



ALISTO ENGINEERING GROUP

ENVIRONMENTAL
PROTECTION

95 APR 17 PM 2:40

LDP 3878

April 14, 1995

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

10-024-04-002

Subject: Sewer Discharge Permit - Semi-Annual Report
BP Oil Company Service Station No. 11132
3201 35th Street
Oakland, California
Wastewater Discharge Permit No. 502-62901

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. 11132, 3201 35th Street, Oakland, California. The previous quarterly report covered the period from October 1 to December 31, 1994, therefore this report covers 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 indicate that petroleum hydrocarbon constituents were not present above the reported detection limits in the effluent samples. The total 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



Peter Beaver
Engineering Manager

Enclosures

cc: Florencio Gonzalez, East Bay Municipal Utility District
Scott Hooton, BP Oil Company



ALISTO ENGINEERING GROUP

April 14, 1995

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

10-024-04-002

Subject: Sewer Discharge Permit - Quarterly Report
BP Oil Company Service Station No. 11132
3201 35th Street
Oakland, California
Wastewater Discharge Permit No. 502-62901

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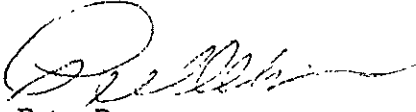
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Mr. Florencio Gonzalez
April 14, 1995
Page 2

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. 11132
 3201 35TH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

DATE	FLOW METER READING (Gallons)	EFFLUENT DISCHARGED (Gallons)	AVERAGE FLOW RATE (GPD)	AVERAGE FLOW RATE (GPM)
01/22/93	48860	48860	---	0.00
02/23/93	48860 (a)	0	---	0.00
07/14/93	50770	1910	---	0.00
07/19/93	0 (b)	---	---	0.00
07/26/93	13700	13700	1957	1.36
08/17/93	37367	23667	1076	0.75
09/28/93	64180	26813	638	0.44
10/25/93	86610	22430	831	0.58
11/26/93	95550	8940	279	0.19
12/28/93	116960	21410	669	0.46
01/28/94	117200	240	8	0.01
02/28/94	164070	46870	1512	1.05
03/29/94	208760	44690	1541	1.07
04/29/94	243380	34620	1117	0.78
05/31/94	292140	48760	1524	1.06
09/03/94	410710	118570	1248	0.87
10/05/94	454250	43540	1361	0.94
10/31/94	464410	10160	391	0.27
11/29/94	482970	18560	640	0.44
12/07/94	508770	25800	3225	2.24
01/04/95	508770	0	0	0.00
01/30/95	547720	38950	1498	1.04
02/21/95	570040	22320	1015	0.70
03/30/95	623360	53320	1441	1.00
TOTAL FOR QUARTER		114590	1348	0.94

ABBREVIATIONS:

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

NOTE:

(a) Flow meter not operating.
 System shut down.
 (b) Flow meter replaced.

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER TREATMENT SYSTEM OPERATION
 BP OIL COMPANY SERVICE STATION NO. 11132
 3201 35TH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-024

