

**BP OIL**

BP Oil Company  
16400 Southcenter Parkway, Suite 301  
Tukwila, Washington 98188  
(206) 575-4077

June 7, 1993

Alameda County Health Care Services Agency  
Attention Mr. Ron Owcarz  
80 Swan Way, Room 200  
Oakland, CA 94621

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

RE: BP Oil Site No. 11124  
High & Porter  
Oakland, CA 94619

*3315 High Street*

Gentlemen:

Attached please find a report summarizing groundwater monitoring activities at the above-captioned location. Based upon the results of our previous work, we believe that no further work is necessary or warranted, and hereby request case closure. We will submit a work plan for the abandonment of the monitoring wells upon receipt of a "no further action" letter.

Please call me at your convenience in the event that you wish to discuss this matter further.

Sincerely,



Scott T. Hooton  
Environmental Resources Management

attachment

cc: site file  
B. Nagle - Alisto

MAY 20 1993

BP OIL CO.  
ENVIRONMENTAL GROUP  
1500 15TH AVENUE  
OAKLAND, CALIFORNIA 94612

**GROUNDWATER MONITORING AND SAMPLING REPORT**

**BP Oil Company Service Station No. 11124  
3315 High Street  
Oakland, California**

**Project No. 10-020**

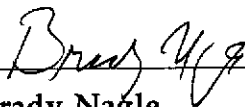
**Prepared for:**

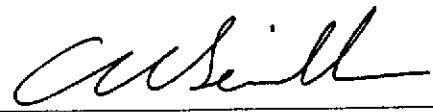
**BP Oil Company  
Environmental Resource Management  
16400 Southcenter Parkway, Suite 301  
Tukwila, Washington**

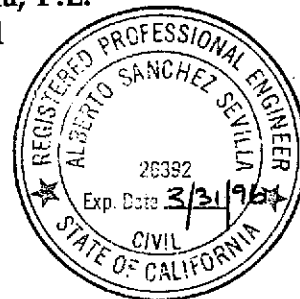
**Prepared by:**

**Alisto Engineering Group  
1777 Oakland Boulevard, Suite 200  
Walnut Creek, California**

**May 18, 1993**

  
\_\_\_\_\_  
**Brady Nagle  
Project Manager**

  
\_\_\_\_\_  
**Al Sevilla, P.E.  
Principal**



# GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11124  
3315 High Street  
Oakland, California

Project No. 10-020

May 18, 1993

## INTRODUCTION

This report presents the results and findings of the March 15 and April 21, 1993 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11124, 3315 High Street, Oakland, California. A site vicinity map is shown in Figure 1.

## FIELD PROCEDURES

Field activities were performed in accordance with the procedures and guidelines of the Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on the top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well in reference to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

Before sample collection, each well was purged of 3 casing volumes, while recording field readings of pH, temperature, and electrical conductivity. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The samples were transferred from the bailer into laboratory-supplied containers. The water sampling field survey forms are presented in Appendix A.

On April 21, MW-2 was resampled to confirm the presence or absence of petroleum hydrocarbons.

## SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples for this and previous events are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown in Figure 2. The laboratory report and chain of custody record are presented in Appendix B.



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 BP OIL COMPANY SERVICE STATION NO. 11124  
 3315 HIGH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-020

