



ALISTO ENGINEERING GROUP

ENVIRONMENTAL
PROTECTION

95 APR 17 PM 2:40

April 14, 1995

Mr. Barney Chan
Department of Environmental Health
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

10-005-03-002

Subject: Sewer Discharge Permit - Quarterly Report
BP Oil Company Service Station No. 11109
4280 Foothill Boulevard
Oakland, California
Wastewater Discharge Permit No. 502-77421

Dear Mr. Chan:

On behalf of BP Oil Company, we have enclosed a summary of analytical results for the remediation system sampling events and quantity discharged for BP Oil Company Service Station No. 11109, 4280 Foothill Boulevard, Oakland, California. The previous quarterly report covered the period from October 1 to December 31, 1994, therefore this report will cover the period from January 1 to March 31, 1995. The next report will cover the period from April 1 to September 30, 1995.

Results of sample analysis from the January sampling event indicated that petroleum hydrocarbon constituents were present in the effluent samples. We believe this is due to laboratory error. On receipt of these results, the East Bay Municipal Utility District was notified and the system was resampled and shut down. The system was restarted when the results of sample analysis from subsequent sampling events indicated that petroleum hydrocarbon constituents were not present above reported detection limits in the effluent samples.

The volume discharged for the period is presented in Table 1: The results of influent, intermediate, and effluent sample analysis are presented in Table 2. The sampling point locations are shown in Figure 1. The laboratory reports and chain of custody records are presented in Attachment A.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Mr. Barney Chan
April 14, 1995
Page 2

Please call if you have questions regarding this report.

Sincerely,

ALISTO ENGINEERING GROUP

A handwritten signature in black ink, appearing to read 'Peter Beaver', with a long horizontal flourish extending to the right.

Peter Beaver
Engineering Manager

Enclosures

cc: Robert Newman, East Bay Municipal Utility District
Scott Hooton, BP Oil Company



ALISTO ENGINEERING GROUP

April 14, 1995

Mr. Robert Newman
Source Control Division
East Bay Municipal Utility District
P.O. Box 24055
Oakland, California 94623

10-005-03-002

Subject: Sewer Discharge Permit - Semi-Annual Report
BP Oil Company Service Station No. 11109
4280 Foothill Boulevard
Oakland, California
Wastewater Discharge Permit No. 502-77421

Dear Mr. Newman:

On behalf of BP Oil Company, we have enclosed a summary of analytical results for the remediation system sampling events and quantity discharged for BP Oil Company Service Station No. 11109, 4280 Foothill Boulevard, Oakland, California. The previous quarterly report covered the period from October 1 to December 31, 1994, therefore this report will cover the period from January 1 to March 31, 1995. The next report will cover the period from April 1 to September 30, 1995.

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Mr. Robert Newman
April 14, 1995
Page 2

Please call if you have questions regarding this report.

Sincerely,

ALISTO ENGINEERING GROUP



Peter Beaver
Engineering Manager

Enclosures

cc: ~~Barney Chan, Alameda County Health Care Services Agency~~
Scott Hooton, BP Oil Company

TABLE 1 - FLOW DATA FOR GROUNDWATER TREATMENT SYSTEM
 BP OIL COMPANY SERVICE STATION NO. 11109
 4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-005

DATE	FLOW METER READING (Gallons)	EFFLUENT DISCHARGED (Gallons)	AVERAGE FLOW RATE (GPD)	AVERAGE FLOW RATE (GPM)
02/15/94	0	0	---	0.00
02/28/94	1640	1640	126	0.09
03/30/94	3000	1360	45	0.03
04/29/94	12550	9550	318	0.22
05/31/94	16237	3687	115	0.08
07/01/94	19505	3268	105	0.07
07/29/94	30516	11011	393	0.27
09/03/94	50432	19916	553	0.38
10/05/94	72894	22462	702	0.49
10/31/94	96393	23499	904	0.63
11/29/94	130333	33940	1170	0.81
12/29/94	137135	6802	227	0.16
01/30/95	147776	10641	333	0.23
02/22/95	150774	2998	130	0.09
03/30/95	156834	6060	168	0.12
TOTAL FOR QUARTER		19699	334	0.23

ABBREVIATIONS:

GPD Gallons per day
 GPM Gallons per minute
 --- Not available/applicable

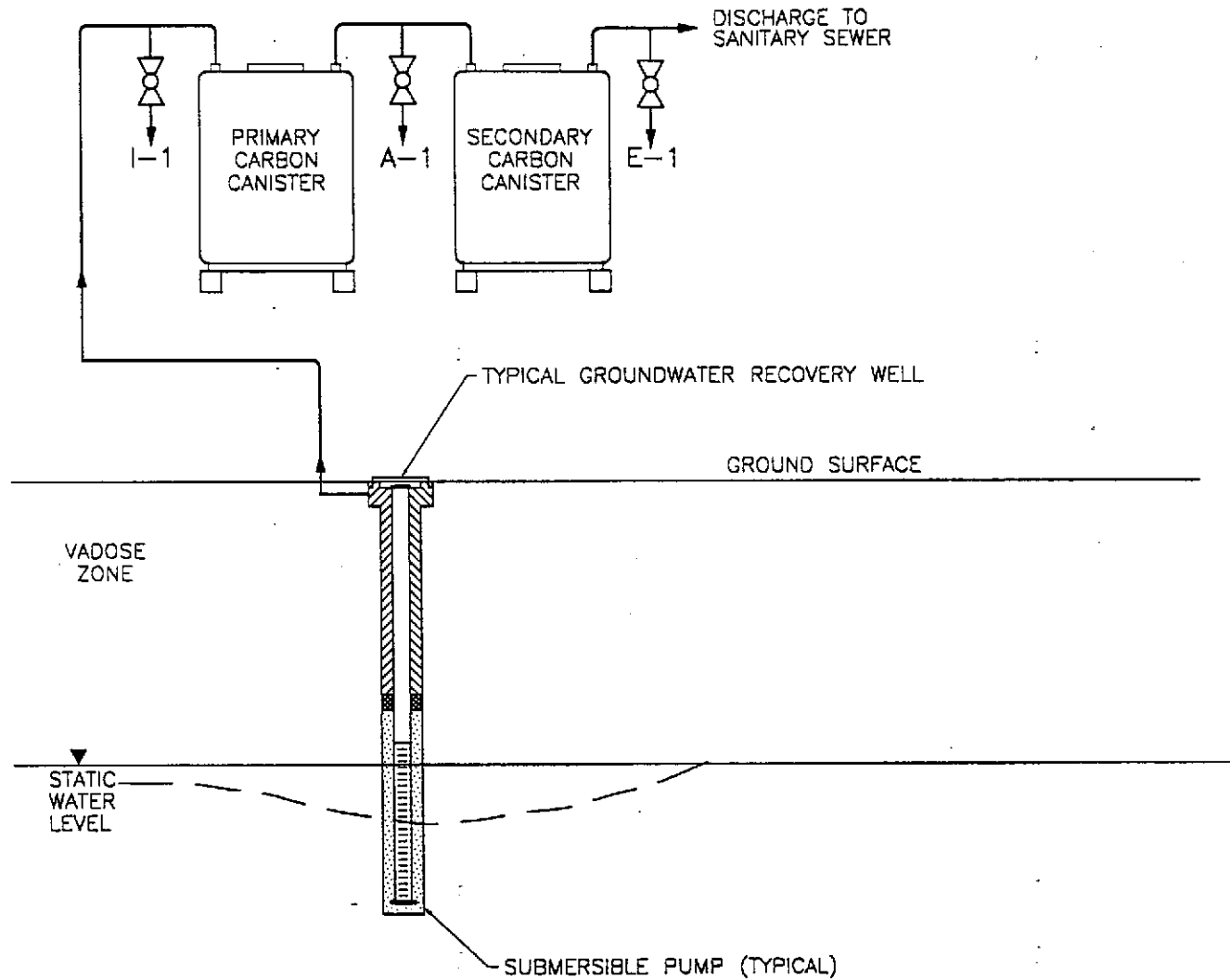
TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER TREATMENT SYSTEM OPERATION
 BP OIL COMPANY SERVICE STATION NO. 11109
 4280 FOOTHILL BOULEVARD, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-005

Sample ID	Date	TPH-G (ppb)	TPH-D (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	UNKNOWN (ppb)	MEK (ppb)	Arsenic (ppm)	Barium (ppm)	Molybdenum (ppm)	Copper (ppm)	Nickel (ppm)	Zinc (ppm)	LAB
STA11109-I	02/15/94	--	--	810	440	ND<0.50	1400	--	ND<5.0	ND<0.005	0.15	ND<0.02	0.02	0.05	0.43	PACE
I-1	02/18/94	19000	--	2500	1300	180	1800	--	ND<5.0	--	--	--	--	--	--	PACE
I-1	02/25/94	19000	3700	2400	1300	190	1400	1400	--	--	--	--	--	--	--	PACE
I-1	03/07/94	5800	--	660	290	52	540	--	--	--	--	--	--	--	--	PACE
I-1	04/15/94	7600	--	740	240	ND<0.50	590	--	--	--	--	--	--	--	--	PACE
I-1	05/12/94	6800	--	710	470	67	730	--	--	--	--	--	--	--	--	PACE
I-1	06/16/94	6000	--	460	270	60	730	--	--	--	--	--	--	--	--	PACE
I-1	07/14/94	5300	2100	260	180	58	820	--	--	--	--	--	--	--	--	PACE
I-1	08/23/94	4700	1400	690	120	52	590	--	--	--	--	--	--	--	--	PACE
I-1	09/19/94	5900	2200	310	120	43	530	--	--	--	--	--	--	--	--	PACE
I-1	10/17/94	2500	ND<50	66	8.9	7.6	110	--	--	--	--	--	--	--	--	GTEL
I-1	11/15/94	14000	ND<50	1000	290	33	1200	--	--	--	--	--	--	--	--	GTEL
I-1	12/14/94	15000	--	2500	470	45	1200	--	--	--	--	--	--	--	--	GTEL
I-1	01/18/95	9300	79	3100	840	150	1500	--	--	--	--	--	--	--	--	ATI
I-1	02/06/95	14000	13000	2460	670	48	1200	--	--	--	--	--	--	--	--	ATI
I-1	02/22/95	11000	12000	1600	390	67	810	--	--	--	--	--	--	--	--	ATI
I-1	03/14/95	12000	15000	2000	560	38	1200	--	--	--	--	--	--	--	--	ATI
STA11109-A	02/15/94	--	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	ND<0.005	ND<0.01	ND<0.02	ND<0.01	ND<0.02	0.13	PACE
A-1	02/18/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	--	--	--	--	--	--	PACE
A-1	02/25/94	ND<50	--	1.1	0.8	ND<0.50	0.7	--	--	--	--	--	--	--	--	PACE
A-1	03/07/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
A-1	04/15/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
A-1	05/12/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	0.5	--	--	--	--	--	--	--	--	PACE
A-1	06/16/94	ND<50	--	0.7	0.5	ND<0.50	0.6	--	--	--	--	--	--	--	--	PACE
A-1	07/14/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
A-1	08/23/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
A-1	09/19/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
A-1	10/17/94	ND<100	--	ND<0.5	ND<1.0	ND<1.0	ND<2.0	--	--	--	--	--	--	--	--	GTEL
A-1	11/15/94	ND<10	--	ND<0.3	ND<0.3	ND<0.3	ND<0.5	--	--	--	--	--	--	--	--	GTEL
A-1	12/14/94	ND<10	--	ND<0.3	ND<0.3	ND<0.3	ND<0.5	--	--	--	--	--	--	--	--	GTEL
A-1	01/18/95	ND<50	--	ND<0.5	ND<0.5	0.6	2	--	--	--	--	--	--	--	--	ATI
A-1	02/06/95	ND<50	--	2.9	1.1	ND<0.25	2.6	--	--	--	--	--	--	--	--	ATI
A-1	02/22/95	ND<50	--	1.6	0.96	ND<0.50	2.1	--	--	--	--	--	--	--	--	ATI
A-1	03/14/95	ND<50	--	0.77	ND<0.50	ND<0.50	1.1	--	--	--	--	--	--	--	--	ATI
STA11109-E	02/15/94	--	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	59	0.019	ND<0.01	0.04	ND<0.01	ND<0.01	0.05	PACE
E-1	02/18/94	--	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	--	--	--	--	--	--	PACE
E-1	02/25/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
E-1	03/07/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
E-1	04/15/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
E-1	05/12/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
E-1	06/16/94	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
E-1	07/14/94	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
E-1	08/23/94	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
E-1	09/19/94	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	--	--	--	--	--	PACE
E-1	10/17/94	ND<100	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<2.0	--	--	--	--	--	--	--	--	GTEL
E-1	11/15/94	ND<10	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.5	--	--	--	--	--	--	--	--	GTEL
E-1	12/14/94	ND<10	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.5	--	--	--	--	--	--	--	--	GTEL
E-1	01/18/95	ND<50	5700	3	0.8	ND<0.5	1	--	--	--	--	--	--	--	--	ATI
E-1	02/06/95	ND<50	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	--	--	--	--	--	--	--	--	ATI
E-1	02/22/95	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	--	--	--	--	--	--	--	ATI
QC-1	02/22/95	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	--	--	--	--	--	--	--	ATI
E-1	03/14/95	ND<50	ND<500	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	--	--	--	--	--	--	--	ATI

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 TPH-D Total petroleum hydrocarbons as diesel
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 MEK Methyl ethyl ketone
 ppb Parts per billion
 ND Not detected above reported detection limit
 -- Not analyzed/available
 QC-1 Field blank
 SEQ Sequoia Analytical Laboratory
 PACE Pace, Inc.
 GTEL GTEL Environmental Laboratories, Inc.
 ATI Analytical Technologies, Inc.



LEGEND


- I = INFLUENT
- A = INTERMEDIATE
- E = EFFLUENT
-  SAMPLE PORT

FIGURE 1

ACTIVATED CARBON TREATMENT SYSTEM SAMPLING LOCATIONS

BP OIL SERVICE STATION NO. 11109
 4280 FOOTHILL BOULEVARD
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-005



ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA

ATTACHMENT A

LABORATORY REPORTS AND CHAIN OF CUSTODY RECORDS



SIGNATURE PAGE

Reviewed by:

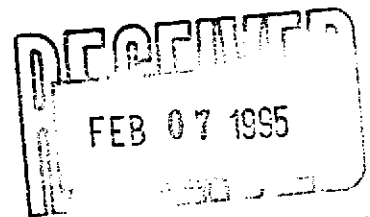


ATI Project Manager

Client: BP OIL COMPANY
RENTON, WASHINGTON

Project Name: BP SITE #11109
Project Number: 10-005-03-001
Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
Accession Number: 501542

Project Manager: PETE BEAVER (ALISTO ENG., CA), SCOTT HOOTON (BP OIL)
Sampled By: JOHN BICKING



Analysis Report

Analysis: DRO\PETRO. HYDROCARBON RANGE C10-C28

Accession: 501542
Client: BP OIL COMPANY
Project Number: 10-005-03-001
Project Name: BP SITE #11109
Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
Department: SEMI-VOLATILE FUELS

"FINAL REPORT FORMAT - SINGLE"

Accession: 501542
Client: BP OIL COMPANY
Project Number: 10-005-03-001
Project Name: BP SITE #11109
Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
Test: DRO\PETRO. HYDROCARBON RANGE C10-C28
Analysis Method: DRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510/SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: N

Lab Id: 001 Sample Date/Time: 19-JAN-95 1345
Client Sample Id: STA #11109 INF Received Date: 21-JAN-95
Batch: FPW013 Extraction Date: 25-JAN-95
Blank: A Dry Weight %: N/A Analysis Date: 25-JAN-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	79	50	
ORTHO TER PHENYL	%REC/SURR	86	37-140	
ANALYST	INITIALS	SJF		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 501542
Client: BP OIL COMPANY
Project Number: 10-005-03-001
Project Name: BP SITE #11109
Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
Test: DRO\PETRO. HYDROCARBON RANGE C10-C28
Analysis Method: DRO / 8015 - SW 846, EPA UST Work Group Nov. 1990, Mod. 8015
Extraction Method: 3510/SW-846, 3rd Edition, September 1986 and Revision 1, July 1992
Matrix: GROUNDWATER
QC Level: N

Lab Id:	003	Sample Date/Time:	19-JAN-95 1347
Client Sample Id:	STA #11109 EFF	Received Date:	21-JAN-95
Batch: FPW013		Extraction Date:	25-JAN-95
Blank: A	Dry Weight %: N/A	Analysis Date:	25-JAN-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	5700	50	
ORTHO TER PHENYL	%REC/SURR	90	37-140	
ANALYST	INITIALS	SJF		

Comments:

"Method Report Summary"

Accession Number: 501542
Client: BP OIL COMPANY
Project Number: 10-005-03-001
Project Name: BP SITE #11109
Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
Test: DRO\PETRO. HYDROCARBON RANGE C10-C28

Client Sample Id:	Parameter:	Unit:	Result:
STA #11109 INF	TOTAL PETROLEUM HYDROCARBON	UG/L	79
STA #11109 EFF	TOTAL PETROLEUM HYDROCARBON	UG/L	5700

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG = MICROGRAMS
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/M3 = MILLIGRAM PER CUBIC METER.
PPMV = PART PER MILLION BY VOLUME.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS

SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM AND REFERENCED METHOD.

ORGANIC SOILS ARE REPORTED ON A DRYWEIGHT BASIS.

ND = NOT DETECTED ABOVE REPORTING LIMIT.

RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.

RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

ATI/GC/FID

ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME IONIZATION DETECTOR (FID).

ATI/GC/FIX

ATI GAS CHROMATOGRAPHIC METHOD FOR ANALYSIS OF FIXED GASES EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD) AND FLAME IONIZATION DETECTOR (FID).

ATI/GC/FPD

ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH FLAME PHOTOMETRIC DETECTOR (FPD) IN SULFUR-SPECIFIC MODE.

ATI/GC/PID

ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH PHOTOIONIZATION DETECTOR (PID).

ATI/GC/TCD

ATI GAS CHROMATOGRAPHIC METHOD EMPLOYING DIRECT INJECTION ON COLUMN WITH THERMAL CONDUCTIVITY DETECTOR (TCD).

LJT = LISA THOMASON
DGH = DARREL HALSELL
TLH = TARA HELTON
KW = KAREN WADSWORTH
MV = MONIQUE VERHEYDEN
SW = STEVE WILHITE
JMP = JACKIE PRICE
SJF = STEVE FILOROMO
PL = PAUL LESCHENSKY
RW = ROBERT WOLFE
BV = BEN VAUGHN
KS = KENDALL SMITH

Analysis Report

Analysis: BETX AND TPH C6-C10 RANGE

Accession: 501542
Client: BP OIL COMPANY
Project Number: 10-005-03-001
Project Name: BP SITE #11109
Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
Department: GC/VOA

"FINAL REPORT FORMAT - SINGLE"

Accession: 501542
Client: BP OIL COMPANY
Project Number: 10-005-03-001
Project Name: BP SITE #11109
Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
Test: BETX AND TPH C6-C10 RANGE
Analysis Method: 5030/8020/8015/SW 846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
Extraction Method: N/A
Matrix: GROUNDWATER
QC Level: N

Lab Id: 001 Sample Date/Time: 19-JAN-95 1345
Client Sample Id: STA #11109 INF Received Date: 21-JAN-95
Batch: ETW026 Extraction Date: N/A
Blank: A Dry Weight %: N/A Analysis Date: 02-FEB-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	3100	50	
TOLUENE	UG/L	840	50	
ETHYLBENZENE	UG/L	150	50	
XYLENES (TOTAL)	UG/L	1500	100	
TOTAL PETROLEUM HYDROCARBON	MG/L	9.3	5.0	
TRIFLUOROTOLUENE (PID)	%REC/SURR	93	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	90	63-135	
ANALYST	INITIALS	NC		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 501542
 Client: BP OIL COMPANY
 Project Number: 10-005-03-001
 Project Name: BP SITE #11109
 Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
 Test: BETX AND TPH C6-C10 RANGE
 Analysis Method: 5030/8020/8015/SW 846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
 Extraction Method: N/A
 Matrix: GROUNDWATER
 QC Level: N

Lab Id: 002 Sample Date/Time: 19-JAN-95 N/S
 Client Sample Id: STA #11109 A Received Date: 21-JAN-95
 Batch: ETW026 Extraction Date: N/A
 Blank: A Dry Weight %: N/A Analysis Date: 02-FEB-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	0.5	
TOLUENE	UG/L	ND	0.5	
ETHYLBENZENE	UG/L	0.6	0.5	
XYLENES (TOTAL)	UG/L	2	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	93	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	98	63-135	
ANALYST	INITIALS	NC		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 501542
 Client: BP OIL COMPANY
 Project Number: 10-005-03-001
 Project Name: BP SITE #11109
 Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
 Test: BETX AND TPH C6-C10 RANGE
 Analysis Method: 5030/8020/8015/SW 846, 3rd Edition, Sep. 1986 and Rev. 1, July 1992
 Extraction Method: N/A
 Matrix: GROUNDWATER
 QC Level: N

Lab Id: 003 Sample Date/Time: 19-JAN-95 1347
 Client Sample Id: STA #11109 EFF Received Date: 21-JAN-95
 Batch: ETW026 Extraction Date: N/A
 Blank: A Dry Weight %: N/A Analysis Date: 02-FEB-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	3	0.5	
TOLUENE	UG/L	0.8	0.5	
ETHYLBENZENE	UG/L	ND	0.5	
XYLENES (TOTAL)	UG/L	1	1	
TOTAL PETROLEUM HYDROCARBON	MG/L	ND	0.050	
TRIFLUOROTOLUENE (PID)	%REC/SURR	95	63-135	
TRIFLUOROTOLUENE (FID)	%REC/SURR	98	63-135	
ANALYST	INITIALS	NC		

Comments:

"Method Report Summary"

Accession Number: 501542
Client: BP OIL COMPANY
Project Number: 10-005-03-001
Project Name: BP SITE #11109
Project Location: 4280 FOOTHILL BLVD., OAKLAND, CA
Test: BETX AND TPH C6-C10 RANGE

Client Sample Id:	Parameter:	Unit:	Result:
STA #11109 INF	BENZENE	UG/L	3100
	TOLUENE	UG/L	840
	ETHYLBENZENE	UG/L	150
	XYLENES (TOTAL)	UG/L	1500
	TOTAL PETROLEUM HYDROCARBON	MG/L	9.3
STA #11109 A	ETHYLBENZENE	UG/L	0.6
	XYLENES (TOTAL)	UG/L	2
STA #11109 EFF	BENZENE	UG/L	3
	TOLUENE	UG/L	0.8
	XYLENES (TOTAL)	UG/L	1

Common notation for Organic reporting

N/S = NOT SUBMITTED
N/A = NOT APPLICABLE
D = DILUTED OUT
UG/L = PARTS PER BILLION.
UG/KG = PARTS PER BILLION.
MG/KG = PARTS PER MILLION.
MG/L = PARTS PER MILLION.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS
SOURCES FOR CONTROL LIMITS ARE INTERNAL LABORATORY QUALITY ASSURANCE PROGRAM
AND REFERENCED METHOD.
ORGANIC SOILS ARE REPORTED ON A DRY WEIGHT BASIS.
** COMPOUNDS FLAGGED IN METHOD ARE NOT WITHIN THE FIVE POINT CURVE. THEY
ARE SEARCHED FOR QUALITATIVELY.
ND = NOT DETECTED ABOVE REPORTING LIMIT.

SR-SHELLEY REAMSMA
DC-DAVID CELESTIAL
LKD-LEIGH DUVALL
MM-MIKE MCKENZIE
KWS-KENDALL SMITH
KKS-KIMBERLY SMITH
GF-GREG FOOTE
NC-NICOLE CALL
JA-JENNIFER ALEXANDER
PAM-PENNY A. MALOUIN
MCW-MARIE CLAUDIA WALTON
SB-SHARON BRADDOCK
KF-KAROLE FERGUSON
SC-SCOTT CLARK
AM-AMANDA MCCRAY



CHAIN OF CUSTODY

501542 No. 058859

CONSULTANT'S NAME ALISTO ENGINEERING		ADDRESS 1777 OAKLAND BLVD		CITY WALNUT CREEK CA	STATE CA	ZIP CODE 94596
BP SITE NUMBER 11109	BP CORNER ADDRESS/CITY 4280 FOOTHILL BLVD OAKLAND, CA				CONSULTANT PROJECT NUMBER 10-005-03-001	
CONSULTANT PROJECT MANAGER PETE BEAVER		PHONE NUMBER 510 295-1650	FAX NUMBER 510 295-1823		CONSULTANT CONTRACT NUMBER G314386	
BP CONTACT SCOTT HOOTON	BP ADDRESS REXTON, WA		PHONE NUMBER		FAX NO.	
LAB CONTACT DIANA SPENCE	LABORATORY ADDRESS 560 NICHES AVE SW STE 101		PHONE NUMBER 206 228-8335		FAX NO.	
SAMPLED BY (Please Print Name) JOHN BICKING		SAMPLED BY (Signature) John K. Bicking		SHIPMENT DATE		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		PRESERVATIVE		TPH	D	COMMENTS
			NO.	TYPE (VOL.)	LAB SAMPLE #				
STA# 11109 INF	1345	GW	2				✓		
STA# 11109 EFF	1347	↓	2				✓		

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
John K. Bicking	1/19	1600	Bertrand	1/20/95	1220	
Bertrand	1/20/95	1220	Paul Ford	21 58 - 95	1340	



501067RF

501542
CHAIN OF CUSTODY 501544 No. 058851

CONSULTANT'S NAME: **ALISTO ENGINEERING** ADDRESS: **1777 OAKLAND Blvd. # 200** CITY: **Walnut Creek CA** STATE: **CA** ZIP CODE: **94596**

BP SITE NUMBER: **BP STA# 11109** BP CORNER ADDRESS/CITY: **4280 Foothill Blvd. Oakland, CA** CONSULTANT PROJECT NUMBER: **10-005**

CONSULTANT PROJECT MANAGER: **PETE BEAVOR** PHONE NUMBER: **510 295-1650** FAX NUMBER: **510 295 1823** CONSULTANT CONTRACT NUMBER: **G 314386**

BP CONTACT: **SCOTT HOOTON** BP ADDRESS: **RENTON, WA** PHONE NUMBER: FAX NO.

LAB CONTACT: ~~MELISSA FORBES~~ **Diana Spence** LABORATORY ADDRESS: ~~RENTON, WA~~ PHONE NUMBER: **904 474-1001** FAX NO.

SAMPLED BY (Please Print Name): **JOHN BICKING** SAMPLED BY (Signature): *John Bicking* SHIPMENT DATE: SHIPMENT METHOD:

TAT: 24 Hours 48 Hours 1 Week Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	EPA MODIFIED		COMMENTS
			NO.	TYPE (VOL.)		TPH - G	TPH - D	
STA# 11109 INF			3		1	✓	✓	<i>delete per B. Nagle 1/19/95 (No sampling)</i>
STA# 11109 A					2	✓	✓	
STA# 11109 EFF					3	✓	✓	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>John K. Bicking</i>	1/18/95	0745	<i>[Signature]</i>	1/19/95	9:15	NOT CA LEFT per B. Nagle 1/19/95
<i>Beverly J. [Signature]</i>	1/20/95	1200	<i>[Signature]</i>	21-JAN-95	1340	



Analytical **Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 502063

February 14, 1995

ALISTO ENGINEERING
1777 OAKLAND BOULEVARD, SUITE 200
WALNUT CREEK, CA 94596

Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA
Project # : G314386/10-005-03-001


Attention: PETER BEAVER

Analytical Technologies, Inc. has received the following sample(s):

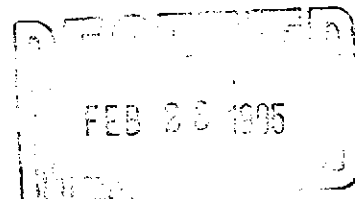
<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
February 07, 1995	3	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. If any flags appear next to the analytical data in this report, please see the attached list of flag definitions.

The results of these analyses and the quality control data are enclosed. Please note that the Sample Condition Upon Receipt Checklist is included at the end of this report.


GARY STEWART
VOLATILES SUPERVISOR


For ALAN J. KLEINSCHMIDT
LABORATORY MANAGER





SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

Report Date: February 14, 1995
ATI I.D. : 502063

ATI #	Client Description	Matrix	Date Collected
1	STA#11109 INF	WATER	06-FEB-95
2	STA#11109 A	WATER	06-FEB-95
3	STA#11109 EFF	WATER	06-FEB-95

---TOTALS---

<u>Matrix</u>	<u># Samples</u>
WATER	3

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



ANALYTICAL SCHEDULE

Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D.: 502063

Analysis	Technique/Description
MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)	GC/FLAME IONIZATION DETECTOR
MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)	GC/FLAME ION./PHOTO IONIZATION DETECTOR

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)
 Client : ALISTO ENGINEERING ATI I.D. : 502063
 Project # : G314386/10-005-03-001
 Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA#11109 INF	WATER	06-FEB-95	09-FEB-95	14-FEB-95	10.00
3	STA#11109 EFF	WATER	06-FEB-95	09-FEB-95	11-FEB-95	1.00

Parameter	Units	1	3
FUEL HYDROCARBONS	MG/L	13	<0.50
HYDROCARBON RANGE		C6-C14	C10-C24
HYDROCARBONS QUANTITATED USING		GASOLINE	DIESEL
SURROGATES			
BIS(2-ETHYLHEXYL)PHTHALATE	%	105	89

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Page 4

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank I.D. : 34339
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502063
Date Extracted: 10-FEB-95
Date Analyzed : 11-FEB-95
Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.50
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
<u>SURROGATES</u>		
BIS(2-ETHYLHEXYL) PHTHALATE	%	118

GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Page 5

 Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
 MSMSD # : 72982
 Client : ALISTO ENGINEERING

 ATI I.D. : 502063
 Date Extracted: 10-FEB-95
 Date Analyzed : 11-FEB-95
 Sample Matrix : WATER
 REF I.D. : 502063-03

 Project # : G314386/10-005-03-001
 Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
FUEL HYDROCARBONS	MG/L	<0.50	10	9.4	94	8.6	86	9

$$\% \text{ Recovery} = (\text{Spike Sample Result} - \text{Sample Result}) * 100 / \text{Spike Concentration}$$

$$\text{RPD (Relative \% Difference)} = (\text{Spiked Sample Result} - \text{Duplicate Spike Result}) * 100 / \text{Average Result}$$

GAS CHROMATOGRAPHY - QUALITY CONTROL
BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
 Blank Spike #: 54409
 Client : ALISTO ENGINEERING
 Project # : G314386/10-005-03-001
 Project Name : BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502063
 Date Extracted: 10-FEB-95
 Date Analyzed : 11-FEB-95
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
FUEL HYDROCARBONS	MG/L	<0.50	11	10	110

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
 RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result



GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
 Client : ALISTO ENGINEERING ATI I.D. : 502063
 Project # : G314386/10-005-03-001
 Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA#11109 INF	WATER	06-FEB-95	N/A	09-FEB-95	100.00
2	STA#11109 A	WATER	06-FEB-95	N/A	09-FEB-95	1.00
3	STA#11109 EFF	WATER	06-FEB-95	N/A	09-FEB-95	1.00

Parameter	Units	1	2	3
BENZENE	UG/L	2400	2.9	<0.25
TOLUENE	UG/L	670	1.1	<0.25
ETHYLBENZENE	UG/L	48	<0.25	<0.25
XYLENES (TOTAL)	UG/L	1200	2.6	<0.50
FUEL HYDROCARBONS	UG/L	14000	<50	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
SURROGATES				
TRIFLUOROTOLUENE	%	108	98	95

GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Page 8

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTEX)
Blank I.D. : 34290
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502063
Date Extracted: N/A
Date Analyzed : 09-FEB-95
Dil. Factor : 1.00

Parameters	Units	Results
BENZENE	UG/L	<0.25
TOLUENE	UG/L	<0.25
ETHYLBENZENE	UG/L	<0.25
XYLENES (TOTAL)	UG/L	<0.50
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	%	96



GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTEX)
MSMSD # : 72836
Client : ALISTO ENGINEERING

ATI I.D. : 502063
Date Extracted: N/A
Date Analyzed : 08-FEB-95
Sample Matrix : WATER
REF I.D. : 502064-03

Project # : G314386/10-005-03-001
Project Name: BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

Table with 9 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Rows include BENZENE and TOLUENE.

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result



GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 54276
Client : ALISTO ENGINEERING
Project #: G314386/10-005-03-001
Project Name : BP SITE#11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502063
Date Extracted: N/A
Date Analyzed : 09-FEB-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.25	4.7	5.0	94
TOLUENE	UG/L	<0.25	4.6	5.0	92

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result



Analytical **Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 502262

March 01, 1995

ALISTO ENGINEERING
1777 OAKLAND BOULEVARD, SUITE 200
WALNUT CREEK, CA 94596

Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA
Project # : G314386/10-005-03-001

Attention: PETER BEAVER


Analytical Technologies, Inc. has received the following sample(s):

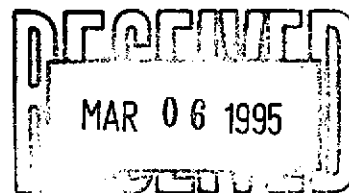
<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
February 23, 1995	4	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. If any flags appear next to the analytical data in this report, please see the attached list of flag definitions.

The results of these analyses and the quality control data are enclosed. Please note that the Sample Condition Upon Receipt Checklist is included at the end of this report.


GARY STEWART
VOLATILES SUPERVISOR


ALAN J. KLEINSCHMIDT
LABORATORY MANAGER



SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

Report Date: March 01, 1995
ATI I.D. : 502262

ATI #	Client Description	Matrix	Date Collected
1	STA #11109 INF	WATER	22-FEB-95
2	STA #11109 A	WATER	22-FEB-95
3	STA #11109 EFF	WATER	22-FEB-95
4	STA #11109 FIELD BLANK	WATER	22-FEB-95

---TOTALS---

Matrix# Samples

WATER

4

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.

ANALYTICAL SCHEDULE

Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D.: 502262

Analysis	Technique/Description
MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)	GC/FLAME IONIZATION DETECTOR
MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)	GC/FLAME ION./PHOTO IONIZATION DETECTOR



GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502262

Table with 7 columns: Sample #, Client ID, Matrix, Date Sampled, Date Extracted, Date Analyzed, Dil. Factor. Rows include STA #11109 INF, EFF, and FIELD BLANK.

Table with 5 columns: Parameter, Units, 1, 3, 4. Rows include FUEL HYDROCARBONS, HYDROCARBON RANGE, and SURROGATES.



GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank I.D. : 34469
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502262
Date Extracted: 24-FEB-95
Date Analyzed : 27-FEB-95
Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.50
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
<u>SURROGATES</u>		
BIS(2-ETHYLHEXYL)PHTHALATE	%	121



GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 73370
Client : ALISTO ENGINEERING

ATI I.D. : 502262
Date Extracted: 24-FEB-95
Date Analyzed : 25-FEB-95
Sample Matrix : WATER
REF I.D. : 502257-01

Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

Table with 10 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Row 1: FUEL HYDROCARBONS, MG/L, <0.50, 10, 8.7, 87, 9.4, 94, 8

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result



GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank Spike #: 54720
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name : BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502262
Date Extracted: 24-FEB-95
Date Analyzed : 24-FEB-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
FUEL HYDROCARBONS	MG/L	<0.50	11	10	110

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result



GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTEX)
 Client : ALISTO ENGINEERING
 Project # : G314386/10-005-03-001
 Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA
 ATI I.D. : 502262

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA #11109 INF	WATER	22-FEB-95	N/A	27-FEB-95	25.00
2	STA #11109 A	WATER	22-FEB-95	N/A	27-FEB-95	1.00
3	STA #11109 EFF	WATER	22-FEB-95	N/A	27-FEB-95	1.00

Parameter	Units	1	2	3
BENZENE	UG/L	1600	1.8	<0.50
TOLUENE	UG/L	380	0.96	<0.50
ETHYLBENZENE	UG/L	57	<0.50	<0.50
XYLENES (TOTAL)	UG/L	910	2.1	<1.0
FUEL HYDROCARBONS	UG/L	11000	<50	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE
<u>SURROGATES</u>				
TRIFLUOROTOLUENE	%	113	96	93

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)
Client : ALISTO ENGINEERING **ATI I.D.** : 502262
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	STA #11109	FIELD BLANK	WATER	22-FEB-95	N/A	27-FEB-95 1.00

Parameter	Units	4
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE

SURROGATES

TRIFLUOROTOLUENE	%	90
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GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank I.D. : 34488
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502262
Date Extracted: N/A
Date Analyzed : 27-FEB-95
Dil. Factor : 1.00

Parameters	Units	Results
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	§	96

GAS CHROMATOGRAPHY - QUALITY CONTROL
MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTEX)
MSMSD # : 73412
Client : ALISTO ENGINEERING

Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502262
Date Extracted: N/A
Date Analyzed : 27-FEB-95
Sample Matrix : WATER
REF I.D. : 502257-01

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	0.97	5.0	5.5	91	5.7	95	4
TOLUENE	UG/L	<0.50	5.0	4.6	92	4.7	94	2

$\% \text{ Recovery} = (\text{Spike Sample Result} - \text{Sample Result}) * 100 / \text{Spike Concentration}$

$\text{RPD (Relative \% Difference)} = (\text{Spiked Sample Result} - \text{Duplicate Spike Result}) * 100 / \text{Average Result}$



GAS CHROMATOGRAPHY - QUALITY CONTROL

BLANK SPIKE

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTEX)
Blank Spike #: 54758
Client : ALISTO ENGINEERING
Project #: G314386/10-005-03-001
Project Name : BP SITE #11109/4280 FOOTHILL BLVD. OAKLAND, CA

ATI I.D. : 502262
Date Extracted: N/A
Date Analyzed : 27-FEB-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.9	5.0	98
TOLUENE	UG/L	<0.50	4.9	5.0	98

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result



502262

CHAIN OF CUSTODY

No. 061498

Page 1 of 1

CONSULTANT'S NAME ALISTO ENGINEERING		ADDRESS 1777 OAKLAND Blvd. #200		CITY WALNUT Creek	STATE CA	ZIP CODE 94596
BP SITE NUMBER 11109	BP CORNER ADDRESS/CITY 4280 Foothill Blvd OAKLAND, CA				CONSULTANT PROJECT NUMBER 10-005-03-001	
CONSULTANT PROJECT MANAGER PIATE BEAVER		PHONE NUMBER (510) 295 1650		FAX NUMBER (510) 295-1823		CONSULTANT CONTRACT NUMBER G314386
BP CONTACT SCOTT HOOTEN		BP ADDRESS RENTON, WA		PHONE NUMBER		FAX NO.
LAB CONTACT DIANA SPENCE		LABORATORY ADDRESS SAN DIEGO, CA		PHONE NUMBER		FAX NO.
SAMPLED BY (Please Print Name) John Bickling		SAMPLED BY (Signature) <i>John K. Bickling</i>		SHIPMENT DATE		SHIPMENT METHOD

TAT: 24 Hours 48 Hours 1 Week Standard 2 Weeks

ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE 1/22/95	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE		YES	NO									COMMENTS
				NO.	TYPE (VOL.)	LAB SAMPLE #	TPH											
01 STA # 11109 INF	1250		GW	5		TPH	TPH	✓	✓									
02 STA # 11109 A	1235		↓	3				✓										
03 STA # 11109 EFF	1240		↓	5				✓	✓									
04 STA # 11109 FIELD BLANK			↓	4				✓	✓									
OK witnessed <i>[Signature]</i> 2/22/95																		

RELINQUISHED BY / AFFILIATION <i>John K. Bickling</i>	DATE 2/17	TIME 1600	ACCEPTED BY / AFFILIATION <i>[Signature]</i>	DATE 2/23/95	TIME 9:00	ADDITIONAL COMMENTS 3.0°C
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Analytical **Technologies, Inc.**

Corporate Offices: 5550 Morehouse Drive San Diego, CA 92121 (619) 458-9141

ATI I.D.: 503225

March 22, 1995

ALISTO ENGINEERING
1777 OAKLAND BOULEVARD, SUITE 200
WALNUT CREEK, CA 94596

Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA
Project # : G314386/10-005-03-001

Attention: PETE BEAVER

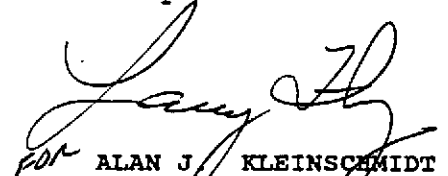
Analytical Technologies, Inc. has received the following sample(s):

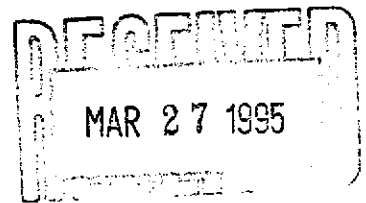
<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
March 17, 1995	4	WATER

The sample(s) were analyzed with EPA methodology or equivalent methods as specified in the enclosed analytical schedule. The symbol for "less than" indicates a value below the reportable detection limit. If any flags appear next to the analytical data in this report, please see the attached list of flag definitions.

The results of these analyses and the quality control data are enclosed. Please note that the Sample Condition Upon Receipt Checklist is included at the end of this report.


CHRISTOPHER MYERS
PROJECT MANAGER


ALAN J. KLEINSCHMIDT
LABORATORY MANAGER





Client : ALISTO ENGINEERING
 Project # : G314386/10-005-03-001
 Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

Report Date: March 22, 1995
 ATI I.D. : 503225

ATI #	Client Description	Matrix	Date Collected
1	STA#11109 INF	WATER	14-MAR-95
2	STA#11109 A	WATER	14-MAR-95
3	STA#11109 EFF	WATER	14-MAR-95
4	STA#11109 FIELD BLANK	WATER	14-MAR-95

---TOTALS---

<u>Matrix</u>	<u># Samples</u>
WATER	4

ATI STANDARD DISPOSAL PRACTICE

The sample(s) from this project will be disposed of in twenty-one (21) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

ATI I.D.: 503225

Analysis	Technique/Description
MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)	GC/FLAME IONIZATION DETECTOR
MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)	GC/FLAME ION./PHOTO IONIZATION DETECTOR



Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)
 Client : ALISTO ENGINEERING
 Project # : G314386/10-005-03-001
 Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

ATI I.D. : 503225

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA#11109 INF	WATER	14-MAR-95	20-MAR-95	20-MAR-95	2.00
3	STA#11109 EFF	WATER	14-MAR-95	20-MAR-95	20-MAR-95	1.00
4	STA#11109 FIELD BLANK	WATER	14-MAR-95	20-MAR-95	20-MAR-95	1.00

Parameter	Units	1	3	4
FUEL HYDROCARBONS	MG/L	15	<0.50	<0.50
HYDROCARBON RANGE		C6-C14	-	-
HYDROCARBONS QUANTITATED USING		GASOLINE	-	-
SURROGATES				
BIS(2-ETHYLHEXYL) PHTHALATE	%	108	111	107



REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank I.D. : 34737
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

ATI I.D. : 503225
Date Extracted: 20-MAR-95
Date Analyzed : 20-MAR-95
Dil. Factor : 1.00

Parameters	Units	Results
FUEL HYDROCARBONS	MG/L	<0.50
HYDROCARBON RANGE		-
HYDROCARBONS QUANTITATED USING		-
<u>SURROGATES</u>		
BIS(2-ETHYLHEXYL) PHTHALATE	%	114



MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 74107
Client : ALISTO ENGINEERING

ATI I.D. : 503225
Date Extracted: 20-MAR-95
Date Analyzed : 20-MAR-95
Sample Matrix : WATER
REF I.D. : 503225-03

Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

Table with 9 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Row 1: FUEL HYDROCARBONS, MG/L, <0.50, 10, 8.3, 83, 8.3, 83, 0

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration
RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result



BLANK SPIKE

Page 6

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
Blank Spike #: 55243
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name : BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

ATI I.D. : 503225
Date Extracted: 20-MAR-95
Date Analyzed : 20-MAR-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
FUEL HYDROCARBONS	MG/L	<0.50	11	10	110

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result



Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTXE)

Client : ALISTO ENGINEERING

ATI I.D. : 503225

Project # : G314386/10-005-03-001

Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA#11109 INF	WATER	14-MAR-95	N/A	21-MAR-95	50.00
2	STA#11109 A	WATER	14-MAR-95	N/A	21-MAR-95	1.00
3	STA#11109 EFF	WATER	14-MAR-95	N/A	21-MAR-95	1.00

Parameter	Units	1	2	3
BENZENE	UG/L	2000	0.77	<0.50
TOLUENE	UG/L	560	<0.50	<0.50
ETHYLBENZENE	UG/L	38	<0.50	<0.50
XYLENES (TOTAL)	UG/L	1200	1.1	<1.0
FUEL HYDROCARBONS	UG/L	12000	<50	<50
HYDROCARBON RANGE		C6-C12	C6-C12	C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE	GASOLINE	GASOLINE

SURROGATES

TRIFLUOROTOLUENE	%	101	92	90
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Test : MOD EPA 8015-CDOHS/8020 (HYDROCARBONS C6-C12/BTEX)
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

ATI I.D. : 503225

Sample Client ID #	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4 STA#11109 FIELD BLANK	WATER	14-MAR-95	N/A	21-MAR-95	1.00

Parameter	Units	4
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE

SURROGATES

TRIFLUOROTOLUENE	%	92
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REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTEX)
Blank I.D. : 34739
Client : ALISTO ENGINEERING
Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

ATI I.D. : 503225
Date Extracted: N/A
Date Analyzed : 21-MAR-95
Dil. Factor : 1.00

Page 1

Parameters	Units	Results
BENZENE	UG/L	<0.50
TOLUENE	UG/L	<0.50
ETHYLBENZENE	UG/L	<0.50
XYLENES (TOTAL)	UG/L	<1.0
FUEL HYDROCARBONS	UG/L	<50
HYDROCARBON RANGE		C6-C12
HYDROCARBONS QUANTITATED USING		GASOLINE
<u>SURROGATES</u>		
TRIFLUOROTOLUENE	%	97



MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTEX)
MSMSD # : 74066
Client : ALISTO ENGINEERING

ATI I.D. : 503225
Date Extracted: N/A
Date Analyzed : 20-MAR-95
Sample Matrix : WATER
REF I.D. : 503196-02

Project # : G314386/10-005-03-001
Project Name: BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
BENZENE	UG/L	<0.50	5.0	4.7	94	4.8	96	2
TOLUENE	UG/L	<0.50	5.0	4.9	98	5.1	102	4

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative % Difference) = (Spiked Sample Result - Duplicate Spike Result)*100/Average Result



BLANK SPIKE

Page 11

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS/BTXE)
Blank Spike #: 55246
Client : ALISTO ENGINEERING
Project #: G314386/10-005-03-001
Project Name : BP SITE #11109/4280 FOOTHILL BLVD., OAKLAND, CA

ATI I.D. : 503225
Date Extracted: N/A
Date Analyzed : 21-MAR-95
Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
BENZENE	UG/L	<0.50	4.6	5.0	92
TOLUENE	UG/L	<0.50	4.8	5.0	96

% Recovery = (Spike Sample Result - Sample Result)*100/Spike Concentration

RPD (Relative % Difference) = (Spiked Sample - Blank Result)*100/Average Result



CHAIN OF CUSTODY

No. 061463

Page 1 of 1

CONSULTANT'S NAME ALISTO ENGINEERING GROUP		ADDRESS 1777 OAKLAND Blvd. #200 Walnut Creek CA		CITY Walnut Creek	STATE CA	ZIP CODE 94596
BP SITE NUMBER 11109	BP CORNER ADDRESS/CITY 4280 Foothill Blvd. OAKLAND, CA			CONSULTANT PROJECT NUMBER 10-005-03-001		
CONSULTANT PROJECT MANAGER PETE BEVERLY		PHONE NUMBER 510 295-1650	FAX NUMBER 510 295-1823		CONSULTANT CONTRACT NUMBER 6314386	
BP CONTACT SCOTT HOOTEN		BP ADDRESS ROSEMONT WA	PHONE NUMBER		FAX NO.	
LAB CONTACT DIANA SPENCE		LABORATORY ADDRESS SAN DIEGO, CA	PHONE NUMBER		FAX NO.	
SAMPLED BY (Please Print Name) JOHN BICKING		SAMPLED BY (Signature) <i>John K. Bicking</i>		SHIPMENT DATE 3/16/95		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		PRESERVATIVE		PH	TEX	TPT										COMMENTS	
			NO.	TYPE (VOL.)	LAB SAMPLE #															
STA# 11109 INF	1000	H ₂ O	5		01	✓	✓													
STA# 11109 A	1005		3		02	✓														
STA# 11109 EFF	1010		5		03	✓	✓													
STA# 11109 FIELD BLANK	1015		5		04	✓	✓													

Withdrawn by HJT 3/16/95

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>John K. Bicking</i>	3/16/95	0900				
			<i>A. Y. ...</i>	3/17/95	9:30	503225