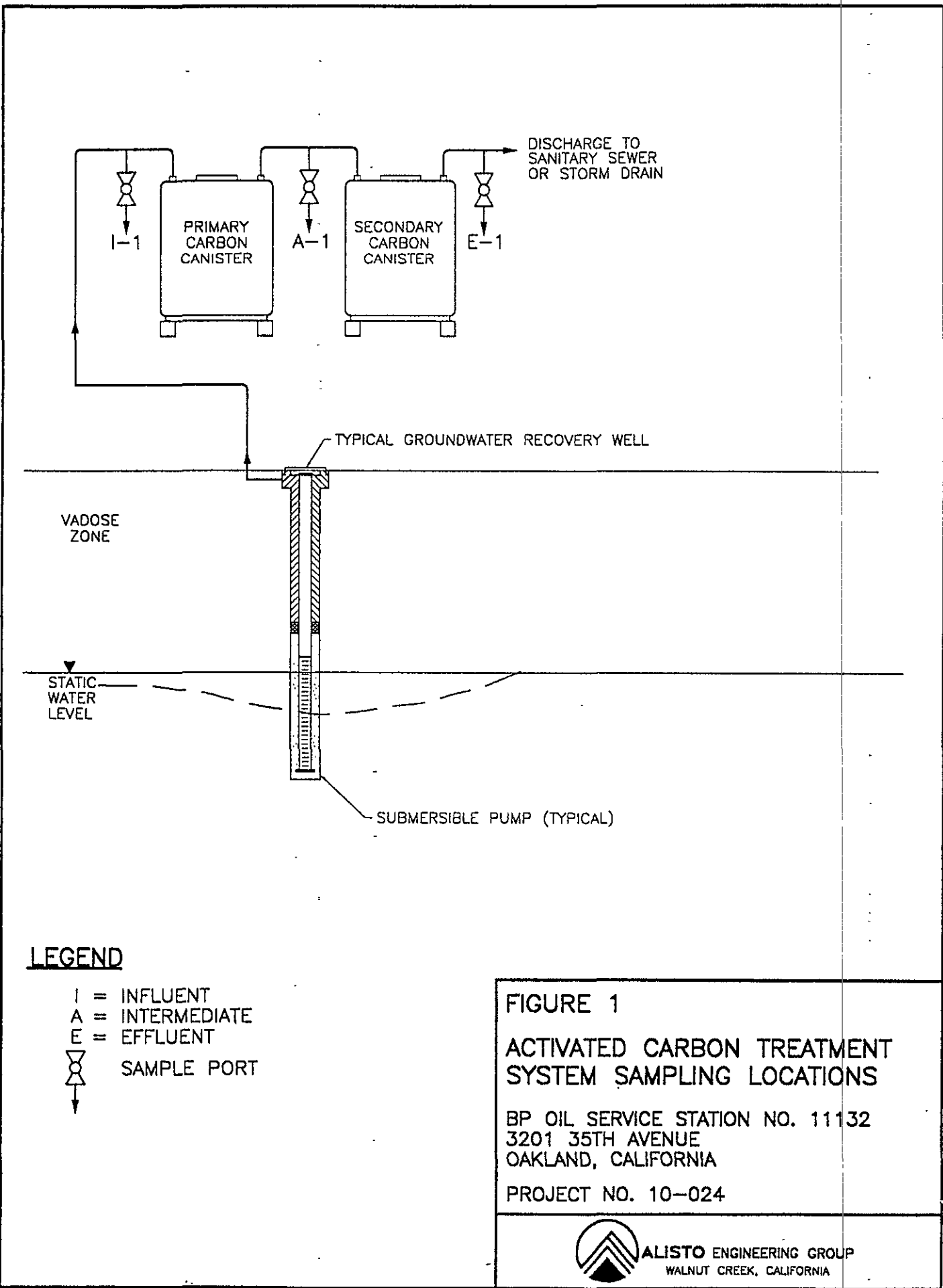
Sample ID	Date	TPH-G (ppb)	TPH-D (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Acetone	MEK	LAB
I-1	11/06/92	22000	---	4500	1600	760	3900	---	---	PACE
I-1	01/22/93	---	120	ND<0.5	250	84	590	54	---	PACE
I-1	07/26/93	---	620	2600	210	120	960	78	96	PACE
I-1	08/17/93	---	520	1200	58	35	300	ND<5.0	ND<5.0	PACE
I-1	09/22/93	4200	370	1000	110	38	520	---	---	PACE
I-1	10/20/93	---	140	930	32	8	190	---	---	PACE
I-1	11/18/93	---	470	970	72	19	410	ND<50	ND<50	PACE
I-1	12/07/93	---	2100	780	(b) ND<5	ND<5	97	ND<50	ND<50	PACE
I-1	02/08/94	---	410000	3400	1400	610	7300	ND<2500	ND<2500	PACE
I-1	02/15/94	42000	6400	4400	2500	820	9400	ND<1200	ND<1200	PACE
I-1	03/15/94	---	1500	1200	200	38	780	ND<50	ND<50	PACE
I-1	04/15/94	---	2500	580	27	38	700	ND<50	ND<50	PACE
I-1	05/12/94	---	430	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
I-1	06/16/94	---	ND<50	150	11	ND<5	ND<5	---	---	PACE
I-1	07/14/94	---	ND<50	ND<5	ND<5	ND<5	ND<5	---	---	PACE
I-1	08/23/94	---	1100	330	7	200	---	---	---	PACE
I-1	09/19/94	---	580	260	62	ND<5	---	---	---	PACE
I-1	10/17/94	---	ND<50	ND<25	ND<25	ND<25	61	---	---	GTEL
I-1	11/18/94	---	4600	2200	880	140	2300	---	---	GTEL
I-1	01/17/95	---	960	960	83	6	300	---	---	ATI
I-1	02/21/95	---	4400	880	130	10	450	ND<50	ND<50	ATI
I-1	03/14/95	---	9000	740	ND<10	10	300	300 (c)	ND<50	ATI
A-1	11/06/92	---	---	---	---	---	---	---	---	PACE
A-1	01/22/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
A-1	07/26/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
A-1	08/17/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
A-1	09/22/93	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
A-1	10/20/93	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	11/18/93	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	12/07/93	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	02/08/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	02/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	03/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	04/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	05/12/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
A-1	06/16/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	PACE
A-1	07/14/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	PACE
A-1	08/23/94	---	---	ND<5	ND<5	ND<5	---	---	---	PACE
A-1	09/19/94	---	---	ND<5	ND<5	ND<5	---	---	---	PACE
A-1	10/17/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	GTEL
A-1	11/18/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	GTEL
A-1	01/17/95	---	---	ND<1	ND<5	ND<1	ND<5	---	---	ATI
A-1	02/21/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
A-1	03/14/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
E-1	11/06/92	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<5	---	---	PACE
E-1	01/22/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
E-1	07/26/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
E-1	08/17/93	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
E-1	09/22/93	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	PACE
E-1	10/20/93	---	---	ND<0.5	ND<5	ND<5	ND<5	ND<5	ND<5	PACE
E-1	11/18/93	---	---	400	22	5	120	ND<50	ND<5	PACE
E-1	12/07/93	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	140	PACE
E-1	02/08/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	02/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	03/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	04/15/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	05/12/94	---	---	ND<5	ND<5	ND<5	ND<5	ND<50	ND<50	PACE
E-1	06/16/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	PACE
E-1	07/14/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	PACE
E-1	08/23/94	---	---	ND<5	ND<5	ND<5	---	---	---	PACE
E-1	09/19/94	---	---	ND<5	ND<5	ND<5	---	---	---	PACE
E-1	10/17/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	GTEL
E-1	11/18/94	---	---	ND<5	ND<5	ND<5	ND<5	---	---	GTEL
E-1	01/17/95	---	---	ND<1	ND<5	ND<1	ND<2	---	---	ATI
E-1	02/21/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
E-1	03/14/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	ATI
QC-1	03/14/95	---	---	ND<1	ND<2	ND<1	ND<1	ND<10	ND<10	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 2-Butanone
 ppb Parts per billion
 ND Not detected above reported detection limit
 --- Not analyzed/available
 QC-1 Field blank
 PACE Pace, Inc.
 GTEL GTEL Environmental Laboratories, Inc.
 ATI Analytical Technologies, Inc.

NOTES:

(a) Suspected sample identification error.
 (b) Sample dilution required to bring compound within linear calibration range.
 (c) Analyte found in the associated reagent blank



LEGEND


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

FIGURE 1
ACTIVATED CARBON TREATMENT SYSTEM SAMPLING LOCATIONS
 BP OIL SERVICE STATION NO. 11132
 3201 35TH AVENUE
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-024



100270--DWG 10-28-93 REV 1-1

ATTACHMENT A

LABORATORY REPORTS AND CHAIN OF CUSTODY RECORDS



SIGNATURE PAGE

Reviewed by:

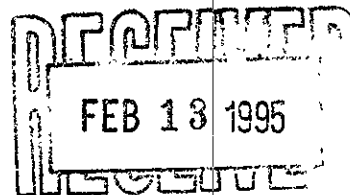

ATI Project Manager

Client: BP OIL COMPANY
RENTON, WASHINGTON

Project Name: BP SITE #11132
Project Number: 10-024
Project Location: 3201 35TH STREET, OAKLAND, CA
Accession Number: 501467

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

THIS IS A REVISED REPORT: February 3, 1995



Analysis Report

Analysis: DRO\PETRO. HYDROCARBON RANGE C10-C28

Accession: 501467
Client: BP OIL COMPANY
Project Number: 10-024
Project Name: BP SITE #11132
Project Location: 3201 35TH STREET, OAKLAND, CA
Department: SEMI-VOLATILE FUELS

"FINAL REPORT FORMAT - SINGLE"

Accession: 501467
Client: BP OIL COMPANY
Project Number: 10-024
Project Name: BP SITE #11132
Project Location: 3201 35TH STREET, 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: LIQUID
QC Level: N

Lab Id: 001 Sample Date/Time: 17-JAN-95 N/S
Client Sample Id: STA#11132 INF Received Date: 20-JAN-95
Batch: FPW011 Extraction Date: 20-JAN-95
Blank: A Dry Weight %: N/A Analysis Date: 24-JAN-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	960	200(+)	
ORTHO TER PHENYL	%REC/SURR	91	37-140	
ANALYST	INITIALS	SJF		

Comments:
(+) ADJUSTED REPORTING LIMIT DUE TO SAMPLE VOLUME ANALYZED.