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (b) (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TOG (ppb)	LAB
MW-1	08/18/86	154.99	10.10	144.89	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	---
MW-1	11/12/90	154.99	11.42	143.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	---
MW-1	07/15/91	154.99	10.66	144.33	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	---
MW-1	10/15/91	154.99	11.67	143.32	ND<50	ND<0.5	0.8	0.6	0.8	ND<5000	---
MW-1	01/15/92	154.99	10.03	144.96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	---
MW-1	04/17/92	154.99	10.31	144.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	---
MW-1	09/30/92	154.99	11.64	143.35	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ANA
MW-1	12/17/92	154.99	9.92	145.07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ANA
QC-1 (c)	12/17/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-1	03/15/93	154.99	10.22	144.77	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	PACE
MW-1	04/21/93	154.99	10.20	144.79	---	---	---	---	---	---	---
MW-2	08/18/86	152.02	10.00	142.02	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	---
MW-2	11/12/90	152.02	10.94	141.08	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	---
MW-2	07/15/91	152.02	9.87	142.15	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	---
MW-2	10/15/91	152.02	11.16	140.86	ND<50	ND<0.5	0.7	ND<0.5	1.5	ND<5000	---
MW-2	01/15/92	152.02	8.81	143.21	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	---
MW-2	04/17/92	152.02	8.41	143.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	---
MW-2	09/30/92	152.02	11.13	140.89	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ANA
MW-2	12/17/92	152.02	8.16	143.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ANA
