

December 7, 1992

9-031

Mr. Scott Hooton  
BP Oil Company - Northwest Division  
16400 Southcenter Parkway, Suite 301  
Tukwila, WA 98188

Re: BP Oil Station No. 11266, 1521 Park Street, Alameda, CA

Dear Scott,

Enclosed please find a package containing information and documents pertinent to the operation of the ground water extraction and remediation system at the above-referenced site. The package contains the following:

- A copy of the East Bay Municipal Utilities District discharge permit
- Site plans and as-built remediation diagrams
- Copies of HETI field notes regarding operation and maintenance of the system to date
- Copies of laboratory reports (influent and effluent analysis)
- Maintenance and operation manuals for the equipment at the site

Hydro-Environmental Technologies, Inc. (HETI) last visited the site on December 3, 1992. The system should be visited again on December 10, 1992 or thereabout. HETI has not yet received the two laboratory reports for recently collected influent and effluent samples. Upon receipt of those reports, HETI will forward copies to BP in an expedient manner.

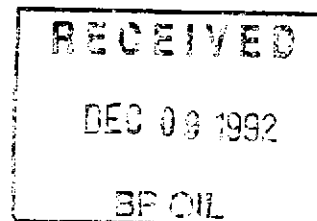
If you have any questions or require additional information, please feel free to call.

Sincerely,  
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.



Brian Gwinn  
Project Manager

enclosures





**ALISTO ENGINEERING GROUP**

November 9, 1992

Mr. Scott Hooton  
Environmental Resource Manager  
BP Oil Company  
16400 Southcenter Parkway, Suite 301  
Tukwila, Washington 98188

Project No. 10-050

Subject: Quarterly Groundwater Monitoring and Sampling Report  
BP Oil Company Service Station No. 11266  
1541 Park Street  
Alameda, California

Dear Mr. Hooton:

Alisto Engineering Group is pleased to submit this report on quarterly groundwater monitoring and sampling conducted at BP Oil Company Service Station No. 11266, 1541 Park Street, Alameda, California. Copies of the report are required by the following parties:

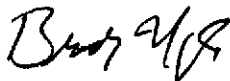
1. Mr. Brian Oliva  
Alameda County Health Care Services Agency  
80 Swan Way, Room 200  
Oakland, California 94621
2. Mr. Eddie So  
Regional Water Quality Control Board  
San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, California 94612
3. Mr. Markus B. Niebanck  
Hydro Environmental Technologies, Inc.  
2363 Mariner Square Drive, Suite 243  
Alameda, California 94501

Mr. Scott Hooton  
November 9, 1992  
Page 2

Please call if you have questions or comments.

Sincerely,

ALISTO ENGINEERING GROUP

A handwritten signature in black ink, appearing to read "Brady Nagle". The signature is written in a cursive, somewhat stylized font.

Brady Nagle  
Project Manager

Enclosure

ALISTO ENGINEERING GROUP



ALISTO ENGINEERING GROUP

September 3, 1992

Mr. Peter DeSantis  
BP Oil Company  
Northwest Division  
Southcenter Place Building  
16400 Southcenter Parkway, Suite 301  
Tukwila, WA 98188

Project No. 10-050

Subject: Quarterly Ground Water Monitoring and Sampling Report  
BP Oil Service Station No. 11266  
1541 Park Street  
Alameda, California

Dear Mr. DeSantis:

Alisto Engineering Group is pleased to submit this report on quarterly groundwater monitoring and sampling conducted at BP Oil Company Service Station No. 11266, located at 1541 Park Street, Alameda, California. Copies of the report should be submitted to the following parties:

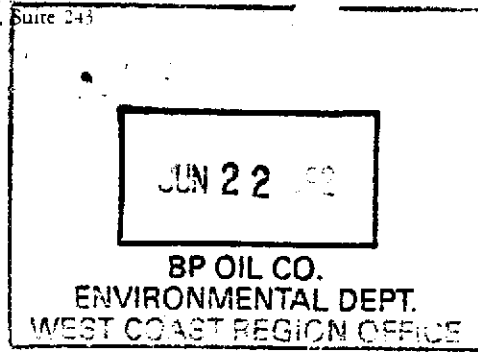
1. Mr. Eddie So  
Regional Water Quality Control Board  
San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, California 94612
2. Mr. Brian Oliva  
Alameda County Health Care Services Agency  
80 Swan Way, Room 200  
Oakland, California 94621
3. Mr. Markus B. Niebanck  
Hydro Environmental Technologies, Inc.  
2363 Mariner Square Drive, Suite 243  
Alameda, CA 94501

**FILE**

**HYDRO  
ENVIRONMENTAL  
TECHNOLOGIES, INC.**

23 Jariner Square Drive, Suite 243  
Alameda, CA 94501  
Tel 510-521-2684  
Fax 510-521-5078

1-800-347-HETT  
Massachusetts  
New York



9-031

June 19, 1992

Mr. Peter DeSantis - Environmental Coordinator  
BP Oil Company  
2868 Prospect Park Drive, Suite 360  
Rancho Cordova, CA 95670

FILE

Re: BP Oil Facility No. 11266, 1541 Park St., Alameda, California

Dear Mr. DeSantis:

Please find enclosed a copy of the "State of California Well Completion Report" for the recovery well (RW-1) installed at the above referenced site on April 13, 1992. This copy is for your files.

If you have any questions, please feel free to call me at the number above.

Sincerely,  
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

Brian M. Gwinn  
Project Geologist

**BP Oil Company**  
**Monthly Summary Report**  
**Month Ending May 31, 1992**

BP Facility No. ~~1266~~  
Address: 1541 Park Street, Alameda, California  
Hydro Environmental Technologies, Inc. Project No. 9-031  
Telephone Number: (510) 521-2684  
Date Report Submitted: June 1, 1992

---

**Background:**

Investigation initiated by Mobil/KEI following removal and replacement of UST's. KEI installed several wells and identified petroleum hydrocarbons in groundwater. Emcon contracted by BP to complete environmental project. Emcon not able to finish in timely manner. BP contracted with HETI to complete the environmental assessment and initiate remedial action.

**Summary HETI Activities to Date:**

-Completed and submitted remedial action plan. Completed preliminary permitting. *GOING to building dept*

**Result of Most Recent Quarterly Monitoring:**

-Hydrocarbon concentrations consistent with previous samplings. Plume defined on all sides.

**Proposed Activity:**

-Move forward with implementation.

**Name and Title of Person Submitting This Report:**

Markus B. Niebanck, Project Manager

---

**Markus B. Niebanck**  
**Project Manager**

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

## **Background and Project History**

### **Summary of Site Conditions**

Mobil initiated an environmental assessment project at this location in late 1988 following the replacement of the underground storage tanks. Kaprealian Engineering Inc. (KEI) was originally contracted by Mobil to characterize the site. BP replaced KEI with Emcon in 1989. Emcon completed the delineation of hydrocarbons in the subsurface in 1991. BP subsequently retained HETI to design and implement the appropriate form of site remediation in late 1991. Specific site characteristics are as follows.

- Depth to ground water typically ranges from 10 to 12 feet below grade.
- The shallow subsurface consists mainly of fine to medium-grained sand.
- The contaminant plume is limited in lateral extent and does not extend far off site.
- Most hydrocarbon-impacted soil was removed during the tank replacement project, with little remaining that needs to be addressed.

### **Remediation Status**

A ground water extraction and treatment system was recently installed at this location. Due to the limited lateral extent of the dissolved hydrocarbon plume it was determined that this system should utilize only a single recovery well as a water extraction point. The recovered ground water is transferred via buried piping to a small above ground bioreactor for primary treatment, then to a carbon vessel for polishing. Treated ground water is discharged to the sanitary sewer. No soil remediation has been undertaken.

## **Evaluation of System Status/Recommendations**

### **Soil**

Although HETI has not been provided with the KEI report of October 1987, we assume that the reported over-excavation of the fuel tank backfill removed almost all of the contaminated soil from the site. Based on that assumption and the single slightly contaminated soil sample from MW-1, no further action should be required. This case would be further strengthened by sampling results from the October 1987 report.

### Ground water

Two remediation strategies were considered in HETT's Remedial Action Plan (RAP): in-situ biological treatment and ground water extraction and above ground treatment. Based on the location of the ground water plume next to the property boundary, treatment by in-situ methods was not recommended. Introduction of oxygenated water and nutrients into the plume to stimulate biological activity requires that the plume be surrounded by recovery wells to prevent spreading. The addition of several recovery wells and infiltration trenches to the site would be costly. Because of the cost and difficulty of controlling in-situ biological activity, this approach was not chosen.