"Method Report Summary"

Accession Number: 501467
Client: BP OIL COMPANY
Project Number: 10-024
Project Name: BP SITE #11132
Project Location: 3201 35TH STREET, OAKLAND, CA
Test: DRO\PETRO. HYDROCARBON RANGE C10-C28

Client Sample Id:	Parameter:	Unit:	Result:
STA#11132 INF	TOTAL PETROLEUM HYDROCARBON	UG/L	960

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: VOLATILES (624)

Accession: 501467
Client: BP OIL COMPANY
Project Number: 10-024
Project Name: BP SITE #11132
Project Location: 3201 35TH STREET, OAKLAND, CA
Department: ORGANIC/MS

"FINAL REPORT FORMAT - SINGLE"

Accession: 501467
 Client: BP OIL COMPANY
 Project Number: 10-024
 Project Name: BP SITE #11132
 Project Location: 3201 35TH STREET, OAKLAND, CA
 Test: VOLATILES (624)
 Analysis Method: 624 / Federal Register 40 CFR, Part 136, July 1, 1992
 Extraction Method: N/A
 Matrix: LIQUID
 QC Level: N

Lab Id: 001 Sample Date/Time: 17-JAN-95 N/S :
 Client Sample Id: STA#11132 INF Received Date: 20-JAN-95
 Batch: VIW007 Extraction Date: N/A
 Blank: C Dry Weight %: N/A Analysis Date: 20-JAN-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	960	10	
BROMODICHLOROMETHANE	UG/L	ND	1	
BROMOFORM	UG/L	ND	2	
BROMOMETHANE	UG/L	ND	1	
CARBON TETRACHLORIDE	UG/L	ND	2	
CHLOROETHANE	UG/L	ND	1	
CHLOROBENZENE	UG/L	ND	1	
2-CHLOROETHYLVINYL ETHER	UG/L	ND	5	
CHLOROFORM	UG/L	ND	2	
CHLOROMETHANE	UG/L	ND	2	
DIBROMOCHLOROMETHANE	UG/L	ND	1	
1,2-DICHLOROBENZENE	UG/L	ND	2	
1,3-DICHLOROBENZENE	UG/L	ND	2	
1,4-DICHLOROBENZENE	UG/L	ND	2	
1,1-DICHLOROETHANE	UG/L	ND	1	
1,2-DICHLOROETHANE	UG/L	ND	2	
TOTAL 1,2-DICHLOROETHENE	UG/L	ND	5	
1,1-DICHLOROETHENE	UG/L	ND	1	
1,2-DICHLOROPROPANE	UG/L	ND	2	
CIS-1,3-DICHLOROPROPENE	UG/L	ND	1	
TRANS-1,3-DICHLOROPROPENE	UG/L	ND	1	
ETHYL BENZENE	UG/L	6	1	
METHYLENE CHLORIDE	UG/L	ND	3	
1,1,2,2-TETRACHLOROETHANE	UG/L	ND	2	
TETRACHLOROETHENE	UG/L	ND	1	
TOLUENE	UG/L	83	5	
1,1,1-TRICHLOROETHANE	UG/L	ND	5	
1,1,2-TRICHLOROETHANE	UG/L	ND	2	
TRICHLOROETHENE	UG/L	ND	1	
TRICHLOROFLUOROMETHANE	UG/L	ND	1	
VINYL CHLORIDE	UG/L	ND	1	
TOTAL XYLENES	UG/L	300	20	
BROMOFLUOROBENZENE	%REC/SURR	103	82-115	
1,2-DICHLOROETHANE-D4	%REC/SURR	97	76-114	
TOLUENE-D8	%REC/SURR	103	88-115	
ANALYST	INITIALS	LP		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 501467
 Client: BP OIL COMPANY
 Project Number: 10-024
 Project Name: BP SITE #11132
 Project Location: 3201 35TH STREET, OAKLAND, CA
 Test: VOLATILES (624)
 Analysis Method: 624 / Federal Register 40 CFR, Part 136, July 1, 1992
 Extraction Method: N/A
 Matrix: LIQUID
 QC Level: N

Lab Id: 002 Sample Date/Time: 17-JAN-95 N/S
 Client Sample Id: STA#11132 A Received Date: 20-JAN-95
 Batch: VIW009 Extraction Date: N/A
 Blank: A Dry Weight %: N/A Analysis Date: 23-JAN-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	1	
BROMODICHLOROMETHANE	UG/L	ND	1	
BROMOFORM	UG/L	ND	2	
BROMOMETHANE	UG/L	ND	1	
CARBON TETRACHLORIDE	UG/L	ND	2	
CHLOROETHANE	UG/L	ND	1	
CHLOROETHANE	UG/L	ND	1	
2-CHLOROETHYL VINYL ETHER	UG/L	ND	5	
CHLOROFORM	UG/L	ND	2	
CHLOROMETHANE	UG/L	ND	2	
DIBROMOCHLOROMETHANE	UG/L	ND	1	
1,2-DICHLOROETHANE	UG/L	ND	2	
1,3-DICHLOROETHANE	UG/L	ND	2	
1,4-DICHLOROETHANE	UG/L	ND	2	
1,1-DICHLOROETHANE	UG/L	ND	1	
1,2-DICHLOROETHANE	UG/L	ND	2	
TOTAL 1,2-DICHLOROETHANE	UG/L	ND	5	
1,1-DICHLOROETHANE	UG/L	ND	1	
1,2-DICHLOROPROPANE	UG/L	ND	2	
CIS-1,3-DICHLOROPROPENE	UG/L	ND	1	
TRANS-1,3-DICHLOROPROPENE	UG/L	ND	1	
ETHYL BENZENE	UG/L	ND	1	
METHYLENE CHLORIDE	UG/L	ND	3	
1,1,2,2-TETRACHLOROETHANE	UG/L	ND	2	
TETRACHLOROETHANE	UG/L	ND	1	
TOLUENE	UG/L	ND	5	
1,1,1-TRICHLOROETHANE	UG/L	ND	5	
1,1,2-TRICHLOROETHANE	UG/L	ND	2	
TRICHLOROETHANE	UG/L	ND	1	
TRICHLOROFLUOROMETHANE	UG/L	ND	1	
VINYL CHLORIDE	UG/L	ND	1	
TOTAL XYLENES	UG/L	ND	2	
BROMOFLUOROBENZENE	%REC/SURR	99	82-115	
1,2-DICHLOROETHANE-D4	%REC/SURR	104	76-114	
TOLUENE-D8	%REC/SURR	106	88-115	
ANALYST	INITIALS	LP		

Comments:

"FINAL REPORT FORMAT - SINGLE"

Accession: 501467
 Client: BP OIL COMPANY
 Project Number: 10-024
 Project Name: BP SITE #11132
 Project Location: 3201 35TH STREET, OAKLAND, CA
 Test: VOLATILES (624)
 Analysis Method: 624 / Federal Register 40 CFR, Part 136, July 1, 1992
 Extraction Method: N/A
 Matrix: LIQUID
 QC Level: N