MW-2	03/15/93	152.02	7.70	144.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	PACE
MW-2	04/21/93	152.02	7.75	144.27	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
QC-2 (c)	04/21/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-3	08/18/86	---	9.60	---	ND<50	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	---
MW-3 (d)	11/12/90	---	---	---	---	---	---	---	---	--	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 BP OIL COMPANY SERVICE STATION NO. 11124  
 3315 HIGH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-020

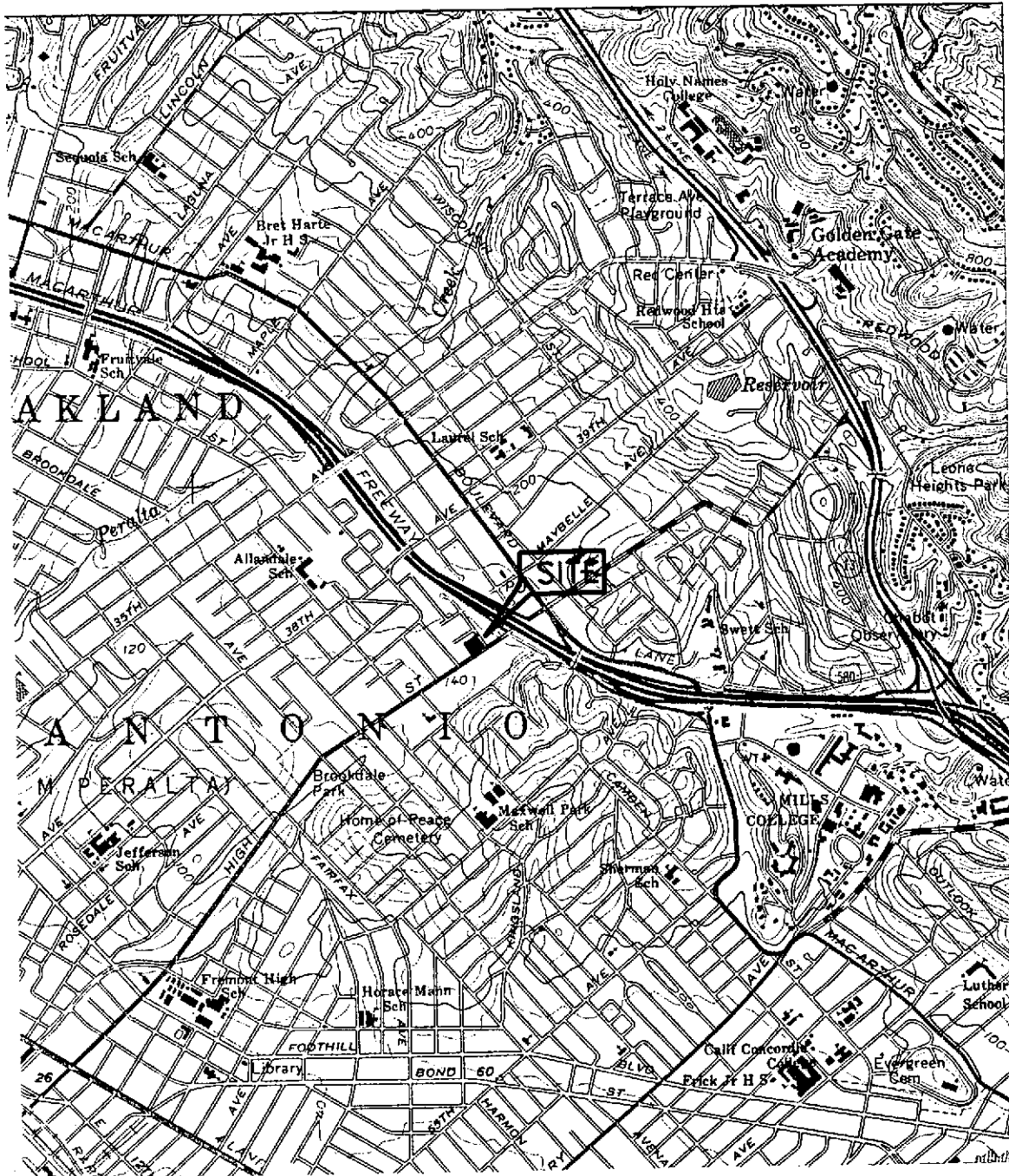
WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (b) (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	TOG (ppb)	LAB
MW-4	07/15/91	152.77	9.62	143.15	ND<50	ND<0.5	ND<0.5	ND<0.5	0.8	---	---
MW-4	10/15/91	152.77	11.30	141.47	ND<50	ND<0.5	0.7	0.6	1.1	ND<5000	---
MW-4	01/15/92	152.77	8.81	143.96	ND<50	ND<0.5	2.7	ND<0.5	ND<0.5	ND<5000	---
MW-4	04/17/92	152.77	8.20	144.57	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	---
MW-4	09/30/92	152.77	11.33	141.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5200	ANA
QC-1 (c)	09/30/92	152.77	11.33	141.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ANA
MW-4	12/17/92	152.77	8.15	144.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	ANA
MW-4	03/15/93	152.77	7.88	144.89	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5000	PACE
QC-1 (c)	03/15/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE
MW-4	04/21/93	152.77	7.61	145.16	---	---	---	---	---	---	---
QC-2 (e)	09/30/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ANA
QC-2 (e)	12/17/92	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	ANA
QC-2 (e)	03/15/93	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	PACE