Groundwater treatment using a biological reactor was selected for this site in an effort to avoid the cost of carbon treatment and disposal. Maintenance cost associated with a biological system may have been underestimated. Biological treatment is the most common treatment method for municipal wastes. These systems, however, require frequent monitoring to prevent upset due to changes in chemical or physical conditions. This monitoring can be costly if an existing trained operator is not already stationed on site for other purposes. Temperature control for the biological reactor was not included in the design. Groundwater temperature is expected to remain at approximately 65°F throughout the year. The ideal temperature for biological action is 70°F to 90°F.

No method of nutrient addition was included in the design. An assumption has been made that sufficient nutrients and indigenous bacteria exist within the groundwater. This may or may not be the case.

Initial dissolved oxygen measurements in the reactor have indicated a concentration of approximately 1% of saturation. The oxygen concentration should be at least 50% of saturation. Some biological action, along with volatile stripping due to air bubbling to add oxygen, may still occur in the reactor. A 50% reduction in volatile component concentration is common in equalization tanks. Because of the likelihood of limited biological action, a similar reduction can be expected in the existing reactor.

The first round of influent, system, and effluent samples have been collected. Analytical data is pending lab test completion.

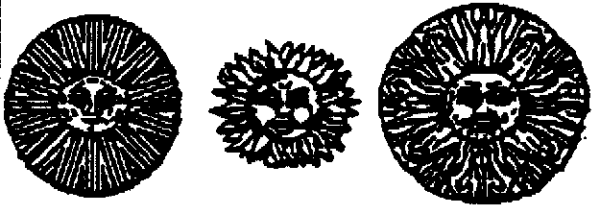


Recommendations

On the above review, HETI makes the following recommendations:

- Obtain the October 1987 report by KEI to confirm the extent of soil over-excavation.
- The activated carbon should be left in place to complete the removal of hydrocarbons from the groundwater until the influent concentration is acceptable for sanitary sewer discharge. If the majority of the soil contamination has been removed by previous excavation, groundwater hydrocarbon concentrations should drop rapidly.
- Confirm the extent of groundwater capture by performing groundwater level measurements with the system in operation.

HYDR-  
ENVIRONMENTAL  
TECHNOLOGIES, INC.



**TELECOPY TRANSMITTAL**

TO: Peter DeSantis FROM: Fred Moss  
OF: BP Oil DATE: 5/18/92  
SUBJECT: Site # 11266 TIME: 5:45 PM

TOTAL PAGES INCLUDING THIS COVER SHEET 4  
HARD COPY TO FOLLOW YES \_\_\_ NO \_\_\_

COMMENTS/SPECIAL INSTRUCTIONS: Please review  
and advise me how to proceed?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

MAY 19 1992  
BP OIL CO.  
ENVIRONMENTAL DEPT.  
WORKING SAFELY ON OFFICE

IF THERE ARE ANY PROBLEMS OR QUESTIONS REGARDING THIS FAX COPY,  
PLEASE CALL: HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.  
2363 MARINER SQUARE DRIVE, #243  
ALAMEDA, CALIFORNIA 94501  
TELEPHONE: (510) 521-2684 FAX: (510) 521-5078

Transmitting this FAX number: \_\_\_\_\_

May 11, 1992

9-031

Mr. Peter DeSantis  
Environmental Resource Manager  
BP Oil Company  
2868 Prospect Park Drive, Suite 360  
Rancho Cordova, CA 95670-6020

Re: BP Facility No. 11266, 1541 Park Street, Alameda, California

Dear Mr. DeSantis:

Hydro-Environmental Technologies, Inc. (HETI) recently received approval from the City of Alameda - Planning Department for construction of the ground water remediation system described in the "Remedial Action Plan" dated February 28, 1992. A copy of the letter sent to HETI by the Planning Department is attached for your files.

The recovery well is now installed in a vault and is ready for pump installation. During well development HETI noted that the well capacity exceeded the flow rate anticipated when EMCON performed the pump test on MW-5. This could be due to well construction techniques or stratigraphic differences. We therefore recommend that a pump capable of 3 gallons per minute (gpm) be selected rather than 1 gpm as specified by EMCON. Discharge permits should be adjusted accordingly. This increased pumping rate could shorten the remediation schedule and save annual operating costs.

HETI is prepared to complete the final design details for the system and order the required equipment. Following your approval of the attached cost summary HETI will initiate the ordering process. The next permit required is the building permit. Since air emissions are not associated with a bioreactor no Bay Area Air Quality Management District (BAAQMD) permit is required. A sewer discharge permit from East Bay Municipal Utility District (EBMUD) will be submitted concurrently with the building permit application.

Please contact me at your earliest convenience so that HETI can complete the installation of the remediation system.

Sincerely,  
HYDRO-ENVIRONMENTAL TECHNOLOGIES INC.

A handwritten signature in black ink that reads "Frederick Moss". The signature is written in a cursive, slightly slanted style.

Frederick G. Moss, P.E.  
Senior Engineer

enclosures

**PRELIMINARY COST SUMMARY**

**BIOREMEDIATION SYSTEM**

**BP Facility # 11266 - Alameda, California**

**Equipment:**

Bioreactor tank w/baffles	\$ 2,700
Pneumatic Pump	\$ 3,200
Air Compressor	\$ 1,700
Carbon Drum	\$ 700
Piping & Valves	\$ 1,200
Electrical Connection	\$ 2,000
Fence & Gate	\$ 1,400
	=====

**Subtotal** \$ 12,900

**Installation :**

Trenching (200 LF)	\$ 7,000
Concrete Pad	\$ 2,700
Paving	\$ 3,000
Mobilization	\$ 1,500
Miscellaneous Items	\$ 700
	=====

**Subtotal** \$14,900

**Project Management (HETI)**

Site Inspection/Coordination	\$ 4,000
Start up Testing	\$ 2,800
Report Preparation	\$ 1,700
	=====

**Subtotal** \$ 8,500

**Permit Preparation (HETI)**

\$ 1,500

**Project Total** \$37,800

May 4, 1992

9-031

Mr. Peter DeSantis  
Environmental Resource Management  
BP Oil Company  
2868 Prospect Park Drive, Suite 360  
Rancho Cordova, California 95670

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

Dear Mr. DeSantis,

Enclosed please find four copies of Hydro-Environmental Technologies, Inc.'s (HETI's) Quarterly Monitoring Report for the above referenced site. Following your review and approval, copies should be sent to the regulators listed below:

Mr. Eddie So  
Regional Water Quality Control Board  
San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, CA 94612