Lab Id: 003 Sample Date/Time: 17-JAN-95 N/S
 Client Sample Id: STA#11132 EFF Received Date: 20-JAN-95
 Batch: VIW009 Extraction Date: N/A
 Blank: A Dry Weight %: N/A Analysis Date: 23-JAN-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
BENZENE	UG/L	ND	1	
BROMODICHLOROMETHANE	UG/L	ND	1	
BROMOFORM	UG/L	ND	2	
BROMOMETHANE	UG/L	ND	1	
CARBON TETRACHLORIDE	UG/L	ND	2	
CHLOROETHANE	UG/L	ND	1	
CHLOROBENZENE	UG/L	ND	1	
2-CHLOROETHYLVINYL ETHER	UG/L	ND	5	
CHLOROFORM	UG/L	ND	2	
CHLOROMETHANE	UG/L	ND	2	
DIBROMOCHLOROMETHANE	UG/L	ND	1	
1,2-DICHLOROBENZENE	UG/L	ND	2	
1,3-DICHLOROBENZENE	UG/L	ND	2	
1,4-DICHLOROBENZENE	UG/L	ND	2	
1,1-DICHLOROETHANE	UG/L	ND	1	
1,2-DICHLOROETHANE	UG/L	ND	2	
TOTAL 1,2-DICHLOROETHENE	UG/L	ND	5	
1,1-DICHLOROETHENE	UG/L	ND	1	
1,2-DICHLOROPROPANE	UG/L	ND	2	
CIS-1,3-DICHLOROPROPENE	UG/L	ND	1	
TRANS-1,3-DICHLOROPROPENE	UG/L	ND	1	
ETHYL BENZENE	UG/L	ND	1	
METHYLENE CHLORIDE	UG/L	ND	3	
1,1,2,2-TETRACHLOROETHANE	UG/L	ND	2	
TETRACHLOROETHENE	UG/L	ND	1	
TOLUENE	UG/L	ND	5	
1,1,1-TRICHLOROETHANE	UG/L	ND	5	
1,1,2-TRICHLOROETHANE	UG/L	ND	2	
TRICHLOROETHENE	UG/L	ND	1	
TRICHLOROFLUOROMETHANE	UG/L	ND	1	
VINYL CHLORIDE	UG/L	ND	1	
TOTAL XYLENES	UG/L	ND	2	
BROMOFLUOROBENZENE	%REC/SURR	103	82-115	
1,2-DICHLOROETHANE-D4	%REC/SURR	102	76-114	
TOLUENE-D8	%REC/SURR	104	88-115	
ANALYST	INITIALS	LP		

Comments:

"Method Report Summary"

Accession Number: 501467
Client: BP OIL COMPANY
Project Number: 10-024
Project Name: BP SITE #11132
Project Location: 3201 35TH STREET, OAKLAND, CA
Test: VOLATILES (624)

Client Sample Id:	Parameter:	Unit:	Result:
STA#11132 INF	BENZENE	UG/L	960
	ETHYL BENZENE	UG/L	6
	TOLUENE	UG/L	83
	TOTAL XYLENES	UG/L	300

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.
MG/M3 = MILLIGRAMS PER CUBIC METER.
NG = NANOGRAMS.
UG = MICROGRAMS.
PPBV = PARTS PER BILLION/VOLUME.
< = LESS THAN DETECTION LIMIT.
* = VALUES OUTSIDE OF QUALITY CONTROL LIMITS
J = THE REPORTED VALUE IS EITHER LESS THAN THE REPORTING LIMIT BUT
GREATER THAN ZERO, OR QUANTITATED AS A TIC; THEREFORE, IT IS
ESTIMATED.
JJ = REPORTED VALUE IS ESTIMATED DUE TO MATRIX INTERFERENCE.
ND = NOT DETECTED ABOVE REPORT LIMIT.
RPT LIMIT = REPORTING LIMITS BASED ON METHOD DETECTION LIMIT STUDIES.
RPD = RELATIVE PERCENT DIFFERENCE (OR DEVIATION)

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

ORGANIC SOILS ARE REPORTED ON A DRY WEIGHT BASIS.

DUE TO THE NATURE OF THE SAMPLE MATRIX, MATRIX SPIKE/MATRIX SPIKE
DUPLICATE ANALYSIS CANNOT BE PERFORMED FOR AIR ANALYSIS.

LP = LEVERNE PETERSON	RW = RITA WINGO
DWB = DAVID BOWERS	LD = LARRY DILMORE
DB = DENNIS BESON	LL = LANCE LARSON
RB = RAFAEL BARRAZA	JA = JENNIFER ALEXANDER
PL = PAUL LESCHENSKY	



SIGNATURE PAGE

Reviewed by:



ATI Project Manager

Client: BP OIL COMPANY
RENTON, WASHINGTON

Project Name: BP SITE #11132
Project Number: 10-024
Project Location: 3201 35TH STREET, OAKLAND, CA
Accession Number: 501467

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

THIS IS A REVISED REPORT: February 3, 1995

DEFINITE
FEB 07 1995

Analysis Report

Analysis: DRO\PETRO. HYDROCARBON RANGE C10-C28

Accession: 501467
Client: BP OIL COMPANY
Project Number: 10-024
Project Name: BP SITE #11132
Project Location: 3201 35TH STREET, OAKLAND, CA
Department: SEMI-VOLATILE FUELS

"FINAL REPORT FORMAT - SINGLE"

Accession: 501467
Client: BP OIL COMPANY
Project Number: 10-024
Project Name: BP SITE #11132
Project Location: 3201 35TH STREET, 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: LIQUID
QC Level: N

Lab Id: 001 Sample Date/Time: 17-JAN-95 N/S
Client Sample Id: STA#11132 INF Received Date: 20-JAN-95
Batch: FPW011 Extraction Date: 20-JAN-95
Blank: A Dry Weight %: N/A Analysis Date: 24-JAN-95

Parameter:	Units:	Results:	Rpt Lmts:	Q:
TOTAL PETROLEUM HYDROCARBON	UG/L	960	200(+)	
ORTHO TER PHENYL	%REC/SURR	91	37-140	
ANALYST	INITIALS	SJF		

Comments:
(+) ADJUSTED REPORTING LIMIT DUE TO SAMPLE VOLUME ANALYZED.

"Method Report Summary"

Accession Number: 501467
Client: BP OIL COMPANY
Project Number: 10-024
Project Name: BP SITE #11132
Project Location: 3201 35TH STREET, OAKLAND, CA
Test: DRO\PETRO. HYDROCARBON RANGE C10-C28

Client Sample Id:	Parameter:	Unit:	Result:
STA#11132 INF	TOTAL PETROLEUM HYDROCARBON	UG/L	960

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



501467

CHAIN OF CUSTODY

No.058854 Page 1 of 1

CONSULTANT'S NAME ALISTO ENGINEERING		ADDRESS 1777 OAKLAND Blvd.		CITY Walnut Creek	STATE CA	ZIP CODE 94596
BP SITE NUMBER STAFF 11132	BP CORNER ADDRESS/CITY 3201 35th STREET OAKLAND, CA				CONSULTANT PROJECT NUMBER 10-024	
CONSULTANT PROJECT MANAGER PETE BEAVER		PHONE NUMBER 510-295-1650		FAX NUMBER 510-295-1823		CONSULTANT CONTRACT NUMBER Q028838
BP CONTACT SCOTT HOOTON		BP ADDRESS BENTON, WA		PHONE NUMBER		FAX NO.
LAB CONTACT Diana Spence		LABORATORY ADDRESS PENSACOLA, FL		PHONE NUMBER 904 474-1001		FAX NO.
SAMPLED BY (Please Print Name) JOHN BICKING		SAMPLED BY (Signature) <i>John K. Biding</i>		SHIPMENT DATE		SHIPMENT METHOD

TAT: 24 Hours 48 Hours 1 Week Standard 2 Weeks **EPA MODIFIED** ANALYSIS REQUIRED

AIRBILL NUMBER

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	TPH D	6	2	4											COMMENTS	
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #																
STAFF 11132 INF			4			✓	✓														
STAFF 11132 A			3				✓														
STAFF 11132 EFF			3				✓														

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<i>John K. Biding</i>	1/18/95	0755	<i>Brian Sender ATI</i>	1/19/95	10/30	
<i>Brian Sender</i>	1/19/95	1030	<i>Ally G. Wells ATI</i>	1/20/95	1007	



Analytical Technologies, Inc.

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

ATI I.D.: 502264

March 03, 1995

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

Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA
Project # : G247985/10-024-04-001


Attention: PETER BEAVER


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

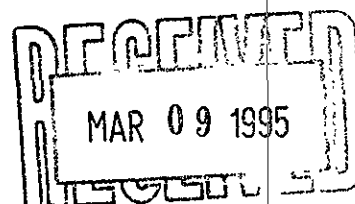
<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
February 23, 1995	3	WATER

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


ALAN J. KLEINSCHMIDT
LABORATORY MANAGER





SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

Report Date: March 03, 1995
ATI I.D. : 502264

Table with 3 columns: ATI #, Client Description, Matrix, Date Collected. Rows include STA #11132 INF, STA #11132 A, and STA #11132 EFF, all with Matrix WATER and Date Collected 21-FEB-95.

---TOTALS---

Summary table with 2 columns: Matrix, # Samples. Row: 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 # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

ATI I.D.: 502264

Analysis	Technique/Description
EPA 624 (GC/MS FOR VOLATILE ORGANICS) MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)	GC/MASS SPECTROMETER GC/FLAME IONIZATION DETECTOR

GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)
Client : ALISTO ENGINEERING **ATI I.D.** : 502264
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA #11132 INF	WATER	21-FEB-95	23-FEB-95	23-FEB-95	1.00

Parameter	Units	1
FUEL HYDROCARBONS	MG/L	4.4
HYDROCARBON RANGE		C6-C14
HYDROCARBONS QUANTITATED USING		GASOLINE

<u>SURROGATES</u>		
BIS(2-ETHYLHEXYL) PHTHALATE	%	114

GAS CHROMATOGRAPHY - QUALITY CONTROL

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Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS) ATI I.D. : 502264
Blank I.D. : 34450 Date Extracted: 23-FEB-95
Client : ALISTO ENGINEERING Date Analyzed : 23-FEB-95
Project # : G247985/10-024-04-001 Dil. Factor : 1.00
Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

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

Test	: MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)	ATI I.D.	: 502264
MSMSD #	: 73326	Date Extracted:	23-FEB-95
Client	: ALISTO ENGINEERING	Date Analyzed:	24-FEB-95
		Sample Matrix:	WATER
Project #	: G247985/10-024-04-001	REF I.D.	: 502252-01
Project Name:	BP SITE #11132/3201 35TH AVENUE OAKLAND, CA		

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
FUEL HYDROCARBONS	MG/L	<0.50	10	8.6	86	8.1	81	6

% 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 #: 54687
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name : BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

ATI I.D. : 502264
 Date Extracted: 23-FEB-95
 Date Analyzed : 23-FEB-95
 Sample Matrix : WATER

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

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

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
 Client : ALISTO ENGINEERING ATI I.D. : 502264
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA #11132 INF	WATER	21-FEB-95	N/A	01-MAR-95	5.00
2	STA #11132 A	WATER	21-FEB-95	N/A	01-MAR-95	1.00
3	STA #11132 EFF	WATER	21-FEB-95	N/A	01-MAR-95	1.00

Parameter	Units	1	2	3
CHLOROMETHANE	UG/L	<50	<10	<10
VINYL CHLORIDE	UG/L	<25	<5	<5
BROMOMETHANE	UG/L	<50	<10	<10
CHLOROETHANE	UG/L	<25	<5	<5
ACETONE	UG/L	<50	<10	<10
1,1-DICHLOROETHENE	UG/L	<5	<1	<1
METHYLENE CHLORIDE	UG/L	<25	<5	<5
CARBON DISULFIDE	UG/L	<10	<2	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<5	<1	<1
1,1-DICHLOROETHANE	UG/L	<5	<1	<1
CIS-1,2-DICHLOROETHENE	UG/L	<5	<1	<1
CHLOROFORM	UG/L	<5	<1	<1
2-BUTANONE (MEK)	UG/L	<50	<10	<10
1,1,1-TRICHLOROETHANE	UG/L	<5	<1	<1
CARBON TETRACHLORIDE	UG/L	<5	<1	<1
1,2-DICHLOROETHANE	UG/L	15	<1	<1
BENZENE	UG/L	980	<1	<1
TRICHLOROETHENE	UG/L	<5	<1	<1
1,2-DICHLOROPROPANE	UG/L	<5	<1	<1
BROMODICHLOROMETHANE	UG/L	<5	<1	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<50	<10	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<5	<1	<1
TOLUENE	UG/L	130	<2	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<5	<1	<1
2-HEXANONE (MBK)	UG/L	<50	<10	<10
1,1,2-TRICHLOROETHANE	UG/L	<5	<1	<1
TETRACHLOROETHENE	UG/L	<5	<1	<1
DIBROMOCHLOROMETHANE	UG/L	<5	<1	<1
CHLOROBENZENE	UG/L	<5	<1	<1
ETHYLBENZENE	UG/L	10	<1	<1
XYLENES (TOTAL)	UG/L	450	<1	<1
STYRENE	UG/L	<10	<2	<2
BROMOFORM	UG/L	<25	<5	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<5	<1	<1
DICHLORODIFLUOROMETHANE	UG/L	<50	<10	<10
TRICHLOROFLUOROMETHANE	UG/L	<25	<5	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<25	<5	<5
1,2-DICHLOROETHANE	UG/L	<25	<5	<5



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

ATI I.D. : 502264

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA #11132 INF	WATER	21-FEB-95	N/A	01-MAR-95	5.00
2	STA #11132 A	WATER	21-FEB-95	N/A	01-MAR-95	1.00
3	STA #11132 EFF	WATER	21-FEB-95	N/A	01-MAR-95	1.00

Parameter	Units	1	2	3
1,3-DICHLOROBENZENE	UG/L	<25	<5	<5
1,4-DICHLOROBENZENE	UG/L	<25	<5	<5

SURROGATES

1,2-DICHLOROETHANE-D4	%	110	110	110
TOLUENE-D8	%	102	102	103
BFB	%	100	98	98



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

ATI I.D.: 502264

Sample Parameters	Units	Results
1 ALIPHATIC HYDROCARBON C5	UG/L	100
OXYGENATED HYDROCARBON	UG/L	1000
ETHYLMETHYL BENZENE ISOMER	UG/L	60
TRIMETHYL BENZENE ISOMER	UG/L	100
TRIMETHYL BENZENE ISOMER	UG/L	40
2 OXYGENATED HYDROCARBON	UG/L	30
3 OXYGENATED HYDROCARBON	UG/L	10

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

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Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
 Blank I.D. : 34504
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

ATI I.D. : 502264
 Date Extracted: N/A
 Date Analyzed : 01-MAR-95
 Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	<10
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFLUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROBENZENE	UG/L	<5
1,3-DICHLOROBENZENE	UG/L	<5
1,4-DICHLOROBENZENE	UG/L	<5
SURROGATES		
1,2-DICHLOROETHANE-D4	%	105
TOLUENE-D8	%	100
BFB	%	97



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 34504 ATI I.D. : 502264
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

Parameters	Units	Results
NONE DETECTED	N/A	N/A



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
MSMSD # : 73479
Client : ALISTO ENGINEERING

ATI I.D. : 502264
Date Extracted: N/A
Date Analyzed : 01-MAR-95
Sample Matrix : WATER
REF I.D. : 502264-03

Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA

Table with 9 columns: Parameters, Units, Sample Result, Conc Spike, Spiked Sample, % Rec, Dup Spike, Dup % Rec, RPD. Rows include 1,1-DICHLOROETHENE, BENZENE, TRICHLOROETHENE, TOLUENE, and CHLOROBENZENE.

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

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL
BLANK SPIKE

Test	: EPA 8240 (GC/MS FOR VOLATILE ORGANICS)	ATI I.D.	: 502264
Blank Spike #:	54810	Date Extracted:	N/A
Client	: ALISTO ENGINEERING	Date Analyzed :	01-MAR-95
Project #	: G247985/10-024-04-001	Sample Matrix :	WATER
Project Name	: BP SITE #11132/3201 35TH AVENUE OAKLAND, CA		

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	52	50	104
BENZENE	UG/L	<1	51	50	102
TRICHLOROETHENE	UG/L	<1	51	50	102
TOLUENE	UG/L	<2	54	50	108
CHLOROBENZENE	UG/L	<1	59	50	118

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



502264

CHAIN OF CUSTODY

No.061496

Page 1 of 1

CONSULTANT'S NAME ALISTO ENGINEERING		ADDRESS 1777 OAKLAND BLVD #200		CITY WALNUT CREEK CA	STATE CA	ZIP CODE 94596
BP SITE NUMBER 11132	BP CORNER ADDRESS/CITY 3201 35th Avenue OAKLAND, CA			CONSULTANT PROJECT NUMBER 10-024-04-001		
CONSULTANT PROJECT MANAGER PETE BEAVER		PHONE NUMBER (510) 295-1650		FAX NUMBER 510 295 1823		CONSULTANT CONTRACT NUMBER G247985
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 BICKING		SAMPLED BY (Signature) <i>John K. Bicking</i>		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	Hcl	TPH(D)	624											COMMENTS	
	COLLECTION TIME		NO.	TYPE (VOL.)	LAB SAMPLE #															
STA# 11132 INF		2/22/95	01			✓	✓													
STA# 11132 A		02				✓	✓													
STA# 11132 EFF		03				✓	✓													
OK witnessed by HCB 2/22/95																				

RELINQUISHED BY / AFFILIATION <i>John K. Bicking</i>	DATE 2/22	TIME 1600	ACCEPTED BY / AFFILIATION <i>[Signature]</i>	DATE 2/23/95	TIME 9:00	ADDITIONAL COMMENTS 3.02
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Analytical **Technologies, Inc.**

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

ATI I.D.: 503226

March 29, 1995

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

Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA
Project # : G247985/10-024-04-001


Attention: PETE BEAVER

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

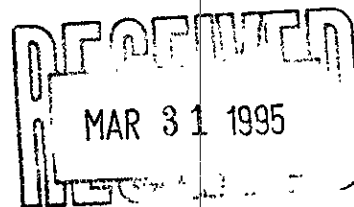
<u>Date Received</u>	<u>Quantity</u>	<u>Matrix</u>
March 17, 1995	4	WATER

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



SAMPLE CROSS REFERENCE

Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

Report Date: March 29, 1995
ATI I.D. : 503226

ATI #	Client Description	Matrix	Date Collected
1	STA#11132 INF	WATER	14-MAR-95
2	STA#11132 A	WATER	14-MAR-95
3	STA#11132 EFF	WATER	14-MAR-95
4	STA#11132 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.

ANALYTICAL SCHEDULE

Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D.: 503226

Analysis	Technique/Description
EPA 624 (GC/MS FOR VOLATILE ORGANICS)	GC/MASS SPECTROMETER
MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)	GC/FLAME IONIZATION DETECTOR



GAS CHROMATOGRAPHY RESULTS

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS: C6-C24)
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226

Table with 7 columns: Sample #, Client ID, Matrix, Date Sampled, Date Extracted, Date Analyzed, Dil. Factor. Row 1: 1, STA#11132 INF, WATER, 14-MAR-95, 17-MAR-95, 18-MAR-95, 1.00

Table with 3 columns: Parameter, Units, Value. Rows: FUEL HYDROCARBONS (3.0), HYDROCARBON RANGE (C6-C14), HYDROCARBONS QUANTITATED USING (GASOLINE), SURROGATES (BIS(2-ETHYLHEXYL) PHTHALATE, 116)



GAS CHROMATOGRAPHY - QUALITY CONTROL

REAGENT BLANK

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
 Blank I.D. : 34757
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226
 Date Extracted: 17-MAR-95
 Date Analyzed : 17-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	%	120



GAS CHROMATOGRAPHY - QUALITY CONTROL

MSMSD

Test : MOD EPA 8015-CDOHS (FUEL HYDROCARBONS)
MSMSD # : 74163
Client : ALISTO ENGINEERING

ATI I.D. : 503226
Date Extracted: 17-MAR-95
Date Analyzed : 20-MAR-95
Sample Matrix : WATER
REF I.D. : 503213-01

Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVE., 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, 13, 130, 13, 130, 0

% 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 #: 55285
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name : BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226
 Date Extracted: 17-MAR-95
 Date Analyzed : 17-MAR-95
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
FUEL HYDROCARBONS	MG/L	<0.50	10	10	100

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



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)

Client : ALISTO ENGINEERING

ATI I.D. : 503226

Project # : G247985/10-024-04-001

Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA#11132 INF	WATER	14-MAR-95	N/A	27-MAR-95	5.00
2	STA#11132 A	WATER	14-MAR-95	N/A	24-MAR-95	1.00
3	STA#11132 EFF	WATER	14-MAR-95	N/A	25-MAR-95	1.00

Parameter	Units	1	2	3
CHLOROMETHANE	UG/L	<50	<10	<10
VINYL CHLORIDE	UG/L	<25	<5	<5
BROMOMETHANE	UG/L	<50	<10	<10
CHLOROETHANE	UG/L	<25	<5	<5
ACETONE	UG/L	390B	<10	<10
1,1-DICHLOROETHENE	UG/L	<5	<1	<1
METHYLENE CHLORIDE	UG/L	<25	<5	<5
CARBON DISULFIDE	UG/L	<10	<2	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<5	<1	<1
1,1-DICHLOROETHANE	UG/L	<5	<1	<1
CIS-1,2-DICHLOROETHENE	UG/L	<5	<1	<1
CHLOROFORM	UG/L	<5	<1	<1
2-BUTANONE (MEK)	UG/L	<50	<10	<10
1,1,1-TRICHLOROETHANE	UG/L	<5	<1	<1
CARBON TETRACHLORIDE	UG/L	<5	<1	<1
1,2-DICHLOROETHANE	UG/L	13	<1	<1
BENZENE	UG/L	740	<1	<1
TRICHLOROETHENE	UG/L	83	<1	<1
1,2-DICHLOROPROPANE	UG/L	<5	<1	<1
BROMODICHLOROMETHANE	UG/L	<5	<1	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<50	<10	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<5	<1	<1
TOLUENE	UG/L	<10	<2	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<5	<1	<1
2-HEXANONE (MBK)	UG/L	<50	<10	<10
1,1,2-TRICHLOROETHANE	UG/L	<5	<1	<1
TETRACHLOROETHENE	UG/L	<5	<1	<1
DIBROMOCHLOROMETHANE	UG/L	<5	<1	<1
CHLOROBENZENE	UG/L	<5	<1	<1
ETHYLBENZENE	UG/L	10	<1	<1
XYLENES (TOTAL)	UG/L	300	<1	<1
STYRENE	UG/L	<10	<2	<2
BROMOFORM	UG/L	<25	<5	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<5	<1	<1
DICHLORODIFLUOROMETHANE	UG/L	<50	<10	<10
TRICHLOROFUOROMETHANE	UG/L	<25	<5	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<25	<5	<5
1,2-DICHLOROBENZENE	UG/L	<25	<5	<5



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
1	STA# 132 INF	WATER	14-MAR-95	N/A	27-MAR-95	5.00
2	STA#11132 A	WATER	14-MAR-95	N/A	24-MAR-95	1.00
3	STA#11132 EWF	WATER	14-MAR-95	N/A	25-MAR-95	1.00

Parameter	Units	1	2	3		
1,3-DICHLOROBENZENE	UG/L	<25	<5	<5		
1,4-DICHLOROBENZENE	UG/L	<25	<5	<5		
SURROGATES						
1,2-DICHLOROETHANE-D4	%	116	110	117		
TOLUENE-D8	%	107	107	105		
BFB	%	102	100	102		



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

WATER
ATI I.D.: 503226

Sample Parameters	Units	Results
1 ALIPHATIC HYDROCARBON C4	UG/L	80
ALIPHATIC HYDROCARBON C5	UG/L	100
OXYGENATED HYDROCARBON	UG/L	1000
ETHYLMETHYL BENZENE ISOMER	UG/L	50
TRIMETHYL BENZENE ISOMER	UG/L	70
2 OXYGENATED HYDROCARBON	UG/L	30
3 OXYGENATED HYDROCARBON	UG/L	20



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226

Sample Client ID #	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	STA#11132 FIELD BLANK	14-MAR-95	N/A	27-MAR-95	1.00

Parameter	Units	4
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	<10
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFLUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROBENZENE	UG/L	<5



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY RESULTS

Test : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226

Sample #	Client ID	Matrix	Date Sampled	Date Extracted	Date Analyzed	Dil. Factor
4	STA#11132 FIELD BLANK	WATER	14-MAR-95	N/A	27-MAR-95	1.00

Parameter	Units	4
1,3-DICHLOROBENZENE	UG/L	<5
1,4-DICHLOROBENZENE	UG/L	<5

SURROGATES

1,2-DICHLOROETHANE-D4	%	107
TOLUENE-D8	%	105
BFB	%	101



ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Method : EPA 624 (GC/MS FOR VOLATILE ORGANICS)
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

WATER
ATI I.D.: 503226

Sample Parameters	Units	Results
4 OXYGENATED HYDROCARBON	UG/L	20



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
 Blank I.D. : 34809
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226
 Date Extracted: N/A
 Date Analyzed : 24-MAR-95
 Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	<10
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFLUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROBENZENE	UG/L	<5
1,3-DICHLOROBENZENE	UG/L	<5
1,4-DICHLOROBENZENE	UG/L	<5
SURROGATES		
1,2-DICHLOROETHANE-D4	%	111
TOLUENE-D8	%	107
BFB	%	104



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 34809
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226

Parameters	Units	Results
NONE DETECTED	N/A	N/A

GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL
REAGENT BLANK

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
 Blank I.D. : 34818
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226
 Date Extracted: N/A
 Date Analyzed : 27-MAR-95
 Dil. Factor : 1.00

Parameters	Units	Results
CHLOROMETHANE	UG/L	<10
VINYL CHLORIDE	UG/L	<5
BROMOMETHANE	UG/L	<10
CHLOROETHANE	UG/L	<5
ACETONE	UG/L	16*L
1,1-DICHLOROETHENE	UG/L	<1
METHYLENE CHLORIDE	UG/L	<5
CARBON DISULFIDE	UG/L	<2
TRANS-1,2-DICHLOROETHENE	UG/L	<1
1,1-DICHLOROETHANE	UG/L	<1
CIS-1,2-DICHLOROETHENE	UG/L	<1
CHLOROFORM	UG/L	<1
2-BUTANONE (MEK)	UG/L	<10
1,1,1-TRICHLOROETHANE	UG/L	<1
CARBON TETRACHLORIDE	UG/L	<1
1,2-DICHLOROETHANE	UG/L	<1
BENZENE	UG/L	<1
TRICHLOROETHENE	UG/L	<1
1,2-DICHLOROPROPANE	UG/L	<1
BROMODICHLOROMETHANE	UG/L	<1
4-METHYL-2-PENTANONE (MIBK)	UG/L	<10
CIS-1,3-DICHLOROPROPENE	UG/L	<1
TOLUENE	UG/L	<2
TRANS-1,3-DICHLOROPROPENE	UG/L	<1
2-HEXANONE (MBK)	UG/L	<10
1,1,2-TRICHLOROETHANE	UG/L	<1
TETRACHLOROETHENE	UG/L	<1
DIBROMOCHLOROMETHANE	UG/L	<1
CHLOROBENZENE	UG/L	<1
ETHYLBENZENE	UG/L	<1
XYLENES (TOTAL)	UG/L	<1
STYRENE	UG/L	<2
BROMOFORM	UG/L	<5
1,1,2,2-TETRACHLOROETHANE	UG/L	<1
DICHLORODIFLUOROMETHANE	UG/L	<10
TRICHLOROFLUOROMETHANE	UG/L	<5
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	UG/L	<5
1,2-DICHLOROBENZENE	UG/L	<5
1,3-DICHLOROBENZENE	UG/L	<5
1,4-DICHLOROBENZENE	UG/L	<5
SURROGATES		
1,2-DICHLOROETHANE-D4	%	105
TOLUENE-D8	%	104
BFB	%	101



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

REAGENT BLANK
ADDITIONAL COMPOUNDS (SEMI-QUANTITATED)

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
Blank I.D. : 34818 ATI I.D. : 503226
Client : ALISTO ENGINEERING
Project # : G247985/10-024-04-001
Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

Parameters	Units	Results
NONE DETECTED	N/A	N/A



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

MSMSD

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
 MSMSD # : 74270
 Client : ALISTO ENGINEERING

ATI I.D. : 503226
 Date Extracted: N/A
 Date Analyzed : 24-MAR-95
 Sample Matrix : WATER
 REF I.D. : 503226-02

Project # : G247985/10-024-04-001
 Project Name: BP SITE #11132/3201 35TH AVE., OAKLAND, CA

Parameters	Units	Sample Result	Conc Spike	Spiked Sample	% Rec	Dup Spike	Dup % Rec	RPD
1,1-DICHLOROETHENE	UG/L	<1	50	55	110	55	110	0
BENZENE	UG/L	<1	50	53	106	52	104	2
TRICHLOROETHENE	UG/L	<1	50	51	102	50	100	2
TOLUENE	UG/L	<2	50	54	108	56	112	4
CHLOROBENZENE	UG/L	<1	50	58	116	59	118	2

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

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



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
 Blank Spike #: 55373
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name : BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226
 Date Extracted : N/A
 Date Analyzed : 24-MAR-95
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	56	50	112
BENZENE	UG/L	<1	52	50	104
TRICHLOROETHENE	UG/L	<1	51	50	102
TOLUENE	UG/L	<2	54	50	108
CHLOROBENZENE	UG/L	<1	59	50	118

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



GAS CHROMATOGRAPHY/MASS SPECTROSCOPY - QUALITY CONTROL

BLANK SPIKE

Test : EPA 8240 (GC/MS FOR VOLATILE ORGANICS)
 Blank Spike #: 55395
 Client : ALISTO ENGINEERING
 Project # : G247985/10-024-04-001
 Project Name : BP SITE #11132/3201 35TH AVE., OAKLAND, CA

ATI I.D. : 503226
 Date Extracted: N/A
 Date Analyzed : 27-MAR-95
 Sample Matrix : WATER

Parameters	Units	Blank Result	Spiked Sample	Spike Conc.	% Rec
1,1-DICHLOROETHENE	UG/L	<1	54	50	108
BENZENE	UG/L	<1	51	50	102
TRICHLOROETHENE	UG/L	<1	48	50	96
TOLUENE	UG/L	<2	51	50	102
CHLOROBENZENE	UG/L	<1	54	50	108

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

ANALYTICAL TECHNOLOGIES, INC.
SAN DIEGO
FLAGS

ORGANICS

FLAG MESSAGE DESCRIPTION

A A TIC IS A SUSPECTED ALDOL-CONDENSATION PRODUCT
B ANALYTE FOUND IN THE ASSOCIATED REAGENT BLANK
C PESTICIDE, WHERE THE IDENTIFICATION WAS CONFIRMED BY GC/MS
CO THESE COMPOUNDS CO-ELUTE AND ARE QUANTITATED AS ONE PEAK
D COMPOUND IDENTIFIED IN AN ANALYSIS AT SECONDARY DILUTION
E ANALYTE AMOUNT EXCEEDS THE CALIBRATION RANGE
J ESTIMATED VALUE
H QUANTIFIED AS DIESEL BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH
THAT OF DIESEL
K QUANTIFIED AS KEROSENE BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH
THAT OF KEROSENE
L QUANTIFIED AS GASOLINE BUT CHROMATOGRAPHIC PATTERN DOES NOT MATCH
THAT OF GASOLINE
N PRESUMPTIVE EVIDENCE OF A COMPOUND
P PESTICIDE/AROCLOR TARGET ANALYTE, WHERE THERE IS GREATER THAN 25%
DIFFERENCE FOR DETECTED CONCENTRATION BETWEEN 2 GC COLUMNS
TR COMPOUND DETECTED AT AN UNQUANTIFIABLE TRACE LEVEL
U COMPOUND WAS ANALYZED FOR BUT NOT DETECTED
X SEE CASE NARRATIVE
Y SEE CASE NARRATIVE
Z SEE CASE NARRATIVE
* OUTSIDE OF QUALITY CONTROL LIMITS
*D COMPOUND ANALYZED FROM A SECONDARY ANALYSIS
*F RESULT OUTSIDE OF ATI'S QUALITY CONTROL LIMITS
*G RESULT OUTSIDE QUALITY CONTROL LIMITS. INSUFFICIENT SAMPLE FOR RE-
EXTRACTION/ANALYSIS
*H RESULT OUTSIDE OF LIMITS DUE TO SAMPLE MATRIX INTERFERENCE
*I BECAUSE OF NECESSARY SAMPLE DILUTION, VALUE WAS OUTSIDE QC LIMITS
*K DUE TO THE NECESSARY DILUTION OF THE SAMPLE, RESULT WAS NOT ATTAINABLE
*L ANALYTE IS A SUSPECTED LAB CONTAMINANT
*P A STANDARD WAS USED TO QUANTITATE THIS VALUE
*R DATA IS NOT USABLE
*T SURROGATE RECOVERY IS OUTSIDE QC CONTROL LIMITS. NO CORRECTIVE
ACTION INDICATED BY METHOD
*V SAMPLE RESULT IS >4X SPIKED CONCENTRATION, THEREFORE SPIKE IS NOT DETECTABLE
*Y RESULT NOT ATTAINABLE DUE TO SAMPLE MATRIX INTERFERENCE
@A RESULTS OUT OF LIMITS DUE TO SAMPLE NON-HOMOGENEITY
@C *VARIABLE MESSAGE*
@D RESULT COULD NOT BE CONFIRMED DUE TO MATRIX INTERFERENCE ON THE
CONFIRMATION COLUMN
@E RESULT MAY BE FALSELY ELEVATED DUE TO SAMPLE MATRIX INTERFERENCE
@F RESULT OUTSIDE OF CONTRACT SPECIFIED QUALITY CONTROL LIMITS
@G RESULT OUTSIDE OF CONTRACT SPECIFIED ADVISORY LIMITS
@H DETECTION LIMIT ELEVATED DUE TO MATRIX INTERFERENCE
@M RESULT NOT CONFIRMED BY U.V. DUE TO SAMPLE MATRIX INTERFERENCE
@N RESULT NOT CONFIRMED BY FLUORESCENCE DUE TO SAMPLE MATRIX INTERFERENCE
@P RESULT QUANTITATED USING FLUORESCENCE ONLY DUE TO THE LOW CONCENTRATION
@Q DETECTION LIMIT ELEVATED DUE TO LIMITED SAMPLE FOR ANALYSIS
@T RESULT DUE TO TCLP EXTRACTION MATRIX INTERFERENCE. NO QC LIMITS
HAVE BEEN ESTABLISHED
@U SAMPLE CHROMATOGRAM DOES NOT RESEMBLE COMMON FUEL HYDROCARBON
FINGERPRINTS
@Z SAMPLE CHROMATOGRAM DOES NOT RESEMBLE A FUEL HYDROCARBON