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline  
 B Benzene  
 T Toluene  
 E Ethylbenzene  
 X Total xylenes  
 TOG Total oil and grease  
 ppb Parts per billion  
 ND Not detected above reported detection limits  
 --- Not analyzed/measured  
 ANA Anametrix, Inc.  
 PACE Pace, Inc.

NOTES:

- (a) Casing elevations surveyed to the nearest 0.01 foot relative to mean sea level.
- (b) Groundwater elevations in feet above mean sea level.
- (c) Blind duplicate.
- (d) Monitoring well destroyed.
- (e) Travel blank.



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



FIGURE 1

SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11124  
 3315 HIGH STREET  
 OAKLAND, CALIFORNIA

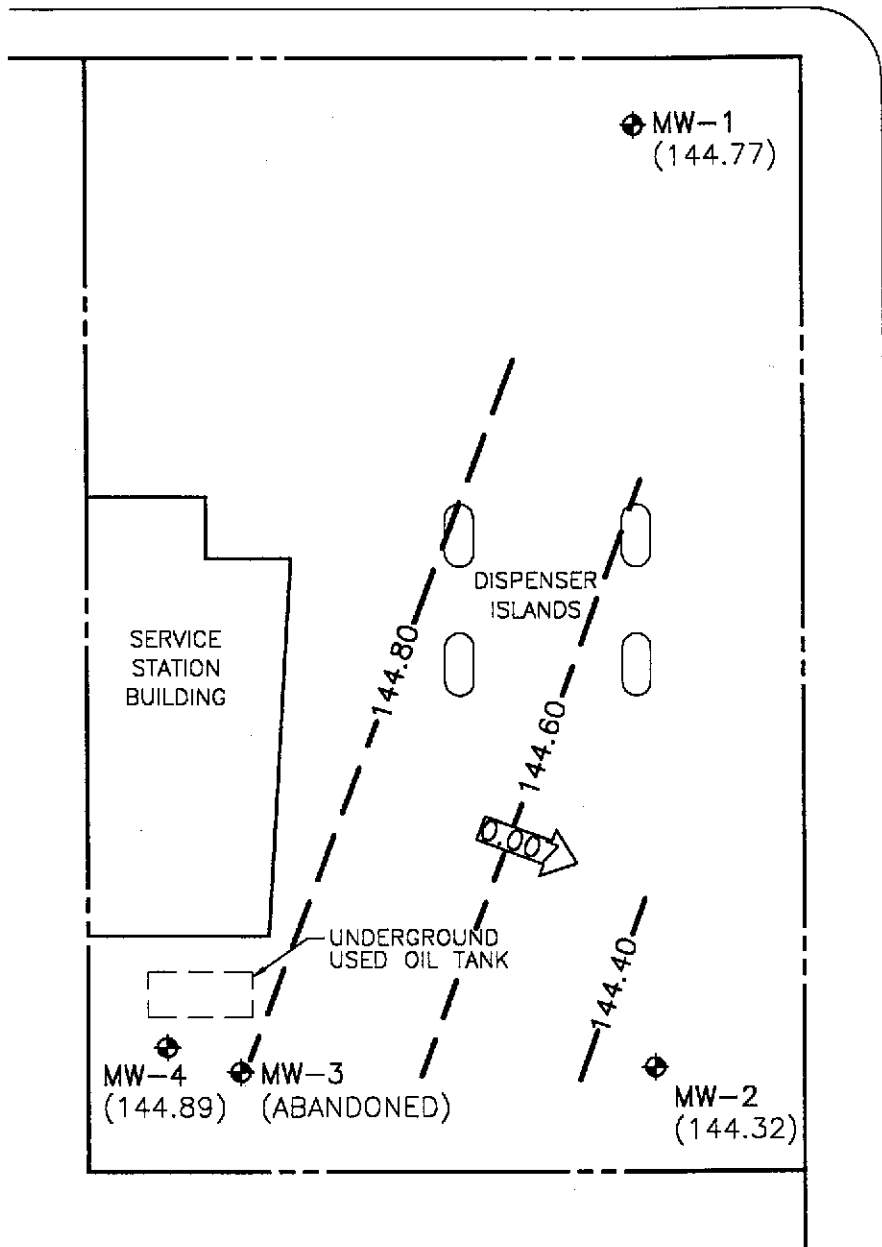


ALISTO PROJECT NO. 10-020




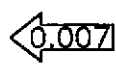
ALISTO ENGINEERING GROUP  
 WALNUT CREEK, CALIFORNIA

PORTER STREET



HIGH STREET

**LEGEND**

-  GROUNDWATER MONITORING WELL
- (144.77) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 144.60- GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL-0.20 FOOT)
-  CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

**FIGURE 2**

**POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP**

**MARCH 15, 1993**

BP OIL SERVICE STATION NO. 11124  
3315 HIGH STREET  
OAKLAND, CALIFORNIA

PROJECT NO. 10-020



**ALISTO ENGINEERING GROUP**  
WALNUT CREEK, CALIFORNIA

**APPENDIX A**  
**WATER SAMPLING FIELD SURVEY FORMS**















# ALISTO ENGINEERING GROUP GROUNDWATER MONITORING

Client: BP  
 Alisto Project No: 10-020-01  
 Service Station No: 1124

Date: 4/21/93  
 Field Personnel: LCB  
 Site Address: Oakland, CA

**FIELD ACTIVITY:**

- Groundwater Monitoring
- Groundwater Sampling
- Well Development

**QUALITY CONTROL SAMPLES:**

- QC-1 Sample Duplicate (Well ID)
- QC-2 Trip Blank
- QC-3 Rinsate Blank

Well ID	Well Diam	Order Measured/ Sampled	Total Depth	Depth to Water	Depth to Product	Product Thick-ness	Comments
MW-1	2"	1	31.50	10.20	Ø	Ø	
MW-2	2"	2	25.80	7.75	Ø	Ø	
MW-4	2"	3	30.40	7.61	Ø	Ø	

Notes:

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# ALISTO ENGINEERING GROUP

## Groundwater Development and Sampling Form

Client: BP  
 Alisto Project No: 10-020-01  
 Service Station No: 1124

Date: 4/21/93  
 Field Personnel: LCB  
 Address: Oakland, CA

Well ID: MW-2 Field Activity: Well Development  Well Sampling  Product Bailing

Casing Diameter:

- 2 Inch (0.16 Gal/foot)  
 3 Inch (0.37 Gal/foot)  
 4 Inch (0.65 Gal/foot)  
 4.5 Inch (0.83 Gal/foot)  
 6 Inch (1.47 Gal/foot)

Purge Method:

- Pump (dispos. Poly Tubing)  
 Disposable Bailers  
 Other  
 1.66 PVC Standard Bailer  
 3.50 PVC Standard Bailer

Well Data:

- Depth to Product  
 Product Thickness  
 7.75 Depth to Water

Sampling Method:

- Disposable Bailer  
 Pump

Decontamination Method:

- Triple Rinse (Liquinox)  
 Steam Cleaned

Calculated Purge Volume

$$\frac{25.80}{775} = 1805 \text{ ft} \times .16 \text{ Gal/Ft} = 2.89 \text{ Gal} \times 3 = 8.67$$

Total Depth of Well    Depth to Water    Water Column    Conversion Factor    Casing Vol    Vols to Purge    Total Volume

Well Development/Sampling Parameters

Time	Temp °F	pH	Cond. (umhos/cm)	Purge Vol (Gal)	Comments/Turbidity	Analysis Required	Container Type	Preserv
1004	67.7	9.10	.49 <sup>X1000</sup>	1.75	clear	<input checked="" type="checkbox"/> TPH-G/BTEX	VOA	HCL
1008	68.2	9.25	.47	3.50	↓	TPH-Diesel	Amber Liter	Solvent Rinsed
1012	68.4	9.17	.46	5.25		EPA 601	VOA	
1016	68.1	8.88	.46	7.50		TOG 5520BF	Amber Liter	H <sub>2</sub> SO <sub>4</sub>
1020	68.2	8.71	.44	9.00				

Begin 1000

Stop 1020

Sampled 1025



**APPENDIX B**

**LABORATORY REPORT AND CHAIN OF CUSTODY RECORD**

March 30, 1993

Mr. Brady Nagle  
Alisto Engineering Group  
1777 Oakland Blvd, Ste. 200  
Walnut Creek, CA 94596

RE: PACE Project No. 430316.505  
Client Reference: BP Station # 11124

Dear Mr. Nagle:

Enclosed is the report of laboratory analyses for samples received March 16, 1993.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,



Stephanie Matzo  
Project Manager

Enclosures



# REPORT OF LABORATORY ANALYSIS

Alisto Engineering Group  
 1777 Oakland Blvd, Ste. 200  
 Walnut Creek, CA 94596

March 30, 1993  
 PACE Project Number: 430316505

Attn: Mr. Brady Nagle

Client Reference: BP Station # 11124

PACE Sample Number: 70 0027829  
 Date Collected: 03/15/93  
 Date Received: 03/16/93  
 Client Sample ID: MW-1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>		<u>DATE ANALYZED</u>
<b>ORGANIC ANALYSIS</b>				
<b>PURGEABLE FUELS AND AROMATICS</b>				
<b>TOTAL FUEL HYDROCARBONS, (LIGHT):</b>				
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/25/93
<b>PURGEABLE AROMATICS (BTXE BY EPA 8020M):</b>				
Benzene	ug/L	0.5	ND	03/25/93
Toluene	ug/L	0.5	ND	03/25/93
Ethylbenzene	ug/L	0.5	ND	03/25/93
Xylenes, Total	ug/L	0.5	2.1	03/25/93
<b>OIL AND GREASE, SILICA GEL (LUFT)</b>				
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	ND	03/20/93
Date Extracted			03/19/93	