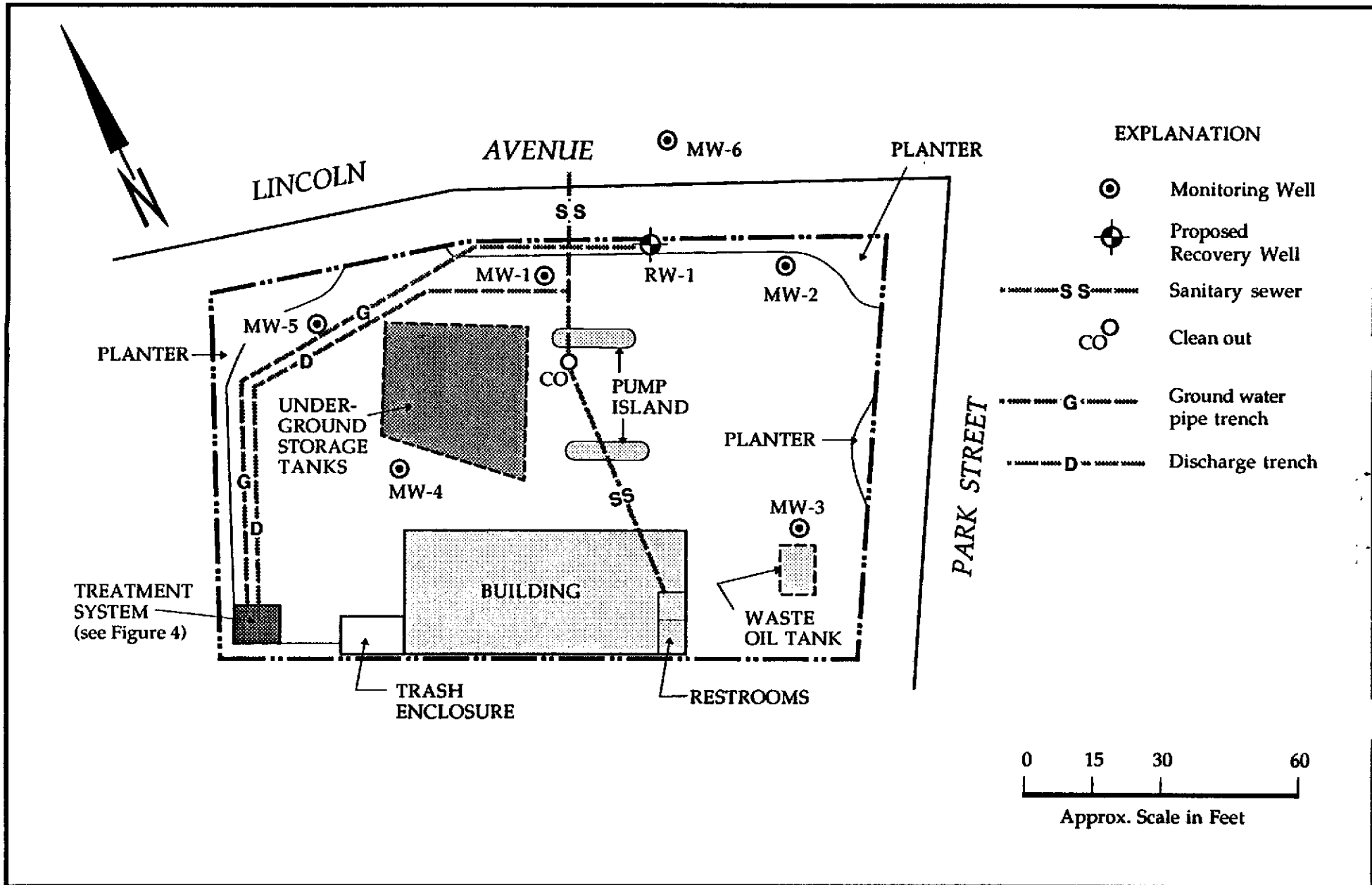
Mr. Brian Oliva  
Alameda County Dept. of  
Environmental Health  
80 Swan Way, Room 200  
Oakland, CA 94621

If you have any questions or require additional information, please feel free to call.

Sincerely,  
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.



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



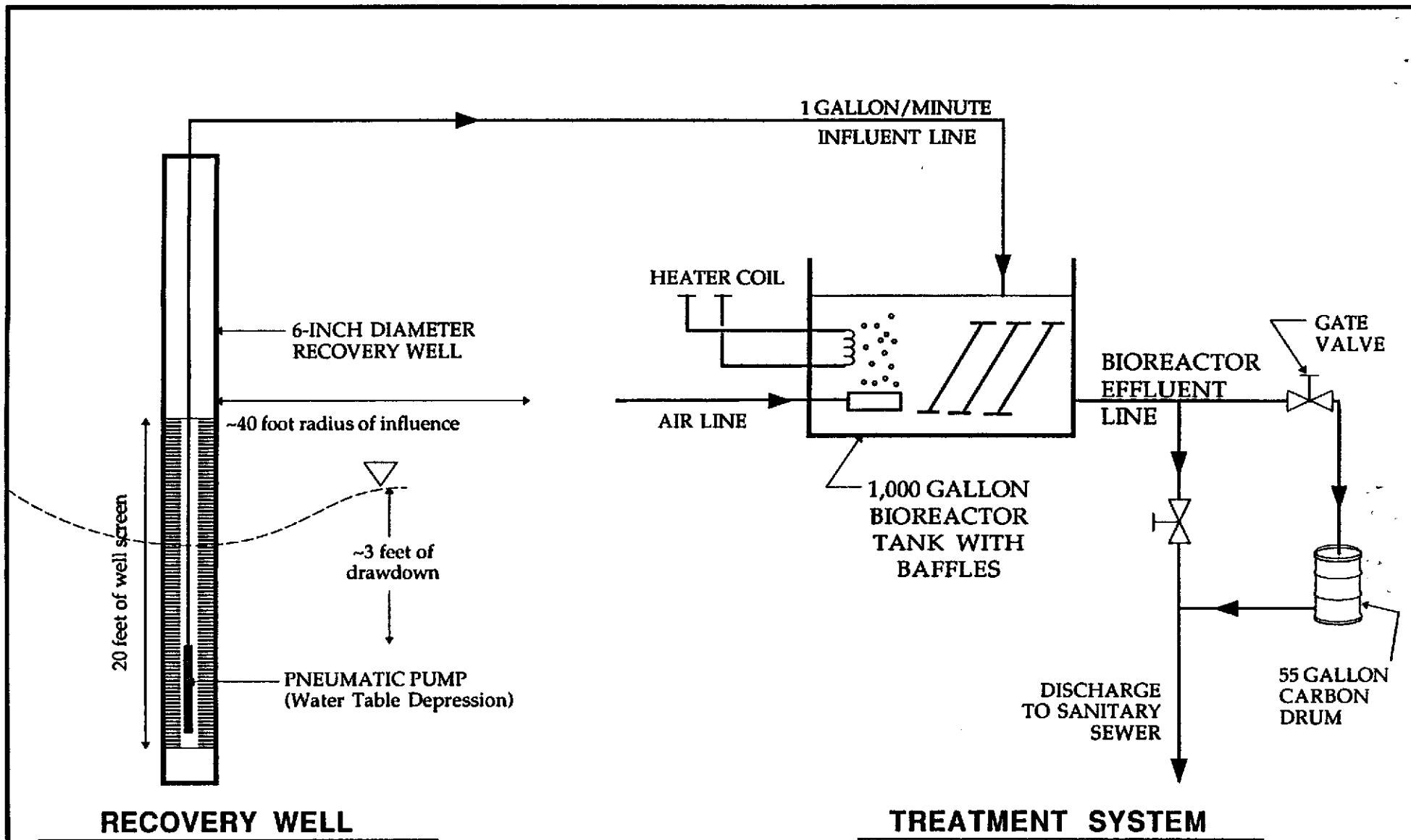
**HYDR-  
ENVIRONMENTAL  
TECHNOLOGIES, INC.**

## Site Plan

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

**Figure  
2**

9-031 | 2/2/92



HYDR-  
ENVIRONMENTAL  
TECHNOLOGIES, INC.

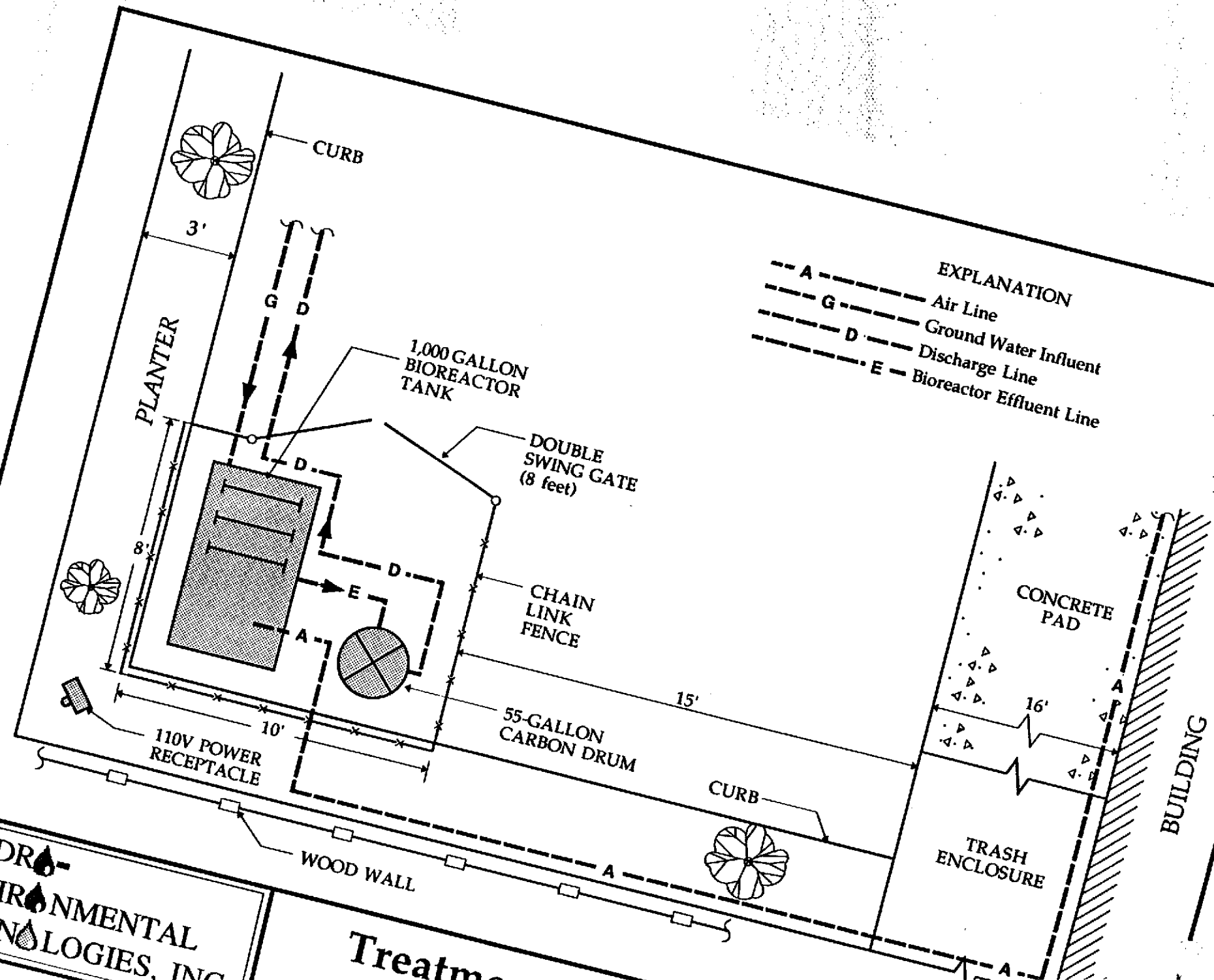
**Remediation Schematic**  
 BP SERVICE STATION No. 11266  
 1541 Park Street, Alameda, California

