0.4

ALISTO ENGINEERING GROUP

high conc. being cycled into treatment system, and none coming out - Good.
but total lbs of TPH removed seems small. is it due to low GPM flow rate?
on avg < 0.5 gpm. most recently at 1.95 gpm through.

April 11, 1997

10-025-15-002

Mr. Raymond Maxwell
East Bay Municipal Utility District
Source Control Division
Post Office Box 24055
Oakland, California 94623-1055

Subject: Groundwater Remediation System Semiannual Report - April 1997
BP Oil Company Service Station 11133
2220 98th Avenue
Oakland, California
Wastewater Discharge Permit No. 503-00381

Dear Mr. Maxwell:

On behalf of BP Oil Company, we have enclosed a summary of analytical results for the groundwater remediation system sampling events and quantity discharged for BP Oil Company Service Station No. 11133, 2220 98th Avenue, Oakland, California. This report covers October 1, 1996 through March 31, 1997.

The results of sample analysis indicate that the system effluent is in compliance with the discharge requirements during this reporting period. 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 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."

1575 TREAT BOULEVARD, SUITE 201 • WALNUT CREEK, CA 94598 • (510) 295-1650 • FAX (510) 295-1823
CONTRACTORS LICENSE NO. A-652544

Please call if you have questions regarding this report.

Sincerely,

ALISTO ENGINEERING GROUP

Peter Beaver
Engineering Manager

Enclosures

cc: Mr. Scott Hooton, BP Oil Company
Ms. Eva Chu, Alameda County Health Care Services Agency

TABLE 1 - FLOW DATA FOR GROUNDWATER REMEDIATION SYSTEM
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

Date		Flow Meter Reading (gallons)	Effluent Discharged (gallons)	Total Effluent Discharged (gallons)	Average Flow Rate (gpd)	Average Flow Rate (gpm)	Influent TPH-G Concentration (ug/l)	Period Hydrocarbons Removed (lb)	Cumulative Hydrocarbons Removed (lb)
03/21/95		0	0	0	---	---	180,000	NC	NC
03/27/95		3,069	3,069	3,069	512	0.71	210,000	5.4	5.4
05/02/95		4,280	1,211	4,280	34	0.05	160,000	1.6	7.0
06/01/95		5,390	1,110	5,390	37	0.05	330,000	3.1	10.1
06/28/95		7,634	2,244	7,634	83	0.12	200,000	3.7	13.8
07/31/95		9,480	1,846	9,480	56	0.08	200,000	3.1	16.9
08/30/95		11,869	2,389	11,869	80	0.11	160,000	3.2	20.1
09/28/95		19,572	7,703	19,572	266	0.37	230,000	14.8	34.9
10/18/95		21,266	1,694	21,266	85	0.12	280,000	4.0	38.8
11/14/95		28,880	7,614	28,880	282	0.39	150,000	9.5	48.3
12/27/95		39,395	10,515	39,395	245	0.34	99,000	8.7	57.0
01/22/96		42,994	3,599	42,994	138	0.19	150,000	4.5	61.5
02/27/96		53,058	10,064	53,058	280	0.39	230,000	19.3	80.8
03/01/96		55,609	2,551	55,609	850	1.18	230,000	4.9	85.7
03/25/96		59,409	3,800	59,409	158	0.22	180,000	5.7	91.4
04/30/96		65,132	5,723	65,132	159	0.22	95,000	4.5	96.0
05/30/96		82,551	17,419	82,551	581	0.81	170,000	24.7	120.7
07/01/96	(a)	83,210	659	83,210	21	0.03	96,000	0.5	121.2
07/31/96	(b)	84,444	1,234	84,444	41	0.06	96,000	1.0	122.2
08/27/96		98,824	14,380	98,824	533	0.74	75,000	9.0	131.2
09/30/96		107,482	8,658	107,482	255	0.35	210,000	15.2	146.4
10/29/96		114,368	6,886	114,368	237	0.33	1,600	0.1	146.5
11/25/96		122,583	8,215	122,583	304	0.42	100,000	6.9	153.3
12/31/96	(a)	131,256	8,673	131,256	241	0.33	39,000	2.8	156.2
02/24/97	(b)	132,257	1,001	132,257	250	0.35	220,000	1.8	158.0
03/25/97		138,149	5,892	138,149	1,403	1.95	230,000	11.3	169.3

does not seem to be very effective

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline	ug/l	Micrograms per liter
gpd	Gallons per day	lb	Pounds
gpm	Gallons per minute	NC	Not calculated

NOTES:

* Hydrocarbon removal is calculated by: Effluent discharged (gallons) x TPH-G concentration (ug/l) x 3.785 (liters/gallon) x 1 (lb) / 453.6E6 (ug).

(a) System shut down due to equipment failure.

(b) Operation of system resumed.

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER REMEDIATION SYSTEM SAMPLE ANALYSIS
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

Sample ID	Date	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DCA (ug/l)	Lead (mg/l)	Lab
I-1	03/21/95	180,000	32,000	55,000	5,100	27,000	---	---	---	ATI
I-1	04/03/95	210,000	31,000	68,000	6,600	35,000	---	---	---	ATI
I-1	05/23/95	160,000	17,000	38,000	4,400	26,000	---	---	0.006	ATI
I-1	06/20/95	330,000	27,000	55,000	7,600	41,000	---	---	---	ATI
QC-1	06/20/95	200,000	21,000	45,000	5,300	30,000	---	---	---	ATI
I-1	08/29/95	160,000	34,000	54,000	4,700	24,000	7,600	ND<500	---	ATI
I-1	09/19/95	230,000	28,000	40,000	3,800	21,000	---	440	---	ATI
I-1	10/18/95	280,000	38,000	51,000	4,200	23,000	3,000	580	---	ATI
I-1	11/14/95	150,000	32,000	33,000	4,100	19,000	---	560	---	ATI
I-1	12/11/95	99,000	24,000	26,000	2,100	14,000	1,000	420	---	ATI
I-1	01/09/96	150,000	28,000	37,000	3,400	18,000	2,000	720	---	ATI
I-1	02/21/96	230,000	22,000	57,000	10,000	61,000	---	ND<5	---	SPL
I-1	03/13/96	180,000	29,000	35,000	3,300	19,000	---	ND<5	---	SPL
I-1	04/18/96	95,000	37,000	34,000	4,000	19,000	---	ND<5	---	SPL
I-1	05/14/96	170,000	28,000	43,000	5,200	30,000	---	ND<5	---	SPL
I-1	06/13/96	96,000	16,000	23,000	2,200	13,800	ND<10,000	---	---	SPL
I-1	08/08/96	75,000	23,000	13,000	2,500	11,000	2,300	---	---	SPL
I-1	09/17/96	210,000	23,000	33,000	5,100	35,000	ND<10,000	---	---	SPL
I-1	10/24/96	1,600	140	190	ND<1.0	ND<1.0	160	---	---	SPL
I-1	11/14/96	100,000	23,000	20,000	2,600	8,900	ND<2,500	---	---	SPL
I-1	12/11/96	39,000	6,800	8,300	740	4,900	ND<2,500	---	---	SPL
I-1	02/24/97	220,000	27,000	34,000	4,400	22,900	ND<10,000	---	---	SPL
I-1	03/12/97	230,000	24,000	48,000	5,400	33,000	ND<10,000	---	---	SPL
PS-1	03/21/95	47,000	690	4,200	1,400	8,400	---	---	---	ATI
PS-1	04/03/95	150,000	26,000	42,000	3,500	18,000	---	---	---	ATI
PS-1	05/23/95	35,000	1,400	4,900	1,100	6,800	---	---	---	ATI
PS-1	06/20/95	60,000	5,200	11,000	1,400	9,000	---	---	---	ATI
PS-1	08/29/95	25,000	150	1,000	500	3,300	ND<250	---	---	ATI
PS-1	09/19/95	55,000	---	---	---	---	---	---	---	ATI
PS-1	10/18/95	12,000	86	660	190	1,400	---	ND<10		ATI
PS-1	11/14/95	630	9	11	3	20	---	ND<1	---	ATI
PS-1	12/11/95	470	34	52	8	81	---	ND<1	---	ATI
PS-1	01/09/96	110	ND<1	ND<2	ND<1	1	---	ND<1	---	ATI
PS-1	02/21/96	75,000	4,100	12,000	3,000	20,000	---	ND<5	---	SPL
PS-1	03/13/96	71,000	1,200	5,700	2,300	14,000	---	ND<5	---	SPL
PS-1	04/18/96	190	ND<5	ND<5	ND<5	5	---	ND<5	---	SPL
PS-1	05/14/96	15,000	11	360	600	3,700	---	ND<5	---	SPL
PS-1	06/13/96	18,000	2,000	3,300	460	3,060	ND<1,000	---	---	SPL
PS-1	08/08/96	180	3.2	6.6	1.6	21.2	37	---	---	SPL
PS-1	09/17/96	600	5.8	7.7	1.9	18.7	39	---	---	SPL
PS-1	10/24/96	35,000	3,900	4,700	ND<50	ND<50	570	---	---	SPL

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER REMEDIATION SYSTEM SAMPLE ANALYSIS
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

Sample ID	Date	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DCA (ug/l)	Lead (mg/l)	Lab
PS-1	11/14/96	12,000	2,300	2,200	270	1,100	420	---	---	SPL
PS-1	12/11/96	17,000	2,900	3,200	330	1,400	640	---	---	SPL
PS-1	02/24/97	280,000	12,000	29,000	6,000	37,000	ND<10,000	---	---	SPL
PS-1	03/12/97	93,000	4,900	11,000	1,600	16,000	ND<5,000	---	---	SPL
A-1	03/21/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
A-1	04/03/95	ND<50	ND<0.50	0.50	ND<0.50	ND<1.0	---	---	---	ATI
A-1	05/23/95	1,200	ND<1.0	2.2	3.4	22	---	---	---	ATI
A-1	06/20/95	88	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
A-1	08/29/95	340	7.1	68	5.3	92	5.2	---	---	ATI
A-1	09/19/95	ND<500	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
A-1	10/18/95	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
A-1	11/14/95	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
A-1	12/11/95	1,200	4	5	3	82	---	ND<1	---	ATI
A-1	01/09/96	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
A-1	02/21/96	4,100	20	90	87	580	---	ND<5	---	SPL
A-1	03/13/96	11,000	50	860	650	4,100	---	ND<5	---	SPL
A-1	04/18/96	60	ND<5	ND<5	ND<5	ND<5	---	ND<5	---	SPL
A-1	05/14/96	60	ND<5	ND<5	ND<5	10	---	ND<5	---	SPL
A-1	06/13/96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	---	---	SPL
A-1	08/08/96	60	16	12	1.8	10.9	61	---	---	SPL
A-1	09/17/96	140	1.4	1.6	ND<1.0	7.5	ND<10	---	---	SPL
A-1	10/24/96	80	24	15	1.0	8.1	37	---	---	SPL
A-1	11/14/96	370	83	51	5.3	21	92	---	---	SPL
A-1	12/11/96	2,400	490	410	39	249	320	---	---	SPL
A-1	02/24/97	350	1.4	8.4	5.7	55	ND<10	---	---	SPL
A-1	03/12/97	90	0.53	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
B-1	03/21/95	88	ND<0.50	2	ND<0.50	2	---	---	---	ATI
B-1	04/03/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
B-1	05/23/95	240	ND<0.50	0.68	0.93	7.2	---	---	---	ATI
B-1	06/20/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
B-1	08/29/95	37,000	54	420	600	3500	260	---	---	ATI
B-1	09/19/95	550	ND<1	ND<2	ND<1	9	---	ND<1	---	ATI
B-1	10/18/95	---	---	---	---	---	---	---	---	ATI
B-1	11/14/95	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
B-1	12/11/95	270	ND<1	ND<2	ND<1	1	---	ND<1	---	ATI
B-1	01/09/96	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
B-1	02/21/96	ND<50	ND<5	ND<5	ND<5	ND<5	---	ND<5	---	SPL
B-1	03/13/96	ND<50	ND<5	ND<5	ND<5	14	---	ND<5	---	SPL
B-1	04/18/96	ND<50	ND<5	ND<5	ND<5	ND<5	---	ND<5	---	SPL
B-1	05/14/96	ND<50	ND<5	8	ND<5	11	---	ND<5	---	SPL

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER REMEDIATION SYSTEM SAMPLE ANALYSIS
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

Sample ID	Date	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DCA (ug/l)	Lead (mg/l)	Lab
B-1	06/13/96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	---	---	SPL
B-1	08/08/96	ND<50	2.3	1.2	ND<1.0	1.3	48	---	---	SPL
B-1	09/17/96	52	0.78	1.6	ND<1.0	ND<1.0	14	---	---	SPL
B-1	10/24/96	70	1.4	ND<1.0	ND<1.0	ND<1.0	13	---	---	SPL
B-1	11/14/96	100	19	9.3	1.1	3.9	24	---	---	SPL
B-1	12/11/96	80	26	7.1	ND<1.0	2.6	110	---	---	SPL
B-1	02/24/97	600	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
B-1	03/12/97	730	5.3	8.1	2.5	51	17	---	---	SPL
E-1	03/21/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ND<0.002	ATI
E-1	04/03/95	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	0.007	ATI
E-1	05/23/95	140	ND<0.50	ND<0.50	ND<0.50	2.3	---	---	---	ATI
QC-1	05/23/95	250	ND<0.50	ND<0.50	1.0	7.5	---	---	---	ATI
E-1	06/20/95	ND<50	ND<0.50	ND<0.50	ND<0.50	1.1	---	---	---	ATI
E-1	08/29/95	200	ND<1	ND<2	ND<1	ND<1	ND<5	---	---	ATI
E-1	09/19/95	ND<500	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
QC-1	09/19/95	ND<500	---	---	---	---	---	---	---	ATI
E-1	10/18/95	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
QC-1	10/18/95	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
E-1	11/14/95	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
QC-1	11/14/95	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
E-1	12/11/95	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
E-1	01/09/96	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
QC-1	01/09/96	ND<50	ND<1	ND<2	ND<1	ND<1	---	ND<1	---	ATI
E-1	02/21/96	ND<50	ND<5	ND<5	ND<5	ND<5	---	ND<5	---	SPL
E-1	03/13/96	2,600	ND<5	19	49	320	---	ND<5	---	SPL
E-1	04/18/96	ND<50	ND<5	ND<5	ND<5	ND<5	---	ND<5	---	SPL
E-1	05/14/96	ND<50	ND<5	ND<5	ND<5	ND<5	---	ND<5	---	SPL
E-1	06/13/96	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<10	---	---	SPL
E-1	08/08/96	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	55	---	---	SPL
E-1	09/17/96	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	10/24/96	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	11/14/96	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	12/11/96	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	02/24/97	ND<50	0.76	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	03/12/97	1,800	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	---	SPL

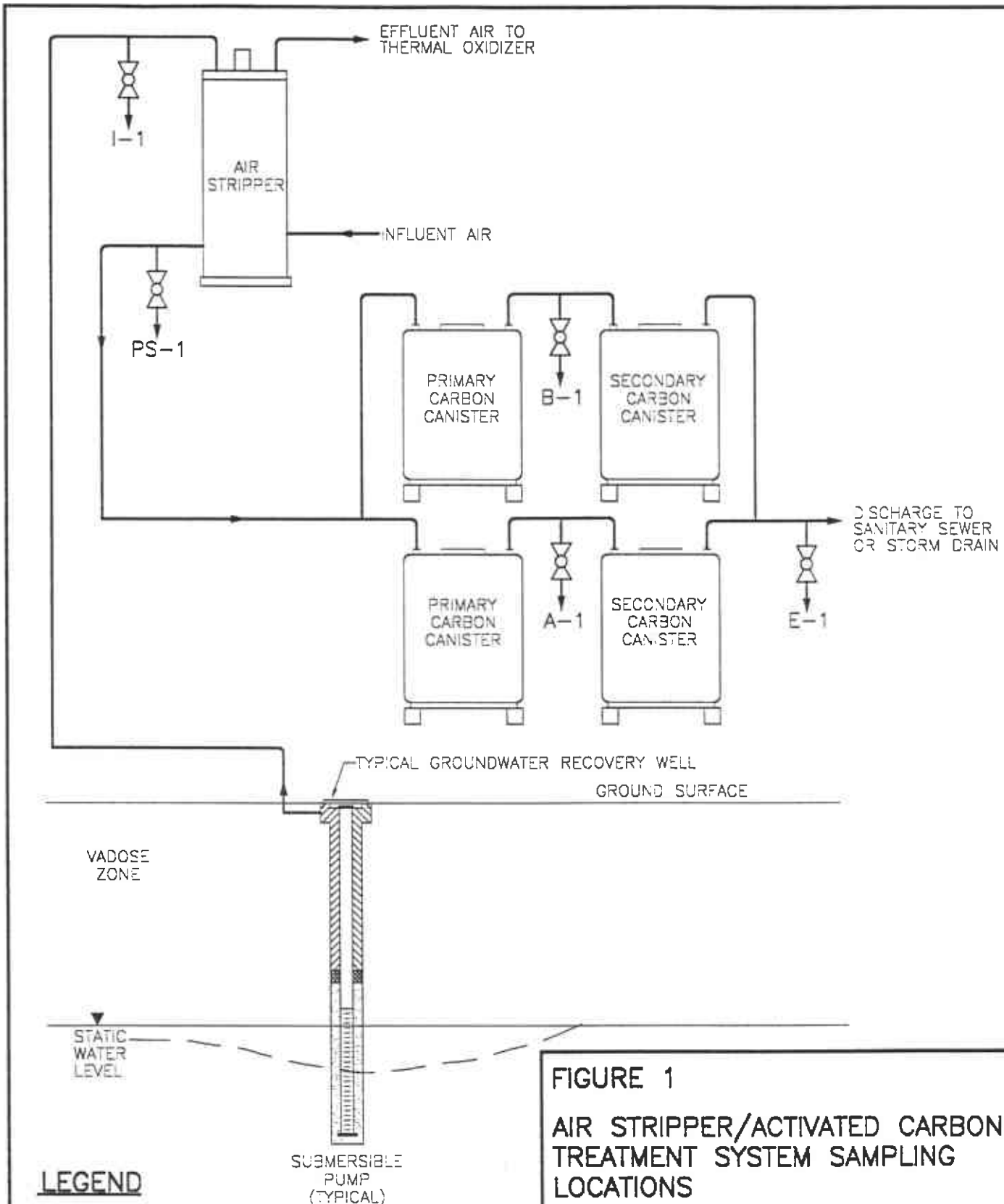
TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER REMEDIATION SYSTEM SAMPLE ANALYSIS
BP OIL COMPANY SERVICE STATION NO. 11133
2220 98TH AVENUE, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-025

Sample ID	Date	TPH-G (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	DCA (ug/l)	Lead (mg/l)	Lab

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
DCA	1,2-Dichloroethane
ug/l	Micrograms per liter
mg/l	Milligrams per liter
I-1	Sample collected from influent sampling port
PS-1	Sample collected from post air stripper sampling port
A-1	Sample collected from intermediate sampling port
B-1	Sample collected from intermediate sampling port
E-1	Sample collected from effluent sampling port
QC-1	Blind duplicate sample
ND	Not detected above reported detection limit
---	Not analyzed
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories



LEGEND

I = INFLUENT
A&B = INTERMEDIATE
E = EFFLUENT
SAMPLE PORT

FIGURE 1

AIR STRIPPER/ACTIVATED CARBON TREATMENT SYSTEM SAMPLING LOCATIONS

BP OIL SERVICE STATION NO. 11133
2220 98TH AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. 10–025

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

ATTACHMENT A

LABORATORY REPORTS AND CHAIN OF CUSTODY RECORDS

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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-10-F18

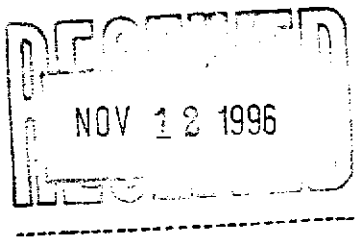
Approved for Release by:

Ed Fry, Project Manager

Date: 11/5/96

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer



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

Certificate of Analysis No. H9-9610F18-01

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
, COC#078134
DATE: 11/05/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133 INF

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 10/24/96 13:00:00
DATE RECEIVED: 10/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	160	10 P	µg/L
Benzene	140	0.5 P	µg/L
Toluene	190	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	107		
4-Bromofluorobenzene	123		
METHOD 8020***			
Analyzed by: LJ			
Date: 11/01/96			
Total Petroleum Hydrocarbons-Gasoline	1.6	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	120		
4-Bromofluorobenzene	117		
CA LUFT - Gasoline			
Analyzed by: LJ			
Date: 11/01/96 11:02:00			

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

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

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

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

Certificate of Analysis No. H9-9610F18-02

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
, COC#078134
DATE: 11/05/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133 PS-1

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 10/24/96 13:01:00
DATE RECEIVED: 10/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	570	500 P	µg/L
Benzene	3900	25 P	µg/L
Toluene	4700	50 P	µg/L
Ethylbenzene	ND	50 P	µg/L
Total Xylene	ND	50 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	113		
METHOD 8020***			
Analyzed by: LJ			
Date: 11/01/96			
Total Petroleum Hydrocarbons-Gasoline	35	2.5 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	120		
4-Bromofluorobenzene	93		
CA LUFT - Gasoline			
Analyzed by: LJ			
Date: 11/01/96 11:30:00			

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

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9610F18-03

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
, COC#078134
DATE: 11/05/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133 A-1

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 10/24/96 13:03:00
DATE RECEIVED: 10/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	37	10 P	µg/L
Benzene	24	0.5 P	µg/L
Toluene	15	1.0 P	µg/L
Ethylbenzene	1.0	1.0 P	µg/L
Total Xylene	8.1	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: RL			
Date: 11/02/96			
Total Petroleum Hydrocarbons-Gasoline	0.080	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	103		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 11/02/96 03:01:00			

(P) - Practical Quantitation Limit

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9610F18-04

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
, COC#078134
DATE: 11/05/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133 B-1

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 10/24/96 13:10:00
DATE RECEIVED: 10/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	13	10 P	µg/L
Benzene	1.4	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	110		
METHOD 8020***			
Analyzed by: LJ			
Date: 11/01/96			
Total Petroleum Hydrocarbons-Gasoline	0.070	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	87		
CA LUFT - Gasoline			
Analyzed by: LJ			
Date: 11/01/96 11:57:00			

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

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9610F18-05

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.#
, COC#078134
DATE: 11/05/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133 E-1

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 10/24/96 13:15:00
DATE RECEIVED: 10/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: RL			
Date: 11/03/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	103		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 11/03/96 12:28:00			

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

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

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

QUALITY CONTROL

DOCUMENTATION

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

METHOD 8020***
WORK ORDER: 9610F18-03A
BATCH#:HP_J961102090700
CLIENT SAMPLE ID:Sta# 11133 A-1

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	28	93	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

METHOD 8020A ***
WORK ORDER: Method Blank
BATCH#:HP_J961102090700
CLIENT SAMPLE ID:

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	25	83	74- 131
4-Bromofluorobenzene	30	30	100	43- 135

METHOD 8020***
WORK ORDER: Matrix Spike
BATCH#:HP_J961102090700
CLIENT SAMPLE ID:9610F76-04A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-DIFLUOROBENZENE	30	28	93	70- 131
4-BROMOFLUOROBENZENE	30	31	103	43- 135

METHOD 8020***
WORK ORDER: Matrix Spike Dup.
BATCH#:HP_J961102090700
CLIENT SAMPLE ID:9610F76-04A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	28	93	70- 131
4-Bromofluorobenzene	30	31	103	43- 135

CA LUFT - Gasoline
WORK ORDER: 9610F18-03A
BATCH#:HP_J961102104600
CLIENT SAMPLE ID:Sta# 11133 A-1

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	31	103	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline
WORK ORDER: 9610F18-05A
BATCH#:HP_J961102104600
CLIENT SAMPLE ID:Sta# 11133 E-1

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	50- 150
4-Bromofluorobenzene	30	32	107	50- 150

CA LUFT - Gasoline
WORK ORDER: Method Blank
BATCH#:HP_J961102104600
CLIENT SAMPLE ID:

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline
WORK ORDER: Matrix Spike
BATCH#:HP_J961102104600
CLIENT SAMPLE ID:9610F70-05A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	27	90	50- 150

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline **BATCH#:**HP_J961102104600
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9610F70-05A

1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline **BATCH#:**HP_J961103015200
WORK ORDER: 9610F18-05A **CLIENT SAMPLE ID:**Sta# 11133 E-1

1,4-Difluorobenzene	30	30	100	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

State of Tennessee Method **BATCH#:**HP_J961103015200
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

4-Bromofluorobenzene	30	31	103	50- 150
1,4-Difluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline **BATCH#:**HP_J961103015200
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9610H56-17A

1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	29	97	50- 150

CA LUFT - Gasoline **BATCH#:**HP_J961103015200
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9610H56-17A

1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

METHOD 8020* ** **BATCH#:**HP_J961103021600
WORK ORDER: 9610F18-05A **CLIENT SAMPLE ID:**Sta# 11133 E-1

1,4-Difluorobenzene	30	26	87	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

METHOD 8020A * ** **BATCH#:**HP_J961103021600
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	26	25.9	74- 131
4-Bromofluorobenzene	30	31	30.7	43- 135

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
METHOD 8020A ***		**BATCH#:**HP_J961103021600		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:**9610H08-01A		
1,4-DIFLUOROBENZENE	30	29	97	70- 131
4-BROMOFLUOROBENZENE	30	30	100	43- 135
METHOD 8020A ***		**BATCH#:**HP_J961103021600		
WORK ORDER: Matrix Spike Dup.		**CLIENT SAMPLE ID:**9610H08-01A		
1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	31	103	43- 135
METHOD 8020***		**BATCH#:**HP_R961101074900		
WORK ORDER: 9610F18-01A		**CLIENT SAMPLE ID:**Sta# 11133 INF		
1,4-Difluorobenzene	30	32	107	70- 131
4-Bromofluorobenzene	30	37	123	43- 135
METHOD 8020***		**BATCH#:**HP_R961101074900		
WORK ORDER: 9610F18-02A		**CLIENT SAMPLE ID:**Sta# 11133 PS-1		
1,4-Difluorobenzene	30	30.0000	100	70- 131
4-Bromofluorobenzene	30	34.0000	113	43- 135
METHOD 8020***		**BATCH#:**HP_R961101074900		
WORK ORDER: 9610F18-04A		**CLIENT SAMPLE ID:**Sta# 11133 B-1		
1,4-Difluorobenzene	30	26	87	70- 131
4-Bromofluorobenzene	30	33	110	43- 135
METHOD 8020A ***		**BATCH#:**HP_R961101074900		
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
1,4-Difluorobenzene	30	26	25.9	74- 131
4-Bromofluorobenzene	30	35	35.0	43- 135
METHOD 8020A ***		**BATCH#:**HP_R961101074900		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:**9610G61-01A		
1,4-DIFLUOROBENZENE	30	27	90	70- 131
4-BROMOFLUOROBENZENE	30	30	100	43- 135
METHOD 8020A ***		**BATCH#:**HP_R961101074900		
WORK ORDER: Matrix Spike Dup.		**CLIENT SAMPLE ID:**9610G61-01A		
1,4-Difluorobenzene	30	27	90	70- 131

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	30	100	43- 135

CA LUFT - Gasoline **BATCH#:**HP_R961101170000
WORK ORDER: 9610F18-01A **CLIENT SAMPLE ID:**Sta# 11133 INF

1,4-Difluorobenzene	30	36	120	50- 150
4-Bromofluorobenzene	30	35	117	50- 150

CA LUFT - Gasoline **BATCH#:**HP_R961101170000
WORK ORDER: 9610F18-02A **CLIENT SAMPLE ID:**Sta# 11133 PS-1

1,4-Difluorobenzene	30	36.0000	120	50- 150
4-Bromofluorobenzene	30	28.0000	93	50- 150

CA LUFT - Gasoline **BATCH#:**HP_R961101170000
WORK ORDER: 9610F18-04A **CLIENT SAMPLE ID:**Sta# 11133 B-1

1,4-Difluorobenzene	30	30	100	50- 150
4-Bromofluorobenzene	30	26	87	50- 150

CA LUFT - Gasoline **BATCH#:**HP_R961101170000
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene		29	29	-
4-Bromofluorobenzene		24	24	-

CA LUFT - Gasoline **BATCH#:**HP_R961101170000
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9610F16-05A

1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline **BATCH#:**HP_R961101170000
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9610F16-05A

1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

METHOD 8020A *** **BATCH#:**HP_R961102014600
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	26	26.3	74- 131
4-Bromofluorobenzene	30	30	30.4	43- 135

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METHOD 8020A ***
WORK ORDER: Matrix Spike

BATCH#:HP_R961102014600
CLIENT SAMPLE ID:9610F18-03A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-DIFLUOROBENZENE	30	28	93	70- 131
4-BROMOFLUOROBENZENE	30	34	113	43- 135

METHOD 8020A ***
WORK ORDER: Matrix Spike Dup.

BATCH#:HP_R961102014600
CLIENT SAMPLE ID:9610F18-03A

1,4-Difluorobenzene	30	28	93	70- 131
4-Bromofluorobenzene	30	34	113	43- 135

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

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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_R961101074900

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	49	98.0	63 - 120
Benzene	ND	50	51	102	62 - 121
Toluene	ND	50	50	100	66 - 136
EthylBenzene	ND	50	50	100	70 - 136
O Xylene	ND	50	46	92.0	74 - 134
M & P Xylene	ND	100	91	91.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	1.6	20.0	18	82.0	18	82.0	0	20	39 - 150
BENZENE	ND	20.0	16	80.0	18	90.0	11.8	25	39 - 150
TOLUENE	ND	20.0	15	75.0	17	85.0	12.5	26	56 - 134
ETHYLBENZENE	ND	20.0	15	75.0	17	85.0	12.5	38	61 - 128
O XYLENE	ND	20.0	15	75.0	16	80.0	6.45	29	40 - 130
M & P XYLENE	ND	40.0	29	72.5	32	80.0	9.84	20	43 - 152

Analyst: LJ
Sequence Date: 11/01/96
SPL ID of sample spiked: 9610G61-01A
Sample File ID: R_J6055.TX0
Method Blank File ID:
Blank Spike File ID: R_J6050.TX0
Matrix Spike File ID: R_J6051.TX0
Matrix Spike Duplicate File ID: R_J6052.TX0

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

SAMPLES IN BATCH(SPL ID):

9610G52-02A 9610D71-01A 9610D71-02A 9610G35-03A
9610G52-03A 9610G52-04A 9610F16-05A 9610F16-01A
9610F18-01A 9610F18-02A 9610F18-04A 9610E73-05A
9610G52-05A 9610G61-01A 9610G52-01A

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

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_J961102090700

L A B O R A T O R Y C O N T R O L S A M P L E

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	45	90.0	63 - 120
Benzene	ND	50	50	100	62 - 121
Toluene	ND	50	49	98.0	66 - 136
EthylBenzene	ND	50	51	102	70 - 136
O Xylene	ND	50	49	98.0	74 - 134
M & P Xylene	ND	100	100	100	77 - 140

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	26	130	24	120	8.00	20	39 - 150
BENZENE	ND	20	21.7	108	22	110	1.83	25	39 - 150
TOLUENE	ND	20	21.2	106	22	110	3.70	26	56 - 134
ETHYLBENZENE	ND	20	21.3	106	22	110	3.70	38	61 - 128
O XYLENE	ND	20	21.5	108	22	110	1.83	29	40 - 130
M & P XYLENE	ND	40	43.5	109	45	112	2.71	20	43 - 152

Analyst: RL
Sequence Date: 11/02/96
SPL ID of sample spiked: 9610F76-04A
Sample File ID: J_K6050.TX0
Method Blank File ID:
Blank Spike File ID: J_K6041.TX0
Matrix Spike File ID: J_K6066.TX0
Matrix Spike Duplicate File ID: J_K6045.TX0

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

SAMPLES IN BATCH(SPL ID):

9610F76-04A 9610F70-05A 9610F70-01A 9610F18-03A
9610F76-02A 9610F76-03A 9610F70-04A 9610F69-08A
9610F69-07A 9610F69-06A 9610F69-05A 9610F69-03A
9610F69-04A 9610F70-02A 9610F70-03A 9610H87-03A
9610H87-04A

SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

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

Matrix: Aqueous
Units: µg/L

Batch Id: HP_J961103021600

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits (**) (Mandatory) % Recovery Range
MTBE	ND	50	45	90.0	63 - 120
Benzene	ND	50	49	98.0	62 - 121
Toluene	ND	50	50	100	66 - 136
EthylBenzene	ND	50	51	102	70 - 136
O Xylene	ND	50	50	100	74 - 134
M & P Xylene	ND	100	100	100	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits (***) (Advisory) RPD Max.	QC Limits (***) (Advisory) Recovery Range
MTBE	370	20	180	NC	180	NC	NC	20	39 - 150
BENZENE	11	20	31	100	31	100	0	25	39 - 150
TOLUENE	3.0	20	23	100	22	95.0	5.13	26	56 - 134
ETHYLBENZENE	5.1	20	25	99.5	25	99.5	0	38	61 - 128
O XYLENE	6.4	20	26	98.0	26	98.0	0	29	40 - 130
M & P XYLENE	15	40	55	100	55	100	0	20	43 - 152

Analyst: RL
Sequence Date: 11/03/96
SPL ID of sample spiked: 9610H08-01A
Sample File ID: J_K6106R.TX0
Method Blank File ID:
Blank Spike File ID: J_K6080.TX0
Matrix Spike File ID: J_K6102.TX0
Matrix Spike Duplicate File ID: J_K6103.TX0

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

SAMPLES IN BATCH(SPL ID):

9610H08-02A 9610H08-04A 9610F37-01A 9610H16-04A
9610F37-05A 9610F37-04A 9610F37-03A 9610F37-02A
9610F37-06A 9610H56-17A 9610H08-01A 9610F18-05A
9610F70-06A 9610H87-03A 9610H08-01A 9610F69-02A
9610H16-06A

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

** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_J961102104600

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.00	1.0	100	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	ND	0.9	1.1	122	1.1	122	0	50	50 - 150

Analyst: RL
Sequence Date: 11/02/96
SPL ID of sample spiked: 9610F70-05A
Sample File ID: JKK6051.TX0
Method Blank File ID:
Blank Spike File ID: JKK6042.TX0
Matrix Spike File ID: JKK6046.TX0
Matrix Spike Duplicate File ID: JKK6047.TX0

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

SAMPLES IN BATCH(SPL ID):

9610F76-04A 9610F70-05A 9610F18-05A 9610F70-01A
9610F18-03A 9610F76-02A 9610F76-03A 9610F70-06A
9610F76-01A 9610F70-04A 9610F69-07A 9610F69-06A
9610F69-05A 9610F69-03A 9610F69-04A 9610F70-02A
9610F70-03A

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

** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_R961101170000

LABORATORY CONTROL SAMPLE

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

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	ND	0.9	1.2	133	1.2	133	0	50	50 - 150

Analyst: LJ
Sequence Date: 11/01/96
SPL ID of sample spiked: 9610F16-05A
Sample File ID: RRK6004.TX0
Method Blank File ID:
Blank Spike File ID: RRK6001.TX0
Matrix Spike File ID: RRK6002.TX0
Matrix Spike Duplicate File ID: RRK6003.TX0

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

SAMPLES IN BATCH(SPL ID): 9610F16-02A 9610F16-03A 9610F16-04A 9610F18-01A
9610F18-02A 9610F18-04A 9610F16-05A 9610F16-01A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9610F18

CHAIN OF CUSTODY

No. 078134 Page 1 of 1

CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
Alisto Engineering Group	1575 Treat Blvd. Ste 201	Walnut Creek	CA	94598

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
11133	2220 98th AVE OAKLAND, CA	10-025-10-001

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
PETER BEAVER	510 - 295-1650	510 295-1823	

BP CONTACT	BP ADDRESS	PHONE NUMBER	FAX NO.
SCOTT HOOTON	Renton, WA	-	-

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.
ED FRY	Houston, TX	-	-

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
JOHN BICKLEY	John K. Bicklay	10/24/96	Fed Ex

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

ANALYSIS REQUIRED

AIRBILL NUMBER: 940477899 4

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE	LAB SAMPLE #	HCl TPH-G BTEX	COMMENTS
START 11133 INF	10/24/96	1300	GW	3	VOA			✓	
PS-1		1301		3				✓	
A-1		1303		3				✓	
B-1		1310		3				✓	
E-1		1315	↓	3	↓			✓	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
John K. Bicklay	10/24/96	1400	Patricia Yelta	10/24/96	1405
Patricia Yelton	10/24/96	1600	Ruben Estrada	10/28/96	0950

ADDITIONAL COMMENTS: POF intact 3°c

CLV-16722
PKG/50

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

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
10/25/96	1350

SPL Sample ID:
9610F18

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		3 C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	940477899	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
Ruben Estrada	10/25/96

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

Southern Petroleum Laboratories, Inc.

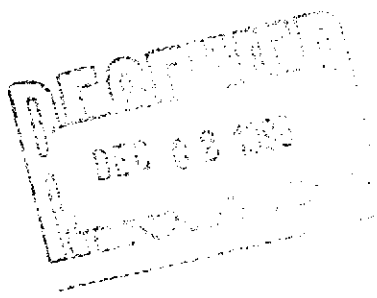
Certificate of Analysis Number: 96-11-852

Approved for Release by:

Ed Fry, Project Manager — Date: 11/25/96

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer



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

Certificate of Analysis No. H9-9611852-01

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G-749588 , COC#071214
DATE: 11/25/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave Oakland
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta 11133-Eff

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 11/14/96 11:48:00
DATE RECEIVED: 11/15/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	107
4-Bromofluorobenzene	97

METHOD 8020***
Analyzed by: RL
Date: 11/21/96

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L

Surrogate	% Recovery
1,4-Difluorobenzene	90
4-Bromofluorobenzene	90

CA LUFT - Gasoline
Analyzed by: RL
Date: 11/21/96 04:53:00

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

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

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

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

Certificate of Analysis No. H9-9611852-02

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G-749588 , COC#071214
DATE: 11/25/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave Oakland
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta 11133-BI

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 11/14/96 11:50:00
DATE RECEIVED: 11/15/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	24	10 P	µg/L
Benzene	19	0.5 P	µg/L
Toluene	9.3	1.0 P	µg/L
Ethylbenzene	1.1	1.0 P	µg/L
Total Xylene	3.9	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	113		
4-Bromofluorobenzene	93		
METHOD 8020***			
Analyzed by: RL			
Date: 11/22/96			
Total Petroleum Hydrocarbons-Gasoline	0.10	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	93		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 11/22/96 12:02:00			

(P) - Practical Quantitation Limit

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

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

Certificate of Analysis No. H9-9611852-03

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G-749588 , COC#071214
DATE: 11/25/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave Oakland
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta 11133-Ai

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 11/14/96 11:53:00
DATE RECEIVED: 11/15/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	92	10 P	µg/L
Benzene	83	0.5 P	µg/L
Toluene	51	1.0 P	µg/L
Ethylbenzene	5.3	1.0 P	µg/L
Total Xylene	21	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	120		
4-Bromofluorobenzene	90		
METHOD 8020***			
Analyzed by: RL			
Date: 11/22/96			
Total Petroleum Hydrocarbons-Gasoline	0.37	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	97		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 11/22/96 12:30:00			

(P) - Practical Quantitation Limit

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9611852-04

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G-749588 , COC#071214
DATE: 11/25/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave Oakland
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta 11133-PS

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 11/14/96 11:55:00
DATE RECEIVED: 11/15/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	420	250 P	µg/L
Benzene	2300	12 P	µg/L
Toluene	2200	25 P	µg/L
Ethylbenzene	270	25 P	µg/L
Total Xylene	1100	25 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	119		
4-Bromofluorobenzene	93		
METHOD 8020***			
Analyzed by: RL			
Date: 11/21/96			
Total Petroleum Hydrocarbons-Gasoline	12	1.2 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	95		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 11/21/96 08:11:00			

(P) - Practical Quantitation Limit

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

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8880 INTERCHANGE DRIVE
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PHONE (713) 660-0901

Certificate of Analysis No. H9-9611852-05

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G-749588 , COC#071214
DATE: 11/25/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave Oakland
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta 11133-Inf

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 11/14/96 11:58:00
DATE RECEIVED: 11/15/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	2500 P	µg/L
Benzene	23000	120 P	µg/L
Toluene	20000	250 P	µg/L
Ethylbenzene	2600	250 P	µg/L
Total Xylene	8900	250 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	128		
4-Bromofluorobenzene	92		
METHOD 8020***			
Analyzed by: RL			
Date: 11/21/96			
Total Petroleum Hydrocarbons-Gasoline	100	12 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	99		
4-Bromofluorobenzene	96		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 11/21/96 08:40:00			

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

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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QUALITY CONTROL

DOCUMENTATION

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

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
CA LUFT - Gasoline			**BATCH#:**HP_N961120072500	
WORK ORDER: 9611852-01A		**CLIENT SAMPLE ID:**Sta 11133-Eff		
1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	27	90	50- 150
CA LUFT - Gasoline			**BATCH#:**HP_N961120072500	
WORK ORDER: 9611852-04A		**CLIENT SAMPLE ID:**Sta 11133-PS		
1,4-Difluorobenzene	30	30.0000	100	50- 150
4-Bromofluorobenzene	30	28.4000	95	50- 150
CA LUFT - Gasoline			**BATCH#:**HP_N961120072500	
WORK ORDER: 9611852-05A		**CLIENT SAMPLE ID:**Sta 11133-Inf		
1,4-Difluorobenzene	30	29.6000	99	50- 150
4-Bromofluorobenzene	30	28.8000	96	50- 150
CA LUFT - Gasoline			**BATCH#:**HP_N961120072500	
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	27	90	50- 150
CA LUFT - Gasoline			**BATCH#:**HP_N961120072500	
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:**9611852-01A		
1,4-Difluorobenzene	30	28	93	50- 150
4-Bromofluorobenzene	30	29	97	50- 150
CA LUFT - Gasoline			**BATCH#:**HP_N961120072500	
WORK ORDER: Matrix Spike Dup.		**CLIENT SAMPLE ID:**9611852-01A		
1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	29	97	50- 150
METHOD 8020* **			**BATCH#:**HP_N961120104600	
WORK ORDER: 9611852-01A		**CLIENT SAMPLE ID:**Sta 11133-Eff		
1,4-Difluorobenzene	30	32	107	70- 131
4-Bromofluorobenzene	30	29	97	43- 135
METHOD 8020* **			**BATCH#:**HP_N961120104600	
WORK ORDER: 9611852-04A		**CLIENT SAMPLE ID:**Sta 11133-PS		
1,4-Difluorobenzene	30	35.6000	119	70- 131

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	28.0000	93	43- 135

METHOD 8020* BATCH#:HP_N961120104600**
WORK ORDER: 9611852-05A **CLIENT SAMPLE ID:** Sta 11133-Inf

1,4-Difluorobenzene	30	38.4000	128	70- 131
4-Bromofluorobenzene	30	27.6000	92	43- 135

METHOD 8020A * BATCH#:HP_N961120104600**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	32	31.7	74- 131
4-Bromofluorobenzene	30	29	28.7	43- 135

METHOD 8020A * BATCH#:HP_N961120104600**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:** 9611990-04A

1,4-DIFLUOROBENZENE	30	37	123	70- 131
4-BROMOFLUOROBENZENE	30	26	87	43- 135

METHOD 8020A * BATCH#:HP_N961120104600**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:** 9611990-04A

1,4-Difluorobenzene	30	36	120	70- 131
4-Bromofluorobenzene	30	26	87	43- 135

CA LUFT - Gasoline BATCH#:HP_N961120121800
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	28	93	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

State of Tennessee Method BATCH#:HP_N961120121800
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:** 9611691-01A

4-Bromofluorobenzene	30	35	117	50- 119
1,4-Difluorobenzene	30	26	87	63- 136

State of Tennessee Method BATCH#:HP_N961120121800
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:** 9611691-01A

4-Bromofluorobenzene	30	25	83	50- 119
1,4-Difluorobenzene	30	31	103	63- 136

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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS

METHOD 8020* BATCH#:HP_N961121172400**
WORK ORDER: 9611852-02A **CLIENT SAMPLE ID:** Sta 11133-BI

1,4-Difluorobenzene	30	34	113	70- 131
4-Bromofluorobenzene	30	28	93	43- 135

METHOD 8020* BATCH#:HP_N961121172400**
WORK ORDER: 9611852-03A **CLIENT SAMPLE ID:** Sta 11133-Ai

1,4-Difluorobenzene	30	36	120	70- 131
4-Bromofluorobenzene	30	27	90	43- 135

METHOD 8020A * BATCH#:HP_N961121172400**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	31	103	74- 131
4-Bromofluorobenzene	30	29	97	43- 135

METHOD 8020A * BATCH#:HP_N961121172400**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:** 9611995-01A

1,4-DIFLUOROBENZENE	30	32	107	70- 131
4-BROMOFLUOROBENZENE	30	28	93	43- 135

METHOD 8020A * BATCH#:HP_N961121172400**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:** 9611995-01A

1,4-Difluorobenzene	30	33	110	70- 131
4-Bromofluorobenzene	30	28	93	43- 135

CA LUFT - Gasoline BATCH#:HP_N961121175200
WORK ORDER: 9611852-02A **CLIENT SAMPLE ID:** Sta 11133-BI

1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	28	93	50- 150

CA LUFT - Gasoline BATCH#:HP_N961121175200
WORK ORDER: 9611852-03A **CLIENT SAMPLE ID:** Sta 11133-Ai

1,4-Difluorobenzene	30	28	93	50- 150
4-Bromofluorobenzene	30	29	97	50- 150

CA LUFT - Gasoline BATCH#:HP_N961121175200
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	27	27.2	50- 150

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	29	29.3	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961121175200
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9611854-01A

1,4-Difluorobenzene	30	29	97	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961121175200
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9611854-01A

1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

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

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N961120104600

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	49	98.0	63 - 120
Benzene	ND	50	42	84.0	62 - 121
Toluene	ND	50	46	92.0	66 - 136
EthylBenzene	ND	50	44	88.0	70 - 136
O Xylene	ND	50	45	90.0	74 - 134
M & P Xylene	ND	100	91	91.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	350	20	370	NC	370	NC	NC	20	39 - 150
BENZENE	17	20	38	105	39	110	4.65	25	39 - 150
TOLUENE	3.5	20	26	112	26	112	0	26	56 - 134
ETHYLBENZENE	15	20	37	110	37	110	0	38	61 - 128
O XYLENE	1.6	20	23	107	23	107	0	29	40 - 130
M & P XYLENE	3.9	40	46	105	45	103	1.92	20	43 - 152

Analyst: RL
Sequence Date: 11/21/96
SPL ID of sample spiked: 9611990-04A
Sample File ID: N_6K052.TX0
Method Blank File ID:
Blank Spike File ID: N_6K046.TX0
Matrix Spike File ID: N_6K047.TX0
Matrix Spike Duplicate File ID: N_6K048.TX0

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

SAMPLES IN BATCH(SPL ID):

9611990-04A 9611852-01A 9611990-03A 9611990-02A
9611990-05A 9611990-07A 9611995-02A 9611852-04A
9611852-05A 9611690-07A 9611853-05A 9611853-04A
9611853-03A 9611853-02A 9611853-01A 9611990-06A
9611990-05A 9611736-12A 9611736-11A

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PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N961121172400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	49	98.0	63 - 120
Benzene	ND	50	40	80.0	62 - 121
Toluene	ND	50	45	90.0	66 - 136
EthylBenzene	ND	50	43	86.0	70 - 136
O Xylene	ND	50	43	86.0	74 - 134
M & P Xylene	ND	100	86	86.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	880	20	860	NC	870	NC	NC	20	39 - 150
BENZENE	3.6	20	22	92.0	22	92.0	0	25	39 - 150
TOLUENE	ND	20	21	105	20	100	4.88	26	56 - 134
ETHYLBENZENE	ND	20	20	100	19	95.0	5.13	38	61 - 128
O XYLENE	ND	20	20	100	19	95.0	5.13	29	40 - 130
M & P XYLENE	ND	40	40	100	40	100	0	20	43 - 152

Analyst: RL
Sequence Date: 11/21/96
SPL ID of sample spiked: 9611995-01A
Sample File ID: N_6K087.TX0
Method Blank File ID:
Blank Spike File ID: N_5K079.TX0
Matrix Spike File ID: N_6K081.TX0
Matrix Spike Duplicate File ID: N_6K082.TX0

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

SAMPLES IN BATCH(SPL ID):

9611852-02A 9611852-03A 9611911-01A 9611911-02A
9611911-05A 9611911-04A 9611911-03A 9611911-07A
9611911-08A 9611911-06A 9611B68-02A 9611B68-01A
9611995-01A 9611B68-03A 9611995-01A

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** SPL BATCH QUALITY CONTROL REPORT **
CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_N961121175200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	1.0	100	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	0.13	0.9	1.0	96.7	0.98	94.4	2.41	50	50 - 150

Analyst: RL
Sequence Date: 11/21/96
SPL ID of sample spiked: 9611854-01A
Sample File ID: NN6K088.TX0
Method Blank File ID:
Blank Spike File ID: NN6K080.TX0
Matrix Spike File ID: NN6K083.TX0
Matrix Spike Duplicate File ID: NN6K084.TX0

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

SAMPLES IN BATCH(SPL ID):

9611B68-01A 9611852-02A 9611852-03A 9611854-02A
9611854-03A 9611911-01A 9611911-02A 9611911-05A
9611911-04A 9611911-03A 9611911-07A 9611911-08A
9611911-06A 9611B68-02A 9611B68-03A 9611854-01A

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** SPL BATCH QUALITY CONTROL REPORT **

CA LUFT

Matrix: Aqueous

Units: mg/L

Batch Id: HP_N961120072500

L A B O R A T O R Y C O N T R O L S A M P L E

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	1.1	110	50 - 150

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	ND	0.9	0.82	91.1	0.74	82.2	10.3	50	50 - 150

Analyst: RL

Sequence Date: 11/20/96

SPL ID of sample spiked: 9611852-01A

Sample File ID: NN6K053.TX0

Method Blank File ID:

Blank Spike File ID: NN6K035.TX0

Matrix Spike File ID: NN6K049.TX0

Matrix Spike Duplicate File ID: NN6K050.TX0

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: Temporary Limits

(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID):

9611852-01A 9611852-04A 9611852-05A 9611853-05A
9611853-04A 9611853-03A 9611853-02A 9611853-01A
9611736-12A 9611736-11A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

96-11-852

CHAIN OF CUSTODY

No. 071214 Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	ADDRESS: 1575 Treat Blvd #201	CITY: Walnut Creek	STATE: CA	ZIP CODE: 94598
BP SITE NUMBER: 11133	BP CORNER ADDRESS/CITY: 2220 98th Ave Oakland			CONSULTANT PROJECT NUMBER: 10-025-10 001
CONSULTANT PROJECT MANAGER: Peter Beaver	PHONE NUMBER: (510) 295-1650	FAX NUMBER: ?		CONSULTANT CONTRACT NUMBER: C749558
BP CONTACT: Scott Hedeen	BP ADDRESS: Renton WA	PHONE NUMBER: —		FAX NO.
LAB CONTACT	LABORATORY ADDRESS: Houston, Texas	PHONE NUMBER: —		FAX NO. —
SAMPLED BY (Please Print Name): Scott Polston	SAMPLED BY (Signature): Scott Polston	SHIPMENT DATE		SHIPMENT METHOD: Fed Ex
TAT: ☐ 24 Hours ☐ 48 Hours ☐ 1 Week ☒ Standard 2 Weeks	ANALYSIS REQUIRED			AIRBILL NUMBER: 4404779160

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE / LAB SAMPLE #	TPH Gas	BTEX	BMO PA	COMMENTS
Stn 11133-Eff	1148	Gw	3	VOA		X	X	1	
Stn 11133-B1	1150					X	X	1	
Stn 11133-A1	1153					X	X	1	
Stn 11133-B2	1155					X	X	1	
Stn 11133-INF	1158	↓	↓	↓		X	X	1	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	11/14/96	1533	Patricia Yerton	11/14/96	1540
Patricia Yerton	11/14/96	1600	[illegible] / SPC	11/15/96	1000

ADDITIONAL COMMENTS: 3°c Rot, intact

CLV-16/22
PKG/50

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

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 11-15-96	Time: 1000

SPL Sample ID: 96-11-852

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		3° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	940477 9166	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date: 11-15-96

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PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-12-765

Approved for Release by:

Ed Fry, Project Manager — Date: 12/18/96

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

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

Certificate of Analysis No. H9-9612765-01

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588,COC#071219
DATE: 12/18/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta #11133-Eff

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 12/11/96 11:07:00
DATE RECEIVED: 12/13/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	97		
METHOD 8020***			
Analyzed by: RL			
Date: 12/15/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	107		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 12/15/96 11:02:00			

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

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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PHONE (713) 660-0901

Certificate of Analysis No. H9-9612765-02

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588,COC#071219
DATE: 12/18/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta #11133-B

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 12/11/96 11:12:00
DATE RECEIVED: 12/13/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	110	10 P	µg/L
Benzene	26	0.5 P	µg/L
Toluene	7.1	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	2.6	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	97		
METHOD 8020***			
Analyzed by: RL			
Date: 12/16/96			
Total Petroleum Hydrocarbons-Gasoline	0.080	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	107		
4-Bromofluorobenzene	97		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 12/16/96 01:25:00			

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

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

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PHONE (713) 660-0901

Certificate of Analysis No. H9-9612765-03

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588,COC#071219
DATE: 12/18/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta #11133-A

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 12/11/96 11:14:00
DATE RECEIVED: 12/13/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	320	10 P	µg/L
Benzene	490	0.5 P	µg/L
Toluene	410	1.0 P	µg/L
Ethylbenzene	39	1.0 P	µg/L
Total Xylene	249	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	80		
4-Bromofluorobenzene	100		
METHOD 8020***			
Analyzed by: RL			
Date: 12/15/96			
Total Petroleum Hydrocarbons-Gasoline	2.4	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	100		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 12/15/96 11:30:00			

(P) - Practical Quantitation Limit

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

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PHONE (713) 660-0901

Certificate of Analysis No. H9-9612765-04

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588,COC#071219
DATE: 12/18/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta #11133-PS

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 12/11/96 11:17:00
DATE RECEIVED: 12/13/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	640	250 P	µg/L
Benzene	2900	12 P	µg/L
Toluene	3200	25 P	µg/L
Ethylbenzene	330	25 P	µg/L
Total Xylene	1400	25 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	112		
4-Bromofluorobenzene	96		
METHOD 8020***			
Analyzed by: RL			
Date: 12/16/96			
Total Petroleum Hydrocarbons-Gasoline	17	1.2 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	108		
4-Bromofluorobenzene	104		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 12/16/96 10:35:00			

(P) - Practical Quantitation Limit

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

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Certificate of Analysis No. H9-9612765-05

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588,COC#071219
DATE: 12/18/96

PROJECT: BP Oil #11133
SITE: 2220 98th Ave, Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta #11133-Inf

PROJECT NO: 10-025-10-001
MATRIX: WATER
DATE SAMPLED: 12/11/96 11:20:00
DATE RECEIVED: 12/13/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	2500 P	µg/L
Benzene	6800	120 P	µg/L
Toluene	8300	250 P	µg/L
Ethylbenzene	740	250 P	µg/L
Total Xylene	4900	250 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	95		
4-Bromofluorobenzene	91		
METHOD 8020***			
Analyzed by: RL			
Date: 12/16/96			
Total Petroleum Hydrocarbons-Gasoline	39	12 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	103		
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 12/16/96 01:23:00			

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

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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QUALITY CONTROL

DOCUMENTATION

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

CA LUFT - Gasoline **BATCH#:**HP_N961215085400
WORK ORDER: 9612765-01A **CLIENT SAMPLE ID:**Sta #11133-Eff

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	50- 150
4-Bromofluorobenzene	30	32	107	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961215085400
WORK ORDER: 9612765-03A **CLIENT SAMPLE ID:**Sta #11133-A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961215085400
WORK ORDER: 9612765-05A **CLIENT SAMPLE ID:**Sta #11133-Inf

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30.0000	100	50- 150
4-Bromofluorobenzene	30	30.8000	103	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961215085400
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961215085400
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9612765-01a

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961215085400
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9612765-01a

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	97	50- 150
4-Bromofluorobenzene	30	31	103	50- 150

METHOD 8020*** **BATCH#:**HP_N961215092200
WORK ORDER: 9612765-01A **CLIENT SAMPLE ID:**Sta #11133-Eff

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	27	90	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

METHOD 8020*** **BATCH#:**HP_N961215092200
WORK ORDER: 9612765-03A **CLIENT SAMPLE ID:**Sta #11133-A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	24	80	70- 131

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	30	100	43- 135

METHOD 8020* BATCH#:HP_N961215092200**
WORK ORDER: 9612765-05A **CLIENT SAMPLE ID:** Sta #11133-Inf

1,4-Difluorobenzene	30	28.4000	95	70- 131
4-Bromofluorobenzene	30	27.2000	91	43- 135

METHOD 8020A * BATCH#:HP_N961215092200**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	26	26.2	74- 131
4-Bromofluorobenzene	30	29	29.1	43- 135

METHOD 8020A * BATCH#:HP_N961215092200**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:** 9612720-13A

1,4-DIFLUOROBENZENE	30	28	93	70- 131
4-BROMOFLUOROBENZENE	30	30	100	43- 135

METHOD 8020A * BATCH#:HP_N961215092200**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:** 9612720-13A

1,4-Difluorobenzene	30	28	93	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

CA LUFT - Gasoline BATCH#:HP_N961216034400
WORK ORDER: 9612765-02A **CLIENT SAMPLE ID:** Sta #11133-B

1,4-Difluorobenzene	30	32	107	50- 150
4-Bromofluorobenzene	30	29	97	50- 150

CA LUFT - Gasoline BATCH#:HP_N961216034400
WORK ORDER: 9612765-04A **CLIENT SAMPLE ID:** Sta #11133-PS

1,4-Difluorobenzene	30	32.4000	108	50- 150
4-Bromofluorobenzene	30	31.2000	104	50- 150

CA LUFT - Gasoline BATCH#:HP_N961216034400
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	31	30.7	50- 150
4-Bromofluorobenzene	30	29	29.4	50- 150

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CA LUFT - Gasoline **BATCH#:**HP_N961216034400
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9612765-02A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	33	110	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

CA LUFT - Gasoline **BATCH#:**HP_N961216034400
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9612765-02A

1,4-Difluorobenzene	30	32	107	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

METHOD 8020* ** **BATCH#:**HP_N961216041200
WORK ORDER: 9612765-02A **CLIENT SAMPLE ID:**Sta #11133-B

1,4-Difluorobenzene	30	31	103	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

METHOD 8020* ** **BATCH#:**HP_N961216041200
WORK ORDER: 9612765-04A **CLIENT SAMPLE ID:**Sta #11133-PS

1,4-Difluorobenzene	30	33.6000	112	70- 131
4-Bromofluorobenzene	30	28.8000	96	43- 135

METHOD 8020A * ** **BATCH#:**HP_N961216041200
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	28	93	74- 131
4-Bromofluorobenzene	30	29	97	43- 135

METHOD 8020A * ** **BATCH#:**HP_N961216041200
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9612706-08A

1,4-DIFLUOROBENZENE	30	29	97	70- 131
4-BROMOFLUOROBENZENE	30	22	73	43- 135

METHOD 8020A * ** **BATCH#:**HP_N961216041200
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9612706-08A

1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS

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

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** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N961215092200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	42	84.0	63 - 120
Benzene	ND	50	36	72.0	62 - 121
Toluene	ND	50	41	82.0	66 - 136
EthylBenzene	ND	50	42	84.0	70 - 136
O Xylene	ND	50	40	80.0	74 - 134
M & P Xylene	ND	100	81	81.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	18	90.0	18	90.0	0	20	39 - 150
BENZENE	ND	20	18	90.0	18	90.0	0	25	39 - 150
TOLUENE	ND	20	19	95.0	19	95.0	0	26	56 - 134
ETHYLBENZENE	ND	20	19	95.0	18	90.0	5.41	38	61 - 128
O XYLENE	ND	20	19	95.0	18	90.0	5.41	29	40 - 130
M & P XYLENE	ND	40	38	95.0	37	92.5	2.67	20	43 - 152

Analyst: RL
Sequence Date: 12/15/96
SPL ID of sample spiked: 9612720-13a
Sample File ID: N_L6551.TX0
Method Blank File ID:
Blank Spike File ID: N_L6544.TX0
Matrix Spike File ID: N_L6566.TX0
Matrix Spike Duplicate File ID: N_L6567.TX0

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

SAMPLES IN BATCH(SPL ID):