Mr. Brady Nagle  
 Page 2

March 30, 1993  
 PACE Project Number: 430316505

Client Reference: BP Station # 11124

PACE Sample Number: 70 0027837  
 Date Collected: 03/15/93  
 Date Received: 03/16/93  
 Client Sample ID: MW-2

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/25/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	180	03/25/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/25/93
Benzene	ug/L	0.5	ND(MT)	03/25/93
Toluene	ug/L	0.5	ND	03/25/93
Ethylbenzene	ug/L	0.5	ND	03/25/93
Xylenes, Total	ug/L	0.5	ND	03/25/93

OIL AND GREASE, SILICA GEL (LUFT)

Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	ND	03/20/93
Date Extracted			03/19/93	

Mr. Brady Nagle  
 Page 3

March 30, 1993  
 PACE Project Number: 430316505

Client Reference: BP Station # 11124

PACE Sample Number: 70 0027845  
 Date Collected: 03/15/93  
 Date Received: 03/16/93  
 Client Sample ID: MW-4

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>		<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/25/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/25/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):				
Benzene	ug/L	0.5	ND	03/25/93
Toluene	ug/L	0.5	ND	03/25/93
Ethylbenzene	ug/L	0.5	ND	03/25/93
Xylenes, Total	ug/L	0.5	ND	03/25/93
OIL AND GREASE, SILICA GEL (LUFT)				
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	ND	03/20/93
Date Extracted			03/19/93	

Mr. Brady Nagle  
 Page 4

March 30, 1993  
 PACE Project Number: 430316505

Client Reference: BP Station # 11124

PACE Sample Number: 70 0027853  
 Date Collected: 03/15/93  
 Date Received: 03/16/93  
 Client Sample ID: QC-1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	03/25/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND 03/25/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			
Benzene	ug/L	0.5	ND 03/25/93
Toluene	ug/L	0.5	ND 03/25/93
Ethylbenzene	ug/L	0.5	ND 03/25/93
Xylenes, Total	ug/L	0.5	ND 03/25/93

Mr. Brady Nagle  
Page 5

March 30, 1993  
PACE Project Number: 430316505

Client Reference: BP Station # 11124

PACE Sample Number: 70 0027861  
Date Collected: 03/15/93  
Date Received: 03/16/93  
Client Sample ID: QC-2

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	03/25/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	03/25/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	03/25/93
Benzene	ug/L	0.5	ND	03/25/93
Toluene	ug/L	0.5	ND	03/25/93
Ethylbenzene	ug/L	0.5	ND	03/25/93
Xylenes, Total	ug/L	0.5	ND	03/25/93

These data have been reviewed and are approved for release.



Darrell C. Cain  
Regional Director

Mr. Brady Nagle  
Page 6

FOOTNOTES  
for pages 1 through 5

March 30, 1993  
PACE Project Number: 430316505

Client Reference: BP Station # 11124

MDL Method Detection Limit  
ND Not detected at or above the MDL.  
(MT) A peak eluting earlier than Benzene and suspected to be methyl tert  
butyl ether was present at approximately 310 ppb.



Mr. Brady Nagle  
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QUALITY CONTROL DATA

March 30, 1993  
 PACE Project Number: 430316505

Client Reference: BP Station # 11124

OIL AND GREASE, SILICA GEL (LUFT)

Batch: 70 19548

Samples: 70 0027829, 70 0027837, 70 0027845

METHOD BLANK:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Reference Value</u>	<u>Recv</u>	<u>Dupl Recv</u>	<u>RPD</u>
Oil and Grease, Gravimetric (SM5520)	mg/L	5.0	20	95%	90%	5%

Mr. Brady Nagle  
 Page 8

QUALITY CONTROL DATA

March 30, 1993  
 PACE Project Number: 430316505

Client Reference: BP Station # 11124

PURGEABLE FUELS AND AROMATICS

Batch: 70 19721

Samples: 70 0027829, 70 0027837, 70 0027845, 70 0027853, 70 0027861

METHOD BLANK:

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

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	96%	96%	0%
Benzene	ug/L	0.5	40.0	110%	111%	0%
Toluene	ug/L	0.5	40.0	107%	108%	0%
Ethylbenzene	ug/L	0.5	40.0	105%	105%	0%
Xylenes, Total	ug/L	0.5	120	105%	104%	0%

Mr. Brady Nagle  
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FOOTNOTES  
for pages 7 through 8

March 30, 1993  
PACE Project Number: 430316505

Client Reference: BP Station # 11124

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



**B.P. OIL COMPANY**  
 16400 Southcenter Parkway, Suite 301, Tukwila, WA 98188  
**CHAIN OF CUSTODY**

430316 505

No 0889



Novato, CA, 11 Digital Drive, 94949  
 Phone: (415) 883-6100 Fax: (415) 883-2673



Huntington Beach, CA, 5702 Bolsa Avenue, 92649  
 Phone: (714) 892-2565 Fax: (714) 890-4032

Consultant's Name: ALISTO ENGINEERING Consultant Project #: 10-020 Page 1 of 1  
 Address: 1777 OAKLAND BLVD STE 200 WALNUT CREEK

Project Contact: BRADY NAGLE Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_ Consultant Work Order #: 10-020  
 Sampled by (print): DAN BIRCH Sampler's Signature: [Signature] B.P. Site Location #: BP11124

Shipment Method: \_\_\_\_\_ Airbill #: \_\_\_\_\_ Shipment Date: \_\_\_\_\_ B.P. Site Location: HIGH STREET, OAKLAND

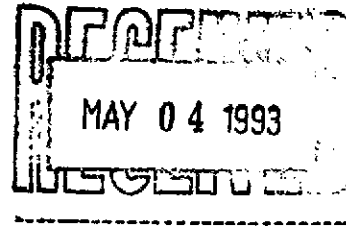
TAT:  24 hr  48 hr  72 hr  Standard (10 day) ANALYSIS REQUIRED

Sample Description	Collection Date/Time	Matrix Soil/Water TIME	Prsv	# of Cont	PACE Sample #	TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 418.1	HVOC 8010	TDGSS208F											Sample Condition as Received Temperature ° C: _____ Cooler #: _____ Inbound Seal Yes No Outbound Seal Yes No
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Sample Description	Collection Date/Time	Matrix Soil/Water TIME	Prsv	# of Cont	PACE Sample #	TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 418.1	HVOC 8010	TDGSS208F											COMMENTS	
MW-1	3/15/93	1525	Hcl	3	2782.9	X				X												
MW-2		1607	Hcl	3	83.7	X				X												
MW-4		1640	Hcl	3	84.5	X				X												
QC-1		1645	Hcl	2	85.3	X																
QC-2	✓	1700	Hcl	2	86.1	X																

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time	Additional Comments:
<u>[Signature]</u>	3/14/93	1207	<u>ORC/Novato/PALE</u>	3/16/93	1207	<u>Ambers not preserved in Field.</u>

April 29, 1993



Mr. Brady Nagle  
Alisto Engineering Group  
1777 Oakland Blvd, Ste. 200  
Walnut Creek, CA 94596

RE: PACE Project No. 430422.514  
Client Reference: BP Station # 11124

Dear Mr. Nagle:

Enclosed is the report of laboratory analyses for samples received April 22, 1993.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Stephanie Matzo  
Project Manager

Enclosures



# REPORT OF LABORATORY ANALYSIS

Alisto Engineering Group  
1777 Oakland Blvd, Ste. 200  
Walnut Creek, CA 94596

April 29, 1993  
PACE Project Number: 430422514

Attn: Mr. Brady Nagle

Client Reference: BP Station # 11124

PACE Sample Number: 70 0055296  
Date Collected: 04/21/93  
Date Received: 04/22/93  
MW-2

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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## ORGANIC ANALYSIS

### PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/27/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	04/27/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/27/93
Benzene	ug/L	0.5	ND	04/27/93
Toluene	ug/L	0.5	ND	04/27/93
Ethylbenzene	ug/L	0.5	ND	04/27/93
Xylenes, Total	ug/L	0.5	ND	04/27/93

Mr. Brady Nagle  
 Page 2

April 29, 1993  
 PACE Project Number: 430422514

Client Reference: BP Station # 11124

PACE Sample Number: 70 0055300  
 Date Collected: 04/21/93  
 Date Received: 04/22/93  
 Client Sample ID: QC-2

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/27/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	04/27/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	04/27/93
Benzene	ug/L	0.5	ND	04/27/93
Toluene	ug/L	0.5	ND	04/27/93
Ethylbenzene	ug/L	0.5	ND	04/27/93
Xylenes, Total	ug/L	0.5	ND	04/27/93

These data have been reviewed and are approved for release.

*Darrell C. Cain*  
 Darrell C. Cain  
 Regional Director

Mr. Brady Nagle  
Page 3

FOOTNOTES  
for pages 1 through 2

April 29, 1993  
PACE Project Number: 430422514

Client Reference: BP Station # 11124

MDL Method Detection Limit  
ND Not detected at or above the MDL.



Mr. Brady Nagle  
Page 4

QUALITY CONTROL DATA

April 29, 1993  
PACE Project Number: 430422514

Client Reference: BP Station # 11124

PURGEABLE FUELS AND AROMATICS

Batch: 70 20712  
Samples: 70 0055296, 70 0055300

METHOD BLANK:

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

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	97%	92%	5%
Benzene	ug/L	0.5	100	115%	111%	3%
Toluene	ug/L	0.5	100	104%	101%	2%
Ethylbenzene	ug/L	0.5	100	104%	99%	4%
Xylenes, Total	ug/L	0.5	300	107%	102%	4%

Mr. Brady Nagle  
Page 5

FOOTNOTES  
for page 4

April 29, 1993  
PACE Project Number: 430422514

Client Reference: BP Station # 11124

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



**B.P. OIL COMPANY**  
 16400 Southcenter Parkway, Suite 301, Tukwila, WA 98188  
**CHAIN OF CUSTODY**

430422.514

No 0936



Novato, CA, 11 Digital Drive, 94949  
 Phone: (415) 883-6100 Fax: (415) 883-2673



Huntington Beach, CA, 5702 Bolsa Avenue, 92649  
 Phone: (714) 892-2565 Fax: (714) 890-4032

Consultant's Name: <u>Alisto Engineering</u>		Consultant Project #: <u>10-020-01</u>		Page <u>1</u> of <u>1</u>
Address: <u>1777 Oakland Blvd. #200, Walnut Creek, Ca 94596</u>				
Project Contact: <u>Brady Nagle</u>		Phone # <u>(570) 295-1650</u> Fax #: <u>295-1823</u>		Consultant Work Order #:
Sampled by (print): <u>Larry Buenvenida</u>		Sampler's Signature: <u>Jamy Buenvenida</u>		B.P. Site Location #: <u>11124</u>
Shipment Method: <u>Courier</u>	Airbill #:	Shipment Date:	B.P. Site Location: <u>Oakland</u>	

TAT: <input type="checkbox"/> 24 hr <input type="checkbox"/> 48 hr <input type="checkbox"/> 72 hr <input checked="" type="checkbox"/> Standard (10 day)						ANALYSIS REQUIRED										Sample Condition as Received Temperature ° C: _____ Cooler #: _____ Inbound Seal Yes No Outbound Seal Yes No						
Sample Description	Collection Date/Time	Matrix Soil/Water	Prsv	# of Cont	PACE Sample #	TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 418.1	HVOC 8010													COMMENTS

MW-2	4/21/93/025	W	HCL	3	5529.6	<input checked="" type="checkbox"/>																
QC-2	1020	W	HCL	2	30.0	<input checked="" type="checkbox"/>																
15/DOOR																						

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time	Additional Comments:
<u>Jamy Buenvenida</u>	<u>4/22/93</u>	<u>1145</u>	<u>Elkathz - Pac</u>	<u>4/22</u>	<u>1145</u>	
<u>Elkathz - Pac</u>	<u>4/22</u>	<u>1715</u>	<u>Sherey/Joover - Pace</u>	<u>4/22</u>	<u>1715</u>	