Figure  
**3**  
 9-031 | 2/2/92

9-031/FM/Fig3/2-2-92



- EXPLANATION**
- A --- Air Line
  - G --- Ground Water Influent
  - D --- Discharge Line
  - E --- Bioreactor Effluent Line



**BP Oil Company  
Monthly Summary Report  
Month Ending January 31, 1992**

BP Facility No. 11266  
Address: 1541 Park Street, Alameda, California  
Hydro Environmental Technologies, Inc. Project No. 9-031  
Telephone Number: (510) 521-2684  
Date Report Submitted: January 30, 1992

OK

Background:

Investigation initiated by Mobil/KEI following removal and replacement of UST's. KEI installed several wells and identified petroleum hydrocarbons in groundwater. Emcon contracted by BP to complete environmental project. Emcon not able to finish in timely manner. BP contracted with HETI to complete the environmental assessment and initiate remedial action.

Summary of this Month's Activities:

-Completed preliminary draft of remedial action plan.

Result of Most Recent Quarterly Monitoring:

-Hydrocarbon concentrations consistent with previous samplings. Plume defined on all sides.

Proposed Activity or Work for Next Month:

-Complete remedial action plan. - *DUE 3 WEEKS FROM HYORD*

Name and Title of Person Submitting This Report:

Markus B. Niebanck, Project Manager

*Markus B. Niebanck*  
Markus B. Niebanck  
Project Manager

*- Hole and depression near island. Check w/contractor.*

**HYDRO  
ENVIRONMENTAL  
TECHNOLOGIES, INC.**

FOR BP OIL INTERNAL USE ONLY:

Date Report Submitted: January 30, 1992

Month Ending: January 31, 1992

BP Facility #: 11266

Regulatory Agencies Involved:

Alameda County Dept. of Environmental Health

80 Swan Way

Alameda, CA 94621

Contact: Barney Chan

RWQCB

2101 Webster Street

Oakland, CA 94612

Contact: Richard Hiatt

Contract and Budget Information:

**Completion of Assessment, Remedial Design**

BP Contract No. F579007

Contract Value: \$36,427

Invoiced This Period: \$110

Invoiced to Date: \$110

**BP Oil Company  
Monthly Summary Report  
Month Ending November 30, 1991**

BP Facility No. 11266  
Address: 1541 Park Street, Alameda, California  
Hydro Environmental Technologies, Inc. Project No. 9-031  
Telephone Number: (510) 521-2684  
Date Report Submitted: December 11, 1991

---

Background:

Investigation initiated by Mobil/KEI following removal and replacement of UST's. KEI installed several wells and identified petroleum hydrocarbons in groundwater. Emcon contracted by BP to complete environmental project. Emcon not able to finish in timely manner. BP contracted with HETI to complete the environmental assessment and initiate remedial action.

Summary of this Month's Activities:

-Evaluated course of action for project site. Determined that additional well installations may not be necessary.

Result of Most Recent Quarterly Monitoring:

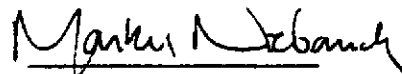
-Hydrocarbon concentrations consistent with previous samplings. Plume defined on all sides.

Proposed Activity or Work for Next Month:

-Begin compiling remedial action plan.

Name and Title of Person Submitting This Report:

Markus B. Niebanck, Project Manager

  
Markus B. Niebanck  
Project Manager

**HYDRO  
ENVIRONMENTAL  
TECHNOLOGIES, INC.**

FOR BP OIL INTERNAL USE ONLY:

Date Report Submitted: December 11, 1991  
Month Ending: November 30, 1990  
BP Facility #: 11266

Regulatory Agencies Involved:

Alameda County Dept. of Environmental Health  
80 Swan Way  
Alameda, CA 94621  
Contact: Barney Chen

RWQCB  
2101 Webster Street  
Oakland, CA 94612  
Contact: Richard Hiatt

Contract and Budget Information:

**Completion of Assessment, Remedial Design**

BP Contract No. F579007

Contract Value: \$36,427

Invoiced This Period: \$110

Invoiced to Date: \$110

**TELECOPY TRANSMITTAL  
(Facsimile)**

TO: Peter DeSantis

OF: \_\_\_\_\_

SUBJ: \_\_\_\_\_

DATE: Wed Nov 6 TIME: AM

FROM: Markus Nieburch

TOTAL PAGES INCLUDING THIS COVER SHEET \_\_\_\_\_

COMMENTS/SPECIAL INSTRUCTIONS:

Peter -

Re: Alameda # 11266. As I prepare the  
workplan I question the need for additional wells.

To make this determination I could use the following:

*Faxed  
to HETI  
11/6*

- ① quarterly for sampling on May - + Aug - , 91 (probably dated  
June + Sept reports)
- ② regulatory correspondence relative to  
the Emcon Phase 2 rpt.
- ③ copies of the KET tank

removal report. *Don't have in file.*

IF THERE ARE ANY PROBLEMS OR QUESTIONS REGARDING THIS  
FAX COPY, PLEASE CALL: HYDRO-ENVIRONMENTAL  
TECHNOLOGIES, INC. - ALAMEDA, CALIFORNIA  
TELEPHONE: (510) 521-2684 FAX: (510) 521-5078

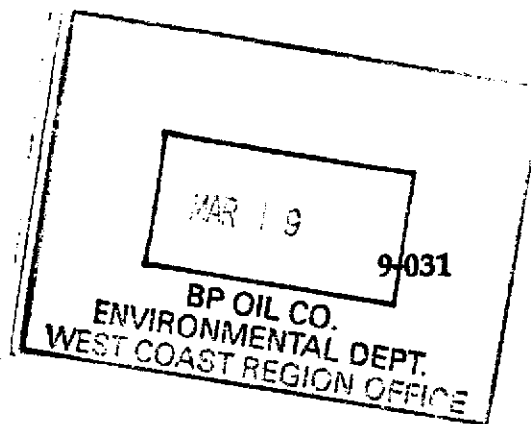
Please call to discuss, I know you're in there.  
Knock knock Markus

**HYDRO  
ENVIRONMENTAL  
TECHNOLOGIES, INC.**

2365 Mariner Square Drive, Suite 243  
Alameda, CA 94501  
Tel 510-521-2684  
Fax 510-521-5078

1-800-347-HETI  
Massachusetts  
New York

March 17, 1991



Mr. Peter DeSantis  
Environmental Resource Management  
BP Oil Company  
2686 Prospect Park Drive, Suite 360  
Rancho Cordova, California 95670

*STEVE,  
Pls distribute  
(2) AGENCIES  
(1) ~~BAKER~~ FILE  
(1) BAKER*

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

Dear Mr. DeSantis,

Enclosed please find three copies of Hydro-Environmental Technologies, Inc.'s (HETI's) Quarterly Monitoring Report for the above referenced site. Following your review and approval, copies should be sent to the regulators listed below:

Mr. Eddie So  
Regional Water Quality Control Board  
San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, CA 94612

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

If you have any questions or require additional information, please feel free to call.