9612720-13A 9612522-12A 9612522-15A 9612583-02A
9612583-03A 9612583-04A 9612583-06A 9612583-05A
9612590-01A 9612583-07A 9612765-01A 9612765-03A
9612768-02A 9612768-03A 9612768-04A 9612765-05A
9612720-04A 9612720-08A 9612720-12A

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** SPL BATCH QUALITY CONTROL REPORT **

METHOD 8020/602

Matrix: Aqueous

Units: µg/L

Batch Id: HP_N961216041200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	44	88.0	63 - 120
Benzene	ND	50	38	76.0	62 - 121
Toluene	ND	50	44	88.0	66 - 136
EthylBenzene	ND	50	45	90.0	70 - 136
O Xylene	ND	50	44	88.0	74 - 134
M & P Xylene	ND	100	88	88.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	150	20	74	NC	160	NC	NC	20	39 - 150
BENZENE	ND	20	19	95.0	19	95.0	0	25	39 - 150
TOLUENE	ND	20	21	105	22	110	4.65	26	56 - 134
ETHYLBENZENE	ND	20	18	90.0	21	105	15.4	38	61 - 128
O XYLENE	ND	20	19	95.0	20	100	5.13	29	40 - 130
M & P XYLENE	ND	40	38	95.0	40	100	5.13	20	43 - 152

Analyst: RL

Sequence Date: 12/16/96

SPL ID of sample spiked: 9612706-08A

Sample File ID: N_L6592.TX0

Method Blank File ID:

Blank Spike File ID: N_L6584.TX0

Matrix Spike File ID: N_L6587.TX0

Matrix Spike Duplicate File ID: N_L6588.TX0

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: SPL-Houston Historical Data (3rd Q '95)

(***) = Source: SPL-Houston Historical Data (2nd Q '95)

SAMPLES IN BATCH(SPL ID):

9612706-08A 9612590-02A 9612706-01A 9612706-02A
9612706-03A 9612706-09A 9612706-07A 9612701-11A
9612706-04A 9612706-05A 9612706-06A 9612765-04A
9612712-01A 9612712-03A 9612712-04A 9612712-05A
9612767-05A 9612347-04A 9612765-02A

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** SPL BATCH QUALITY CONTROL REPORT **

CA LUFT

Matrix: Aqueous

Batch Id: HP_N961215085400

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	0.97	97.0	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	ND	0.9	0.85	94.4	0.84	93.3	1.17	50	50 - 150

Analyst: RL

Sequence Date: 12/15/96

SPL ID of sample spiked: 9612765-01A

Sample File ID: NNL6570.TX0

Method Blank File ID:

Blank Spike File ID: NNL6549.TX0

Matrix Spike File ID: NNL6547.TX0

Matrix Spike Duplicate File ID: NNL6548.TX0

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: Temporary Limits

(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9612590-01A 9612765-01A 9612765-03A 9612768-02A 9612768-03A 9612768-04A 9612765-05A

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** SPL BATCH QUALITY CONTROL REPORT **

CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_N961216034400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	0.95	95.0	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	0.08	0.9	1.03	106	1.00	102	3.85	50	50 - 150

Analyst: RL
Sequence Date: 12/16/96
SPL ID of sample spiked: 9612765-02A
Sample File ID: NNL6591.TX0
Method Blank File ID:
Blank Spike File ID: NNL6583.TX0
Matrix Spike File ID: NNL6585.TX0
Matrix Spike Duplicate File ID: NNL6586.TX0

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

SAMPLES IN BATCH(SPL ID):

9612706-08A 9612590-02A 9612706-01A 9612706-02A
9612706-03A 9612706-09A 9612706-07A 9612706-04A
9612706-05A 9612706-06A 9612765-04A 9612765-02A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

96-12-765

CHAIN OF CUSTODY

No. 071219 Page 1 of 1

CONSULTANT'S NAME	ADDRESS	CITY	STATE	ZIP CODE
ALISTO ENG	1575 TREAT BLVD #201	WC	CA	94598

BP SITE NUMBER	BP CORNER ADDRESS/CITY	CONSULTANT PROJECT NUMBER
11133	2220 98th AVE OAKLAND	10-025-10-001

CONSULTANT PROJECT MANAGER	PHONE NUMBER	FAX NUMBER	CONSULTANT CONTRACT NUMBER
KIN LEUNG	(510) 295-1650	(510) 295-1823	G749588

BP CONTACT	BP ADDRESS	PHONE NUMBER	FAX NO.
Scott Hooten	RENTON WA		

LAB CONTACT	LABORATORY ADDRESS	PHONE NUMBER	FAX NO.
	Houston Tex		

SAMPLED BY (Please Print Name)	SAMPLED BY (Signature)	SHIPMENT DATE	SHIPMENT METHOD
SCOTT POLSTON		12/12/96	Fedex

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

AIRBILL NUMBER 940779591

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	HCl TPH G	HCl BTEX	HCl MTBE		pH						COMMENTS
STA #11133-Eff	12/11/96 1107	GW	3	VOA		X	X	X		1						
STA #11133-B	1112									1						
STA #11133-A	1114									1						
STA #11133-PS	1117									1						
STA #11133-INF	1120	↓	↓	↓		↓	↓	↓		1						

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	12/11/96			12/12/96	
	12/14/96		SPL	12/13/96	1000
			2°C ROI, Intact		

ADDITIONAL COMMENTS

CLV-16722
PKG/50

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

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
12/13/96	1000

SPL Sample ID:
96-12-765

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		2° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	940477959 1	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
[signature]	12/13/96

HOUSTON LABORATORY
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PHONE (713) 660-0901

March 7, 1997

Mr. Scott Hooton
BP OIL COMPANY
295 SW 41st St, Bldg 13, Suite N
Renton, WA 98055

The following report contains analytical results for samples received at Southern Petroleum Laboratories (SPL) on February 26, 1997. The samples were assigned to Certificate of Analysis No. 9702B30 and analyzed for all parameters as listed on the chain of custody.

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

If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

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

Southern Petroleum Laboratories

Ed Fry
Project Manager

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

SOUTHERN PETROLEUM LABORATORIES, INC.

Certificate of Analysis Number: 97-02-B30

Approved for Release by:

Ed Fry, Project Manager

3/11/97
Date:

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

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

Certificate of Analysis No. H9-9702B30-01

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588 , COC#055981
DATE: 03/07/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-EFF

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 02/24/97 15:53:00
DATE RECEIVED: 02/26/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	0.76	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	97
4-Bromofluorobenzene	97

Method 8020A***
Analyzed by: fab
Date: 03/02/97

Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L

Surrogate	% Recovery
1,4-Difluorobenzene	87
4-Bromofluorobenzene	97

California LUFT Manual
Analyzed by: fab
Date: 03/02/97 12:48:00

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

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

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

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

Certificate of Analysis No. H9-9702B30-02

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588 , COC#055981
DATE: 03/07/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-B

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 02/24/97 15:55:00
DATE RECEIVED: 02/26/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	97		
Method 8020A***			
Analyzed by: JN			
Date: 03/04/97			
Total Petroleum Hydrocarbons-Gasoline	0.60	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: JN			
Date: 03/04/97 04:36:00			

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

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

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

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

Certificate of Analysis No. H9-9702B30-03

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588 , COC#055981
DATE: 03/07/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-A

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 02/24/97 15:58:00
DATE RECEIVED: 02/26/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	1.4	0.5 P	µg/L
Toluene	8.4	1.0 P	µg/L
Ethylbenzene	5.7	1.0 P	µg/L
Total Xylene	55	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: fab			
Date: 03/02/97			
Total Petroleum Hydrocarbons-Gasoline	0.35	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: fab			
Date: 03/02/97 01:17:00			

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

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

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

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

Certificate of Analysis No. H9-9702B30-04

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588 , COC#055981
DATE: 03/07/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-PS

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 02/24/97 16:00:00
DATE RECEIVED: 02/26/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10000 P	µg/L
Benzene	12000	500 P	µg/L
Toluene	29000	1000 P	µg/L
Ethylbenzene	6000	1000 P	µg/L
Total Xylene	37000	1000 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: fab			
Date: 03/02/97			
Total Petroleum Hydrocarbons-Gasoline	280	50 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: fab			
Date: 03/02/97 03:11:00			

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

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

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

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

Certificate of Analysis No. H9-9702B30-05

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G749588 , COC#055981
DATE: 03/07/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-INF

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 02/24/97 16:03:00
DATE RECEIVED: 02/26/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10000 P	µg/L
Benzene	27000	500 P	µg/L
Toluene	34000	1000 P	µg/L
Ethylbenzene	4400	1000 P	µg/L
Total Xylene	22900	1000 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	90		
Method 8020A***			
Analyzed by: fab			
Date: 03/02/97			
Total Petroleum Hydrocarbons-Gasoline	220	50 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: fab			
Date: 03/02/97 03:39:00			

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

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

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

QUALITY CONTROL

DOCUMENTATION

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

Method 8020A* BATCH#:HP_N970301190600**
WORK ORDER: 9702B30-01A **CLIENT SAMPLE ID:** Sta# 11133-EFF

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

Method 8020A* BATCH#:HP_N970301190600**
WORK ORDER: 9702B30-03A **CLIENT SAMPLE ID:** Sta# 11133-A

1,4-Difluorobenzene	30	28	93	70- 131
4-Bromofluorobenzene	30	28	93	43- 135

Method 8020A* BATCH#:HP_N970301190600**
WORK ORDER: 9702B30-04A **CLIENT SAMPLE ID:** Sta# 11133-PS

1,4-Difluorobenzene	30	29.0000	97	70- 131
4-Bromofluorobenzene	30	28.0000	93	43- 135

Method 8020A* BATCH#:HP_N970301190600**
WORK ORDER: 9702B30-05A **CLIENT SAMPLE ID:** Sta# 11133-INF

1,4-Difluorobenzene	30	29.0000	97	70- 131
4-Bromofluorobenzene	30	27.0000	90	43- 135

Method 8020A * BATCH#:HP_N970301190600**
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	28	28.3	74- 131
4-Bromofluorobenzene	30	28	28.0	43- 135

Method 8020A * BATCH#:HP_N970301190600**
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:** 9702976-03A

1,4-DIFLUOROBENZENE	30	28	93	70- 131
4-BROMOFLUOROBENZENE	30	29	97	43- 135

Method 8020A * BATCH#:HP_N970301190600**
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:** 9702976-03A

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	29	97	43- 135

California LUFT Manual BATCH#:HP_N970301200200
WORK ORDER: 9702B30-01A **CLIENT SAMPLE ID:** Sta# 11133-EFF

1,4-Difluorobenzene	30	26	87	50- 150

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PHONE (713) 660-0901

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	29	97	50- 150

California LUFT Manual **BATCH#:**HP_N970301200200
WORK ORDER: 9702B30-03A **CLIENT SAMPLE ID:**Sta# 11133-A

1,4-Difluorobenzene	30	26	87	50- 150
4-Bromofluorobenzene	30	28	93	50- 150

California LUFT Manual **BATCH#:**HP_N970301200200
WORK ORDER: 9702B30-04A **CLIENT SAMPLE ID:**Sta# 11133-PS

1,4-Difluorobenzene	30	27.0000	90	50- 150
4-Bromofluorobenzene	30	28.0000	93	50- 150

California LUFT Manual **BATCH#:**HP_N970301200200
WORK ORDER: 9702B30-05A **CLIENT SAMPLE ID:**Sta# 11133-INF

1,4-Difluorobenzene	30	27.0000	90	50- 150
4-Bromofluorobenzene	30	28.0000	93	50- 150

California LUFT Manual **BATCH#:**HP_N970301200200
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	26	26.2	50- 150
4-Bromofluorobenzene	30	29	28.8	50- 150

California LUFT Manual **BATCH#:**HP_N970301200200
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9702976-06A

1,4-Difluorobenzene	30	34	113	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

California LUFT Manual **BATCH#:**HP_N970301200200
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9702976-06A

1,4-Difluorobenzene	30	34	113	50- 150
4-Bromofluorobenzene	30	30	100	50- 150

California LUFT Manual **BATCH#:**HP_N970304092500
WORK ORDER: 9702B30-02A **CLIENT SAMPLE ID:**Sta# 11133-B

1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	28	93	50- 150

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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
California LUFT Manual		**BATCH#:** HP_N970304092500		
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
1,4-Difluorobenzene	30	28	28.3	50- 150
4-Bromofluorobenzene	30	27	27.5	50- 150
California LUFT Manual		**BATCH#:** HP_N970304092500		
WORK ORDER: LCS		**CLIENT SAMPLE ID:**		
1,4-Difluorobenzene	30	37	123	50- 150
4-Bromofluorobenzene	30	29	96.7	50- 150
California LUFT Manual		**BATCH#:** HP_N970304092500		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:** 9702D24-01A		
1,4-Difluorobenzene	30	38	127	50- 150
4-Bromofluorobenzene	30	29	97	50- 150
California LUFT Manual		**BATCH#:** HP_N970304092500		
WORK ORDER: Matrix Spike Dup.		**CLIENT SAMPLE ID:** 9702D24-01A		
1,4-Difluorobenzene	30	36	120	50- 150
4-Bromofluorobenzene	30	29	97	50- 150
Method 8020A* **		**BATCH#:** HP_N970304100300		
WORK ORDER: 9702B30-02A		**CLIENT SAMPLE ID:** Sta# 11133-B		
1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	29	97	43- 135
Method 8020A* **		**BATCH#:** HP_N970304100300		
WORK ORDER: Method Blank		**CLIENT SAMPLE ID:**		
1,4-Difluorobenzene	30	29	28.8	70- 131
4-Bromofluorobenzene	30	27	26.6	43- 135
Method 8020A* **		**BATCH#:** HP_N970304100300		
WORK ORDER: LCS		**CLIENT SAMPLE ID:**		
1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	28	93.3	43- 135
Method 8020A* **		**BATCH#:** HP_N970304100300		
WORK ORDER: Matrix Spike		**CLIENT SAMPLE ID:** 9702D23-01A		
1,4-DIFLUOROBENZENE	30	29	97	70- 131

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	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-BROMOFLUOROBENZENE	30	27	90	43- 135

Method 8020A* BATCH#:HP_N970304100300
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9702D23-01A

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	30	100	43- 135

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

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

** SPL BATCH QUALITY CONTROL REPORT **

METHOD 8020/602

Matrix: Aqueous

Batch Id: HP_N970301190600

Units: µg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	49	98.0	63 - 120
Benzene	ND	50	45	90.0	62 - 121
Toluene	ND	50	45	90.0	66 - 136
EthylBenzene	ND	50	47	94.0	70 - 136
O Xylene	ND	50	49	98.0	74 - 134
M & P Xylene	ND	100	100	100	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	19	95.0	20	100	5.13	20	39 - 150
BENZENE	ND	20	20	100	20	100	0	25	39 - 150
TOLUENE	ND	20	19	95.0	19	95.0	0	26	56 - 134
ETHYLBENZENE	ND	20	19	95.0	19	95.0	0	38	61 - 128
O XYLENE	ND	20	20	100	20	100	0	29	40 - 130
M & P XYLENE	ND	40	41	102	41	102	0	20	43 - 152

Analyst: fab
Sequence Date: 03/01/97
SPL ID of sample spiked: 9702976-03A
Sample File ID: N_C7028.TX0
Method Blank File ID:
Blank Spike File ID: N_C7020.TX0
Matrix Spike File ID: N_C7023.TX0
Matrix Spike Duplicate File ID: N_C7024.TX0

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

SAMPLES IN BATCH(SPL ID):

9702B48-01A 9702976-05A 9702976-02A 9702B30-04A
9702B30-05A 9702998-18A 9702866-05A 9702976-04A
9702B48-08A 9702B48-07A 9702B48-06A 9702B48-04A
9702B48-05A 9702B48-03A 9702B48-02A 9702976-03A
9702976-06A 9702B30-01A 9702B30-03A

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

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

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N970304100300

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	42	84.0	20 - 110
Benzene	ND	50	41	82.0	52 - 121
Toluene	ND	50	43	86.0	66 - 136
EthylBenzene	ND	50	43	86.0	70 - 136
O Xylene	ND	50	47	94.0	74 - 134
M & P Xylene	ND	100	95	95.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	220	20	240	NC	240	NC	NC	20	39 - 150
BENZENE	ND	20	23	115	23	115	0	25	39 - 150
TOLUENE	ND	20	20	100	19	95.0	5.13	26	56 - 134
ETHYLBENZENE	ND	20	23	115	22	110	4.44	38	61 - 128
O XYLENE	ND	20	23	115	23	115	0	29	40 - 130
M & P XYLENE	ND	40	47	118	48	120	1.68	20	43 - 152

Analyst: JN
Sequence Date: 03/04/97
SPL ID of sample spiked: 9702D23-01A
Sample File ID: N_C7128.TX0
Method Blank File ID:
Blank Spike File ID: N_C7121.TX0
Matrix Spike File ID: N_C7123.TX0
Matrix Spike Duplicate File ID: N_C7124.TX0

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

SAMPLES IN BATCH(SPL ID):

9702D23-03A 9702D23-04A 9702D23-05A 9702C88-01A
9702C88-03A 9702C88-04A 9702C88-12A 9702C88-15A
9702C88-17A 9702C88-05A 9703071-01A 9703071-04A
9703071-05A 9703071-02A 9703071-03A 9702D23-01A
9702D24-01A 9702B30-02A 9702D24-02A

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

** SPL BATCH QUALITY CONTROL REPORT **

CA LUFT

Matrix: Aqueous

Batch Id: HP_N970301200200

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	0.86	86.0	50 - 150

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	ND	0.9	0.85	94.4	0.85	94.4	0	50	50 - 150

Analyst: fab

Sequence Date: 03/01/97

SPL ID of sample spiked: 9702976-06A

Sample File ID: NNC7029.TX0

Method Blank File ID:

Blank Spike File ID: NNC7022.TX0

Matrix Spike File ID: NNC7025.TX0

Matrix Spike Duplicate File ID: NNC7026.TX0

* = Values Outside QC Range. ⁎ = Data outside Method Specification limits.

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: Temporary Limits

(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9702B30-05A 9702B28-03A 9702B30-01A 9702B30-03A 9702B30-04A

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

** SPL BATCH QUALITY CONTROL REPORT **

CA LUFT

Matrix: Aqueous
Units: mg/L

Batch Id: HP_N970304092500

L A B O R A T O R Y C O N T R O L S A M P L E

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Petroleum Hydrocarbons-Gas	ND	1.0	0.7	70.0	50 - 150

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
PETROLEUM HYDROCARBONS-GAS	ND	0.9	0.86	95.6	0.80	88.9	7.26	50	50 - 150

Analyst: JN
Sequence Date: 03/04/97
SPL ID of sample spiked: 9702D24-01A
Sample File ID: NNC7129.TX0
Method Blank File ID:
Blank Spike File ID: NNC7122.TX0
Matrix Spike File ID: NNC7125.TX0
Matrix Spike Duplicate File ID: NNC7126.TX0

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

SAMPLES IN BATCH(SPL ID):

9702D23-02A 9702D23-03A 9702D23-04A 9702D23-05A
9702C88-01A 9702C88-03A 9702C88-04A 9702C88-17A
9702D23-01A 9702D24-01A 9702B30-02A 9702D24-02A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9702B30

CHAIN OF CUSTODY

No. 055981 Page 1 of 1

CONSULTANT'S NAME: Alisto Eng	ADDRESS: 1575 Treat Blvd #201	CITY: Walnut Creek	STATE: CA	ZIP CODE: 94598
BP SITE NUMBER: 11133	BP CORNER ADDRESS/CITY: 2220 98th Ave Oakland			CONSULTANT PROJECT NUMBER: 10-025-15-04
CONSULTANT PROJECT MANAGER: Peter Beaver	PHONE NUMBER: (510) 295-1650	FAX NUMBER: (510) 295-1823		CONSULTANT CONTRACT NUMBER: G749588
BP CONTACT: Scott Hooton	BP ADDRESS: Renton WA	PHONE NUMBER: —		FAX NO.: —
LAB CONTACT: Ed Fry	LABORATORY ADDRESS: Houston, Texas	PHONE NUMBER: —		FAX NO.: —
SAMPLED BY (Please Print Name): Scott Hooton	SAMPLED BY (Signature):	SHIPMENT DATE: 2-25-97		SHIPMENT METHOD: Fed Ex

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

AIRBILL NUMBER: 384484699 25

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE / COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE / LAB SAMPLE #	TPH	BTEX	COMMENTS
Sta # 11133 - EFF	2/24/97 1535	Liq	3	VOA		X	X	
Sta # 11133 - B	1525							
Sta # 11133 - A	1558							
Sta # 11133 - PS	1600							
Sta # 11133 - INF	1603							

PM AC 2/26/97

- Turnaround per QC

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	2/24/97		Patricia Lytton	2/25/97	0800
Patricia Lytton	2/25/97	1500	[signature]	2/26/97	1000

ADDITIONAL COMMENTS

CTV 16722

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

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
2/26/97	1250

SPL Sample ID:
9702B30

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		4 C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	384846992	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
Andrea Stanley	2/26/97

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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 97-03-655

Approved for Release by:

Ed Fry, Project Manager

Date: 3/24/97

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

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

Certificate of Analysis No. H9-9703655-01

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G 749588 , COC#071231
DATE: 03/24/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-EFF

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 03/12/97 09:14:00
DATE RECEIVED: 03/13/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	1.0 P	µg/L
Benzene	ND	1.0 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: WK			
Date: 03/17/97			
Total Petroleum Hydrocarbons-Gasoline	1.8	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	120		
California LUFT Manual			
Analyzed by: WK			
Date: 03/17/97 05:41:00			

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

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

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

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

Certificate of Analysis No. H9-9703655-02

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G 749588 , COC#071231
DATE: 03/24/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-B

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 03/12/97 09:20:00
DATE RECEIVED: 03/13/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	17	1.0 P	µg/L
Benzene	5.3	1.0 P	µg/L
Toluene	8.1	1.0 P	µg/L
Ethylbenzene	2.5	1.0 P	µg/L
Total Xylene	51	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: JN			
Date: 03/17/97			
Total Petroleum Hydrocarbons-Gasoline	0.73	0.25 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: WK			
Date: 03/17/97 08:33:00			

(P) - Practical Quantitation Limit

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

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

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

Certificate of Analysis No. H9-9703655-03

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G 749588 , COC#071231
DATE: 03/24/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-A

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 03/12/97 09:24:00
DATE RECEIVED: 03/13/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	0.53	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: WK			
Date: 03/17/97			
Total Petroleum Hydrocarbons-Gasoline	0.090	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	97		
California LUFT Manual			
Analyzed by: WK			
Date: 03/17/97 06:10:00			

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

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

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

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

Certificate of Analysis No. H9-9703655-04

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G 749588 , COC#071231
DATE: 03/24/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-PS

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 03/12/97 09:27:00
DATE RECEIVED: 03/13/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	5000 P	µg/L
Benzene	4900	250 P	µg/L
Toluene	11000	500 P	µg/L
Ethylbenzene	1600	500 P	µg/L
Total Xylene	16000	500 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: WK			
Date: 03/17/97			
Total Petroleum Hydrocarbons-Gasoline	93	25 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: WK			
Date: 03/17/97 09:01:00			

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

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

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

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

Certificate of Analysis No. H9-9703655-05

BP Oil Company
295 SW 41st St, Bldg 13,Ste N
Renton, WA 98055
ATTN: Scott Hooton

P.O.# G 749588 , COC#071231
DATE: 03/24/97

PROJECT: BP Oil #11133
SITE: 2220 98TH Ave Oakland CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Sta# 11133-INF

PROJECT NO: 10-025-15-001
MATRIX: WATER
DATE SAMPLED: 03/12/97 09:35:00
DATE RECEIVED: 03/13/97

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10000 P	µg/L
Benzene	24000	500 P	µg/L
Toluene	48000	1000 P	µg/L
Ethylbenzene	5400	1000 P	µg/L
Total Xylene	33000	1000 P	µg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	103		
4-Bromofluorobenzene	93		
Method 8020A***			
Analyzed by: WK			
Date: 03/17/97			
Total Petroleum Hydrocarbons-Gasoline	230	50 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	93		
California LUFT Manual			
Analyzed by: WK			
Date: 03/17/97 09:30:00			

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

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

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

QUALITY CONTROL

DOCUMENTATION

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

SURROGATE RECOVERY SUMMARY
03/24/97 14:47:23

Method 8020A *** **BATCH#:**HP_N970317012400
WORK ORDER: 9703655-01A **CLIENT SAMPLE ID:**Sta# 11133-EFF

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	32	107	43- 135

Method 8020A* ** **BATCH#:**HP_N970317012400
WORK ORDER: 9703655-03A **CLIENT SAMPLE ID:**Sta# 11133-A

1,4-Difluorobenzene	30	29	97	70- 131
4-Bromofluorobenzene	30	28	93	43- 135

Method 8020A* ** **BATCH#:**HP_N970317012400
WORK ORDER: 9703655-04A **CLIENT SAMPLE ID:**Sta# 11133-PS

1,4-Difluorobenzene	30	30.0000	100	70- 131
4-Bromofluorobenzene	30	28.0000	93	43- 135

Method 8020A* ** **BATCH#:**HP_N970317012400
WORK ORDER: 9703655-05A **CLIENT SAMPLE ID:**Sta# 11133-INF

1,4-Difluorobenzene	30	31.0000	103	70- 131
4-Bromofluorobenzene	30	28.0000	93	43- 135

Method 8020A *** **BATCH#:**HP_N970317012400
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

1,4-Difluorobenzene	30	29	29.2	74- 131
4-Bromofluorobenzene	30	29	29.3	43- 135

Method 8020A *** **BATCH#:**HP_N970317012400
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9703655-01A

1,4-DIFLUOROBENZENE	30	31	103	70- 131
4-BROMOFLUOROBENZENE	30	30	100	43- 135

Method 8020A *** **BATCH#:**HP_N970317012400
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9703655-01A

1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	31	103	43- 135

California LUFT Manual **BATCH#:**HP_N970317022200
WORK ORDER: 9703655-01A **CLIENT SAMPLE ID:**Sta# 11133-EFF

1,4-Difluorobenzene	30	28	93	50- 150

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

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
4-Bromofluorobenzene	30	36	120	50- 150

California LUFT Manual **BATCH#:**HP_N970317022200
WORK ORDER: 9703655-02A **CLIENT SAMPLE ID:**Sta# 11133-B

1,4-Difluorobenzene	30	26.0000	87	50- 150
4-Bromofluorobenzene	30	28.0000	93	50- 150

California LUFT Manual **BATCH#:**HP_N970317022200
WORK ORDER: 9703655-03A **CLIENT SAMPLE ID:**Sta# 11133-A

1,4-Difluorobenzene	30	27	90	50- 150
4-Bromofluorobenzene	30	29	97	50- 150

California LUFT Manual **BATCH#:**HP_N970317022200
WORK ORDER: 9703655-04A **CLIENT SAMPLE ID:**Sta# 11133-PS

1,4-Difluorobenzene	30	26.0000	87	50- 150
4-Bromofluorobenzene	30	28.0000	93	50- 150

California LUFT Manual **BATCH#:**HP_N970317022200
WORK ORDER: 9703655-05A **CLIENT SAMPLE ID:**Sta# 11133-INF

1,4-Difluorobenzene	30	27.0000	90	50- 150
4-Bromofluorobenzene	30	28.0000	93	50- 150

Modified 8015A - Gasoline* ** **BATCH#:**HP_N970317022200
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

4-Bromofluorobenzene	30	29	97	52- 152
1,4-Difluorobenzene	30	27	90	54- 137

Modified 8015A - Gasoline* ** **BATCH#:**HP_N970317022200
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9703655-01A

4-Bromofluorobenzene	30	34	113	52- 152
1,4-Difluorobenzene	30	37	123	54- 137

Modified 8015A - Gasoline* ** **BATCH#:**HP_N970317022200
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9703655-01A

4-Bromofluorobenzene	30	34	113	52- 152
1,4-Difluorobenzene	30	38	127	54- 137

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

SURROGATE RECOVERY SUMMARY
03/24/97 14:47:23

Method 8020A *** **BATCH#:**HP_N970317102700
WORK ORDER: 9703655-02A **CLIENT SAMPLE ID:**Sta# 11133-B

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	30	100	70- 131
4-Bromofluorobenzene	30	28	93	43- 135

Method 8020A *** **BATCH#:**HP_N970317102700
WORK ORDER: Method Blank **CLIENT SAMPLE ID:**

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	29	29.5	74- 131
4-Bromofluorobenzene	30	28	27.8	43- 135

Method 8020A *** **BATCH#:**HP_N970317102700
WORK ORDER: Matrix Spike **CLIENT SAMPLE ID:**9703619-06A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-DIFLUOROBENZENE	30	31	103	70- 131
4-BROMOFLUOROBENZENE	30	29	97	43- 135

Method 8020A *** **BATCH#:**HP_N970317102700
WORK ORDER: Matrix Spike Dup. **CLIENT SAMPLE ID:**9703619-06A

	AMOUNT ADDED	CONC. MEASURED	RECOVERY	LIMITS
1,4-Difluorobenzene	30	31	103	70- 131
4-Bromofluorobenzene	30	28	93	43- 135

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

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

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N970317012400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	42	84.0	63 - 120
Benzene	ND	50	40	80.0	62 - 121
Toluene	ND	50	40	80.0	66 - 136
EthylBenzene	ND	50	44	88.0	70 - 136
O Xylene	ND	50	45	90.0	74 - 134
M & P Xylene	ND	100	90	90.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	ND	20	20	100	19	95.0	5.13	20	39 - 150
BENZENE	ND	20	23	115	21	105	9.09	25	39 - 150
TOLUENE	ND	20	17	85.0	16	80.0	6.06	26	56 - 134
ETHYLBENZENE	ND	20	20	100	19	95.0	5.13	38	61 - 128
O XYLENE	ND	20	20	100	19	95.0	5.13	29	40 - 130
M & P XYLENE	ND	40	41	102	39	97.5	4.51	20	43 - 152

Analyst: WK
Sequence Date: 03/17/97
SPL ID of sample spiked: 9703655-01A
Sample File ID: N_C7570.TXO
Method Blank File ID:
Blank Spike File ID: N_C7560.TXO
Matrix Spike File ID: N_C7564.TXO
Matrix Spike Duplicate File ID: N_C7565.TXO

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

SAMPLES IN BATCH(SPL ID): 9703619-03A 9703619-04A 9703619-05A 9703655-04A 9703655-05A 9703619-01A 9703655-01A 9703655-03A 9703619-02A

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

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020/602

Matrix: Aqueous
Units: µg/L

Batch Id: HP_N970317102700

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
MTBE	ND	50	48	96.0	63 - 120
Benzene	ND	50	45	90.0	62 - 121
Toluene	ND	50	44	88.0	66 - 136
EthylBenzene	ND	50	47	94.0	70 - 136
O Xylene	ND	50	49	98.0	74 - 134
M & P Xylene	ND	100	98	98.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
MTBE	1.7	20	25	116	25	116	0	20	39 - 150
BENZENE	ND	20	23	115	22	110	4.44	25	39 - 150
TOLUENE	ND	20	20	100	19	95.0	5.13	26	56 - 134
ETHYLBENZENE	ND	20	23	115	21	105	9.09	38	61 - 128
O XYLENE	ND	20	23	115	22	110	4.44	29	40 - 130
M & P XYLENE	ND	40	48	120	46	115	4.26	20	43 - 152

Analyst: JN
Sequence Date: 03/17/97
SPL ID of sample spiked: 9703619-06A
Sample File ID: N_C7584.TXO
Method Blank File ID:
Blank Spike File ID: N_C7583.TXO
Matrix Spike File ID: N_C7585.TXO
Matrix Spike Duplicate File ID: N_C7586.TXO

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

SAMPLES IN BATCH(SPL ID): 9703663-06A 9703619-07A 9703619-11A 9703619-12A 9703619-13A 9703619-14A 9703619-19A 9703619-06A 9703540-06A 9703540-07A 9703540-08A 9703655-02A

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

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

Matrix: Aqueous
Units: mg/L

Batch Id: HP_N970317022200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Gasoline Petr. Hydrocarbon	ND	1.0	0.85	85.0	56 - 130

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
GASOLINE PETR. HYDROCARBON	ND	5 77.8	2.5	77.8	0 22		169H		31702 - 2200

Analyst: WK
Sequence Date: 03/17/97
SPL ID of sample spiked: 9703655-01A
Sample File ID:
Method Blank File ID:
Blank Spike File ID: NNC7562.TXO
Matrix Spike File ID:
Matrix Spike Duplicate File ID:

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

SAMPLES IN BATCH(SPL ID): 9703619-03A 9703619-04A 9703619-05A 9703655-02A 9703655-04A 9703655-05A 9703619-01A 9703655-01A 9703655-03A 9703619-02A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

970655

CHAIN OF CUSTODY

No. 071231 Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	ADDRESS: 1575 Treat Blvd #201	CITY: WC	STATE: CA	ZIP CODE: 94598
BP SITE NUMBER: 11133	BP CORNER ADDRESS/CITY: 2220 98th Ave Oakland			CONSULTANT PROJECT NUMBER: 10-025-15-001
CONSULTANT PROJECT MANAGER: Peter Beaver	PHONE NUMBER: (510) 295-1650	FAX NUMBER: (510) 295-1823		CONSULTANT CONTRACT NUMBER: G 749588
BP CONTACT: Scott Hooton	BP ADDRESS: Renton WA	PHONE NUMBER:		FAX NO:
LAB CONTACT: SPL	LABORATORY ADDRESS: Houston Texas	PHONE NUMBER:		FAX NO:
SAMPLED BY (Please Print Name): Scott Polston	SAMPLED BY (Signature):	SHIPMENT DATE: 3/12/97		SHIPMENT METHOD: Fed Ex

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

ANALYSIS REQUIRED

AIRBILL NUMBER: 8898470007

SAMPLE DESCRIPTION	COLLECTION DATE / TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE	LAB SAMPLE #	HCl TPH GAS	HCl BTEX							COMMENTS
Sta # 11133 - EFF	3/12/97 0914	GW	3	VOA			X	X							
Sta # 11133 - B	0920														
Sta # 11133 - A	0924								PH RC 3/13/97						
Sta # 11133 - DS	0927														
Sta # 11133 - INF	0931														
															Intact P/A S

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
				3/12/97	3:50
	3/14/97	2:50		3/13/97	1000

ADDITIONAL COMMENTS

CLV-16722
PKG/50

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

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 3/13/97	Time: 1450

SPL Sample ID: 9703655

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		3 C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery		
		FedEx Delivery (airbill #)	3848470006	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date: 3/13/97

☑ 8880 Interchange Dr.
Houston, TX 77054
ph: (713) 660-0901
fax: (713) 660-8975

☐ 500 Ambassador Caffery Pkwy.
Scott, LA 70583-8544
ph: (318) 237-4775
fax: (318) 237-7080

☐ 459 Hughes Rd.
Traverse City, MI 49684
ph: (616) 947-5777
fax: (616) 947-7455

SOUTHERN PETROLEUM LABORATORIES

BOTTLE ORDER AND PROJECT FORM FOR BP

SHIP TO: Alisto Engineering	BILL TO:
STREET: 1575 Treat Blvd	BP OIL COMPANY
CITY: Walnut Creek	STREET:
STATE: CA	CITY, STATE:
ZIP: 94598	ZIP:
ATTN: Patrica Yeltan	ATTN: (BP-PM)
PHONE:	PHONE:
CONSULTANT PROJECT #: 10-025-15-001	DATE/TIME ORDER NEEDED: 3/5/97
BP SITE #: 11133	INITIATED BY (SPL-PM): EB DATE: 2/26/97
BP CONTRACT #:	SAMPLE ARRIVAL DATE:

NUMBER OF SAMPLES	MATRIX	BOTTLE TYPE	PRESER-VATIVE	METHOD AND ANALYSIS
15	H2O	40ml	HCL	BTX-MTBE-EPA

LAB COMMENTS: Please include BP's COC's and fedex return airbill

FILLED BY: [illegible]

DATE: 3-3-97

MODE OF KIT DELIVERY (CHECK BOX):

☐ PR FEDEX ☐ STD FEDEX ☐ 2 DAY FEDEX ☐ UPS 3 DAY ☑ UPS 5 DAY ☐ OTHER

SHIPPED BY:

CONSULTANTS: PLEASE INSPECT THE ENCLOSED BOTTLE ORDER. SIGN AND DATE AFTER INSPECTION.
PLEASE RETURN THIS FORM WITH SAMPLES (COOLER).

BP CONSULTANT NAME (PRINT) AND SIGNATURE

DATE AND TIME BOTTLE KIT EXAMINED

CONSULTANT COMMENTS: