



GETTLER-RYAN INC.

TRANSMITTAL

TO: Ms. Eva Chu
 Alameda County Health Care Services
 Department of Environmental Health
 1131 Harbor Bay Pkwy, 2nd Floor
 Alameda, California 94502

DATE: May 11, 1999
 PROJ. #: 140214.02

SUBJECT: Former Tosco BP
 Branded Facility No. 11133
 2220 98th Avenue, Oakland, CA

FROM: Douglas J. Lee
 Gettler-Ryan Inc.
 6747 Sierra Court, Suite J
 Dublin, California 94568

WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	February 2, 1999	Tank and Product Piping Removal Report

THESE ARE TRANSMITTED as checked below:

- For review and comment Approved as submitted Resubmit __ copies for approval
 As requested Approved as noted Submit __ copies for distribution
 For approval Return for corrections Return __ corrected prints
 For Your Files

COMMENTS:

At the request of Tosco Marketing Company, we are sending one copy of the referenced report for your files. If you have any questions or comments, please call me at (925) 551-7555.

cc: Mr. David De Witt, Tosco Marketing Company

99 MAY 14 AM 9:10
 ENVIRONMENTAL
 PROTECTION



GETTLER-RYAN Inc.

February 2, 1999

Mr. David De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

**Subject: Underground Storage Tank and Product Piping Removal Report for Former
 Tosco BP Branded Facility No. 11133, 2220 98th Avenue, Oakland, California.**

Dear Mr. De Witt:

At the request of Tosco Marketing Company, Gettler-Ryan Inc. (GR) conducted a soil investigation during underground storage tank (UST) and product piping removal activities at the subject site. The purpose was to assess if petroleum hydrocarbons have impacted the soil near the former gasoline USTs and beneath the former product lines. GR's scope of work included: observing removal of the former USTs; collecting soil and groundwater samples from the UST pit, collecting soil samples from the former product piping trenches, and from the soil stockpiles for disposal characterization; submitting soil samples for analysis; coordinating disposal of soil stockpiles; and preparing a report of the field activities and analytical results. Tank removal and excavation activities were performed by Fuller Excavating & Demolition, Inc. (Fuller) of Rancho Cordova, California.

SITE DESCRIPTION

The subject site is a former service station located on the northeast corner of the intersection of 98th Avenue and the Bancroft Avenue in Oakland, California (Figure 1). The site is currently closed and fenced. The current facilities consist of a building and a canopy. Pertinent site features are shown on Figure 2.

FIELD WORK

Sampling was performed in accordance with GR's Field Methods and Procedures (attached). All soil and groundwater samples collected during this investigation were submitted under chain-of-custody to Sequoia Analytical Laboratory located in Walnut Creek, California (ELAP #1271). Analytical methods and results are summarized in Tables 1 and 2. Soil sample locations are shown on Figure 2. Copies of the laboratory analytical reports and chain-of-custody records are attached. Mr. Stephen W. Craford of

140214.02

the City of Oakland Fire Services Agency (COFSA) was present at the site to observe former UST removal and sample collection.

Gasoline UST Removal and Soil and groundwater Sampling

On October 1, 1998, two 10,000-gallon and one 12,000-gallon double-wall fiberglass unleaded gasoline USTs were removed from the site. Upon removal, the USTs were visually inspected for evidence of failure. No holes or cracks were observed in the tanks. The USTs were removed from the site and disposed of by Ecology Control Industries (ECI) of Richmond, California.

Limits of the gasoline UST pit is shown on Figure 2. Native soil in the vicinity of the UST pit consisted primarily of silty clay and sandy clay. Groundwater was encountered in the UST pit at a depth of approximately 12.5 feet below ground surface (bgs), thus prohibiting the collection of soil samples from beneath the USTs.

Following UST removal, two groundwater samples (Water-1 and Water-2) were collected from the southeast and northwest ends of the UST pit. Four soil samples (SW1 through SW4) were collected from the sidewalls of the UST pit at depths of approximately 12.0 feet bgs. All soil and groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert-butyl ether (MTBE). TPHg or BTEX were not detected in any of the sidewall soil samples from the UST pit. MTBE was detected in samples SW2 and SW3 at concentrations of 0.43 ppm and 0.099 ppm, respectively. The groundwater samples (Water-1 and Water-2) contained TPHg at concentrations of 430 and 3,700 parts per billion (ppb), benzene at 46 and 98 ppb, and MTBE at 1,200 and 4,100 ppb, respectively.

Product Line Removal and Soil Sampling

On October 1, 1998, the existing fiber trenches and 2-inch-diameter single-wall fiberglass product lines were removed. Eight soil samples (P1 through P8) were collected from the base of the product piping trenches at depths of approximately 3.5 feet bgs. Native soil in the vicinity of the product line trenches consisted of silty clay. The soil samples collected from the product piping trenches were analyzed for TPHg, BTEX and MTBE. TPHg was detected in one of the eight samples (P7) at a concentration of 1.2 ppm (reported by the laboratory as unidentified hydrocarbons C6-C12). Benzene was detected in samples P5 and P7 at concentrations of 0.0085 ppm and 0.067 ppm, respectively. MTBE was detected in samples P2, P5 and P7 at concentrations of 4.0 ppm, 0.74 ppm and 2.0 ppm, respectively.

Stockpile Sampling

On October 1, 1998, six composite soil samples (CompA through CompF) were collected from approximately 550 cubic yards of stockpiled soil generated from the gasoline UST pit and piping trenches. Stockpile samples were collected for disposal characterization. All stockpile soil samples were analyzed for TPHg, BTEX, MTBE, and total lead. The analytical results of stockpiled soil samples were within limits acceptable to the landfill. Analytical results are summarized in Table 1.

SOIL DISPOSAL

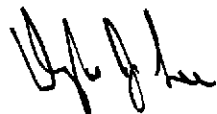
On December 7, 8, and 9, 1998, Denbeste Transportation, Inc. of Windsor, California, removed the soil stockpile (represented by samples CompA through CompF) from the site and transported a total of 655.40 tons of soil to the Forward, Inc. disposal facility in Manteca, California. A copy of Forward, Inc. acceptance documentation is attached.

If you have any questions regarding this report please call us in our Dublin office at (510) 551-7555.

Sincerely,
Gettler-Ryan Inc.



Hagop Kevork
Staff Engineer
P.E. C55734



Douglas J. Lee
Project Manager

Attachments: Table 1. Analytical Results
Figure 1. Vicinity Map
Figure 2. Site Plan/Soil Sample Location Map
GR Field Methods and Procedures
Forward Landfill Acceptance Documentation
Laboratory Analytical Reports and Chain-of-Custody Records

Table 1 - Chemical Analytical Data
 Former Tosco BP Branded Facility No. 11133
 2220 98th Avenue
 Oakland, California

Sample ID	Date Collected	Sample Depth (feet)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Xylenes (ppm)	MTBE (ppm)	Lead (ppm)
<u>GASOLINE UST PIT (SOIL)</u>									
SW1	10/1/98	12	ND	ND	ND	ND	ND	ND	NR
SW2	10/1/98	12	ND	ND	ND	ND	ND	0.43	NR
SW3	10/1/98	12	ND	ND	ND	ND	ND	0.099	NR
SW4	10/1/98	12	ND	ND	ND	ND	ND	ND	NR
<u>PRODUCT LINES (SOIL)</u>									
P1	10/1/98	3.5	ND	ND	ND	ND	0.029	ND	NR
P2	10/1/98	3.5	ND	ND	ND	ND	ND	4.0	NR
P3	10/1/98	3.5	ND	ND	ND	ND	ND	ND	NR
P4	10/1/98	3.5	ND	ND	ND	ND	ND	ND	NR
P5	10/1/98	3.5	ND	0.0085	0.047	0.0071	0.057	0.74	NR
P6	10/1/98	3.5	ND	ND	ND	ND	ND	ND	NR
P7	10/1/98	3.5	1.2 ¹	0.067	0.090	ND	0.042	2.0	NR
P8	10/1/98	3.5	ND	ND	ND	ND	ND	ND	NR
<u>STOCKPILES</u>									
Comp A	10/1/98	NA	ND	ND	ND	ND	ND	ND	5.0
Comp B	10/1/98	NA	ND	ND	ND	ND	0.026	ND	1.4
Comp C	10/1/98	NA	ND	ND	ND	ND	ND	ND	2.4
Comp D	10/1/98	NA	ND	ND	ND	ND	ND	ND	2.0
Comp E	10/1/98	NA	ND	ND	ND	ND	ND	ND	ND
Comp F	10/1/98	NA	ND	ND	ND	ND	0.0091	ND	1.2

Table 1 - Chemical Analytical Data
 Former Tosco BP Branded Facility No. 11133
 2220 98th Avenue
 Oakland, California

Sample ID	Date Collected	Depth to Water (feet)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-Benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	Lead (ppm)
<u>GASOLINE UST PIT (WATER)</u>									
Water-1	10/1/98	12.5	430	46	20	0.65	89	1,200	NR
Water-2	10/1/98	12.5	3,700	98	450	56	360	4,100	NR

EXPLANATION:

ND = none detected
 NA = not applicable
 ppm = parts per million
 ppb = parts per billion
 NR = analysis not requested

ANALYTICAL LABORATORY:

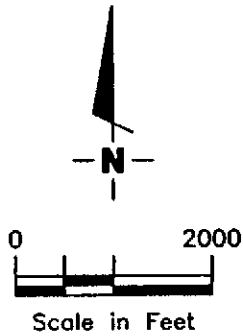
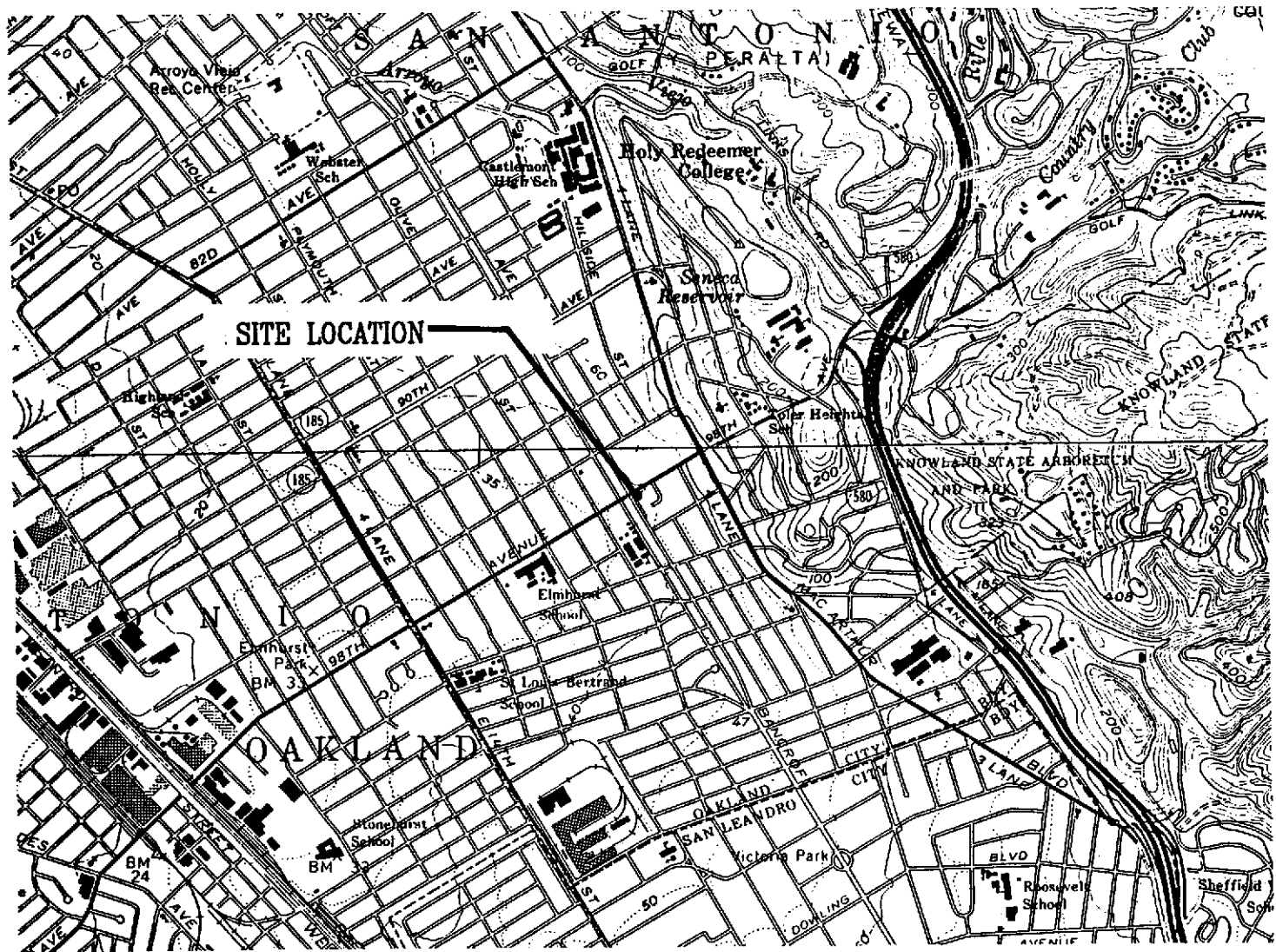
Sequoia Analytical (ELAP # 1271)

NOTES:

¹ = Laboratory report indicates unidentified hydrocarbons C6-C12

ANALYTICAL METHODS:

TPHg = Total petroleum hydrocarbons as gasoline according to EPA Method 8015 Modified.
 BTEX = Benzene, toluene, ethylbenzene, and xylenes according to EPA Method 8020.
 MTBE = Methyl tert-butyl ether according to EPA Method 8020.



Base Map: USGS Topographic Map



Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

VICINITY MAP
Former Tosco BP Branded Facility #11133
2220 98th Avenue
Oakland, California

FIGURE

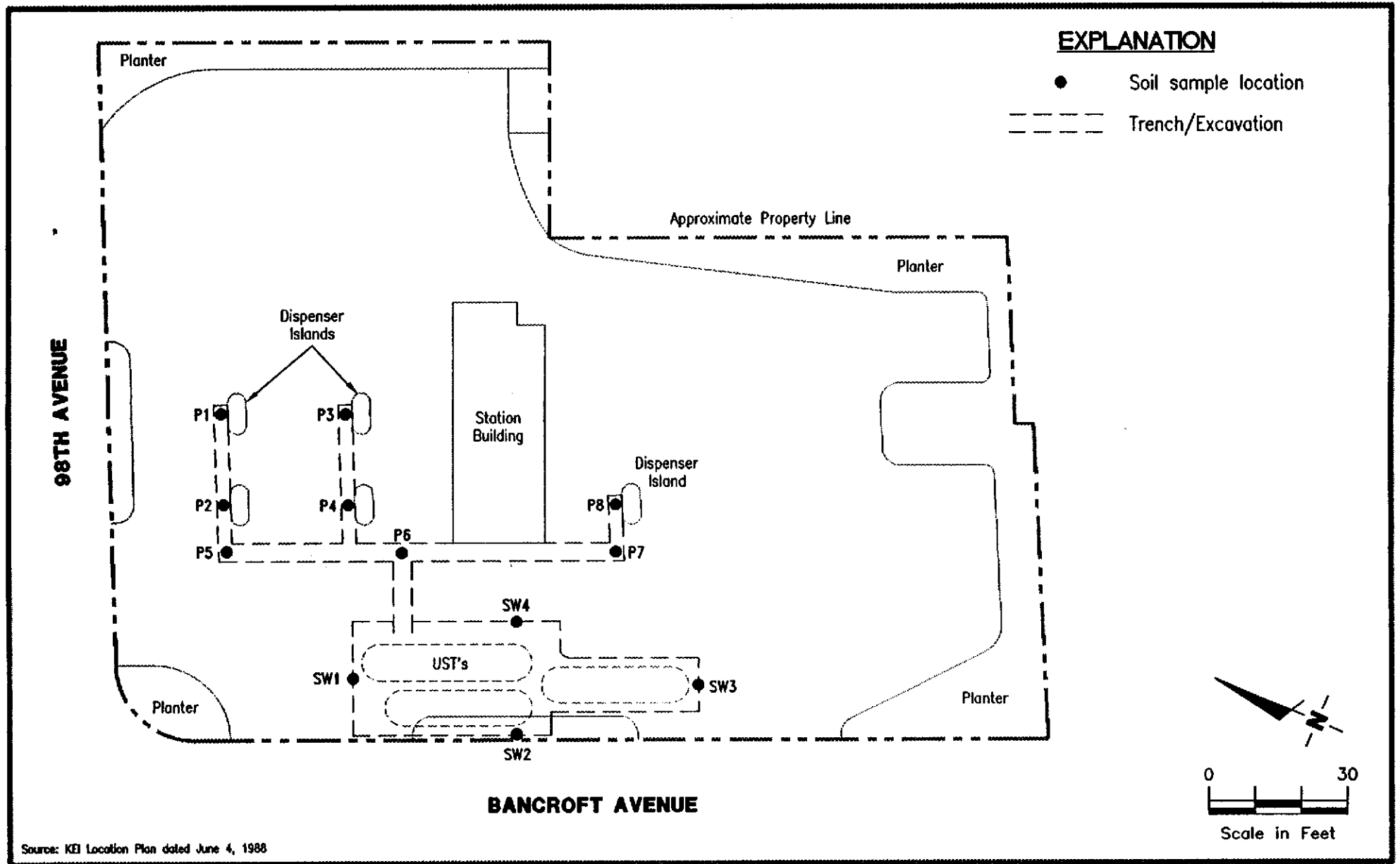
1

JOB NUMBER
140214

REVIEWED BY

DATE
October, 1998

REVISED DATE



Gettler - Ryan Inc.

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 Dublin, CA 94568

SITE PLAN/SOIL SAMPLE LOCATION MAP
 Former Tosco BP Branded Facility #11133
 2220 98th Avenue
 Oakland, California

FIGURE

2

JOB NUMBER
 140214.02

REVIEWED BY

DATE
 October, 1998

REVISED DATE



FORWARD
INCORPORATED

P.O. Box 6336
1145 W. Charter Way • Stockton, CA 95206
(209) 466-4482 • (800) 204-4242 • FAX (209) 466-1067

Via Fax (925) 441-7888

January 14, 1999

Gettler-Ryan, Inc.
Attn: Haig Kevork
6747 Sierra Court, Ste J
Dublin, CA 94568

Re: **FORWARD, INC.** Approval No. 764222
Contaminated Soil from from
Former Tosco BP# 11133 -2220 98th Ave, Oakland, CA

Dear Mr. Kevork:

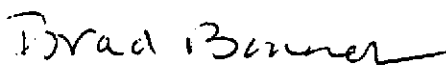
FORWARD, INC. is pleased to confirm the disposal of 655.40 tons of material as referenced above. The material was received at our Manteca, California facility for disposal on 12/78/98, 12/8/98 and 12/9/98. The material was placed in a Class 2 waste management unit.

Approval for this material was based on the information provided in the waste profile and associated materials submitted on behalf of Tosco Marketing (Generator). Acceptance of the waste is subject to the "Terms and Conditions" agreed to and signed by the Generator on the Waste Profile Form.

Thank you for the opportunity to be of service. Should you have any questions regarding this matter, please contact me or Customer Service at (800) 204-4242.

Sincerely,

FORWARD, INC.


Brad J. Bonner
Sales Manager

BB/sr

GETTLER-RYAN INC.

FIELD METHODS AND PROCEDURES

Site Safety Plan

Field work performed by Gettler-Ryan Inc. (GR) is conducted in accordance with GR's Health and Safety Plan and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the contents of these plans prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Samples

Soil samples are collected from the wall or base of the excavation with a hand-driven sampling device fitted with a 2-inch-diameter, clean brass tube or stainless steel liner. If safety considerations preclude collection of the samples with the drive sampler, the excavating equipment is used to bring soil from the pit wall to the surface, where a sample tube is filled by driving it into the soil in the excavator's bucket. After removal from the sampling device, sample tubes are covered on both ends with teflon sheeting, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory.

If it is necessary to collect a sample of groundwater standing in the UST pit, the sample is collected by lowering a new, clean teflon bailer into the pit from a safe position along the pit wall. Once filled and retrieved, the groundwater in the bailer is carefully decanted into the appropriate containers supplied by the analytical laboratory. If required, preservative is added to the sample bottles by the laboratory prior to delivery. The samples are then labeled and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory.

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from soil samples. This test procedure involves placing a small amount of the soil to be screened in a sealable plastic bag. The bag is warmed in the sun to allow organic compounds in the soil sample to volatilize. The PID probe is inserted through the wall of the bag and into the headspace inside, and the meter reading is recorded in the field notes. An alternative method involves placing a plastic cap over the end of the sample tube. The PID probe is placed through a hole in the plastic cap, and vapors with the covered tube measured. Head-space screening is performed and results recorded as reconnaissance data only. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Storing and Sampling of Soil Stockpiles

Excavated material is stockpiled on and covered with plastic sheeting. Stockpile samples are collected and analyzed for disposal classification on the basis of one composite sample per 100 cubic yards of soil. Stockpile samples are composed of four discrete soil samples, each collected from an arbitrary location on the stockpile. The four discrete samples are then composited in the laboratory prior to analysis. Each discrete stockpile sample is collected by removing the upper 12 to 18 inches of soil, and then driving the stainless steel or brass sample tube into the stockpiled material with a mallet or drive sampler. The sample tubes are then covered on both ends with teflon sheeting, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.



Sequoia Analytical

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404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

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(916) 921-9600
(707) 792-1865

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FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

RECEIVED

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Method 5 1998
First Sample #: 810-0151

Sampled: Oct 1, 1998
Received: Oct 1, 1998
Reported: Oct 13, 1998

GETTLER-RYAN INC.

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX, MTBE

Analyte	Reporting Limit mg/Kg	Sample I.D. 810-0151 SW1	Sample I.D. 810-0152 SW2	Sample I.D. 810-0153 SW3	Sample I.D. 810-0154 SW4
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.0050	N.D.	N.D.	N.D.	N.D.
MTBE	0.050	N.D.	0.43	0.099	N.D.

Chromatogram Pattern: -- -- -- --

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Analyzed:	10/5/98	10/5/98	10/5/98	10/5/98
Instrument Identification:	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 40-140%)	82	82	83	82

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Julianne Fegley
Project Manager



Sequoia Analytical

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FAX (707) 792-0342

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Sample Matrix: Water
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 810-0155

Sampled: Oct 1, 1998
Received: Oct 1, 1998
Reported: Oct 13, 1998

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 810-0155 Water-1	Sample I.D. 810-0156 Water-2
Purgeable Hydrocarbons	50	430	3,700
Benzene	0.50	46	98
Toluene	0.50	20	450
Ethyl Benzene	0.50	0.65	56
Total Xylenes	0.50	89	360
MTBE	2.5	1,200	4,100
Chromatogram Pattern:		Gasoline	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	20
Date Analyzed:	10/5/98	10/7/98
Instrument Identification:	HP-2	HP-5
Surrogate Recovery, %: (QC Limits = 70-130%)	178 *	97

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Please Note:

* Surrogate recovery above control limit due to coelution.

Julianne Fegley
Julianne Fegley
Project Manager



Sequoia Analytical

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FAX (707) 792-0342

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Matrix: Solid

QC Sample Group: 8100151-154

Reported: Oct 13, 1998

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	8092408	8092408	8092408	8092408
Date Prepared:	10/5/98	10/5/98	10/5/98	10/5/98
Date Analyzed:	10/5/98	10/5/98	10/5/98	10/5/98
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	0.80 mg/kg	0.80 mg/kg	0.80 mg/kg	2.4 mg/kg
Matrix Spike % Recovery:	96	81	84	96
Matrix Spike Duplicate % Recovery:	96	81	84	96
Relative % Difference:	0.0	0.0	0.0	0.0

LCS Batch#:	4LCS100598	4LCS100598	4LCS100598	4LCS100598
Date Prepared:	10/5/98	10/5/98	10/5/98	10/5/98
Date Analyzed:	10/5/98	10/5/98	10/5/98	10/5/98
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	105	88	90	100

% Recovery Control Limits:	50-150	50-150	50-150	50-150

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley

Julianne Fegley
Project Manager



Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Matrix: Liquid

QC Sample Group: 8100155-156

Reported: Oct 13, 1998

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb

MS/MSD

Batch#:	8100262	8100262	8100262	8100262
Date Prepared:	10/5/98	10/5/98	10/5/98	10/5/98
Date Analyzed:	10/5/98	10/5/98	10/5/98	10/5/98
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	105	100	95	98
Matrix Spike Duplicate % Recovery:	95	90	80	85
Relative % Difference:	10	11	17	15

LCS Batch#:	2LCS100598	2LCS100598	2LCS100598	2LCS100598
Date Prepared:	10/5/98	10/5/98	10/5/98	10/5/98
Date Analyzed:	10/5/98	10/5/98	10/5/98	10/5/98
Instrument I.D.#:	HP-2	HP-2	HP-2	HP-2
LCS % Recovery:	110	105	105	110

% Recovery Control Limits:	70-130	70-130	70-130	70-130
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Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley

Julianne Fegley
Project Manager



Sequoia Analytical

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Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Matrix: Liquid

QC Sample Group: 8100155-156

Reported: Oct 13, 1998

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	8100176	8100176	8100176	8100176
Date Prepared:	10/7/98	10/7/98	10/7/98	10/7/98
Date Analyzed:	10/7/98	10/7/98	10/7/98	10/7/98
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L
Matrix Spike % Recovery:	95	95	95	98
Matrix Spike Duplicate % Recovery:	95	95	95	100
Relative % Difference:	0.0	0.0	0.0	1.7

LCS Batch#:	5LCS100798	5LCS100798	5LCS100798	5LCS100798
Date Prepared:	10/7/98	10/7/98	10/7/98	10/7/98
Date Analyzed:	10/7/98	10/7/98	10/7/98	10/7/98
Instrument I.D.#:	HP-5	HP-5	HP-5	HP-5
LCS % Recovery:	90	90	90	93

% Recovery Control Limits:	70-130	70-130	70-130	70-130
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Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

680 Chesapeake Drive • Redwood City, CA 94063 • (650) 364-9600 FAX (650) 364-9233
 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: GETTLER-RYAN INC.			Project Name: TOSCO-BP#11133-OAKLAND		
Address: 6747 Sierra Ct, Suite J			Billing Address (if different): 9810041		
City: DUBLIN	State: CA	Zip Code: 94568	TOSCO PROJECT MANAGER: TINA BERRY		
Telephone: (925) 551-7555 FAX #: 551-7888			P.O. #: 2220 98th Avenue		
Report To: HAIG KEVORK		Sampler: HAIG KEVORK	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A		

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 Time: 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Drinking Water
 Waste Water
 Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	<div style="text-align: center; font-size: 2em; transform: rotate(-45deg); opacity: 0.5;"> TPH-G BTEX MTBE </div>					Comments	
1. SW1	10/1/98	SOIL	1	BRASS TUBE		✓	✓	✓			8100151	
2. SW2		SOIL	1			✓	✓	✓			8100152	
3. SW3		SOIL	1			✓	✓	✓			8100153	
4. SW4		SOIL	1	↓		✓	✓	✓			8100154	
5. Water-1		W	2	VOA		✓	✓	✓			8100155	AB
6. Water-2	↓	W	2	VOA		✓	✓	✓			8100156	↓
7.												
8.												
9.												
10.												

Relinquished By: <i>[Signature]</i>	Date: 10/1/98	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 10/1	Time: 1900

Pink - Client
 Yellow - Sequoia
 White - Sequoia



**Sequoia
Analytical**

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Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 810-0157

Sampled: Oct 1, 1998
Received: Oct 1, 1998
Reported: Oct 13, 1998

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE
GETTLER-RYAN INC.
GENERAL CONTRACTORS

Analyte	Reporting Limit mg/Kg	Sample I.D. 810-0157 P1	Sample I.D. 810-0158 P2	Sample I.D. 810-0159 P3	Sample I.D. 810-0160 P4	Sample I.D. 810-0161 P5	Sample I.D. 810-0162 P6
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	0.0085	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.	0.047	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	0.0071	N.D.
Total Xylenes	0.0050	0.029	N.D.	N.D.	N.D.	0.057	N.D.
MTBE	0.050	N.D.	4.0	N.D.	N.D.	0.74	N.D.

Chromatogram Pattern: -- -- -- -- -- --

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	10/5/98	10/5/98	10/5/98	10/5/98	10/5/98	10/5/98
Instrument Identification:	HP-4	HP-4	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 40-140%)	83	85	78	74	78	80

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Julianne Fegley
Project Manager



Sequoia Analytical

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FAX (707) 792-0342

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 810-0163

Sampled: Oct 1, 1998
Received: Oct 1, 1998
Reported: Oct 13, 1998

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit mg/Kg	Sample I.D. 810-0163 P7	Sample I.D. 810-0164 P8
Purgeable Hydrocarbons	1.0	1.2	N.D.
Benzene	0.0050	0.067	N.D.
Toluene	0.0050	0.090	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.
Total Xylenes	0.0050	0.042	N.D.
MTBE	0.050	2.0	N.D.
Chromatogram Pattern:		Unidentified Hydrocarbons C6 - C12	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	10/6/98	10/6/98
Instrument Identification:	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 40-140%)	81	75

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Julianne Fegley
Project Manager



Sequoia Analytical

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Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Matrix: Solid

QC Sample Group: 8100157-164

Reported: Oct 13, 1998

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes
Batch#:	8092408	8092408	8092408	8092408
Date Prepared:	10/5/98	10/5/98	10/5/98	10/5/98
Date Analyzed:	10/5/98	10/5/98	10/5/98	10/5/98
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
Conc. Spiked:	0.80 mg/kg	0.80 mg/kg	0.80 mg/kg	2.4 mg/kg
Matrix Spike % Recovery:	96	81	84	96
Matrix Spike Duplicate % Recovery:	96	81	84	96
Relative % Difference:	0.0	0.0	0.0	0.0

LCS Batch#:	4LCS100598	4LCS100598	4LCS100598	4LCS100598
Date Prepared:	10/5/98	10/5/98	10/5/98	10/5/98
Date Analyzed:	10/5/98	10/5/98	10/5/98	10/5/98
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4
LCS % Recovery:	105	88	90	100

% Recovery Control Limits:	50-150	50-150	50-150	50-150
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Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Project Manager



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: GETTLER-RYAN INC.	Project Name: TOSCO-BP # 1133-OAKLAND
Address: 6447 Sierra Ct., Suite J	Billing Address (if different): 9810042
City: DUBLIN State: CA Zip Code: 94568	TOSCO PROJECT MANAGER: TINA BERRY
Telephone: (925) 551-7555 FAX #: 551-7888	P.O. #: 2220 98th AVENUE
Report To: HAIG KEVORK Sampler:	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 Time: 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Drinking Water Waste Water Other
 Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested										Comments		
						TPH-G	BTEX	MTBE										
1. P1	10/1/98	SOIL	1	BRASS TUBE		✓	✓	✓									8100157	
2. P2	↓	↓	1	↓		✓	✓	✓									8100158	
3. P3	↓	↓	1	↓		✓	✓	✓									8100159	
4. P4	↓	↓	1	↓		✓	✓	✓									8100160	
5. P5	↓	↓	1	↓		✓	✓	✓									8100161	
6. P6	↓	↓	1	↓		✓	✓	✓									8100162	
7. P7	↓	↓	1	↓		✓	✓	✓									8100163	
8. P8	↓	↓	1	↓		✓	✓	✓									8100164	
9.																		
10.																		

Relinquished By: <i>[Signature]</i> Date: 10/1/98 Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By Lab: JRUMS Date: 10/1 Time: POD

Pink - Client
 Yellow - Sequoia
 White - Sequoia



Sequoia Analytical

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FAX (707) 792-0342

Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 810-0165

Sampled: Oct 1, 1998
Received: Oct 1, 1998
Reported: Oct 15, 1998

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TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

GETTLER RYAN INC.
GENERAL CONTRACTORS

Analyte	Reporting Limit mg/Kg	Sample I.D. 810-0165 Comp A	Sample I.D. 810-0166 Comp B	Sample I.D. 810-0167 Comp C	Sample I.D. 810-0168 Comp D	Sample I.D. 810-0169 Comp E	Sample I.D. 810-0170 Comp F
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.0050	N.D.	0.026	N.D.	N.D.	N.D.	0.0091
MTBE	0.050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Chromatogram Pattern:

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	10/7/98	10/7/98	10/7/98	10/7/98	10/7/98	10/7/98
Instrument Identification:	HP-4	HP-4	HP-4	HP-4	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 40-140%)	76	78	78	78	81	76

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Julianne Fegley

Julianne Fegley
Project Manager



Sequoia Analytical

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Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Sample Descript: Soil
Analysis for: Lead
First Sample #: 810-0165

Sampled: Oct 1, 1998
Received: Oct 1, 1998
Digested: Oct 6, 1998
Analyzed: Oct 14, 1998
Reported: Oct 15, 1998

LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
810-0165	Comp A	1.0	5.0
810-0166	Comp B	1.0	1.4
810-0167	Comp C	1.0	2.4
810-0168	Comp D	1.0	2.0
810-0169	Comp E	1.0	N.D.
810-0170	Comp F	1.0	1.2

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

SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Julianne Fegley
Project Manager



Sequoia Analytical

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Gettler-Ryan - Dublin
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Haig Kevork

Client Project ID: Tosco BP#11133, Oakland
Matrix: Solid

QC Sample Group: 8100165-170

Reported: Oct 15, 1998

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes	Lead
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 6010
Analyst:	D. Newcomb	D. Newcomb	D. Newcomb	D. Newcomb	J. Kelly

MS/MSD	Benzene	Toluene	Ethyl Benzene	Xylenes	Lead
Batch#:	8100167	8100167	8100167	8100167	8092091
Date Prepared:	10/7/98	10/7/98	10/7/98	10/7/98	10/6/98
Date Analyzed:	10/7/98	10/7/98	10/7/98	10/7/98	10/9/98
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	MV-4
Conc. Spiked:	0.80 mg/kg	0.80 mg/kg	0.80 mg/kg	2.4 mg/kg	50 mg/kg
Matrix Spike % Recovery:	96	81	83	96	93
Matrix Spike Duplicate % Recovery:	98	81	84	96	91
Relative % Difference:	1.3	0.0	1.5	0.0	2.1

LCS Batch#:	4LCS100798	4LCS100798	4LCS100798	4LCS100798	LCS100698
Date Prepared:	10/7/98	10/7/98	10/7/98	10/7/98	10/6/98
Date Analyzed:	10/7/98	10/7/98	10/7/98	10/7/98	10/14/98
Instrument I.D.#:	HP-4	HP-4	HP-4	HP-4	MV-4
LCS % Recovery:	85	73	74	83	96

% Recovery Control Limits:	50-150	50-150	50-150	50-150	80-120
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Please Note:

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SEQUOIA ANALYTICAL, #1271

Julianne Fegley
Julianne Fegley
Project Manager



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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Company Name: GETTLER-RYAN INC.		Project Name: TOSCO - BP#11133-OAKLAND	
Address: 6747 Sierra Ct, Suite J		Billing Address (if different): 9810043	
City: DUBLIN	State: CA	Zip Code: 94568	TOSCO PROJECT MANAGER: TINA BERRY
Telephone: (925) 551-7555		FAX #: 551-7888	
Report To: HAIG KEVORK		Sampler: HAIG KEVORK	
P.O. #: 2220 98th AVENUE		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 Time: 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Drinking Water
 Waste Water
 Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-G	BTEX	MTBE	Total Pb	Comments
1. COMP A	10/1/98	SOIL	4	BRASS TUBES		✓	✓	✓	✓	8100165 AP
2. Comp B	↓	↓	4	↓		✓	✓	✓	✓	8100166
3. Comp C	↓	↓	4	↓		✓	✓	✓	✓	8100167
4. Comp D	↓	↓	4	↓		✓	✓	✓	✓	8100168
5. Comp E	↓	↓	4	↓		✓	✓	✓	✓	8100169
6. Comp F	↓	↓	4	↓		✓	✓	✓	✓	8100170
7.										
8.										
9.										
10.										

Relinquished By: <i>[Signature]</i>	Date: 10/1/98	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: <i>[Signature]</i>	Date: 10/1	Time: 7:00

Pink - Client
 Yellow - Sequoia
 White - Sequoia

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	---	---	299,100	NC	NC
03/27/95	3,069	3,069	3,069	512	0.71	350,600	9.0	9.0
05/02/95	4,280	1,211	4,280	34	0.05	245,400	2.5	11.5
06/01/95	5,390	1,110	5,390	37	0.05	460,600	4.3	15.7
06/28/95	7,634	2,244	7,634	83	0.12	301,300	5.6	21.4
07/31/95	9,480	1,846	9,480	56	0.08	301,300	4.6	26.0
08/30/95	11,869	2,389	11,869	80	0.11	276,700	5.5	31.5
09/28/95	19,572	7,703	19,572	266	0.37	322,800	20.7	52.3
10/18/95	21,266	1,694	21,266	85	0.12	396,200	5.6	57.9
11/14/95	28,880	7,614	28,880	282	0.39	238,100	15.1	73.0
12/27/95	39,395	10,515	39,395	245	0.34	165,100	14.5	87.5
01/22/96	42,994	3,599	42,994	138	0.19	236,400	7.1	94.6
02/27/96	53,058	10,064	53,058	280	0.39	380,000	31.9	126.5
03/01/96	55,609	2,551	55,609	850	1.18	380,000	8.1	134.6
03/25/96	59,409	3,800	59,409	158	0.22	266,300	8.4	143.0
04/30/96	65,132	5,723	65,132	159	0.22	189,000	9.0	152.1
05/30/96	82,551	17,419	82,551	581	0.81	276,200	40.1	192.2
07/01/96 (a)	83,210	659	83,210	21	0.03	151,000	0.8	193.0
07/31/96 (b)	84,444	1,234	84,444	41	0.06	151,000	1.6	194.6
08/27/96	98,824	14,380	98,824	533	0.74	124,500	14.9	209.5
09/30/96	107,482	8,658	107,482	255	0.35	306,100	22.1	231.6
10/29/96	114,368	6,886	114,368	237	0.33	1,930	0.1	231.7
11/25/96	122,583	8,215	122,583	304	0.42	154,500	10.6	242.3
12/31/96 (a)	131,256	8,673	131,256	241	0.33	59,740	4.3	246.7
02/24/97 (b)	132,257	1,001	132,257	250	0.35	308,300	2.6	249.2
03/25/97	138,149	5,892	138,149	1,403	1.95	340,400	16.7	266.0
04/14/97 (a)	138,290	141	138,290	30	0.04	278,500	0.3	266.3
05/20/97 (c)	138,372	82	138,372	36	0.05	465,600	0.3	266.6
05/26/98 (b)	138,967	595	138,967	259	0.36	294,400	1.5	268.1
06/25/98	143,256	4,289	143,256	143	0.20	287,300	10.3	278.4
07/07/98 (d)	149,459	6,203	149,459	517	0.72	287,300	14.9	293.2
09/26/98 (b)	150,311	852	150,311	11	0.01	230,200	1.6	294.9
09/30/98	151,021	710	151,021	178	0.25	230,200	1.4	296.2
10/20/98	160,715	9,894	160,715	346	0.48	441,300	35.7	331.9
11/24/98	162,237	1,522	162,237	56	0.08	441,300	5.6	337.5
12/14/98 (e)	166,358	4,121	166,358	206	0.29	198,300	8.8	344.4

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)
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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.
- (c) System shut down pending approval from East Bay Municipal Utility District to resume operation.
- (d) System shut down for carbon changeout.
- (e) System shut down at the request of BP Oil.

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	180	---	---	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
I-1	04/08/97	150,000	26,000	61,000	6,500	35,000	ND<25,000	---	---	SPL
I-1	05/15/97	330,000	24,000	54,000	7,600	50,000	ND<10,000	---	---	SPL
I-1	05/22/98	210,000	20,000	36,000	3,600	24,800	ND<2,500	---	---	SPL
I-1	06/17/98	230,000	6,000	26,000	2,300	23,000	ND<250	---	---	SPL
I-1	09/26/98	150,000	20,000	35,000	3,900	21,300	1,200	---	---	SPL
I-1	10/28/98	320,000	30,000	47,000	6,300	38,000	2,400	---	---	SPL
I-1	12/07/98	130,000	19,000	26,000	3,200	20,100	1,500	---	---	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

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	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
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
PS-1	04/08/97	130,000	10,000	31,000	5,900	30,800	ND<25,000	---	---	SPL
PS-1	05/15/97	230,000	11,000	35,000	6,900	46,000	ND<5,000	---	---	SPL
PS-1	05/22/98	58,000	5,400	11,000	1,200	7,200	ND<500	---	---	SPL
PS-1	06/17/98	96,000	4,200	14,000	2,200	13,900	330	---	---	SPL
PS-1	09/26/98	79,000	11,000	19,000	1,900	11,800	ND<1,000	---	---	SPL
PS-1	10/28/98	120,000	13,000	15,000	1,700	15,100	ND<2,500	---	---	SPL
PS-1	12/07/98	27,000	4,100	3,000	290	4,700	750	---	---	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

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
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
A-1	04/08/97	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
A-1	05/15/97	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
A-1	05/22/98	120	ND<0.5	ND<1.0	ND<1.0	1.8	ND<10	---	---	SPL
A-1	06/17/98	1,400	ND<0.5	7.7	24	132	ND<10	---	---	SPL
A-1	09/26/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
A-1	10/28/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
A-1	12/07/98	ND<50	ND<0.5	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
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
B-1	04/08/97	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
B-1	05/15/97	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
B-1	05/22/98	230	2.4	2.7	2.2	15.8	ND<10	---	---	SPL
B-1	06/17/98	1,000	0.85	10	15	90	ND<10	---	---	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	09/26/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
B-1	10/26/98	ND<50	0.9	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
B-1	12/07/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	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	---	---	---	ATI
QC-1	09/19/95	ND<500	---	---	---	---	---	ND<1	---	ATI
E-1	10/18/95	ND<50	ND<1	ND<2	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
E-1	04/08/97	ND<50	ND<1.0	ND<1.0	ND<1.0	1.3	ND<1.0	---	---	SPL
E-1	05/15/97	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	05/22/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	06/17/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	09/26/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	10/26/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL
E-1	12/07/98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	---	SPL

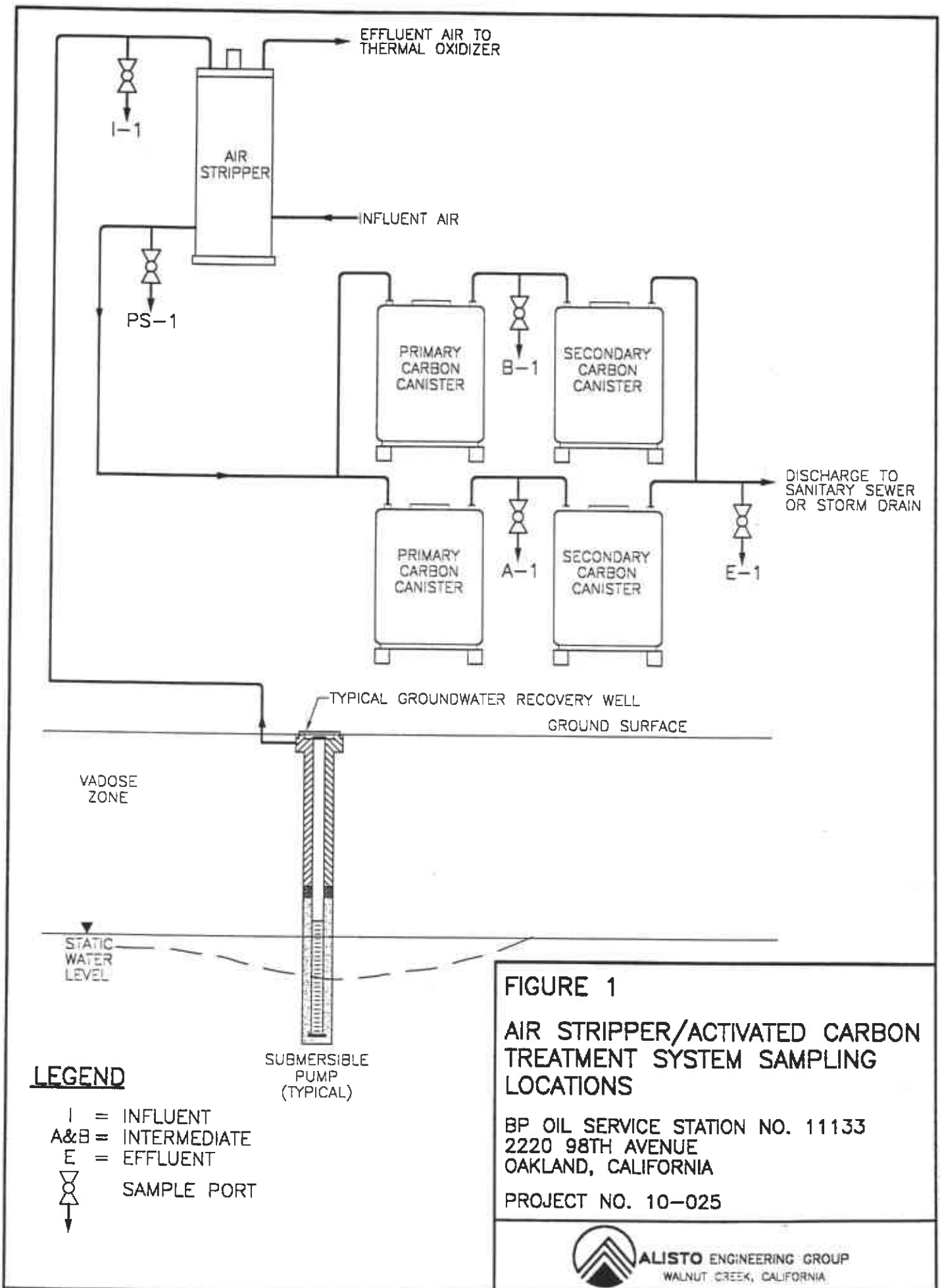
TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER REMEDIATION SYSTEM SAMPLE ANALYSIS
 BP OIL COMPANY SERVICE STATION NO. 11133
 2220 98TH AVENUE, OAKLAND, CALIFORNIA

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
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ABBREVIATIONS:

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



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



ATTACHMENT A

LABORATORY REPORTS AND CHAIN OF CUSTODY RECORDS



HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 680-0901

December 14, 1998

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

The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on December 11, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9812591 and analyzed for all parameters as listed on the chain of custody.


The chain of custody record reflects the sampling date of October 8, 1998. As per my conversation with Peter Beaver with Alisto Engineering the actual collection date was December 8, 1998. SPL, Inc. has reflected this change on your report.

Any data flags or quality control exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s).

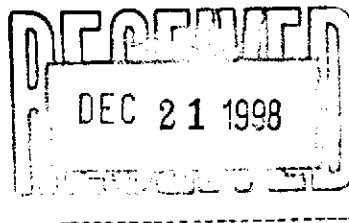
If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

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



Sonia West
Senior Project Manager





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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-12-591

Approved for Release by:

Sonia West

Sonia West, Senior Project Manager

12-14-98

Date

Greg Grandits
Laboratory Director

Cynthia Schreiner
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.
The results relate only to the samples tested.
Results reported on a Wet Weight Basis unless otherwise noted.



Certificate of Analysis No. H9-9812591-01

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

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

P.O.#
H157730, COC#095788
DATE: 12/14/98

PROJECT: #11133, 98th Ave.
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: INF

PROJECT NO: 10-025-16-001
MATRIX: WATER
DATE SAMPLED: 12/08/98
DATE RECEIVED: 12/11/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	1500	50 P	ug/L
Benzene	19000	25 P	ug/L
Toluene	26000	200 P	ug/L
Ethylbenzene	3200	50 P	ug/L
Total Xylene	20100	50 P	ug/L
Surrogate		% Recovery	
1,4-Difluorobenzene		108	
4-Bromofluorobenzene		105	
Method 8020A***			
Analyzed by: DN			
Date: 12/13/98			
Gasoline Range Organics	130	10 P	mg/L
Surrogate		% Recovery	
1,4-Difluorobenzene		97	
4-Bromofluorobenzene		90	
California LUFT Manual for Gasoline			
Analyzed by: DN			
Date: 12/13/98 20:00:00			

(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) 680-0901

Certificate of Analysis No. H9-9812591-02

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

P.O.#
 H157730, COC#095788
 DATE: 12/14/98

PROJECT: #11133, 98th Ave.
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: PS

PROJECT NO: 10-025-16-001
 MATRIX: WATER
 DATE SAMPLED: 12/08/98
 DATE RECEIVED: 12/11/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	750	25 P	ug/L
Benzene	4100	12 P	ug/L
Toluene	3000	25 P	ug/L
Ethylbenzene	290	25 P	ug/L
Total Xylene	4700	25 P	ug/L
Surrogate			
1,4-Difluorobenzene	% Recovery 115		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: DN			
Date: 12/13/98			
Gasoline Range Organics	27	1.2 P	mg/L
Surrogate			
1,4-Difluorobenzene	% Recovery 103		
4-Bromofluorobenzene	92		
California LUFT Manual for Gasoline			
Analyzed by: DN			
Date: 12/13/98 21:19:00			

(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



Certificate of Analysis No. H9-9812591-03

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

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

P.O.#
H157730, COC#095788
DATE: 12/14/98

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

PROJECT NO: 10-025-16-001
MATRIX: WATER
DATE SAMPLED: 12/08/98
DATE RECEIVED: 12/11/98

ANALYTICAL DATA

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

Surrogate

% Recovery

1,4-Difluorobenzene

100

4-Bromofluorobenzene

100

Method 8020A***

Analyzed by: TB

Date: 12/12/98

Gasoline Range Organics

ND 0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

93

4-Bromofluorobenzene

83

California LUFT Manual for Gasoline

Analyzed by: DN

Date: 12/13/98 19:34:00

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) 680-0901

Certificate of Analysis No. H9-9812591-04

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

P.O.#
 H157730, COC#095788
 DATE: 12/14/98

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

PROJECT NO: 10-025-16-001
 MATRIX: WATER
 DATE SAMPLED: 12/08/98
 DATE RECEIVED: 12/11/98

ANALYTICAL DATA

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

Surrogate

% Recovery

1,4-Difluorobenzene

103

4-Bromofluorobenzene

100

Method 8020A***

Analyzed by: DN

Date: 12/13/98

Gasoline Range Organics

ND 0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

93

4-Bromofluorobenzene

83

California LUFT Manual for Gasoline

Analyzed by: DN

Date: 12/13/98 19:07:00

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. H9-9812591-05

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

P.O.#
 H157730, COC#095788
 DATE: 12/14/98

PROJECT: #11133, 98th Ave.
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: EFF

PROJECT NO: 10-025-16-001
 MATRIX: WATER
 DATE SAMPLED: 12/08/98
 DATE RECEIVED: 12/11/98

ANALYTICAL DATA

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

Surrogate % Recovery
 1,4-Difluorobenzene 100
 4-Bromofluorobenzene 100
 Method 8020A***
 Analyzed by: TB
 Date: 12/12/98

Gasoline Range Organics ND 0.05 P mg/L

Surrogate % Recovery
 1,4-Difluorobenzene 93
 4-Bromofluorobenzene 80
 California LUFT Manual for Gasoline
 Analyzed by: DN
 Date: 12/13/98 20:26:00

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



** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020

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

Batch Id: HP_U981213131400

Units: ug/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	50	100	72 - 128
Benzene	ND	50	49	98.0	61 - 119
Toluene	ND	50	50	100	65 - 125
EthylBenzene	ND	50	49	98.0	70 - 118
O Xylene	ND	50	50	100	72 - 117
M & P Xylene	ND	100	96	96.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
			MTBE	ND	20	17		85.0	18
BENZENE	ND	20	14	70.0	14	70.0	0	21	32 - 164
TOLUENE	ND	20	14	70.0	14	70.0	0	20	36 - 159
ETHYLBENZENE	ND	20	13	65.0	14	70.0	7.41	19	52 - 142
O XYLENE	ND	20	14	70.0	15	75.0	6.90	18	53 - 143
M & P XYLENE	ND	40	26	65.0	27	67.5	3.77	17	53 - 144

* = Values outside QC Range due to Matrix Interference (except RPD)

* = 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 (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1st Q '97)

Analyst: DN

Sequence Date: 12/13/98

SPL ID of sample spiked: 9812591-04A

Sample File ID: U_L1261.TX0

Method Blank File ID:

Blank Spike File ID: U_L1254.TX0

Matrix Spike File ID: U_L1256.TX0

Matrix Spike Duplicate File ID: U_L1257.TX0

SAMPLES IN BATCH(SPL ID):

9812531-15A 9812531-04A 9812531-05A 9812531-07A
9812531-08A 9812531-11A 9812531-12A 9812591-04A
9812591-01A 9812591-02A 9812531-02A



** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020

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

Units: ug/L

Batch Id: HP_U981212070400

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	47	94.0	72 - 128
Benzene	ND	50	48	96.0	61 - 119
Toluene	ND	50	48	96.0	65 - 125
EthylBenzene	ND	50	49	98.0	70 - 118
O Xylene	ND	50	48	96.0	72 - 117
M & P Xylene	ND	100	94	94.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	ND	20.0	19	95.0	20	100	5.13	20	39 - 150
BENZENE	ND	20.0	20	100	19	95.0	5.13	21	32 - 164
TOLUENE	ND	20.0	20	100	19	95.0	5.13	20	38 - 159
ETHYLBENZENE	ND	20.0	20	100	19	95.0	5.13	19	52 - 142
O XYLENE	ND	20.0	20	100	20	100	0	18	53 - 143
M & P XYLENE	ND	40.0	39	97.5	37	92.5	5.26	17	53 - 144

* = Values outside QC Range due to Matrix Interference (except RPD)

< = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

% Recovery = $[(<1> - <2>) / <3>] \times 100$

LCS % Recovery = $(<1> / <3>) \times 100$

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

(**) = Source: SPL-Houston Historical Data (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1st Q '97)

Analyst: TB

Sequence Date: 12/12/98

SPL ID of sample spiked: 9812591-05A

Sample File ID: U_L1225.TX0

Method Blank File ID:

Blank Spike File ID: U_L1215.TX0

Matrix Spike File ID: U_L1218.TX0

Matrix Spike Duplicate File ID: U_L1220.TX0

SAMPLES IN BATCH(SPL ID):

9812430-04A 9812446-04A 9812591-01A 9812591-04A
9812446-03A 9812386-01A 9812386-02A 9812386-03A
9812386-04A 9812386-05A 9812386-06A 9812591-03A
9812591-05A 9812430-01A



** SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 660-0901

Batch Id: HP_U981212073100

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) ‡ Recovery Range
			Result <1>	Recovery ‡	
Gasoline Range Organics	ND	1.0	0.83	83.0	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
			GASOLINE RANGE ORGANICS	ND	0.90	1.1		122	1.1

Analyst: TB

Sequence Date: 12/12/98

SPL ID of sample spiked: 9812591-03A

Sample File ID: UUL1224.TX0

Method Blank File ID:

Blank Spike File ID: UUL1216.TX0

Matrix Spike File ID: UUL1221.TX0

Matrix Spike Duplicate File ID: UUL1222.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)

◀ = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

‡ Recovery = $[(<1> - <2>) / <3>] \times 100$

LCS ‡ Recovery = $(<1> / <3>) \times 100$

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

(**) = Source: SPL-Houston Historical data (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID):

9812386-01A 9812386-02A 9812386-03A 9812386-04A
 9812386-05A 9812386-06A 9812591-04A 9812591-03A
 9812591-01A 9812591-05A 9812446-04A 9812591-02A
 9812446-03A

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST



9812541

CHAIN OF CUSTODY

No. 095788

Page 1 of 1

CONSULTANT'S NAME ALISTO ENGINEERING GROUP		CONSULTANT'S ADDRESS 1575 TREAT BLVD., SUITE 201, WALNUT CREEK, CA 94565	
BP SITE NUMBER 11133	BP SITE / FACILITY ADDRESS 98TH AVE., OAKLAND, CA		CONSULTANT PROJECT NUMBER 10-025-16-001
CONSULTANT PROJECT MANGER P. BEAVER		PHONE NUMBER (925) 295-1650	FAX NUMBER (925) 295-1823
BP CONTACT SCOTT HOOTON	BP ADDRESS RENTON, WA	PHONE NUMBER -	CONSULTANT CONTRACT NUMBER H157730
LAB CONTACT SPL	LABORATORY ADDRESS TEXAS	PHONE NUMBER -	FAX NO. -
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)	RUSH REQUESTED OF (Print Consultant Contact Name)	DATE/TIME	SHIPMENT DATE
			12-10-98
			SHIPMENT METHOD FED EX

TAT: 24 Hours 48 Hours 72 Hours Standard 7 or 14 Days

ANALYSIS REQUIRED

AIRBILL NUMBER
805188475405

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE		TPH ₆ /BTEX	MTBE											COMMENTS	
				NO.	TYPE (VOL.)	LAB SAMPLE #															
INF	10-8-98		H ₂ O	3		HCL	X	X													
PS	↓		↓	2		↓	↓	↓													
A-1	↓		↓	2		↓	↓	↓													
B-1	↓		↓	3		↓	↓	↓													
EFF	↓		↓	3		↓	↓	↓													

SAMPLED BY (Please Print Name) **KIN LEUNG** SAMPLED BY (Signature) *Kin Leung* ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME
<i>Kin Leung</i> KIN LEUNG	12/10/98	4:30 pm	P. Yelton	12/10/98	4:30
P. Yelton	12/10/98	4:30			
			Vina Lockrum	12-11-98	1000

CLV-16722-A (2/97) PKG/50

4

(Signature)

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 12/11/98	Time: 1000
----------------	------------

SPL Sample ID: 9812591

		<u>Yes</u>	<u>No</u>
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 #) 805 188475405	
		Other:	
11	Method of sample disposal:	SPL Disposal	✓
		HOLD	
		Return to Client	

Name: Tina Cockrum	Date: 12/11/98
--------------------	----------------



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

November 11, 1998

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


The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on November 5, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9811236 and analyzed for all parameters as listed on the chain of custody.

Any data flags or quality control exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s).

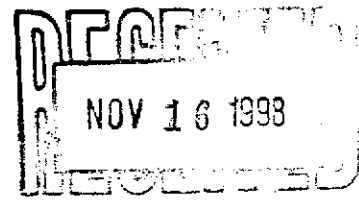
If you have any questions or comments pertaining to this data report, please do not hesitate to contact me. Please reference the above Certificate of Analysis No. during any inquiries.

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



Sonia West
Senior Project Manager





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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-11-236

Approved for Release by:

Sonia West

Sonia West, Senior Project Manager

11-11-98

Date

Greg Grandits
Laboratory Director

Cynthia Schreiner
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.
The results relate only to the samples tested.
Results reported on a Wet Weight Basis unless otherwise noted.



Certificate of Analysis No. H9-9811236-01

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

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

P.O.#
H157730, COC#095784
DATE: 11/11/98

PROJECT: #11133, N/A
SITE: Oakland, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: Inf-1

PROJECT NO: 10-025-16/001
MATRIX: WATER
DATE SAMPLED: 10/28/98
DATE RECEIVED: 11/05/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	2400	500 P	ug/L
Benzene	30000	250 P	ug/L
Toluene	47000	500 P	ug/L
Ethylbenzene	6300	500 P	ug/L
Total Xylene	38000	500 P	ug/L
Surrogate		% Recovery	
1,4-Difluorobenzene		107	
4-Bromofluorobenzene		107	
Method 8020A***			
Analyzed by: TB			
Date: 11/07/98			
Gasoline Range Organics	320	25 P	mg/L
Surrogate		% Recovery	
1,4-Difluorobenzene		107	
4-Bromofluorobenzene		127	
California LUFT Manual for Gasoline			
Analyzed by: TB			
Date: 11/07/98 13:11:00			

(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.

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. H9-9811236-02

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

P.O.#
 H157730, COC#095784
 DATE: 11/11/98

PROJECT: #11133, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: PS-1

PROJECT NO: 10-025-16/001
 MATRIX: WATER
 DATE SAMPLED: 10/28/98
 DATE RECEIVED: 11/05/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	2500 P	ug/L
Benzene	13000	125 P	ug/L
Toluene	15000	250 P	ug/L
Ethylbenzene	1700	250 P	ug/L
Total Xylene	15100	250 P	ug/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

101
 107

Method 8020A***

Analyzed by: LJ

Date: 11/08/98

Gasoline Range Organics

120 12 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

107
 129

California LUFT Manual for Gasoline

Analyzed by: LJ

Date: 11/08/98 21:54:00

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. H9-9811236-03

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

P.O.#
 H157730, COC#095784
 DATE: 11/11/98

PROJECT: #11133, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: A-1

PROJECT NO: 10-025-16/001
 MATRIX: WATER
 DATE SAMPLED: 10/28/98
 DATE RECEIVED: 11/05/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	ug/L
Benzene	ND	0.50 P	ug/L
Toluene	ND	1.0 P	ug/L
Ethylbenzene	ND	1.0 P	ug/L
Total Xylene	ND	1.0 P	ug/L

Surrogate

1,4-Difluorobenzene

4-Bromofluorobenzene

% Recovery

93

103

Method 8020A***

Analyzed by: TB

Date: 11/07/98

Gasoline Range Organics

ND 0.050 P

mg/L

Surrogate

1,4-Difluorobenzene

4-Bromofluorobenzene

% Recovery

99

129

California LUFT Manual for Gasoline

Analyzed by: TB

Date: 11/07/98 14:48:00

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. H9-9811236-04

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

P.O.#
 H157730, COC#095784
 DATE: 11/11/98

PROJECT: #11133, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: B-1

PROJECT NO: 10-025-16/001
 MATRIX: WATER
 DATE SAMPLED: 10/28/98
 DATE RECEIVED: 11/05/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	ug/L
Benzene	0.9	0.5 P	ug/L
Toluene	ND	1.0 P	ug/L
Ethylbenzene	ND	1.0 P	ug/L
Total Xylene	ND	1.0 P	ug/L

Surrogate	% Recovery
1,4-Difluorobenzene	93
4-Bromofluorobenzene	107

Method 8020A***
 Analyzed by: LJ
 Date: 11/08/98

Gasoline Range Organics	ND	0.050 P	mg/L
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Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	123

California LUFT Manual for Gasoline
 Analyzed by: TB
 Date: 11/07/98 13:59:00

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. H9-9811236-05

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

P.O.#
 H157730, COC#095784
 DATE: 11/11/98

PROJECT: #11133, N/A
 SITE: Oakland, CA
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: Eff

PROJECT NO: 10-025-16/001
 MATRIX: WATER
 DATE SAMPLED: 10/28/98
 DATE RECEIVED: 11/05/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	ug/L
Benzene	ND	0.50 P	ug/L
Toluene	ND	1.0 P	ug/L
Ethylbenzene	ND	1.0 P	ug/L
Total Xylene	ND	1.0 P	ug/L

Surrogate

1,4-Difluorobenzene

4-Bromofluorobenzene

% Recovery

93

103

Method 8020A***

Analyzed by: TB

Date: 11/07/98

Gasoline Range Organics

ND 0.050 P

mg/L

Surrogate

1,4-Difluorobenzene

4-Bromofluorobenzene

% Recovery

97

127

California LUFT Manual for Gasoline

Analyzed by: TB

Date: 11/07/98 14:24:00

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



Batch Id: HP_N981107072900

Units: ug/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	42	84.0	72 - 128
Benzene	ND	50	44	88.0	61 - 119
Toluene	ND	50	43	86.0	65 - 125
EthylBenzene	ND	50	42	84.0	70 - 118
O Xylene	ND	50	44	88.0	72 - 117
M & P Xylene	ND	100	87	87.0	72 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	18	20	41	115	41	115	0	20	39 - 150
BENZENE	ND	20	25	125	24	120	4.08	21	32 - 164
TOLUENE	ND	20	25	125	24	120	4.08	20	38 - 159
ETHYLBENZENE	ND	20	24	120	24	120	0	19	52 - 142
O XYLENE	ND	20	24	120	24	120	0	18	53 - 143
M & P XYLENE	ND	40	50	125	47	118	5.76	17	53 - 144

* = Values outside QC Range due to Matrix Interference (except RPD)

< = 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>) / 2] | x 100

(**) = Source: SPL-Houston Historical Data (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1st Q '97)

Analyst: TB

Sequence Date: 11/07/98

SPL ID of sample spiked: 9811220-06A

Sample File ID: N_K1230.TX0

Method Blank File ID:

Blank Spike File ID: N_K1223.TX0

Matrix Spike File ID: N_K1225.TX0

Matrix Spike Duplicate File ID: N_K1226.TX0

SAMPLES IN BATCH(SPL ID):

9811236-03A 9811116-01A 9811116-02A 9811116-03A
 9811116-04A 9811116-05A 9811116-06A 9811116-07A
 9811116-08A 9811220-02A 9811220-04A 9811220-06A
 9811223-01A 9811236-01A 9811236-05A



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

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

Batch Id: HP_N981107220600

Units: ug/L

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank ... Spike.....		QC Limits(**) (Mandatory) ‡ Recovery Range
			Result <1>	Recovery ‡	
MTBE	ND	50	42	84.0	72 - 128
Benzene	ND	50	45	90.0	61 - 119
Toluene	ND	50	44	88.0	65 - 125
EthylBenzene	ND	50	45	90.0	70 - 118
O Xylene	ND	50	44	88.0	72 - 117
M & P Xylene	ND	100	87	87.0	72 - 116

MATRIX SPIKES

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative ‡ Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
			MTBE	5.4	20	27		108	27
BENZENE	ND	20	24	120	23	115	4.26	21	32 - 164
TOLUENE	1.6	20	25	117	24	112	4.37	20	38 - 159
ETHYLBENZENE	ND	20	23	115	22	110	4.44	19	52 - 142
O XYLENE	ND	20	24	120	23	115	4.26	18	53 - 143
M & P XYLENE	ND	40	47	118	46	115	2.58	17	53 - 144

Analyst: LJ

Sequence Date: 11/07/98

SPL ID of sample spiked: 9811136-03B

Sample File ID: N_K1268.TX0

Method Blank File ID:

Blank Spike File ID: N_K1257.TX0

Matrix Spike File ID: N_K1262.TX0

Matrix Spike Duplicate File ID: N_K1263.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)

† = 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 (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID):

9811236-04A 9811220-03A 9811223-03A 9811223-04A
9811223-05A 9811223-06A 9811236-02A 9811220-02A
9811220-01A 9811220-07A 9810D69-03A 9811223-02A



**SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TEXAS 77054

PHONE (713) 680-0901

Batch Id: ... HP_N981107075300

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) ‡ Recovery Range
			Result <1>	Recovery ‡	
Gasoline Range Organics	ND	1.0	0.99	99.0	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative ‡ Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
GASOLINE RANGE ORGANICS	ND	0.90	1.1	122	1.0	111	9.44	36	36 - 160

Analyst: TB

Sequence Date: 11/07/98

SPL ID of sample spiked: 9811223-01A

Sample File ID: NNK1231.TX0

Method Blank File ID:

Blank Spike File ID: NNK1224.TX0

Matrix Spike File ID: NNK1227.TX0

Matrix Spike Duplicate File ID: NNK1228.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)

< = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

‡ Recovery = $[(<1> - <2>) / <3>] \times 100$

LCS ‡ Recovery = $(<1> / <3>) \times 100$

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

(**) = Source: SPL-Houston Historical data (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID):

9811236-05A 9811116-06A 9811116-01A 9811223-01A
9811236-01A 9811236-02A 9811236-04A



**** SPL BATCH QUALITY CONTROL REPORT ****

California LUFT Manual for Gasoline

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

Batch Id: HP_N981107223000

Units: mg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) ‡ Recovery Range
			Result <1>	Recovery ‡	
Gasoline Range Organics	ND	1.0	0.96	96.0	64 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative ‡ Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
GASOLINE RANGE ORGANICS	ND	0.90	0.84	93.3	0.84	93.3	0	36	36 - 160

Analyst: LJ

Sequence Date: 11/07/98

SPL ID of sample spiked: 9811223-02A

Sample File ID: NNK1269.TX0

Method Blank File ID:

Blank Spike File ID: NNK1258.TX0

Matrix Spike File ID: NNK1264.TX0

Matrix Spike Duplicate File ID: NNK1265.TX0

* = Values outside QC Range due to Matrix Interference (except RPD)

< = Data outside Method Specification limits.

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

ND = Not Detected/Below Detection Limit

‡ Recovery = $[(<1> - <2>) / <3>] \times 100$

LCS ‡ Recovery = $(<1> / <3>) \times 100$

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

(**) = Source: SPL-Houston Historical data (1st Q '97)

(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID):

9811236-02A 9811223-02A 9811223-05A 9811223-06A

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST



9811236

CHAIN OF CUSTODY

No. 095784

Page 1 of 1

CONSULTANT'S NAME <i>Alisto Engineering</i>		CONSULTANT'S ADDRESS <i>1575 Trent Blvd #201 W.C. Ca 94598</i>	
BP SITE NUMBER <i>1133</i>	BP SITE / FACILITY ADDRESS <i>Oakland, Ca</i>		CONSULTANT PROJECT NUMBER <i>10-025-16/001</i>
CONSULTANT PROJECT MANGER <i>Don Kin Leung</i>	PHONE NUMBER <i>(925) 295-1150</i>	FAX NUMBER <i>295-1823</i>	CONSULTANT CONTRACT NUMBER <i>A157730</i>
BP CONTACT <i>Scott Hooton</i>	BP ADDRESS <i>Kenton, WA</i>	PHONE NUMBER <i>-</i>	FAX NO. <i>-</i>
LAB CONTACT <i>SPL</i>	LABORATORY ADDRESS <i>Texas</i>	PHONE NUMBER <i>-</i>	FAX NO. <i>-</i>
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)	RUSH REQUESTED OF (Print Consultant Contact Name)	DATE/TIME <i>11/4/98</i>	SHIPMENT DATE <i>11/4/98</i>
			SHIPMENT METHOD <i>Fed Ex</i>

TAT: 24 Hours 48 Hours 72 Hours Standard 7 or 14 Days

ANALYSIS REQUIRED

AIRBILL NUMBER *805188474410*

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	LAB SAMPLE #	T#-01	T#-02	T#-03	T#-04	T#-05	T#-06	T#-07	T#-08	T#-09	T#-10	T#-11	T#-12	COMMENTS	
				NO.	TYPE (VOL.)																
<i>INE 1</i>	<i>10/27/98</i>		<i>H2O</i>	<i>3</i>	<i>Hel</i>			<i>X</i>	<i>X</i>												
<i>PS-1</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	<i>↓</i>												
<i>A-1</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	<i>↓</i>												
<i>B-1</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	<i>↓</i>												
<i>EFF</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	<i>↓</i>			<i>↓</i>	<i>↓</i>												

SAMPLED BY (Please Print Name)			SAMPLED BY (Signature)			ADDITIONAL COMMENTS		
RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME			
<i>[Signature]</i>	<i>11/2/98</i>		<i>Patricia Yelton</i>	<i>11/4/98</i>	<i>930</i>			
<i>Patricia Yelton</i>	<i>11/4/98</i>	<i>1900</i>	<i>Vina Cockerum / SPL</i>	<i>11/5/98</i>	<i>1000</i>	<i>AP</i>		

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 11/5/98	Time: 1330
---------------	------------

SPL Sample ID: <div style="text-align: center; font-size: 1.2em; margin-top: 10px;">9811236</div>
--

		<u>Yes</u>	<u>No</u>
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 #) 805188474410	
		Other:	
11	Method of sample disposal:	✓	
		SPL Disposal	
		HOLD	
	Return to Client		

Name: <i>Jina Cockerum</i>	Date: 11/5/98
----------------------------	---------------