Sincerely,  
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

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

**ALAMEDA**  
Site #: 11266

**B P OIL COMPANY  
MONTHLY SUMMARY REPORT**

Site County: Alameda  
Submitting Company: EMCON Associates  
Telephone Number: 408/453-7300  
Date Report Submitted: January 17, 1991  
Month Ending: January 15, 1991

---

**BACKGROUND:**

Tank removal and an initial site assessment were conducted by KEI in September 1987. Analytical results indicated that soil and ground water were impacted by TPHG and gravimetric waste oil. KEI installed 3 ground-water monitoring wells in March 1988 to further characterize the extent of contamination, and conducted quarterly monitoring of the site for one year. KEI installed three additional ground-water monitoring wells in March 1989 to define the limits of impacted ground water. Soil and ground-water samples from these locations did not contain detectable levels of petroleum hydrocarbons. In November 1989, EMCON collected and analyzed ground-water samples from all the wells and utilized a direct-push ground-water sampling method to confirm the lateral extent of the contaminant plume. Hydraulic testing was performed to characterize the hydraulic properties of the shallow water-bearing zone as an aid in evaluating remediation alternatives.

**SUMMARY OF THIS MONTH'S ACTIVITIES:**

No work has been performed on this project since the final report (March 15, 1990)

**RESULT OF QUARTERLY MONITORING:**

N/A

**PROPOSED ACTIVITY OR WORK FOR NEXT MONTH:**

It is recommended that proposed remedial action should include pumping of an on-site extraction well and treat the extracted ground-water. Quarterly ground-water sampling and analysis is recommended to monitor the extent of the impacted ground-water plume.

**NAME AND TITLE OF PERSON SUBMITTING REPORT:**

Joe V. Meigs, Project Manager



**FOR BP OIL INTERNAL USE ONLY:**

**Date Report Submitted:** January 17, 1991  
**Month Ending:** January 15, 1991  
**BP Facility #:** 11266

**Regulatory Agencies Involved:**

<b>Agency</b>	<b>Contact</b>
RWQCB	Mr. Rich Hiatt
Alameda County Water District	Mr. Jim Ingle

**Contract and Budget Information:**

**Consultant:** EMCON Associates  
**Project Manager:** Joe V. Meigs      **Project Number:** C90-04.00  
**Project Phase:** Phase II Site Assessment  
**Project Start Date:** November 28, 1989

<b>Original Budget Authorized</b>	<b>\$29,260.00</b>
<b>Additional Budget Approved</b>	<b>0</b>
<b>Total Budget Authorized to Date:</b>	<b>\$29,260.00</b>
<b>Total Cost Spent to Date:</b>	<b>\$23,602.21</b>



**KAPREALIAN ENGINEERING, INC.**

**Consulting Engineers**

P.O. BOX 996 • BENICIA, CA 94510  
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

KEI-J90-0907.R2  
October 16, 1990

BP Oil Company  
Aetna Building, Suite 360  
2868 Prospect Park Drive  
Rancho Cordova, CA 95670

# 11266

Attention: Mr. Peter J. DeSantis

RE: Stockpiled Soil Sampling for  
BP Service Station  
1541 Park Street  
Alameda, California

Dear Mr. DeSantis:

This letter report summarizes the results of the stockpiled soil sampling and laboratory analyses for the referenced site. The soil analyses were conducted to comply with the County Health Department requirements for proper disposal of contaminated soil.

On September 21, 1990, soil samples from approximately six cubic yards of stockpiled soil excavated from the pipe trenches were collected to determine proper disposal of the soil. One composite soil sample (designated as Comp A) was taken. Each composite sample consisted of four individual grab samples taken at various locations and depths ranging from 1 to 2 feet. The samples were collected in two-inch diameter, clean brass tubes, which were then sealed with aluminum foil, plastic caps and tape, and placed in a cooled ice chest for subsequent delivery to a certified laboratory for analysis. All samples were analyzed at Sequoia Analytical Laboratory in Concord, California, and were accompanied by properly executed Chain of Custody documentation. Sample point locations are as shown on the attached Site Plan.

Soil samples were analyzed to determine concentrations of total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 in conjunction with modified 8015, benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA method 8020. In addition, sample Comp A was analyzed for organic lead using the DHS LUFT Manual method. Analytical results of the soil samples (Comp A) indicate non-detectable levels of TPH as gasoline. Results of the soil analyses are summarized in Table 1. Copies of the laboratory analyses, and the Chain of Custody documentation are attached to this report.

KEI-J90-0907.R2  
October 16, 1990  
Page 2

Based on the analytical results of the soil samples, stockpiled soil represented by sample Comp A can be disposed of at an approved Class III disposal site. However, KEI recommends that during disposal, when obvious isolated high contamination is detected within the stockpiled soil, that portion of the soil be separately stockpiled for further sampling and treatment.

DISTRIBUTION

A copy of this report should be sent to Ms. Katherine Chesick of the Alameda County Health Care Services, and to the Regional Water Quality Control Board, San Francisco Bay Region.

Should you have any questions on this report, please do not hesitate to contact me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.



Kristin B. Mascarenas

jad

Attachments: Table 1  
Site Plan  
Laboratory Results  
Chain of Custody documentation

KEI-J90-0907.R2  
October 16, 1990

TABLE 1

SUMMARY OF LABORATORY ANALYSES

(Collected on September 21, 1990)

<u>Sample</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethyl-benzene</u>	<u>Organic Lead</u>
Comp A	ND	ND	ND	ND	ND	ND
Detection Limits	1.0	0.0050	0.0050	0.0050	0.0050	0.050

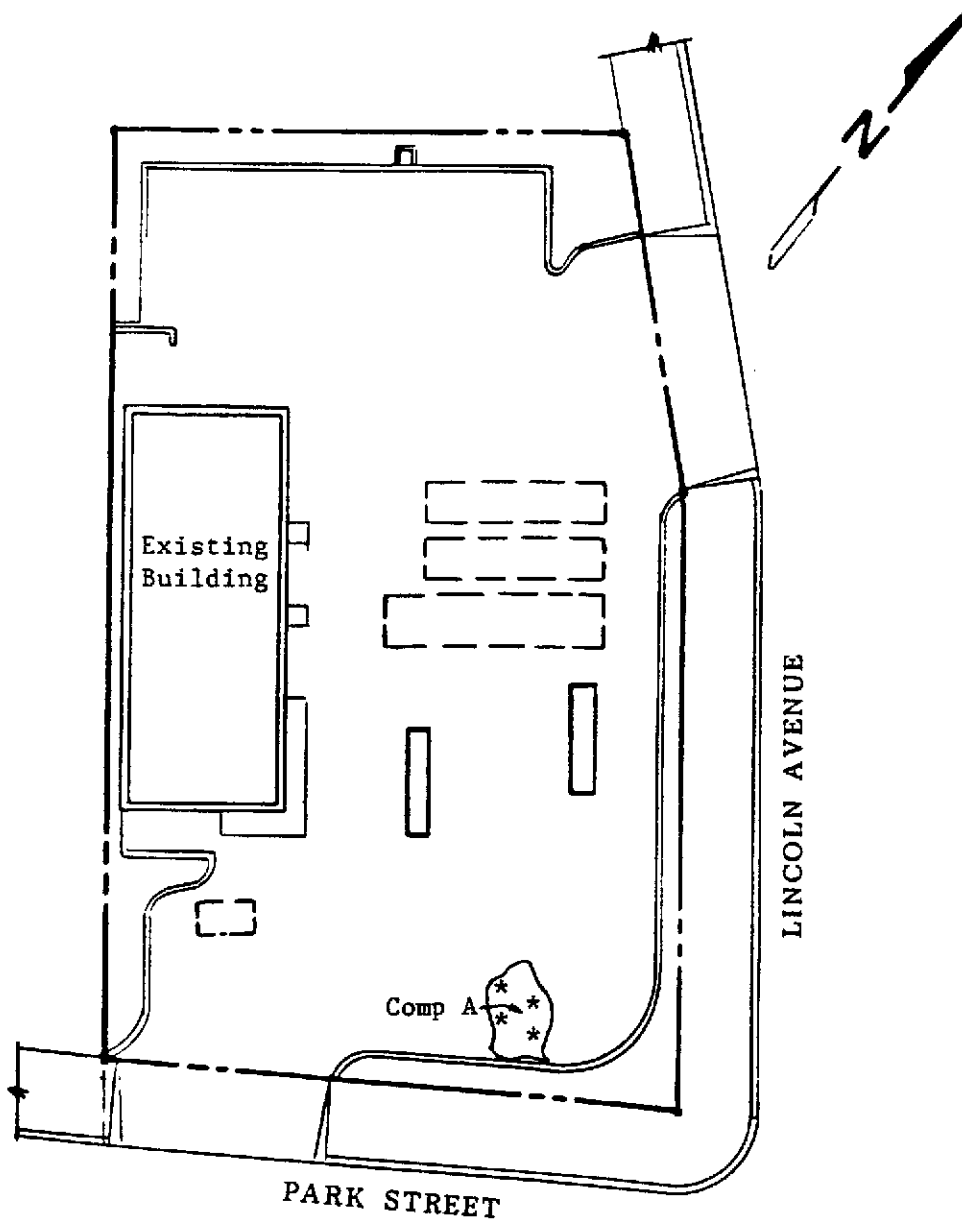
ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.



