mg/kg	<1 µg/kg	<2 µg/kg	<2 µg/kg	<2 µg/kg	<100 µg/kg

Notes:
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram

Groundwater Analytical Results

The groundwater sample collected from well MW-10 was analyzed for TPPH-g, BTEX compounds, and MtBE. TPPH-g and BTEX compounds were not detected at a concentrations above the laboratory detection limits. MtBE was detected by the

laboratory at a concentration of 13 micrograms per liter (µg/l) using EPA Method 8020. CARs and chain-of-custody documentation are presented in Attachment C.

Table 2
Summary of Groundwater Analytical Data

Sample ID	TPPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MtBE
MW-10	<0.05 mg/l	<0.5 µg/l	<1.0 µg/l	<1.0 µg/l	<1.0 µg/l	13 µg/l

Notes:
mg/l = milligrams per liter
µg/l = micrograms per liter

SUMMARY

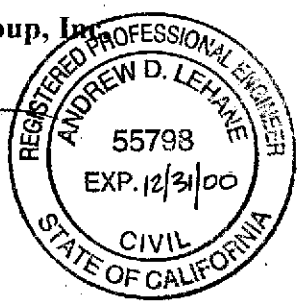
- Boring MW-10 was drilled off site to a maximum depth of about 37.5 feet bgs and was subsequently converted into a groundwater monitoring well by installing 2-inch diameter Schedule 40 PVC blank and 0.02-inch slotted casing completed to a depth of about 35 feet bgs.
- Units of sandy gravel, sandy clay, and sandy silt were encountered in Boring MW-10 from the ground surface to a depth of about 12 feet bgs. Sandy gravel was encountered below 12 feet to a depth of approximately 30 feet bgs. Sandy silt was encountered to the total depth explored of approximately 37.5 feet bgs.
- Recovered soil samples collected at about 5-foot intervals from Boring MW-10 were analyzed for TPPH-g, BTEX compounds, and MtBE. TPPH-g, BTEX compounds, and MtBE were not detected at concentrations above the laboratory detection limits.
- A groundwater sample collected from Well MW-10 was analyzed for TPPH-g, BTEX compounds, and MtBE. TPPH-g, BTEX compounds, were not detected at a concentrations above the laboratory detection limits. MtBE was detected at 13 µg/l, just above the detection limit of 10 µg/l.

PACIFIC recommends that Well MW-10 be surveyed to a datum common to existing monitoring wells at the site, and that this well be incorporated into BP's groundwater monitoring and sampling program for this site.

If you have any questions or require additional information, please contact me at (408) 441-7500.

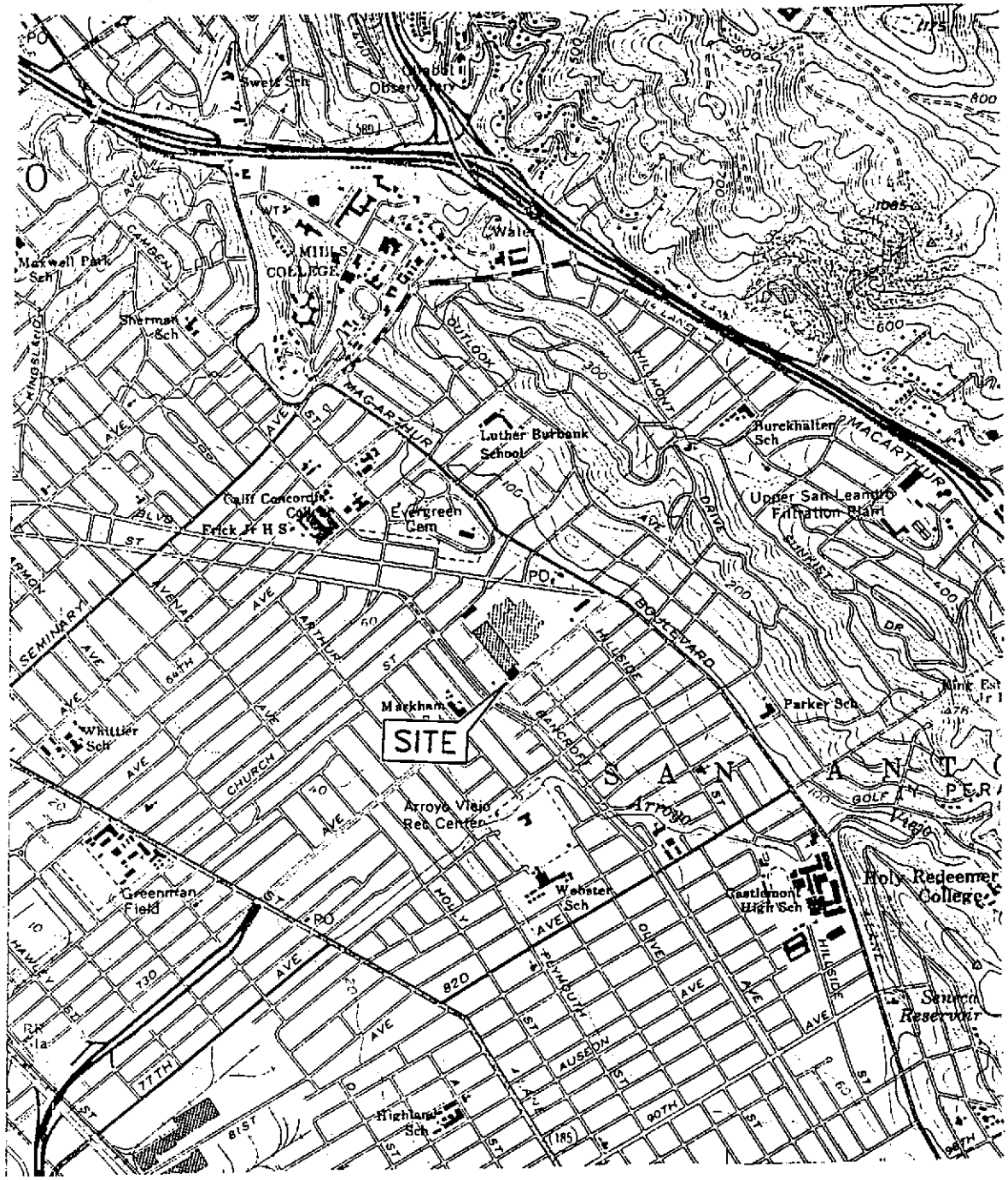
Sincerely,

Pacific Environmental Group, Inc.



Andrew D. Lehane
Project Engineer
RCE 55798

Attachments:
Figure 1 - Site Location Map
Figure 2 - Site Map
Attachment A - Field and Laboratory Procedures
Attachment B - Boring Log and Well Detail
Attachment C - Certified Analytical Reports and Chain-of Custody Documentation



SOURCE:
USGS MAP, OAKLAND EAST QUADRANGLE, CALIFORNIA, 7.5 MINUTE SERIES, 1959, PHOTOREVISED 1980.

N

0 1000' 2000'

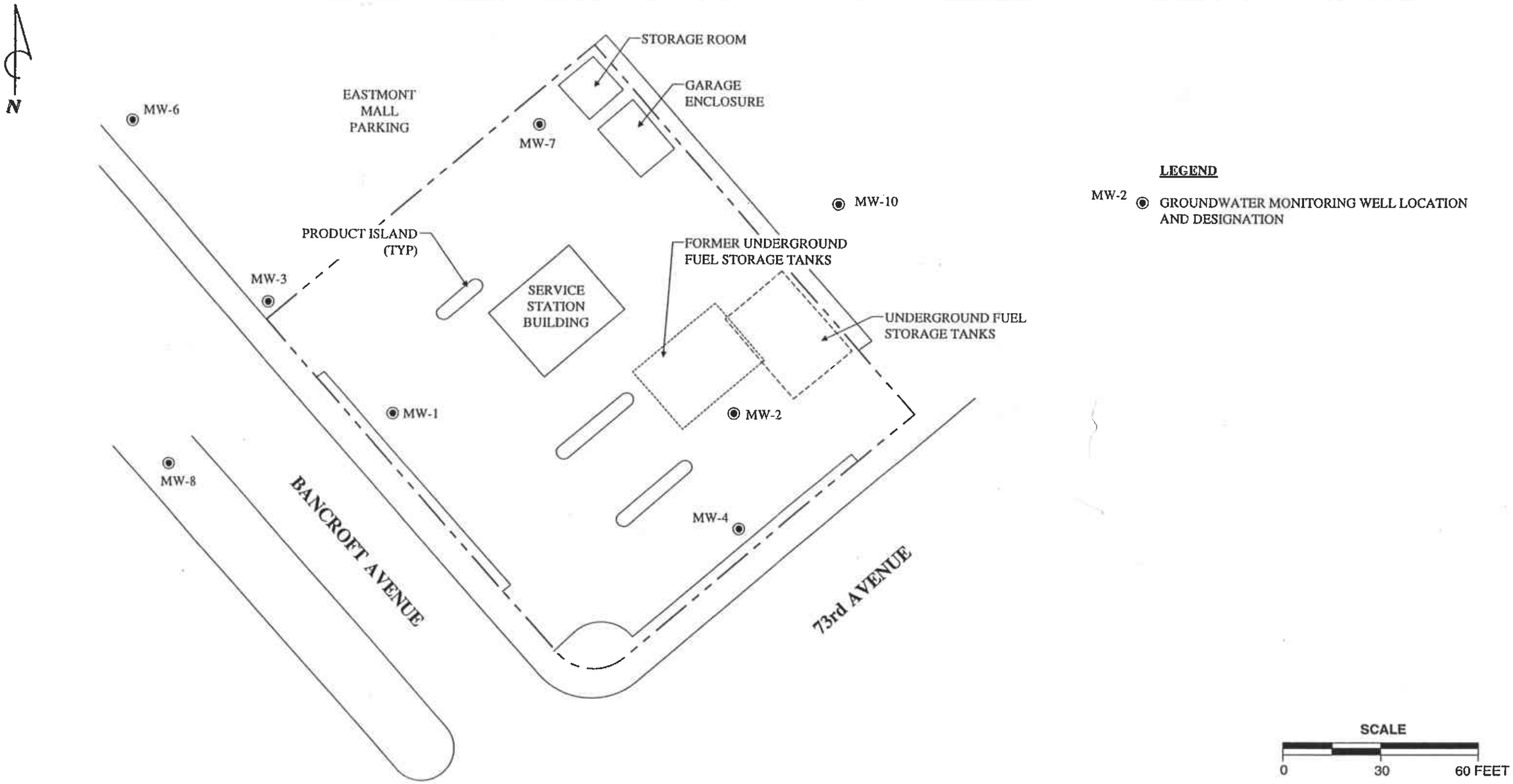
PACIFIC ENVIRONMENTAL GROUP, INC.

BP OIL SERVICE STATION 11117
7210 Bancroft Avenue
Oakland, California

SITE LOCATION MAP

FIGURE: **1**

PROJECT: 360-016.3A



Reference: 360/016/Sitemp30.vsd

PACIFIC ENVIRONMENTAL GROUP, INC.

TITLE:

SITE MAP

PREPARED FOR:

BP FACILITY 11117
7210 Bancroft Avenue at 73rd Avenue
Oakland, California

DATE: 4-15-97	PROJECT: 360-016.1A	FIGURE: 2

ATTACHMENT A

FIELD AND LABORATORY PROCEDURES

ATTACHMENT A
FIELD AND LABORATORY PROCEDURES

Soil Borings

Boring MW-10 was drilled with 8-inch diameter hollow-stem augers using a CME-75 truck-mounted, continuous-flight, hollow-stem auger drill rig. All down-hole equipment was steam cleaned prior to drilling. Representative undisturbed soil samples were collected from the well borings for geologic logging, field hydrocarbon vapor screening and laboratory analysis. The soil samples were collected using a 2.5-inch outside diameter, modified California split-spoon sampler fitted with brass liners. The rig mounted sampler was driven 18 inches into the soil beyond the lead auger using a standard 140-pound hammer with a 30-inch drop. Soil samples and drill cuttings were logged by a PACIFIC geologist using the Unified Soil Classification System (ASTM D2488). The boring were drilled to a total depth of approximately 37.5 feet below ground surface (bgs). The log for Boring MW-10 is presented in Attachment B.

Soil samples were collected from the borings at about 5-foot depth intervals. At each sampling interval, the middle sample liner was retained for chemical analysis. The ends of the liner were sealed with Teflon® tape and plastic end caps, and placed in a chilled container and were maintained at temperature of less than 4 degrees Centigrade.

Soil samples collected at each interval were also field screened for VOCs using headspace analysis and a photo-ionization detector (PID) calibrated to 100 parts per million by volume isobutylene gas. For each sample, approximately 200 grams of soil was placed in a sealable plastic bag. After the soil was allowed to equilibrate for approximately 20 minutes, the probe tip of the PID was inserted into the bag. The highest measured concentrations of VOCs within the headspace of the bag were recorded on the boring log (Attachment B).

Monitoring Well Installation

Boring MW-10 was converted into a groundwater monitoring well by installing 2-inch diameter Schedule 40 PVC blank and 0.02-inch slotted casing. The well was screened from approximately 15 to 35 feet bgs. A filter pack of Lonestar #8 sand was placed in the annular space of the well from approximately 1 foot above the slotted interval to the total depth of the

boring. A 2-foot thick bentonite seal was placed above the filter pack interval of the boring and the remaining annular space surrounding the blank casings were backfilled with Portland cement grout, or equivalent, to approximately 1 foot bgs. Each well head was secured with a lockable well cap and enclosed in a water-tight traffic-rated steel well box set in concrete. Well construction details are included on the boring log in Attachment B.

Groundwater Sampling Method

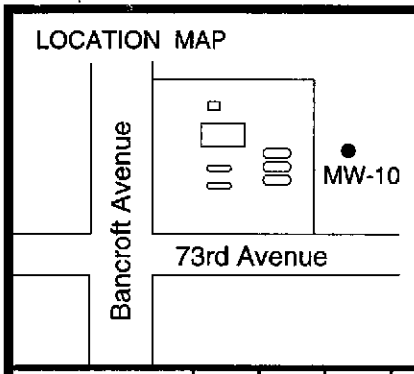
Groundwater samples were collected from Well MW-10 using a clean disposable bailer. The water samples were transferred from the bailers into glass containers appropriate to each EPA analytical method being employed. When necessary, appropriate preservatives were added to the sample containers. After collection, the sample containers were labeled and stored in an ice chest, and maintained at temperature of less than 4 degrees Centigrade.

Laboratory Procedures

Soil and groundwater samples were transported under standard chain-of-custody protocols to a BP-approved, state-certified analytical laboratory (SPL/Houston, Texas). The soil and groundwater samples were analyzed for total purgeable petroleum hydrocarbons calculated as gasoline (TPPH-g) by EPA Method 8015 (modified). The soil and groundwater samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX compounds), and methyl tert-butyl ether (MtBE) by EPA Method 8020. Certified analytical reports and chain-of-custody documentation are presented as Attachment C.

ATTACHMENT B

BORING LOG AND WELL DETAIL



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-10
PAGE 1 OF 1

PROJECT NO. 360-016.1A
LOGGED BY: T.B.
DRILLER: MITCHELL
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: SCH 40 PVC
SLOT SIZE: 0.020
GRAVEL PACK: #8 SAND

CLIENT: BP OIL COMPANY
DATE DRILLED: 7-7-97
LOCATION: 7210 Bancroft Ave., Oakland
HOLE DIAMETER: 8"
HOLE DEPTH: 37.5'
WELL DIAMETER: 2"
WELL DEPTH: 35'
CASING STICKUP: NA

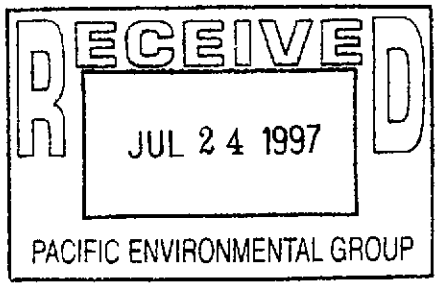
WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				2	GP	ASPHALT SANDY GRAVEL
				4	CL	SANDY CLAY: dark brown; medium plasticity; 75% fines; 25% fine to medium sand; no product odor.
	Dry	0	>72	6		
				8	ML	SANDY SILT: strong brown; 75% fines; 24% fine sand; 1% gravel; no product odor.
		0	47	10		
				12	GP	SANDY GRAVEL: no recovery except 2 coarse gravel - r x fragments.
BENTONITE			>63	14		
				16		
				18		
			50	20		@20': no recovery.
SAND				22		
				24		
	Wt	80	>63	26		@25': brown; 15% fines; 20% fine sand; 65% gravel; no product odor.
				28		
	Wt	off-scale	38	30		@30': gray; 10% fines; 30% sand; 60% gravel.
				32	ML	SANDY SILT: brown; no product odor.
				34		
	Mst	22	24	36		@35': brown; 75% fines; 20% fine sand; 5% gravel; no product odor.
				38		
				40		BOTTOM OF BORING 37.5'
				42		
				44		

ATTACHMENT C

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

July 21, 1997



Mr. Andrew Lebanc
PACIFIC ENVIRONMENTAL GROUP
2025 Gateway Place #440
San Jose,CA 95110

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on July 09, 1997. The samples were assigned to Certificate of Analysis No(s).9707355 and analyzed for the parameters specified on the chain of custody.

There were no analytical problems encountered with this group of samples and all quality control data was within acceptance limits.

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis Number(s) during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Ed Fry
Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 97-07-355

Approved for Release by:

Ed Fry, Project Manager

Date: 7/21/97

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

****SUMMARY REPORT*****

07/21/97

Company: Pacific Environmental Group
Site: 7210 Bancroft Ave Oakland, CA
Project No: 360-016.1A
Project: BP Oil #11117

ANALYTICAL DATA
NOTE: ND - Not Detected

SPL ID MATRIX	CLIENT ID DATE SAMPLED	BENZENE	TOLUENE	ETHYLBENZ.	XYLENE	TPH-IR	TPH-GC PQL	LEAD	MTBE
9707355-01 SOIL	MW-10-6' 07/07/97						ND 0.1mg/kg		
9707355-02 SOIL	MW-10-11' 07/07/97						ND 0.1mg/kg		
9707355-03 SOIL	MW-10-30' 07/07/97						ND 0.1mg/kg		
9707355-04 SOIL	MW-10-35' 07/07/97						ND 0.1mg/kg		

TPH-GC - California LUFT Manual for Gasoline

SPL, Inc., - Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707355-01

Pacific Environmental Group
2025 Gateway Place #440
San Jose, CA 95110
ATTN: Andrew Lebanc

P.O.# H117166,COC#071955
DATE: 07/21/97

PROJECT: BP Oil #11117
SITE: 7210 Bancroft Ave Oakland, CA
SAMPLED BY: Pacific Environmental
SAMPLE ID: MW-10-6'

PROJECT NO: 360-016.1A
MATRIX: SOIL
DATE SAMPLED: 07/07/97
DATE RECEIVED: 07/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	µg/Kg
Benzene	ND	1.0 P	µg/Kg
Toluene	ND	2.0 P	µg/Kg
Ethylbenzene	ND	2.0 P	µg/Kg
Total Xylene	ND	2.0 P	µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: SB			
Date: 07/11/97			
Gasoline Range Organics	ND	0.1 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	113		
California LUFT Manual for Gasoline			
Analyzed by: SB			
Date: 07/11/97 03:27:00			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707355-02

Pacific Environmental Group
2025 Gateway Place #440
San Jose, CA 95110
ATTN: Andrew Lebanc

P.O.# H117166,COC#071955
DATE: 07/21/97

PROJECT: BP Oil #11117
SITE: 7210 Bancroft Ave Oakland, CA
SAMPLED BY: Pacific Environmental
SAMPLE ID: MW-10-11'

PROJECT NO: 360-016.1A
MATRIX: SOIL
DATE SAMPLED: 07/07/97
DATE RECEIVED: 07/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	µg/Kg
Benzene	ND	1.0 P	µg/Kg
Toluene	ND	2.0 P	µg/Kg
Ethylbenzene	ND	2.0 P	µg/Kg
Total Xylene	ND	2.0 P	µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	103		
Method 8020A***			
Analyzed by: SB			
Date: 07/11/97			
Gasoline Range Organics	ND	0.1 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	107		
California LUFT Manual for Gasoline			
Analyzed by: SB			
Date: 07/11/97 03:58:00			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707355-03

Pacific Environmental Group
2025 Gateway Place #440
San Jose, CA 95110
ATTN: Andrew Lebanc

P.O.# H117166,COC#071955
DATE: 07/21/97

PROJECT: BP Oil #11117
SITE: 7210 Bancroft Ave Oakland, CA
SAMPLED BY: Pacific Environmental
SAMPLE ID: MW-10-30'

PROJECT NO: 360-016.1A
MATRIX: SOIL
DATE SAMPLED: 07/07/97
DATE RECEIVED: 07/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	µg/Kg
Benzene	ND	1.0 P	µg/Kg
Toluene	ND	2.0 P	µg/Kg
Ethylbenzene	ND	2.0 P	µg/Kg
Total Xylene	ND	2.0 P	µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	110		
Method 8020A***			
Analyzed by: SB			
Date: 07/11/97			
Gasoline Range Organics	ND	0.1 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	113		
California LUFT Manual for Gasoline			
Analyzed by: SB			
Date: 07/11/97 07:04:00			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707355-04

Pacific Environmental Group
2025 Gateway Place #440
San Jose, CA 95110
ATTN: Andrew Lebanc

P.O.# H117166,COC#071955
DATE: 07/21/97

PROJECT: BP Oil #11117
SITE: 7210 Bancroft Ave Oakland, CA
SAMPLED BY: Pacific Environmental
SAMPLE ID: MW-10-35'

PROJECT NO: 360-016.1A
MATRIX: SOIL
DATE SAMPLED: 07/07/97
DATE RECEIVED: 07/09/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	µg/Kg
Benzene	ND	1.0 P	µg/Kg
Toluene	ND	2.0 P	µg/Kg
Ethylbenzene	ND	2.0 P	µg/Kg
Total Xylene	ND	2.0 P	µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	103		
Method 8020A***			
Analyzed by: SB			
Date: 07/11/97			
Gasoline Range Organics	ND	0.1 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	110		
California LUFT Manual for Gasoline			
Analyzed by: SB			
Date: 07/11/97 07:34:00			

ND - Not detected. (P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

QUALITY CONTROL

DOCUMENTATION

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

SURROGATE RECOVERY SUMMARY
07/21/97 10:12:50

Method 8020A*
WORK ORDER: 9707355-01A
BATCH#:HP_O970710211100
CLIENT SAMPLE ID:MW-10-6'

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	60- 136
4-Bromofluorobenzene	30	32	107	37- 168

Method 8020A*
WORK ORDER: 9707355-02A
BATCH#:HP_O970710211100
CLIENT SAMPLE ID:MW-10-11'

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	60- 136
4-Bromofluorobenzene	30	31	103	37- 168

Method 8020A*
WORK ORDER: 9707355-03A
BATCH#:HP_O970710211100
CLIENT SAMPLE ID:MW-10-30'

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	60- 136
4-Bromofluorobenzene	30	33	110	37- 168

Method 8020A*
WORK ORDER: 9707355-04A
BATCH#:HP_O970710211100
CLIENT SAMPLE ID:MW-10-35'

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	60- 136
4-Bromofluorobenzene	30	31	103	37- 168

Method 8020A *
WORK ORDER: Method Blank
BATCH#:HP_O970710211100
CLIENT SAMPLE ID:

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	60- 136
4-Bromofluorobenzene	30	32	107	37- 168

Method 8020A *
WORK ORDER: LCS
BATCH#:HP_O970710211100
CLIENT SAMPLE ID:

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	60- 136
4-Bromofluorobenzene	30	30	100	37- 168

Method 8020A *
WORK ORDER: Matrix Spike
BATCH#:HP_O970710211100
CLIENT SAMPLE ID:9707153-06A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-DIFLUOROBENZENE	30	30	100	60- 136
4-BROMOFLUOROBENZENE	30	32	107	37- 168

Method 8020A *
WORK ORDER: Matrix Spike Dup.
BATCH#:HP_O970710211100
CLIENT SAMPLE ID:9707153-06A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	60- 136

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	30	100	37- 168

California LUFT Manual for Gasoline **BATCH#:**HP_O970710214200
WORK ORDER: 9707355-01A **CLIENT SAMPLE ID:**MW-10-6'

1,4-Difluorobenzene	30	28	93	45- 160
4-Bromofluorobenzene	30	34	113	57- 130

California LUFT Manual for Gasoline **BATCH#:**HP_O970710214200
WORK ORDER: 9707355-02A **CLIENT SAMPLE ID:**MW-10-11'

1,4-Difluorobenzene	30	28	93	45- 160
4-Bromofluorobenzene	30	32	107	57- 130

California LUFT Manual for Gasoline **BATCH#:**HP_O970710214200
WORK ORDER: 9707355-03A **CLIENT SAMPLE ID:**MW-10-30'

1,4-Difluorobenzene	30	28	93	45- 160
4-Bromofluorobenzene	30	34	113	57- 130

California LUFT Manual for Gasoline **BATCH#:**HP_O970710214200
WORK ORDER: 9707355-04A **CLIENT SAMPLE ID:**MW-10-35'

1,4-Difluorobenzene	30	28	93	45- 160
4-Bromofluorobenzene	30	33	110	57- 130

Modified 8015 A* ** **BATCH#:**HP_O970710214200
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

4-Bromofluorobenzene	30	34	33.6	45- 160
1,4-Difluorobenzene	30	28	27.5	57- 130

Modified 8015 A* ** **BATCH#:**HP_O970710214200
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9707153-06A

4-Bromofluorobenzene	30	31	103	45- 160
1,4-Difluorobenzene	30	31	103	57- 130

Modified 8015 A* ** **BATCH#:**HP_O970710214200
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9707153-06A

4-Bromofluorobenzene	30	31	103	45- 160
1,4-Difluorobenzene	30	30	100	57- 130

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Method 8020A *** BATCH#:HP_O970711114300
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29		60- 136
4-Bromofluorobenzene	30	31		37- 168

Method 8020A *** BATCH#:HP_O970711114300
WORK ORDER: LCS **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	30	100	60- 136
4-Bromofluorobenzene	30	30	100	37- 168

Method 8020A *** BATCH#:HP_O970711114300
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9707458-21A

1,4-DIFLUOROBENZENE	30	32	107	60- 136
4-BROMOFLUOROBENZENE	30	33	110	37- 168

Method 8020A *** BATCH#:HP_O970711114300
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9707458-21A

1,4-Difluorobenzene	30	31	103	60- 136
4-Bromofluorobenzene	30	29	97	37- 168

Modified 8015 A*** BATCH#:HP_O970711121500
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

4-Bromofluorobenzene	30	34	113	45- 160
1,4-Difluorobenzene	30	28	93	57- 130

Modified 8015 A*** BATCH#:HP_O970711121500
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9707458-21A

4-Bromofluorobenzene	30	35	117	45- 160
1,4-Difluorobenzene	30	31	103	57- 130

Modified 8015 A*** BATCH#:HP_O970711121500
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9707458-21A

4-Bromofluorobenzene	30	11	37 «	45- 160
1,4-Difluorobenzene	30	30	100	57- 130

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SURROGATE RECOVERY SUMMARY
07/21/97 10:12:50

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS

« = Recovery outside of control limits
* = Methods for Chemical Analysis of Water & Wastes,1983,EPA
** = Standard Methods for Examination of Water & Wastewater,17th
*** = Test Methods for Evaluating Solid Waste,EPA SW846,3rd

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** SPL BATCH QUALITY CONTROL REPORT **
Method 8020A ***

Matrix: Soil
Units: ug/kg

Batch Id: HP_0970710211100

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50.0	36	72.0	64 - 126
Benzene	ND	50.0	39	78.0	66 - 123
Toluene	ND	50.0	49	98.0	74 - 125
EthylBenzene	ND	50.0	55	110	84 - 125
O Xylene	ND	50.0	56	112	76 - 137
M & P Xylene	ND	100.0	110	110	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20.0	14	70.0	19	95.0	30.3 *	22	27 - 196
BENZENE	ND	20.0	14	70.0	11	55.0	24.0	33	47 - 143
TOLUENE	ND	20.0	12	60.0	9	45.0 *	28.6	35	46 - 148
ETHYLBENZENE	ND	20.0	12	60.0	10	50.0	18.2	40	32 - 151
O XYLENE	ND	20.0	10	50.0	9	45.0	10.5	24	35 - 143
M & P XYLENE	ND	40.0	19	47.5	15	37.5	23.5	38	25 - 139

Analyst: SB
Sequence Date: 07/10/97
SPL ID of sample spiked: 9707153-06A
Sample File ID: 00G7347.TX0
Method Blank File ID:
Blank Spike File ID: 00G7339.TX0
Matrix Spike File ID: 00G7343.TX0
Matrix Spike Duplicate File ID: 00G7344.TX0

* = Values Outside QC Range. « = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9707153-07A 9707355-01A 9707355-02A 9707153-03A
9707153-04A 9707355-04A 9707306-02A 9707329-01A
9707355-03A 9707306-01A 9707153-06A 9707153-01A
9707153-02A 9707153-05A

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** SPL BATCH QUALITY CONTROL REPORT **
Modified 8015 - Gasoline

Matrix: Soil
Units: mg/Kg

Batch Id: HP_O970710214200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits (**) (Mandatory) % Recovery Range
Gasoline Petr. Hydrocarbon	ND	1.0	.84	84.0	47 - 147

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits (***) (Advisory) RPD Max.	QC Limits (***) (Advisory) Recovery Range
GASOLINE PETR. HYDROCARBON	0.30	0.9	1.0	77.8	0.89	65.6	17.0 *	16	34 - 150

Analyst: SB
Sequence Date: 07/10/97
SPL ID of sample spiked: 9707153-06A
Sample File ID: O_G7347.TX0
Method Blank File ID:
Blank Spike File ID: O_G7340.TX0
Matrix Spike File ID: O_G7345.TX0
Matrix Spike Duplicate File ID: O_G7346.TX0

* = Values Outside QC Range. « = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (2nd Q '95)
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9707153-05A 9707153-07A 9707355-01A 9707355-02A
9707153-03A 9707153-04A 9707355-04A 9707355-03A
9707153-06A 9707153-01A 9707153-02A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9707355

CHAIN OF CUSTODY

No. 071955 Page _____ of _____

CONSULTANT'S NAME: Pacific Environmental	ADDRESS: 2025 Gateway Place Suite 440	CITY: San Jose	STATE: CA	ZIP CODE: 95110
BP SITE NUMBER: 11117	BP CORNER ADDRESS/CITY: 7210 Bancroft Ave. Oakland			CONSULTANT PROJECT NUMBER: 360-016.1A
CONSULTANT PROJECT MANAGER: Andrew Kehane	PHONE NUMBER: 408-441-7500	FAX NUMBER: 408-441-7539		CONSULTANT CONTRACT NUMBER: N117166
BP CONTACT: Scott Hooton	BP ADDRESS:	PHONE NUMBER:		FAX NO.:
LAB CONTACT: Ed Fry	LABORATORY ADDRESS: SPL 8880 Interchange Drive Houston, TX 77054	PHONE NUMBER: 713-660-0901		FAX NO.:
SAMPLED BY (Please Print Name): Tom Barry	SAMPLED BY (Signature): Tom Barry	SHIPMENT DATE: 7/8/97		SHIPMENT METHOD:

TAT: ☐ 24 Hours ☐ 48 Hours ☐ 1 Week ☐ Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER:

SAMPLE DESCRIPTION	COLLECTION DATE / TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH-D	BTEX	MTBE	COMMENTS
MW10-6'	7/7	Soil	1			↓	↓	↓	BTEX LAS
MW-10-11'	7/7	↓	1						~~MTBE~~ GROCAS
MW-10-30'	7/7		1						
MW-10-35'	7/7	↓	1			↓	↓	↓	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Tom Barry PEG	7/8	900	Krissy Hesoras	7/8	500pm
Krissy Hesoras PEG	7/8	500pm	Glen Clapp / SPL	7/9/97	1000

ADDITIONAL COMMENTS: (255 3322 256

Yocket

CLV-16722
PKG/50

Distribution: White - Original (with Data)
Yellow - BP
Pink - Lab
Blue - Consultant Field Staff

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
7/9/97	1000

SPL Sample ID:
9707355

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		4° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	255 3322 254	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
[signature]	7/9/97

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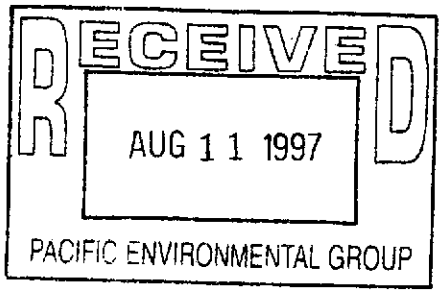
August 4, 1997



Mr. Andrew Lebanc
Pacific Environmental Group
2025 Gateway Place #440
San Jose, CA 95110

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on July 26, 1997. The samples were assigned to Certificate of Analysis No. 9707C61 and analyzed for the parameters specified on the chain of custody.

There were no analytical problems encountered with this group of samples and all quality control data was within acceptance limits

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis Number(s) during any inquiries.

Again, SPL is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Southern Petroleum Laboratories

Brett VanDelinder
Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number 97-07-C61

Approved for Release by:

Brett VanDelinder, Project Manager

8/5/97
Date

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713)660-0901

Certificate of Analysis No. H9-9707C61-01

Pacific Environmental Group
2025 Gateway Place #440
San Jose, CA 95110
ATTN: Andrew Lebanc

P.O.# H117166,COC#071959
DATE: 08/05/97

PROJECT: BP Oil #11117
SITE: 7210 Bancroft Ave, Oakland
SAMPLED BY: Pacific Environmental
SAMPLE ID: MW-10W

PROJECT NO: 360-016.1A
MATRIX: WATER
DATE SAMPLED: 07/24/97 13:10:00
DATE RECEIVED: 07/26/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	13	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: TB			
Date: 08/02/97			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	67		
4-Bromofluorobenzene	97		
California LUFT Manual			
Analyzed by: TB			
Date: 08/01/97 12:43:00			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903

QUALITY CONTROL

DOCUMENTATION

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
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SURROGATE RECOVERY SUMMARY **PAGE 1**
08/05/97 09:21:19

Method 8020A* BATCH#:HP_S970801013900**
WORK ORDER: 9707C61-01A **CLIENT SAMPLE ID:** MW-10W

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

Method 8020A* BATCH#:HP_S970801013900**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	29.6	70- 131
4-Bromofluorobenzene	30	30	29.8	43- 135

Method 8020A* BATCH#:HP_S970801013900**
WORK ORDER: LCS **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	31	103	43- 135

Method 8020A* BATCH#:HP_S970801013900**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:** 9707B69-01A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-DIFLUOROBENZENE	30	30	100	70- 131
4-BROMOFLUOROBENZENE	30	30	100	43- 135

Method 8020A* BATCH#:HP_S970801013900**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:** 9707B69-01A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

California LUFT Manual BATCH#:HP_S970801070900
WORK ORDER: 9707C61-01A **CLIENT SAMPLE ID:** MW-10W

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	20	67	50- 150
4-Bromofluorobenzene	30	29	97	50- 150

California LUFT Manual BATCH#:HP_S970801070900
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	20	67	50- 150
4-Bromofluorobenzene	30	28	93	50- 150

California LUFT Manual BATCH#:HP_S970801070900
WORK ORDER: LCS **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	50- 150

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	58	193 «	50- 150

California LUFT Manual **BATCH#:**HP_S970801070900
WORK ORDER: LCS **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	29	96.7	50- 150
4-Bromofluorobenzene	30	29	96.7	50- 150

California LUFT Manual **BATCH#:**HP_S970801070900
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9707C31-08A

1,4-Difluorobenzene	30	25	83	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

California LUFT Manual **BATCH#:**HP_S970801070900
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9707C31-08A

1,4-Difluorobenzene	30	25	83	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

« = Recovery outside of control limits
*** = Methods for Chemical Analysis of Water & Wastes,1983,EPA**
**** = Standard Methods for Examination of Water & Wastewater,17th**
***** = Test Methods for Evaluating Solid Waste,EPA SW846,3rd**

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Aqueous
Units: µg/L

Batch Id: HP_S970801013900

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	50	100	20 - 110
Benzene	ND	50.0	52	104	62 - 121
Toluene	ND	50.0	51	102	66 - 136
Ethyl_Benzene	ND	50.0	49	98.0	70 - 136
O-Xylene	ND	50.0	50	100	74 - 134
M and P Xylene	ND	100.0	100	100	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	19	95.0	18	90.0	5.41	20	39 - 150
BENZENE	ND	20	18	90.0	18	90.0	0	25	39 - 150
TOLUENE	ND	20	17	85.0	17	85.0	0	26	56 - 134
ETHYL_BENZENE	ND	20	17	85.0	17	85.0	0	38	61 - 128
O-XYLENE	ND	20	17	85.0	17	85.0	0	29	40 - 130
M AND P XYLENE	ND	40	35	87.5	35	87.5	0	20	43 - 152

Analyst: TB
Sequence Date: 08/02/97
SPL ID of sample spiked: 9707B69-01A
Sample File ID: S_H7015.TX0
Method Blank File ID:
Blank Spike File ID: S_H7034.TX0
Matrix Spike File ID: S_H7006.TX0
Matrix Spike Duplicate File ID: S_H7007.TX0

* = Values Outside QC Range. « = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (3rd Q '96)

SAMPLES IN BATCH(SPL ID):

9707D52-01A 9707D52-03A 9707D52-05A 9707D52-04A
9707C61-01A 9707B69-03A 9707B69-10A 9707B69-02A
9707B69-09A 9707B69-04A 9707B69-08A 9707B69-05A
9707B69-02A 9707B69-11A 9707B69-06A 9707B69-01A

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** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_S970801070900

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	1.1	110	50 - 150
Petroleum Hydrocarbons-Gas	ND	0.9	0.73	81.1	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	1.0	0.9	1.8	88.9	1.8	88.9	0	50	50 - 150

Analyst: TB
Sequence Date: 07/31/97
SPL ID of sample spiked: 9707C31-08A
Sample File ID: SS7G232.TX0
Method Blank File ID:
Blank Spike File ID: SS7G209.TX0
Matrix Spike File ID: SS7G213.TX0
Matrix Spike Duplicate File ID: SS7G214.TX0

* = Values Outside QC Range. « = Data outside Method Specification limits.
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: Temporary Limits
(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9707C32-03A 9707C32-02A 9707C61-01A 9707C31-08A 9707C31-05A 9707C32-01A 9707C31-07A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9707C61

BP

CHAIN OF CUSTODY

No.071959 Page 1 of 1

CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
Pacific Environmental	2025 Gateway Place Suite 440	San Jose	CA	95110

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
11117	7210 Bancroft Ave. Oakland	360-016.1A

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
Andrew Lehane	408-441-7500	408-441-7539	H117166

BP CONTACT	BP ADDRESS	PHONE NUMBER	FAX NO.
Scott Hooton			

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.
Ed Fry	SPL 8880 Interchange Drive Houston, TX 77054	713-660-0901	

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
Tom Barry	Tom Barry		

TAT: ☐ 24 Hours ☐ 48 Hours ☐ 1 Week ☐ Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPHG	BTEX	MtBE								COMMENTS
MW-10W	1310	Water	3			X	X	X								
																Intact Rec 4°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
Tom Barry PEG	7/24	1500	Krissy Thomas PEG	7/25	1650	274 3650 192
Krissy Thomas PEG	7/25		[illegible]	7/26	1000	

Distribution: White - Original (with Data) Yellow - BP Pink - Lab Blue - Consultant Field Staff

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
7/26/97	1150

SPL Sample ID:
9707C61

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		4°C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	2743150192	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
Ruben Stutt	7/26/97