**KAPREALIAN ENGINEERING, INC.**  
*Consulting Engineers*

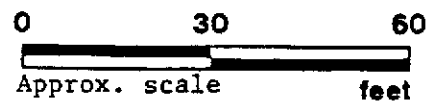
P.O. BOX 996 • BENICIA, CA 94510  
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581



SITE PLAN

LEGEND

\* Sample Point Location



BP Service Station  
1541 Park Street  
Alameda, CA



# SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520  
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc.	Client Project ID:	BP Station, Park St./Lincoln Ave., Alameda	Sampled:	Sep 21, 1990
P.O. Box 996	Sample Descript.:	Soil, Comp A	Received:	Sep 24, 1990
Benicia, CA 94510	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Sep 24, 1990
Attention: Mardo Kaprealian, P.E.	Lab Number:	009-0570 A-B	Reported:	Sep 25, 1990

## TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons.....	1.0	N.D.
Benzene.....	0.0050	N.D.
Toluene.....	0.0050	N.D.
Ethyl Benzene.....	0.0050	N.D.
Xylenes.....	0.0050	N.D.

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.  
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

*Belinda C. Vega*  
Belinda C. Vega  
Laboratory Director



# SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520  
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: BP Station, Park St./Lincoln Ave., Alameda Sample Descript: Soil Analysis Method: California LUFT Manual, 12/87 First Sample #: 009-0570 A-B	Sampled: Sep 21, 1990 Received: Sep 24, 1990 Extracted: Sep 24, 1990 Analyzed: Sep 24, 1990 Reported: Sep 25, 1990
--	--	--

## ORGANIC LEAD

Sample Number	Sample Description	Sample Results mg/kg (ppm)
009-0570 A-B	Comp A	N.D.

Detection Limits:

0.050

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

  
Belinda C. Vega  
Laboratory Director

90570.KEI <2>



# KAPREALIAN ENGINEERING, INC.

## CHAIN OF CUSTODY

SAMPLER <i>Henry</i>		SITE NAME & ADDRESS <i>BP Station - ALAMEDA Peck St / Lincoln Ave.</i>					ANALYSES REQUESTED <i>TPH-G BTXE Organic Lead</i>			TURN AROUND TIME: <i>24 Hrs</i>
WITNESSING AGENCY										REMARKS <i>Please Fax the results</i>
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	CONT.	NO. OF	SAMPLING LOCATION	
<i>Comp A1</i>	<i>9/21/90</i>		<input checked="" type="checkbox"/>					<i>2</i>	<i>STOCKPILE 0090570AB</i>	

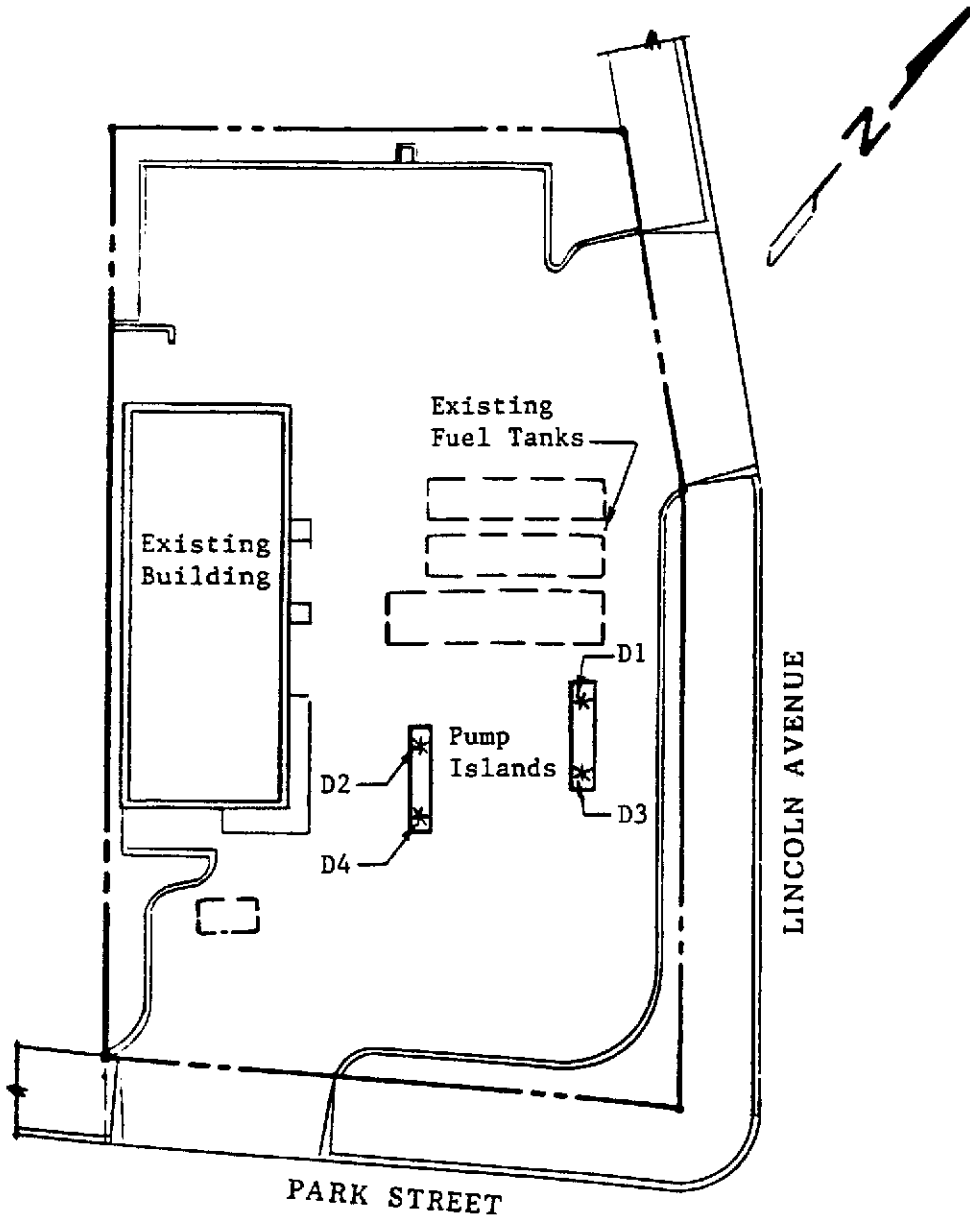
Relinquished by: (Signature) <i>Henry</i>	Date/Time <i>9/24/90 9:05+</i>	Received by: (Signature) <i>Kenneth J. Winter</i>	The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/> 2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/> 3. Did any samples received for analysis have head space? <i>NO</i> 4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/>
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	
		<i>VA</i>	Signature
		<i>SJR</i>	Title
		<i>9/24</i>	Date





**KAPREALIAN ENGINEERING, INC.**  
*Consulting Engineers*

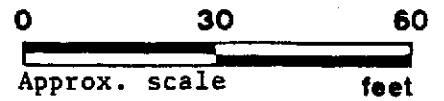
P.O. BOX 996 • BENICIA, CA 94510  
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581



SITE PLAN

LEGEND

\* Sample Point Location



BP Service Station  
1541 Park Street  
Alameda, CA



**FEB 26 1990**  
 BP OIL CO.  
 ENVIRONMENTAL DEPT.  
 WEST COAST REGION OFFICE

*71 11266*

Date February 21, 1990  
 Project C90-02.06  
           C90-03.06  
           C90-04.06

To:

Mr. W.J. Hollis  
BP Oil Company  
2868 Prospect Dr., Suite 360  
Rancho Cordova, California 95670-6020  
Attention: Darlene Jacobsen

We are enclosing:

Copies	Description
<u>1</u>	<u>Summary of waste soil and water stored at BP sites 11203, 11231, and 11266.</u>
<u>1</u>	<u>Site map of each service station showing storage locations.</u>
<u>1</u>	<u>Certified analytical reports for these sites.</u>

For your:  Use  
 Approval  
 Review  
 Information  
 Records  
 Signature

Sent by:  Regular Mail  
 Standard Air  
 Courier  
 Federal Express

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CC:

Justin Bradley  
Project Geologist



**EMCON**  
ASSOCIATES

Consultants in Wastes  
Management and  
Environmental Control

February 22, 1990  
Projects: C90-02.06,  
C90-03.06, C90-04.06

Mr. W. J. Hollis  
BP Oil Company  
2868 Prospect Dr., Suite 360  
Rancho Cordova, California 95670-6020

Re: Service Stations: #11231,  
#11203, #11266

Dear Mr. Hollis:

This letter is a reminder that waste soil and water generated from drilling, developing, and sampling of wells, remains at the following BP Service Stations:

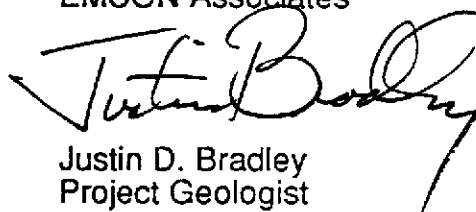
<u>Site</u>	<u>Soil (cubic yards)</u>	<u>Water (# of drums)</u>	<u>Latest Disposal Date</u>
Pacifica #11203	2	6	03/21/90
Sunnyvale #11231	1	5	03/11/90
Alameda #11266	0	3	03/07/89

To assist you in appropriate disposal, I have included the Certified Analytical Reports which indicate the levels of petroleum hydrocarbons in the waste soil and water. A map for each station showing the locations of the wastes has also been included. We recommend disposal before the dates indicated to comply with regulatory requirements (90 day limit).

If you have any questions, please call.

Very truly yours,

EMCON Associates



Justin D. Bradley  
Project Geologist

## COLUMBIA ANALYTICAL SERVICES, INC.

## Analytical Report

CLIENT: EMCON Associates  
 SUBMITTED BY: Client  
 PROJECT: C90-04.03  
 SAMPLE DESCRIPTION: Water

DATE RECEIVED: 11/30/89  
 DATE EXTRACTED: N/A  
 DATE ANALYZED: 12/07/89  
 WORK ORDER #: E89-1667

BTEX Analyses  
 DHS LUFT Method  
 EPA Method 602/8020  
 ug/L(ppb)

Sample Name:		MW-1	MW-2	MW-3
	<u>MRL</u>			
Benzene	0.5	280	<5.7*	<0.5
Toluene	1	880	<1	<1
Ethyl Benzene	1	340	<1	<1
Total Xylenes	3	1200	<3	<3
Gasoline	50	15000	170**	<50

Sample Name:		MW-4	MW-5	MW-6
Benzene		<0.5	<0.5	<0.5
Toluene		<1	<1	<1
Ethyl Benzene		<1	<1	<1
Total Xylenes		<3	<3	<3
Gasoline		<50**	<50	<50

MRL - Method Reporting Limit

\* Raised reporting limit due to presence of unknown, volatile component.

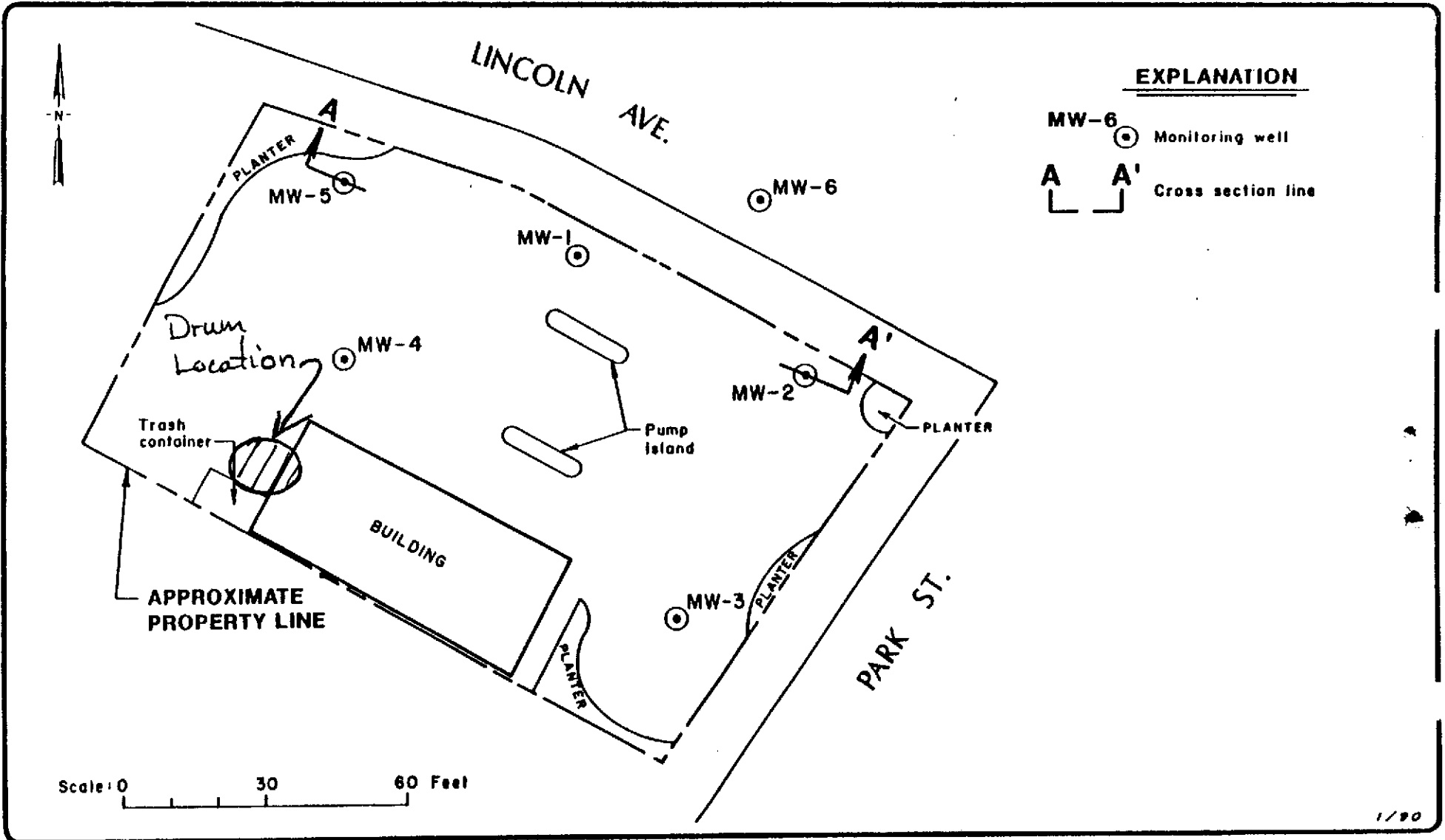
\*\*An unknown discrete, volatile, non-fuel hydrocarbon was observed in this sample.

Approved by

*Timothy P. Dean*

Date

*12/19/89*




**EMCON**  
Associates

BP OIL CORPORATION  
SERVICE STATION No. 11266  
SITE ASSESSMENT  
ALAMEDA, CALIFORNIA

---

SITE PLAN

FIGURE  
**2**  
PROJECT NO.  
C90-04.06

*Cell*



**EMCON**  
ASSOCIATES

Consultants in Wastes  
Management and  
Environmental Control

JAN 17 1990

BP OIL CO.  
ENVIRONMENTAL DEPT.  
WEST COAST REGION OFFICE

Date Jan. 16, 1990

Project C90-04.06

To:

Mr. W. J. Hollis  
B. P. Oil Company  
2868 Prospect Drive, Suite 360  
Rancho Cordova, CA  
95670-6020

*FUS*

We are enclosing:

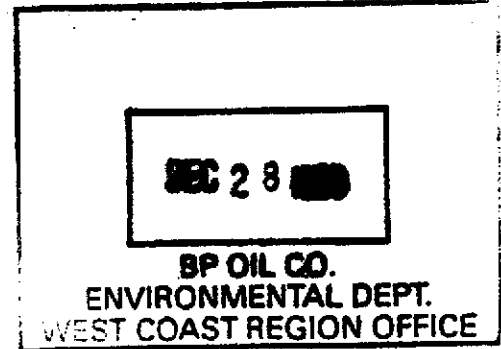
Copies	Description
<u>1</u>	<u>Draft of Phase II Site Assessment Report</u> <u>SS# 11266, Alameda, Ca.</u>
<u>1</u>	<u>Status Report, SS# 11231, Sunnyvale, CA</u>
<u>1</u>	<u>Status Report, SS# 11203, Pacifica, CA.</u>

For your:  Use                      Sent by:  Regular Mail  
 Approval                       Standard Air  
 Review                               Courier  
 Information                       Other FED. EX.

Comments: Bill, the report on Alameda is concurrently undergoing  
QA/QC internally. Please call if you have any questions

cc:

*RDEvamer*



December 22, 1989  
Project C90-04.01

Mr. W.J. Hollis  
B.P. Oil Company  
2868 Prospect Drive, Suite 360  
Rancho Cordova, California 95670-6020

Re: Interim Report, Service  
Station No. 11266,  
Alameda, California

Dear Mr. Hollis:

An interim report of environmental services as proposed in the October 27, 1989 Phase II Workplan for B.P. Oil Company Service Station Number 11266, Alameda, California is presented in this letter. Task 1 (Prefield Activities) and Task 2 (Collect and Analyze Ground-Water Samples) were completed in November 1989. The results were reported to BP in a telephone conversation with Mr. W.J. Hollis on November 21, 1989 and are summarized below.

Ground-water samples were collected at two on-site and one off-site locations (see attached sketch map) using a direct-push sampling method to characterize the extent of gasoline-impacted ground water. Evaluation of the analytical results indicate a limited extent of impacted ground water, possibly restricted to on site. Three additional wells, one off site (MW-4) and two on site (MW-5 and MW-6), were discovered during fieldwork. Analytical data provided by Mobil Oil Corporation showed no detectable petroleum hydrocarbons in ground water sampled from these wells.

Based on our discussion of the results and previous ground-water analytical data from the six existing wells, the following items were agreed on as part of the remaining Phase II work:

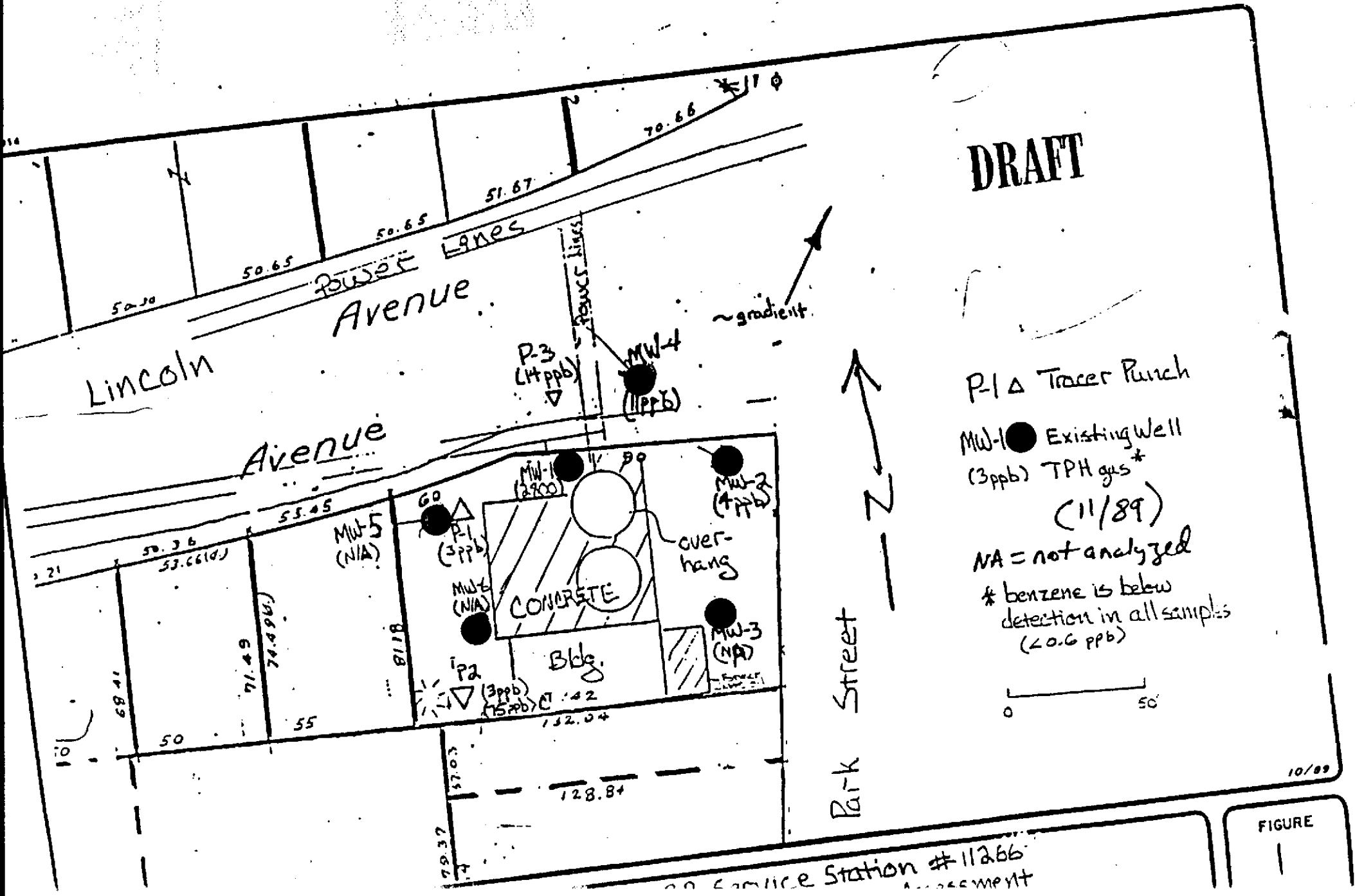
- Well MW-1 will be used as a pumping well for hydraulic testing and nearby monitoring wells will serve as observation wells.
- No additional verification wells are necessary. The existing wells adequately characterize the extent of impacted ground water.

Mr. Hollis and I agreed on the following items as changes in the original scope of work:

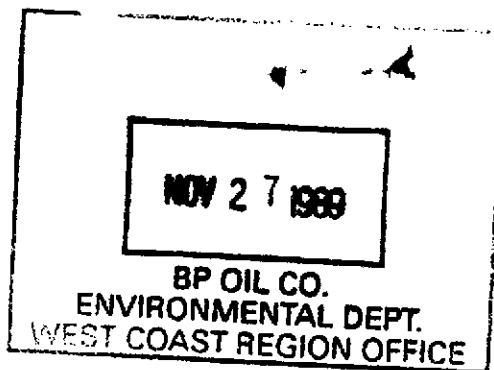
1. Verification monitoring wells will not be installed.

PJC C900401.00W

DRAFT







November 22, 1989  
Project C90-03.01

*DS*  
*NEED TO PREPARE*  
*ACCESS AGREEMENTS*  
*SEE ME FOR*  
*DETAILS -*

Mr. William Hollis,  
BP Oil Company  
2868 Prospect Drive, Suite 360  
Rancho Cordova, California 95670-6020

Re: BP Service Stations  
#11203, Pacifica, #11231,  
Sunnyvale, #11266,  
Alameda

Dear Mr. Hollis:

As you requested, we submitted copies of workplans to the appropriate regulatory agencies for BP sites in Pacifica, Sunnyvale and Alameda. Attached are copies of the documents that we sent to local and regional agencies.

As we discussed, additional encroachment permission is needed for two verification wells for the Sunnyvale site before we can complete plume definition. The contact information to obtain encroachment permission is listed below.

Owners of the Mobil home park northwest of the site where Well E-8 is proposed:

↙ Harold and Ida Brown,  
870 Arroyo, Los Altos 94022 *E-8*

Caltrans has jurisdiction over encroachment for Well E-9 proposed north of the site:

↙ Call (408) 436-0930 *E-9*  
Ask for the encroachment permit engineer

If you have any questions, please call.

Very truly yours,

EMCON Associates

*for* *Richard S. Cramer*  
Richard S. Cramer  
Project Manager

Attachments: Workplans for BP Service Station #11203, #11231, #11266  
JDB/RSC: