BP OIL

BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0667
Fax No. (425) 251-0736

March 11, 1999

3/17/99
- Check MtBE in AW-6 and AW5 2,500 5,600
- Sample 6" tank cavity well
- AW-5 had up to 5,000ppb MtBE in 2/23/98. Do HP west of AW-5 a sample well installed w/in tank cavity
- 6W in tank pit w/ 4400ppb MtBE (8260)

Alameda County Health Care Services Agency
Attention Ms. Eva Chu
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502-6577

RE: BP Oil Site No. 11116
Village Parkway (at 7197) and Amador Valley
Dublin, CA

Dear Ms. Chu:

This transmits a Soil Removal and Confirmation Soil Sampling Report, dated 9 March 1999. The report describes a removal action undertaken in conjunction with the closure of the gasoline dispensing system at the above-captioned location. Based on these data, I ask that the Alameda County Health Care Services Agency make a finding for no further action and case closure. Please call (425) 251-0689 if you have questions.

Sincerely,

Scott Hooton

attachment

cc: Brady Nagle - Alisto
CRWQCB, 1515 Clay Street, STE 1400, Oakland, CA 94612
D. Camille - Tosco (w/attachment)

SOIL REMOVAL AND CONFIRMATION SOIL SAMPLING REPORT

BP Oil Company Service Station No. 11116
7197 Village Parkway
Dublin, California

10/19/99. Ask S Hooton to sample "well" w/ tank cavity for TPHg, BTEX and MtBE. If low MtBE and new tank for closure. MtBE should be confirmed w/ 8260

Alisto Project No. 10-017

March 1999

SOIL REMOVAL AND CONFIRMATION SOIL SAMPLING REPORT

BP Oil Company Service Station No. 11116
7197 Village Parkway
Dublin, California

Project No. 10-017

Prepared for:

BP Oil Company
295 SW 41st Street
Renton, Washington 98055

Prepared by:

Alisto Engineering Group
1575 Treat Boulevard, Suite 201
Walnut Creek, California

March 9, 1999

Brady Nagle
Project Manager

Al Sevilla, P.E.
Principal

TABLE OF CONTENTS

1.0 INTRODUCTION

BP Oil Company retained Alisto Engineering Group to observe soil removal and to collect compliance soil samples at the BP Oil Service Station No. 11116, 7197 Village Parkway, Dublin, California. The work was performed under BP Contract Release No. H4482942, dated July 17, 1998. A site vicinity map is shown on Figure 1, and a site plan is shown on Figure 2.

The scope of work performed included the following:

- Obtaining permits and destruction of two groundwater monitoring wells
- Coordinating and observing the removal of petroleum hydrocarbon-impacted soil
- Collecting and analyzing confirmation soil samples after soil removal
- Preparation of this report documenting field procedures and analytical results
- Recovery and disposal of groundwater from the excavation cavity

2.0 FIELD METHODS

The field methods used during performance of the above scope of work are described in the following sections.

2.1 Well Destruction

Prior to well destruction, permits were obtained from the Alameda County Flood Control and Water Conservation District (Zone 7). A copy of the well destruction permits for the destroyed wells is presented in Appendix A.

Monitoring Wells AW-5 and AW-6 were destroyed because of the anticipated extent of soil excavation at these locations. Wells AW-5 and AW-6 were constructed to depths of approximately 35 and 22 feet with 4-inch-diameter PVC casing. Copies of the boring logs and well construction details for both wells AW-5 and AW-6 are presented in Appendix B.

On July 17, 1998, the wells were destroyed by overdrilling to the total depth of the boring using an 10-inch-diameter hollow-stem auger. The resulting borehole was tremie grouted by inserting a 1-inch-diameter PVC pipe to the bottom of the borehole and then filling with neat cement grout from the bottom to approximately 6 inches below surface grade. The well vaults were removed before grouting and backfilled to grade with asphalt patch to match existing surface conditions.

Well destruction forms were completed for submittal to the California Department of Water Resources, copies of which are included in Appendix C.

2.2 Soil Excavation

From July 28 to 31, 1998, Tosco Marketing Company removed three underground fuel tanks and one used oil tank and associated product piping, vent lines, and fiberglass secondary containment devices ("fibertrenches") from the site. Fibertrenches are three feet wide and two feet deep open-top fiberglass lining for the pipeline trench. Fibertrenches were installed around all product lines, and not beneath the product dispenser or vent lines. If a release occurs from the piping, it would be contained in the fibertrenches and directed, by gravity, to the sump at each underground fuel tank. Photographs of the fibertrenches and sumps are presented in Appendix D.

Tank and piping removal and compliance soil sampling were performed by contractors on behalf of owner and operator, Tosco Marketing Company. The tanks were observed to be in good condition with no visible holes. The fibertrenches terminated at a sump at each tank at the turbine pump. There were no seals observed in the sump openings where the electrical conduit and product piping entered the sumps. Product staining was observed on the soil and weeping from a bonded joint on one of the vent lines (see photographic documentation in Appendix D). C-2

Following the removal of the underground storage tank system, compliance soil samples were collected by Gettler-Ryan, Inc. on behalf of Tosco. Gettler-Ryan's sample locations and laboratory data are presented in Appendix E. A total of 436.11 tons of soil were excavated by Tosco contractors before Gettler-Ryan collected the compliance samples .

After collection of compliance samples, BP elected to remove additional soil based on visual observations and field instrument indications of petroleum hydrocarbons. The purpose of the removal action was to eliminate source material that would potentially degrade groundwater quality above water quality objectives.

Between July 31 and August 25, 1998, soil was excavated from the vicinity of the underground fuel storage tanks, dispenser islands, and product lines. The lateral extent of excavation was terminated to within approximately 7 feet of the sidewalks and approximately 10 feet of the service station building so as not to compromise structural integrity. Soil types encountered during excavation consisted of silty clay to the total depth of the excavation with increasing sand content with depth. Soil removal was performed by Fuller Excavating, Rancho Cordova, California under contract to BP Oil Company and Tosco Marketing Company. add'l area exc. to what depth

The extent of excavation was guided by field screening of soil samples using a Thermo Model 580B photoionizing detector (PID) calibrated on a daily basis. Soil samples were placed in a sealed plastic bag and allowed a minimum of 10 minutes to volatilize petroleum hydrocarbons before measuring with the PID. The excavated soil was stockpiled onsite while awaiting disposal. The approximate extent of soil excavation is shown on Figure 3

Approximately 1850 tons of soil was removed from the site on behalf of BP and transported to Forward, Inc., Stockton, California for disposal. A copy of the Forward, Inc. Material Analysis Report documenting soil disposal on behalf of BP is presented as Appendix F. This supplements the 436.11 tons of soil removed by Tosco's contractors. At the conclusion of the project, a total of 2,284 tons of soil were removed from the site. over-ex

2.3 Confirmation Soil Sampling and Analysis

On August 19 and 25, 1998, Soil Samples S-1 through S-8 were collected at the extent of soil excavation for laboratory analysis. The soil sampling procedures are presented in Appendix G.

Soil samples collected from the extent of excavation were analyzed by SPL Laboratory, Houston, Texas using standard test methods of the U.S. EPA and the California Department of Health Services for the following:

- Total petroleum hydrocarbons as gasoline (TPH-G) using the California LUFT Manual Method
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method Modified 8020A
- Methyl tert butyl ether (MTBE) using EPA Method Modified 8020A

The locations of the soil samples are shown on Figure 3, and the laboratory results are summarized in Table 1. The chain of custody documentation, laboratory report, and chain of custody record are included in Appendix H.

2.4 Groundwater Removal

Between July 31 and August 27, 1998, approximately 28,200 gallons of accumulated water was removed from the tank cavity. Groundwater was encountered in the tank cavity at a depth of approximately 10 feet below grade, and sumps were excavated to depths of up to 17 feet to facilitate removal of groundwater from the tank cavity. The water was stored onsite in a 21,000-gallon temporary tank until disposal at Tosco Refinery, Rodeo, California. On August 2, 1998, a sample of the groundwater, Sample W-1, was collected from the tank pit for laboratory analysis of the refinery's disposal criteria, which included reactivity, corrosivity, ignitability, priority pollutant metals, benzene, and MTBE. Water Sample W-1 was collected after removal of approximately 7,000 gallons of water from the tank cavity.

The laboratory results of the tank water sample analysis are summarized in Table 2. The chain of custody documentation, laboratory report, and chain of custody record are included in Appendix H.

A well was installed within the tank cavity on August 24, 1998. The tank cavity well was constructed using 6-inch-diameter, flush-threaded, Schedule 40, polyvinyl chloride bank casing and 0.020-inch slotted casing. The slotted casing was installed from 6 to 16 feet below grade and a 1-foot bottom cap was installed for a total depth of 17 feet. The area around the temporary well to above the slotted interval was backfilled with 3/4-inch drain rock.

3.0 FINDINGS

The results of the soil removal, confirmation soil sampling, and groundwater sampling, based on field observations and laboratory analysis, are discussed below.

- Soil types encountered at the site during soil removal consisted of silty clay with fine-grained sand increasing with depth, which were consistent with those observed in the borings previously drilled at the site.

- Groundwater accumulated in the excavation at a depth of approximately 10 feet. Depth to groundwater measured in the groundwater monitoring wells has varied over time. The deepest depth to groundwater measurements from each groundwater monitoring well were obtained on November 10, 1992, averaging 10.2 feet. The shallowest depth to groundwater measurements from the majority of the groundwater monitoring wells (MW-1, MW-2, MW-3, AW-4, and AW-6) were obtained during the February 1998 event. The average of depth to groundwater measurements obtained from all of the groundwater monitoring wells on February 23, 1998 is 4.8 feet.

- The highest concentrations of TPH-G and aromatic hydrocarbons (BTEX) were detected in Soil Sample S-6-9', located between the former northern dispenser island and the underground storage tanks. The next highest concentrations of TPH-G and aromatic hydrocarbons were detected in Soil Sample S-4-8.5', located immediately west of the service station building. Further excavation was not performed in the vicinity of Sample S-4-8.5' to avoid undermining the integrity of the station building foundation. TPH-G and aromatic hydrocarbon concentrations in the remaining samples were lower by at least an order of magnitude.

- Analysis of a groundwater sample collected from the tank cavity after approximately 7,000 gallons were removed, Sample W-1, detected 18 micrograms per liter (ug/l) benzene and 4400 ug/l MTBE. An additional 21,000 gallons of water were removed after sample collection.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The California Regional Water Quality Control Board, San Francisco Bay Region issued an interim guidance for petroleum release sites on December 8, 1996. The guidance document provides definitions for low risk soil and groundwater cases. A discussion of current site conditions relative to each definition for a low risk groundwater case is presented below.

Definition 1: The leak has been stopped and ongoing sources, including free product, have been removed or remediated.

Discussion: The underground storage tank system at the site was removed in July 1998, along with the subsequent excavation of 2,284 tons of soil and recovery of 28,200 gallons of groundwater

Definition 2: *The site has been adequately characterized.*

Discussion: Groundwater monitoring data collected since 1990 are sufficient to characterize the extent of the release. The data show the existence of an isolated area with higher concentrations of dissolved hydrocarbon constituents associated with Well AW-6, which is located to the north of the former underground storage tanks and to the west of the northern dispenser island.

Definition 3: *The dissolved plume is not migrating.*

Discussion: The aggregate data associated with hydrocarbon concentrations in Well AW-6 show a declining trend. These data demonstrate that the mass of gasoline constituents in groundwater is diminishing and that the extent of the plume is decreasing. The observed declining trend in dissolved hydrocarbon concentrations in AW-6 indicates that natural attenuation processes are actively mitigating the consequences of the release. Based on the observed trends in Well AW-6, it is reasonable to conclude that hydrocarbon concentrations in groundwater will continue to decline. Further, the excavation of 2,284 tons of soil and 28,200 gallons of groundwater during the removal of the underground storage tank system can be expected to accelerate the natural attenuation process.

Definition 4: *No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.*

Discussion: The petroleum hydrocarbon concentrations associated with this site are expected to continue to decline. The removal of the tank system and impacted soil and groundwater is expected to accelerate the rate of decline in hydrocarbon concentrations, which should further mitigate the release.

Definition 5: *The site presents no significant risk to the environment.*

Discussion: The site is located in an urban area and is not in proximity to sensitive wetlands or wildlife habitat. As such, conditions at this site should not represent a threat to the environment.

Based on the above discussions, it is apparent that the site can be designated as a low risk groundwater case and that no further investigation or engineered remediation is warranted. We, therefore, recommend that all existing groundwater monitoring wells be destroyed and regulatory case closure be granted for this site.

TABLE 1 - SUMMARY OF RESULTS OF CONFIRMATION SOIL SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

SOIL SAMPLE ID	SAMPLE DEPTH (feet)	DATE OF SAMPLING	TPH-G (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	LAB
S-1	8	08/19/98	0.05	ND<0.001	ND<0.002	ND<0.002	ND<0.002	ND<0.1	SPL
S-2	9	08/19/98	ND<0.05	ND<0.001	ND<0.002	ND<0.002	ND<0.002	ND<0.1	SPL
S-3	9	08/19/98	1.2	0.13	0.019	0.011	0.0255	0.17	SPL
S-4	8.5	08/19/98	130	0.26	ND<0.2	2.3	10.3	ND<10	SPL
S-5	9	08/25/98	0.73	0.021	ND<0.01	0.012	ND<0.01	0.46	SPL
S-6	9	08/25/98	540	1.8	0.96	8.7	23.6	ND<5.0	SPL
S-7	8 5	08/25/98	1.0	0.0076	0.0037	0.010	0.0185	ND<0.1	SPL
S-8	8 5	08/25/98	ND<0.05	ND<0.001	ND<0.002	ND<0.002	ND<0.002	ND<0.1	SPL

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
mg/kg	Milligrams per kilogram
ND	Not detected above reported detection limit
SPL	Southern Petroleum Laboratories

F:\0\10-017\10-017S WQ2

09 Oct-98

TABLE 2 - SUMMARY OF RESULTS OF TANK CAVITY WATER SAMPLING
SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY, DUBLIN, CALIFORNIA

ALISTO PROJECT NO. 10-017

CONSTITUENTS	UNITS	MDL	W-1
DATE OF SAMPLING			08/02/98
Cyanide-Reactive	mg/kg	1	ND
Sulfide-Reactive	mg/kg	10	ND
pH	pH Units	—	7.22
Flash Points	Degree F	—	>210
Antimony, Sb	mg/l	0.1	ND
Arsenic, As	mg/l	0.1	ND
Banum, Ba	mg/l	0.005	0.473
Beryllium, Be	mg/l	0.003	ND
Cadmium, Cd	mg/l	0.005	ND
Chromium, total, Cr	mg/l	0.01	ND
Cobalt, Co	mg/l	0.01	ND
Copper, Cu	mg/l	0.01	0.01
Lead, total, Pb	mg/l	0.005	ND
Mercury, Hg	mg/l	0.0002	ND
Molybdenum, Mo	mg/l	0.02	0.1
Nickel, Ni	mg/l	0.02	0.03
Selenium, Se	mg/l	0.1	ND
Silver, Ag	mg/l	0.01	ND
Thallium, Tl	mg/l	0.1	ND
Vanadium, V	mg/l	0.005	0.02
Zinc, Zn	mg/l	0.02	1.16
Benzene	ug/l	5	18
MTBE	ug/l	250	4400
LAB			SPL

ABBREVIATIONS

mg/l	Milligrams per liter
ug/l	Micrograms per liter
MDL	Method detection limit
MTBE	Methyl tert-butyl ether
—	Not applicable
ND	Not detected above reported detection limit
SPL	SPL Laboratory

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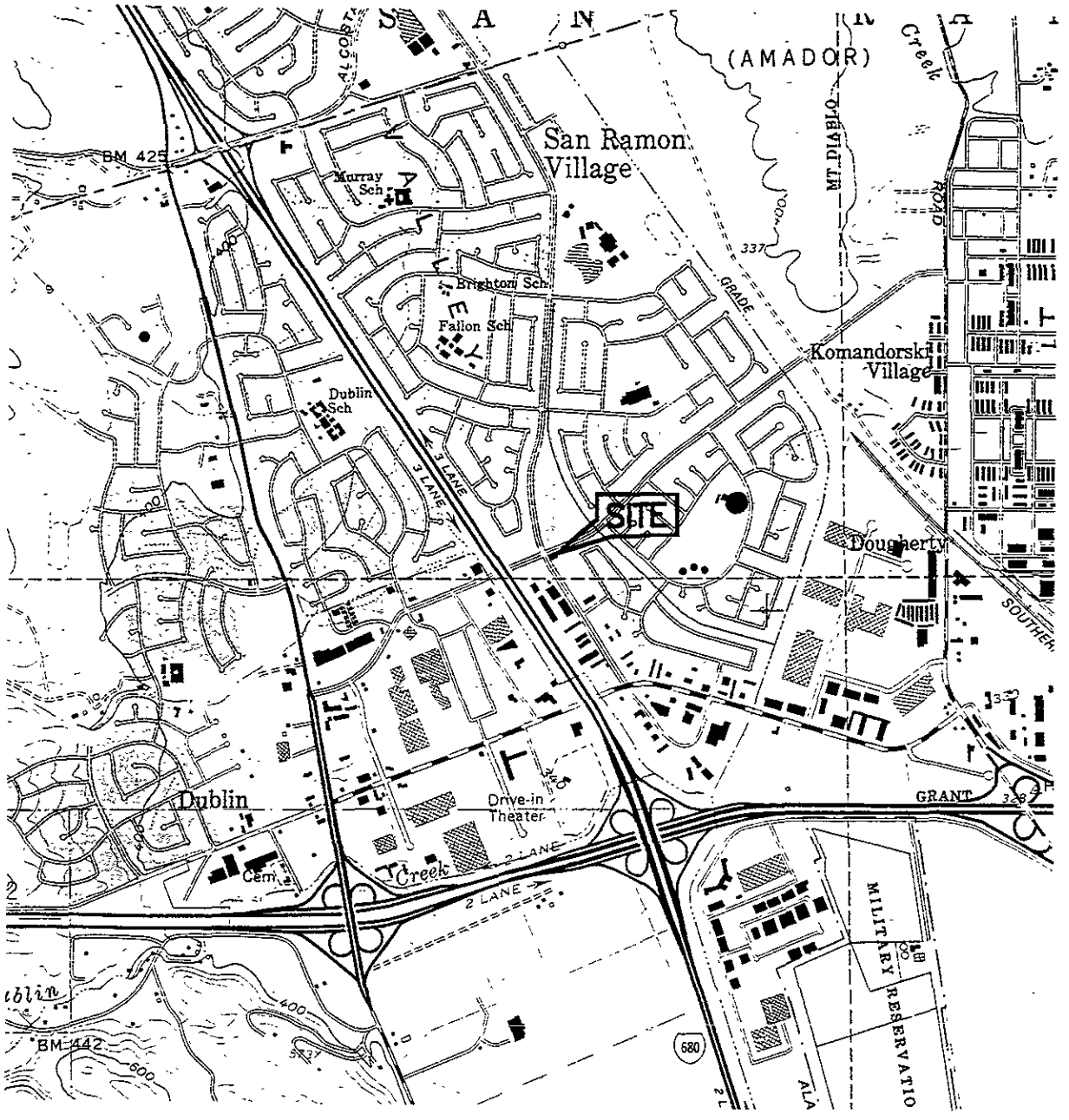


SOURCE:
USGS MAP, DUBLIN QUADRANGLE, CALIFORNIA. 7.5 MINUTE SERIES. 1961. PHOTOREVISED 1980.

N

0 1000' 2000'

QUADRANGLE LOCATION

FIGURE 1

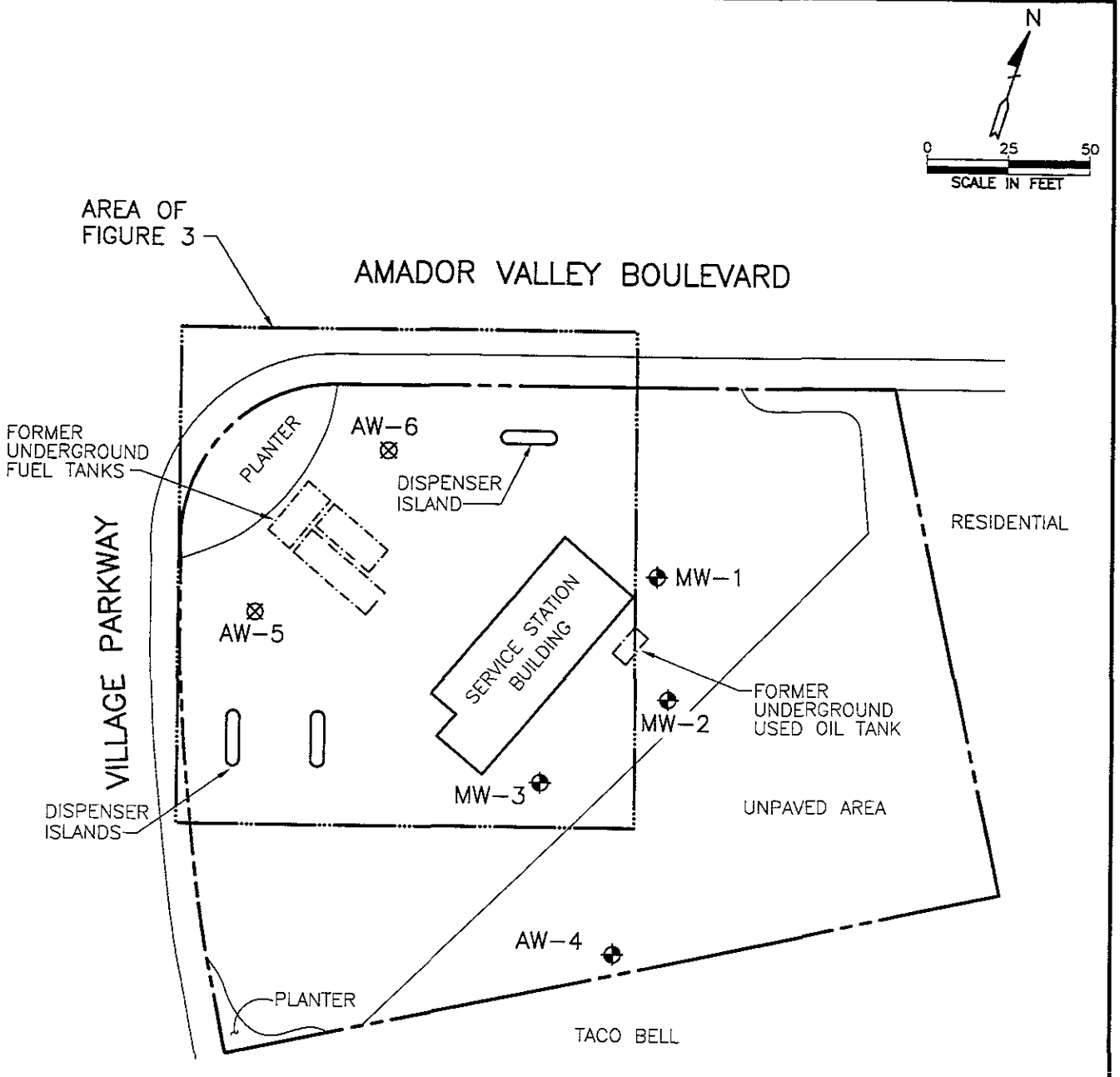
SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

PROJECT NO. 10-017

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

10017D DWG 7/20/93 REV 1 1



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊗ DESTROYED WELL

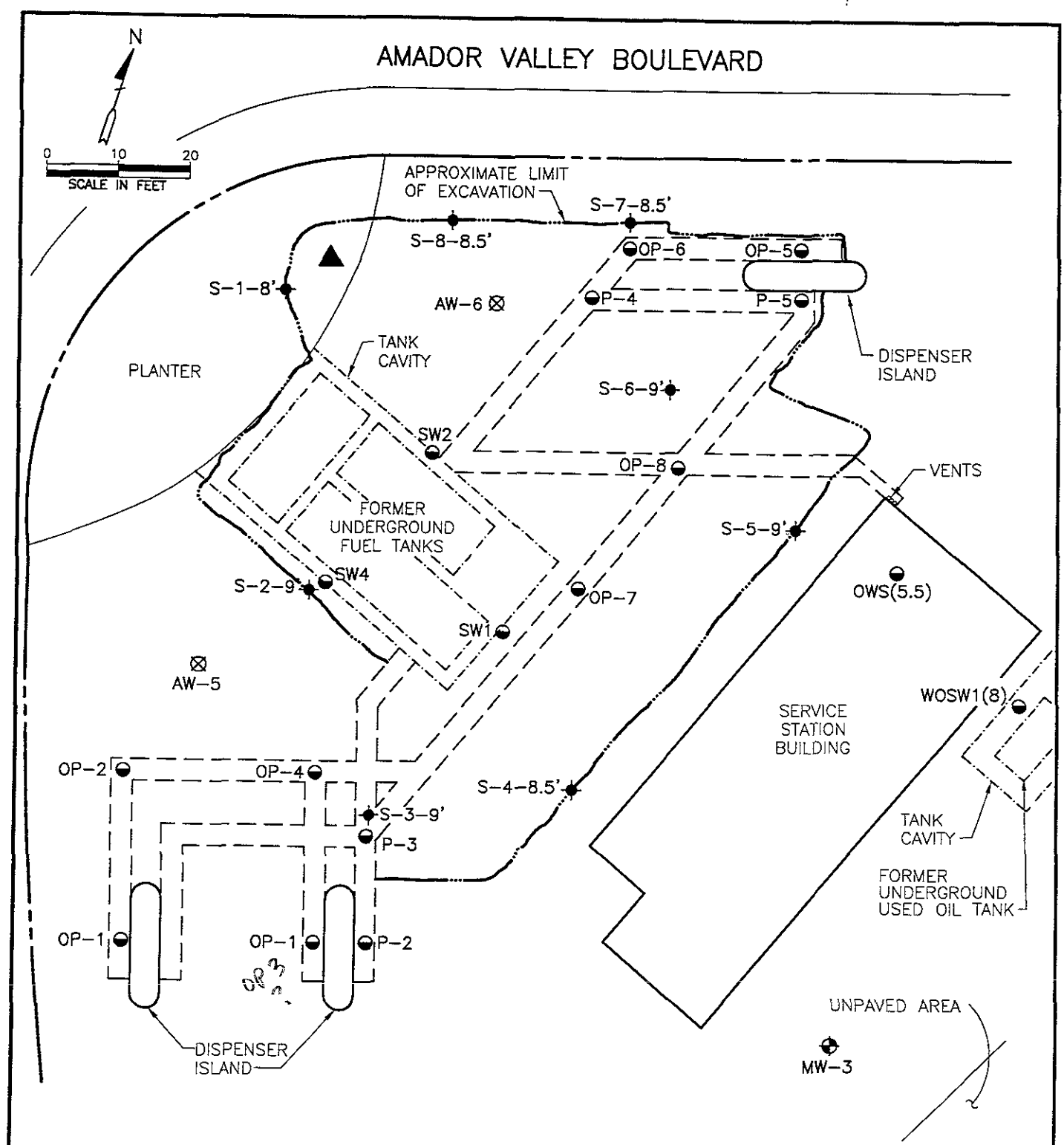
FIGURE 2

SITE PLAN

BP OIL SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

PROJECT NO. 10-017

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA



LEGEND

- GROUNDWATER MONITORING WELL
- BP OIL SOIL SAMPLE LOCATION
- TOSCO SOIL SAMPLE LOCATION
- TANK CAVITY WELL
- DESTROYED WELL
- PRODUCT LINE TRENCH
- LIMIT OF EXCAVATION

FIGURE 3

SOIL SAMPLE LOCATION MAP

BP OIL SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

PROJECT NO. 10-017

ALISTO ENGINEERING GROUP
WALNUT CREEK CALIFORNIA

APPENDIX A

PERMIT

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE, PLEASANTON, CALIFORNIA 94588-5127 PHONE (510) 484-2600 X235
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 7197 Village Parkway, Dublin

California Coordinates Source _____ ft. Accuracy ± _____ ft.
CCN _____ ft. CCE _____ ft.
APN _____

CLIENT
Name RA Oil Company
Address 245 S.W. 4th ST Phone 425.251.1669
City Renton WA Zip 98055

APPLICANT
Name Alisto Engineering Group
Address 1575 Treat Blvd Floor 1 Fax 925 296 8823
City Walnut Creek CA Zip 94598 Phone 925 295 1650

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☐
Monitoring	☐	Well Destruction	☒

PROPOSED WATER SUPPLY WELL USE AW-5 + AW-6

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☒
Cable	☐	Other	☐		

DRILLER'S LICENSE NO. C57-720904

WELL PROJECTS
Drill Hole Diameter _____ in. Maximum
Casing Diameter _____ in. Depth _____ ft.
Surface Seal Depth _____ ft. Number _____

GEOTECHNICAL PROJECTS
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft

ESTIMATED STARTING DATE 7/17/98
ESTIMATED COMPLETION DATE 7/17/98

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE _____ Date _____

FOR OFFICE USE

PERMIT NUMBER 98117
WELL NUMBER 2S/1W 36P19 & 36P20
APN 941 0210 013 00

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

(F.) WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS

Approved Wyman Hong Date 17 Jul 98
Wyman Hong

10/96

APPENDIX B

BORING LOGS AND WELL CONSTRUCTION DETAILS

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-095 DATE DRILLED 11/6/90
CLIENT Mobil Oil Corporation
LOCATION 7197 Village Pkwy, Dublin
LOGGED BY B. Nagle APPROVED BY

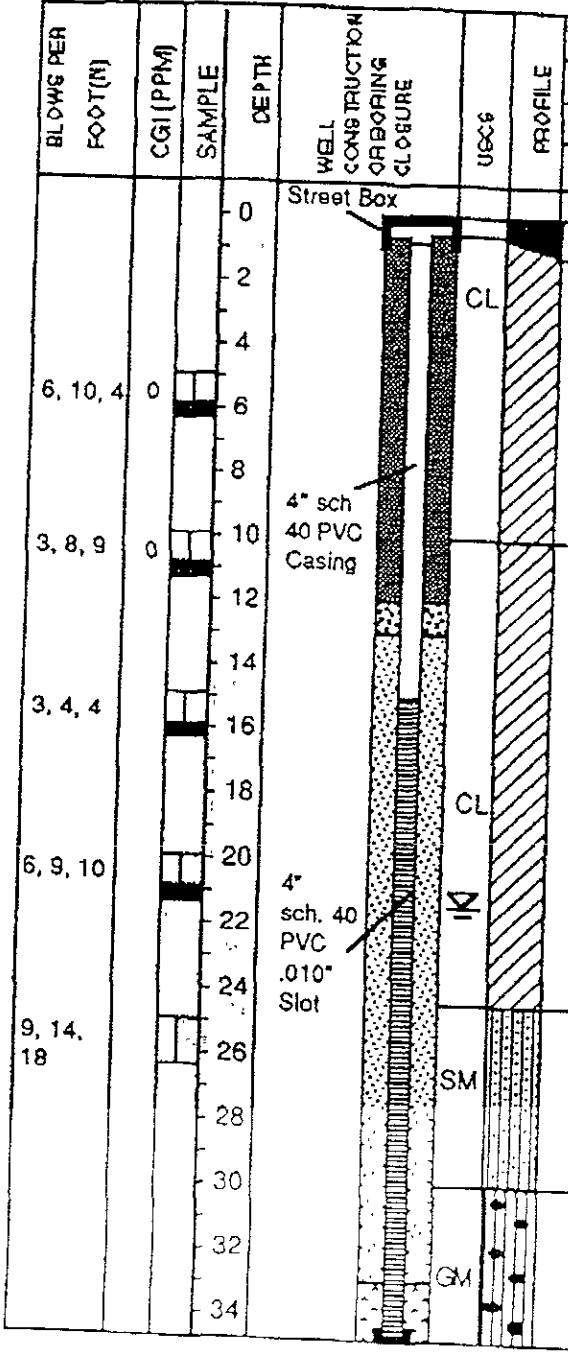
BORING NO. AW-5
WELL NO. AW-5
Page 1 of 1

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 334.81

DRILLING METHOD Hollow stem auger HOLE DIAM. 10"
SAMPLER TYPE Modified split spoon
CASING DATA Perforations: 15-35'
DRILLER West Hazmat

WATER LEVEL	21.5	9.67'	
DATE	11/6/90	11/15/90	
TIME	1200	--	



DESCRIPTION

4" asphalt; 4" base material

SANDY CLAY; dark grayish brown, damp, moderate plasticity, very stiff

SILTY CLAY; very dark brown to black, damp, high plasticity, stiff

Color change to tan; minor coarse sand and rootlets

Color change to dark gray, moisture change to wet at 21.5 feet below grade

SILTY SAND; light brown, wet, medium dense

Unable to sample below 26.5 feet due to flowing sand, abundant gravel in cuttings from below 30 feet

Boring terminated at 35 feet below grade
Free ground water encountered at appoximately 21.5 feet below grade

Portland Cement | Bentonite Pellets | Sample
Sand #3 Lonestar | Native Soil | Driven interval

ALTON GEOSCIENCE, Inc.
LOG OF EXPLORATORY BORING

PROJECT NO. 30-095 DATE DRILLED 11/6/90
CLIENT Mobil Oil Corporation
LOCATION 7197 Village Pkwy, Dublin
LOGGED BY B. Nagle APPROVED BY

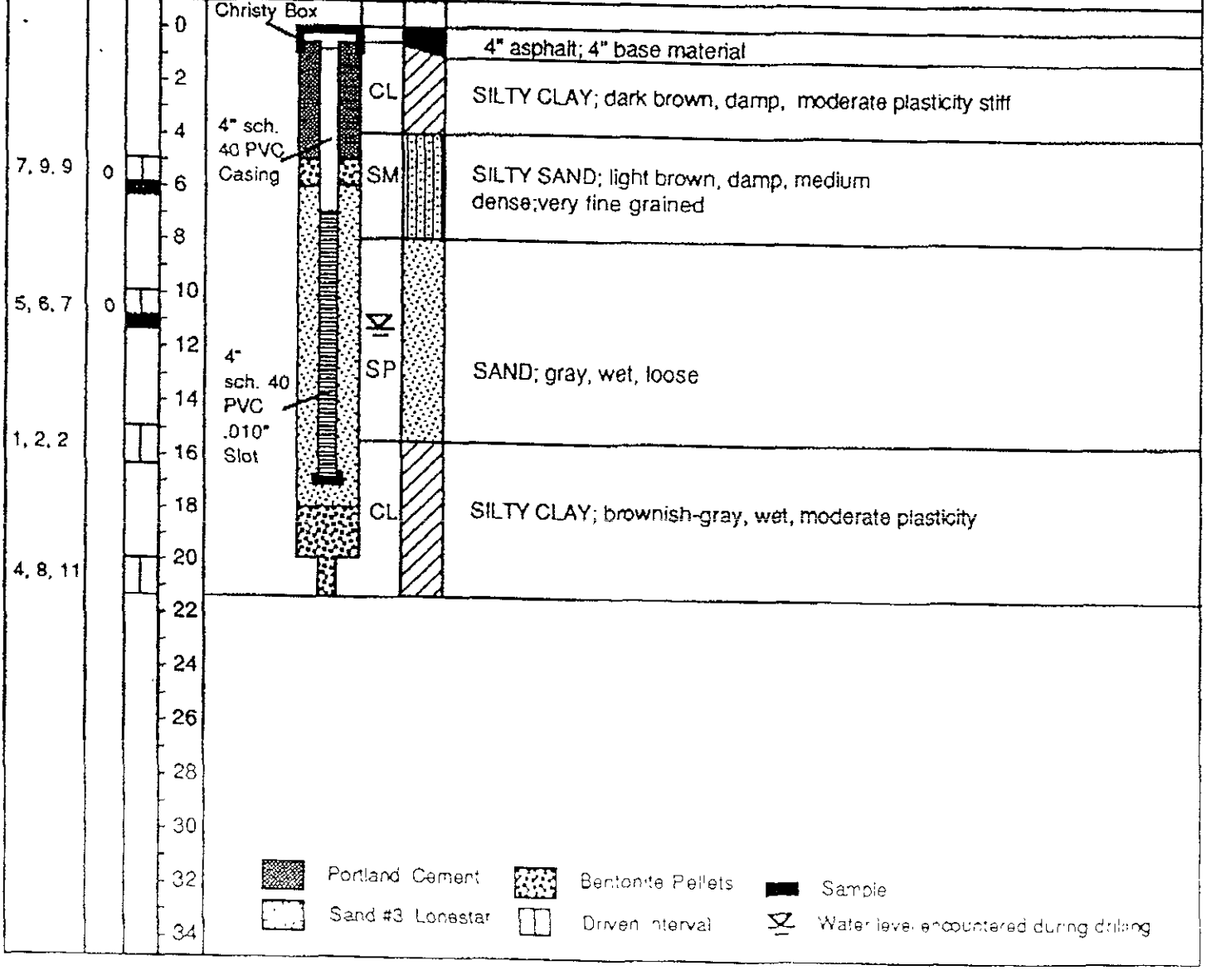
BORING NO. AW-6
WELL NO. AW-6
Page 1 of 1

FIELD SKETCH OF BORING LOCATION

TOP OF CASING ELEVATION 334.93

DRILLING METHOD Hollow stem auger HOLE DIAM. 10"
SAMPLER TYPE Modified split spoon
CASING DATA Perforations: 7-17'
DRILLER West Hazmat

WATER LEVEL	11.5'	9.58'	
DATE	11/6/90	11/15/90	
TIME	1400	-	



APPENDIX C

DWR WELL DESTRUCTION FORMS

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

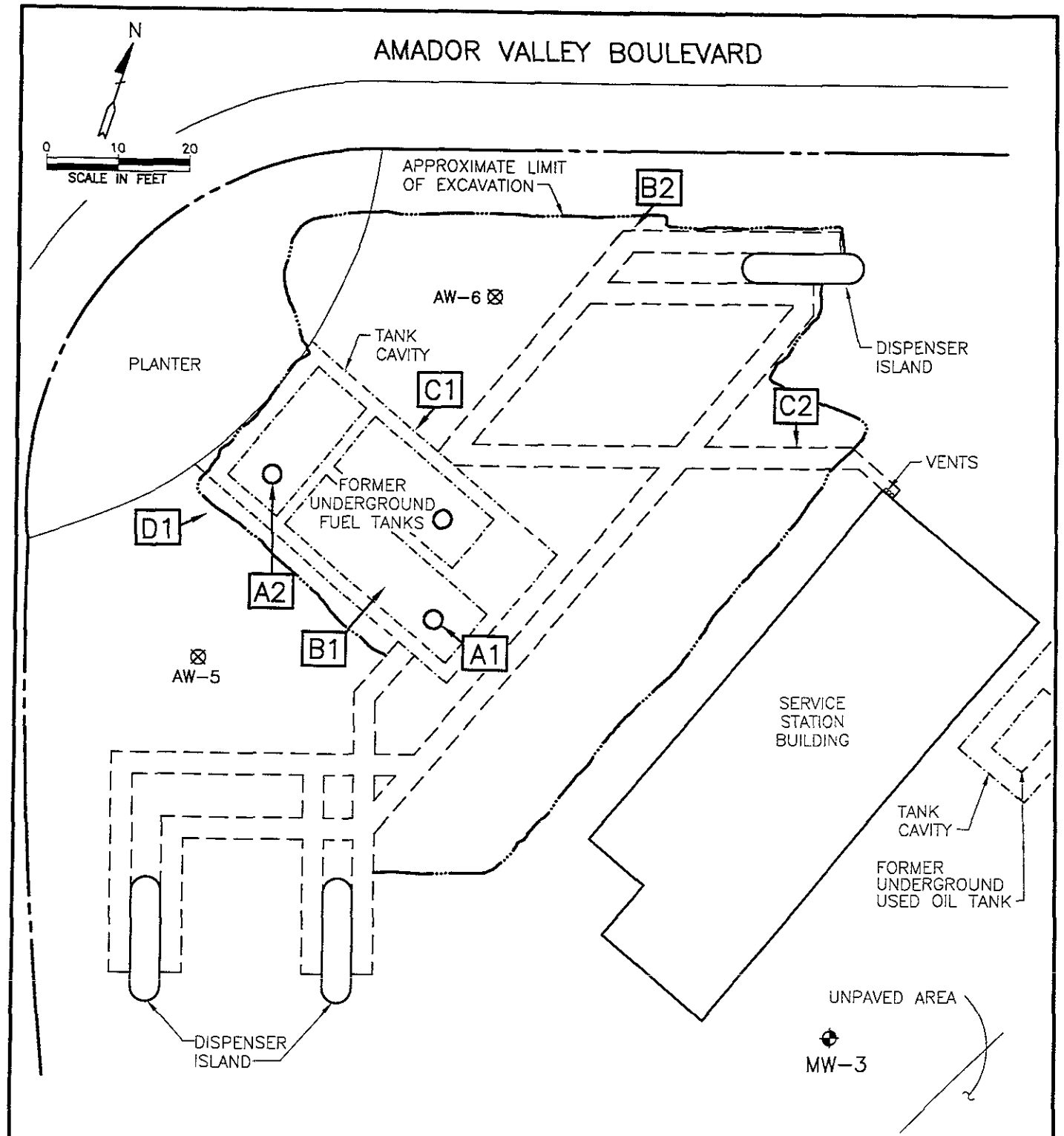
CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

APPENDIX D

SITE PHOTOGRAPHS



LEGEND

- GROUNDWATER MONITORING WELL
- DESTROYED WELL
- PRODUCT LINE TRENCH
- LIMIT OF EXCAVATION
- C2 — LOCATION OF CAMERA AND DIRECTION OF PHOTOGRAPH

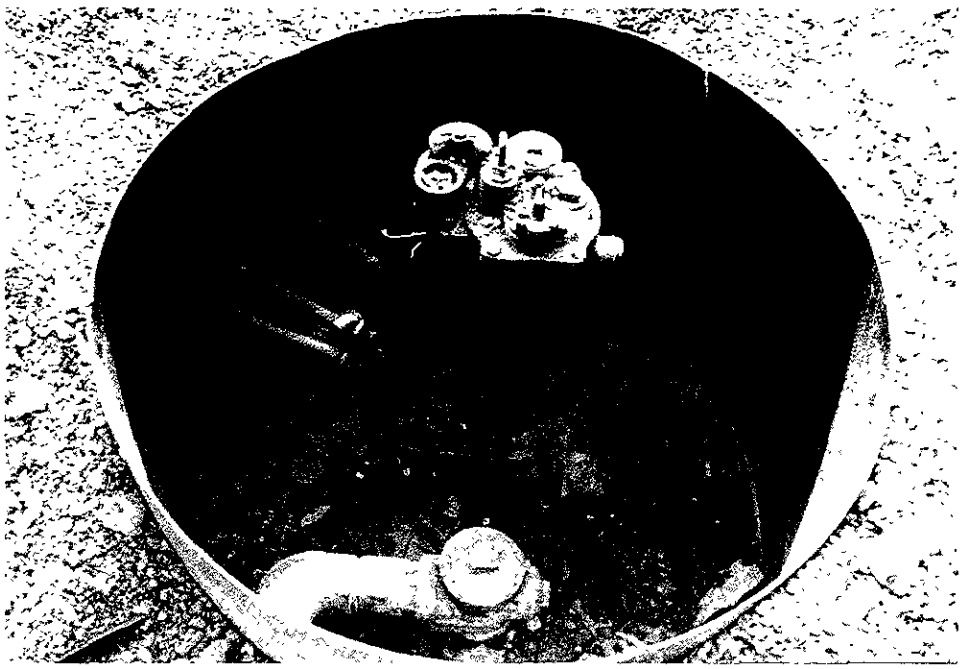
SITE PHOTOGRAPH LOCATION MAP

BP OIL SERVICE STATION NO. 11116
7197 VILLAGE PARKWAY
DUBLIN, CALIFORNIA

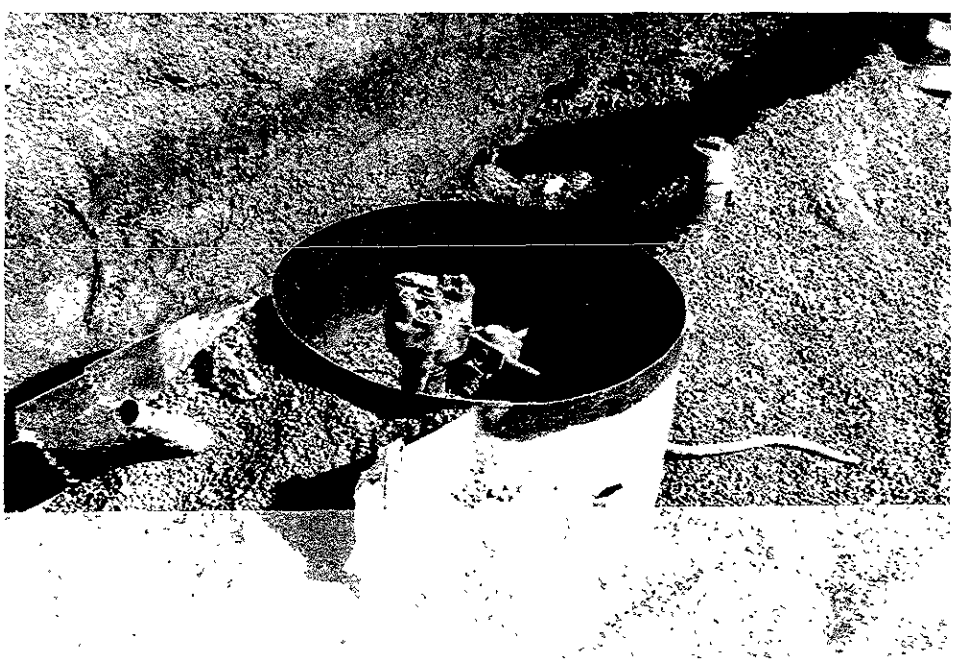
PROJECT NO. 10-017

ALISTO ENGINEERING GROUP
WALNUT CREEK CALIFORNIA

SITE PHOTOGRAPHS
Former BP Oil Company Site No. 11116
Dublin, California



Photograph A1
July 27, 1998 - Tank sump containing turbine pump, vent piping and electrical conduit.



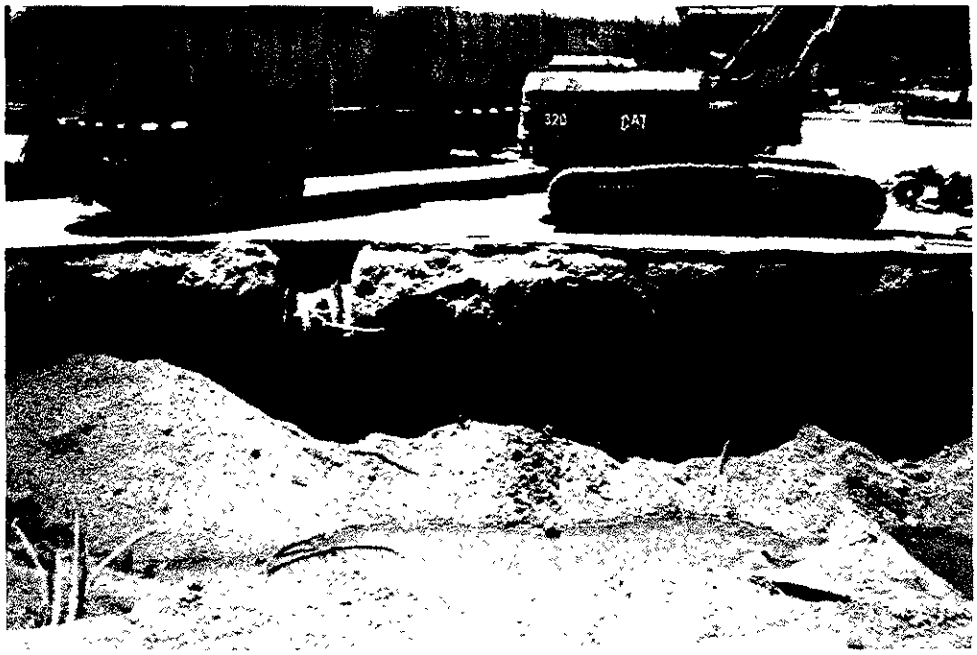
Photograph A2
July 27, 1998 - Tank sump with fibertrench terminated at the sump

SITE PHOTOGRAPHS
Former BP Oil Company Site No. 11116
Dublin, California

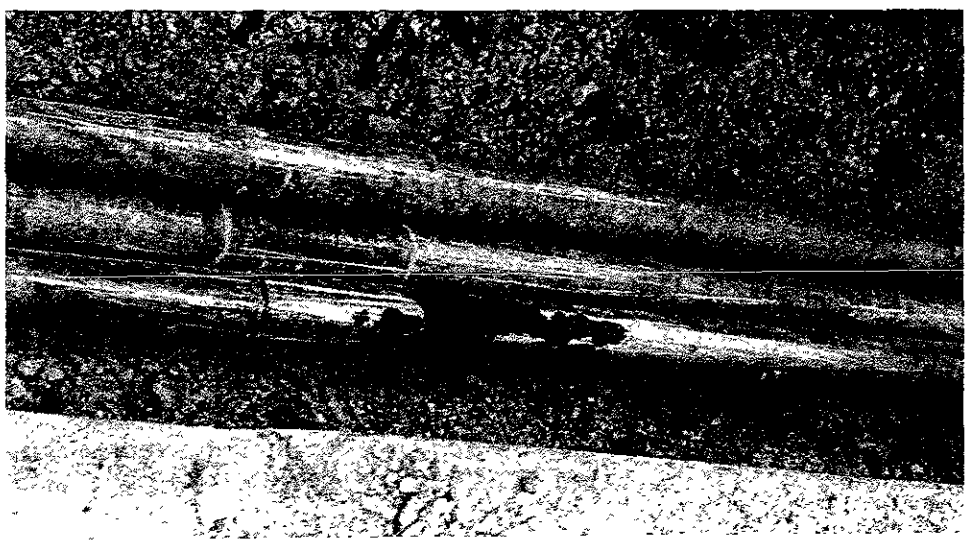
Photograph B1
July 31, 1998 - Looking northeast from the tank cavity, showing fibertrench and product and vent lines.

Photograph B2
July 31, 1998 - Looking southwest from the east dispenser island, showing fibertrench, product lines, and vent lines.

SITE PHOTOGRAPHS
Former BP Oil Company Site No. 11116
Dublin, California

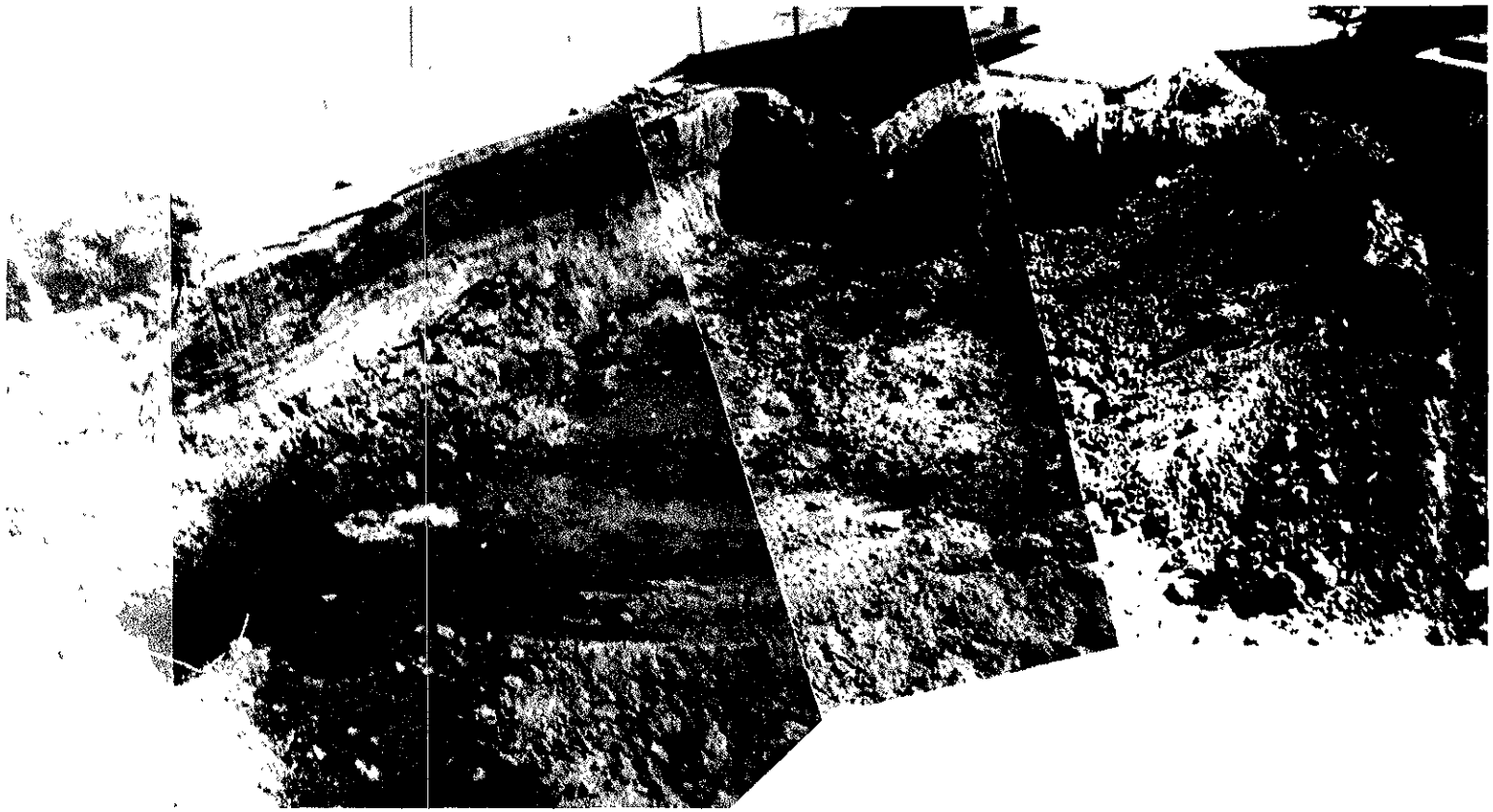


Photograph C1
July 28, 1998 - Tank cavity after removal of underground fuel tanks showing groundwater.



Photograph C2
July 28, 1998 - Vent lines showing product leaking from piping joints.

SITE PHOTOGRAPH
Former BP Oil Company Site No. 11116
Dublin, California



Photograph D
August 21, 1998 - **Looking northeast from atop temporary water storage tank, showing extent of soil excavation.**

APPENDIX E

TOSCO COMPLIANCE SOIL SAMPLE LOCATIONS AND SUMMARY OF LABORATORY DATA

Table 1 - Chemical Analytical Data

Former Tosco BP Branded Facility No. 11116
7197 Village Parkway
Dublin, California

Sample ID	Date Collected	Sample Depth (feet)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Xylenes (ppm)	MTBE (ppm)	TPHd (ppm)	LEAD (ppm)	HVOCs (ppm)	SVOCs (ppm)
GASOLINE UST PIT EXCAVATION (SOIL)												
SW1	7/28/98	9.5	ND	ND	ND	ND	ND	ND	NR	8.1	NR	NR
SW2	7/28/98	9.5	ND	ND	ND	ND	ND	ND	NR	5.2	NR	NR
SW3	7/28/98	9.5	ND	ND	ND	ND	ND	ND	NR	5.4	NR	NR
SW4	7/28/98	9.5	ND	ND	ND	ND	ND	ND	NR	5.7	NR	NR
WASTE OIL UST PIT EXCAVATION (SOIL)												
WOSW1 (8)	7/28/98	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
OIL/WATER SEPARATOR (SOIL)												
OWS (5.5)	7/30/98	5.5	260[2]	ND	ND	ND	0.890	ND	470[3]	8.2	ND[4]	ND[5]
PRODUCT PIPING TRENCHES (SOIL)												
P-1	7/30/98	4.5	52[6]	ND	0.11	0.16	0.38	ND	NR	5.0	NR	NR
P-2	7/30/98	4.5	ND	ND	ND	ND	ND	0.053	NR	6.7	NR	NR
P-3	7/30/98	4.5	ND	ND	ND	ND	ND	0.26	NR	5.4	NR	NR
P-4	7/30/98	5.0	130[6]	ND	ND	0.57	0.26	ND	NR	9.4	NR	NR
P-5	7/30/98	4.0	37[6]	ND	0.14	ND	0.27	ND	NR	5.6	NR	NR
FORMER PRODUCT PIPING TRENCHES (SOIL)												
OP-1	8/7/98	4.0	ND	ND	ND	ND	ND	ND	NR	8.9	NR	NR
OP-2	8/7/98	3.0	ND	ND	ND	ND	ND	ND	NR	7.7	NR	NR
OP-3	8/7/98	3.5	ND	ND	ND	ND	ND	0.23	NR	7.5	NR	NR
OP-4	8/7/98	3.0	ND	0.0064	ND	ND	0.035	ND	NR	6.5	NR	NR
OP-5	8/7/98	3.5	6.3	0.18	0.027	0.064	0.13	0.1	NR	10	NR	NR
OP-6	8/7/98	3.5	2.9	0.064	0.017	0.055	0.15	ND	NR	7.9	NR	NR
OP-7	8/7/98	4.0	13	0.36	0.048	1.0	0.42	0.26	NR	550	NR	NR
OP-8	8/7/98	3.0	3.6	0.030	0.013	0.11	0.068	0.0517	NR	6.6	NR	NR

Table 1 - Chemical Analytical Data

Former Tosco BP Branded Facility No. 11116
7197 Village Parkway
Dublin, California

Sample ID	Date Collected	Sample Depth (feet)	TPHg (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Xylenes (ppm)	MTBE (ppm)	TPHd (ppm)	LEAD (ppm)	HVOCs (ppm)	SVOCs (ppm)
WASTE OIL UST PIT STOCKPILE												
Comp WO	7/30/98	NA	ND	ND	ND	ND	ND	ND	ND	5.6	ND	ND
GASOLINE UST PIT STOCKPILE												
Comp A	7/30/98	NA	ND	ND	0.012	ND	0.024	ND	NR	5.5	NR	NR
Comp B	7/30/98	NA	ND	ND	0.0072	ND	0.015	ND	NR	4.1	NR	NR
PRODUCT LINE STOCKPILE												
Comp C	8/7/98	NA	1.0[7]	ND	0.0075	ND	0.24	ND	NR	8.8	NR	NR

Sample ID	Date Collected	Sample Depth (feet)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-Benzene (ppb)	Xylenes (ppb)	MTBE (ppb)	TPHd (ppb)	LEAD (ppm)	HVOCs (ppb)	SVOCs (ppb)
GASOLINE UST PIT EXCAVATION (WATER)												
Water-FT	7/28/98	NA	10,000	450	2,000	210	1,300	16,000	NR	ND	NR	NR
WASTE OIL UST PIT EXCAVATION (WATER)												
Water-WO	7/28/98	NA	ND	ND	ND	ND	ND	120	270[1]	ND	ND	ND

Sample ID	Date Collected	Sample Depth (feet)	O&G (ppm)	Chromium (ppm)	Nickel (ppm)	Zinc (ppm)	Cadmium (ppm)
WOSW1 (8)	7/28/98	8.0	ND	33	42	38	ND
Water-WO	7/28/98	NA	8.7	0.12	0.20	0.14	ND
OWS (5 5)	7/30/98	5.5	2,700	ND	ND	1.5	ND
Comp WO	7/30/98	NA	ND	6.8	41	28	ND

Table 1 - Chemical Analytical Data

Former Tosco BP Branded Facility No. 11116
7197 Village Parkway
Dublin, California

EXPLANATION:

ND = none detected
NA = not applicable
ppm = parts per million
ppb = parts per billion
NR = analysis not requested
MTBE = methyl tert-butyl ether

ANALYTICAL LABORATORY:

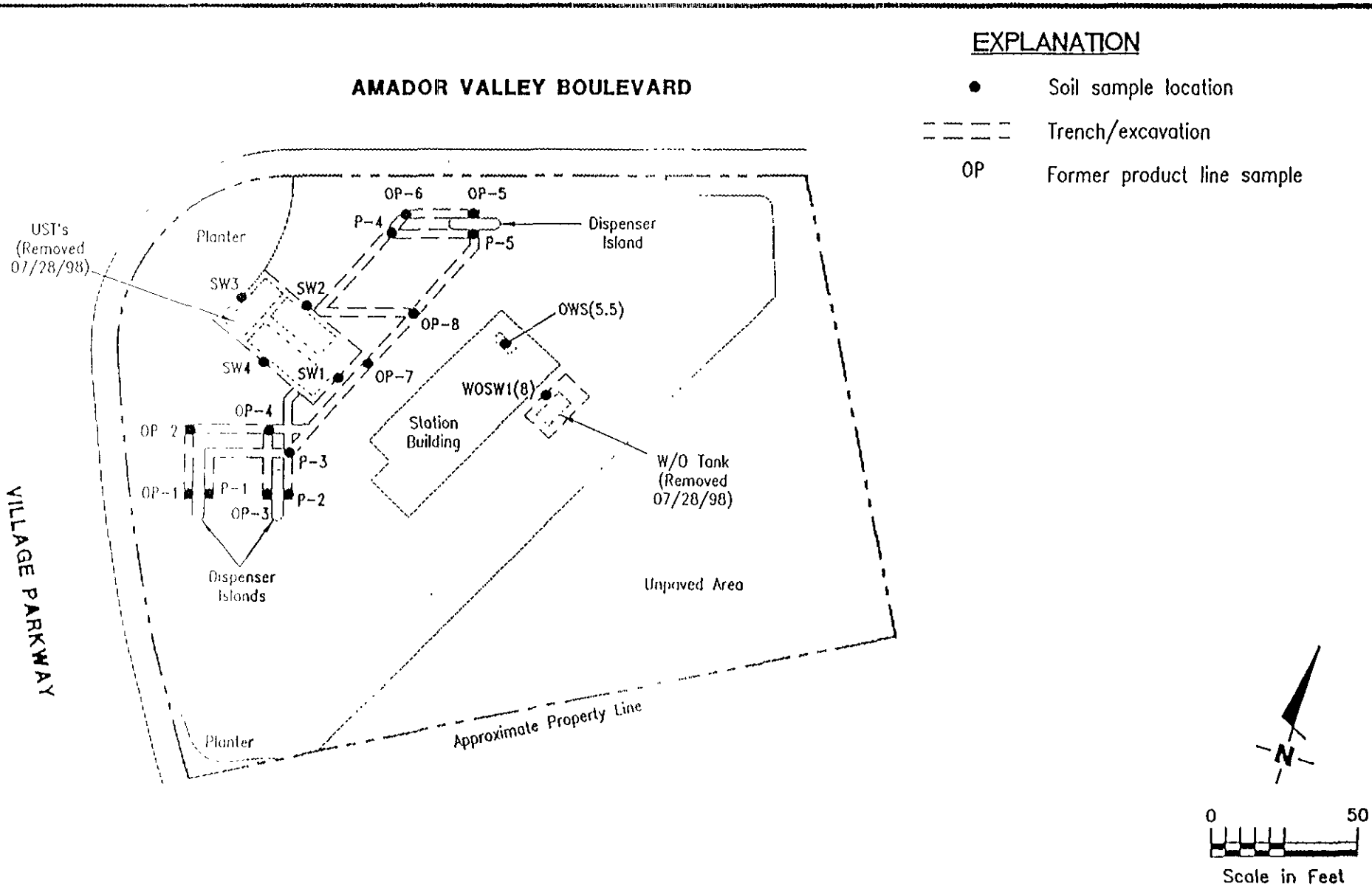
Sequoia Analytical (ELAP # 1271)

NOTES:

[1] = Laboratory reports indicates unidentified hydrocarbons >C18
[2] = Laboratory reports indicates unidentified hydrocarbons >C8
[3] = Laboratory reports indicates unidentified hydrocarbons <C14 & >C16
[4] = None of the analytes detected except chlorobenzene (0.270 ppm), 1,2-dichlorobenzene (1 600 ppm), 1,3-dichlorobenzene (0.032 ppm), and 1,4-dichlorobenzene (0.120 ppm).
[5] = None of the analytes detected except for 2-methylnaphthalene (0.270 ppm) and naphthalene (0.160 ppm).
[6] = Laboratory reports indicates gasoline and unidentified hydrocarbons >C8
[7] = Laboratory reports indicates unidentified hydrocarbons C6-C12

ANALYTICAL METHODS:

TPHg = Total Petroleum Hydrocarbons as gasoline according to EPA Method 8015 Modified.
TPHd = Total Petroleum Hydrocarbons as diesel according to EPA Method 8015 Modified.
TPHhf = Total Petroleum Hydrocarbons as hydraulic fluid according to EPA Method 8015 Modified.
O&G = Total recoverable petroleum oil according to Standard Methods 5520 E&F(Gravimetric).
HVOCs = Halogenated volatile organic compounds according to EPA Method 8010.
SVOCs = Semi-volatile organic compounds according to EPA Method 8270.
Metals = EPA Method 6010



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

SOIL SAMPLE LOCATION MAP
Former Tosco BP Branded Facility #11116
7197 Village Parkway
Dublin, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
140188.02		September, 1998	

APPENDIX F

FORWARD INC. MATERIAL ANALYSIS REPORT

FAX TO BRADY
925-295-1823

Date 09/24/98
Time 13:31:03

FORWARD. INC.

MATERIAL ANALYSIS REPORT BY ACCOUNT

SOIL

For the period / / - 09/24/98
Detailed report for sites 00 - 99
Accounts 737702 - 737702 Customer Types - Z Materials - ZZZZZZZZZZ Material Types - :

Date	Material	Type	Customer	Type	Tickets	Count	Est. vol.	Act. Vol.	Est. Wt.	Actual Wt.
09/24/98	COV CII T	Q	737702	B	02-043199	0	18	18	18.97	18.97
09/24/98	COV CII T	Q	737702	B	02-043200	0	18	18	23.37	23.37
09/24/98	COV CII T	Q	737702	B	02-043201	0	18	18	22.24	22.24
09/24/98	COV CII T	Q	737702	B	02-043202	0	18	18	22.46	22.46
09/24/98	COV CII T	Q	737702	B	02-043203	0	18	18	23.51	23.51
09/24/98	COV CII T	Q	737702	B	02-043204	0	18	18	19.89	19.89
09/24/98	COV CII T	Q	737702	B	02-043205	0	18	18	20.79	20.79
09/24/98	COV CII T	Q	737702	B	02-043206	0	18	18	27.34	27.34
09/24/98	COV CII T	Q	737702	B	02-043207	0	18	18	26.21	26.21
09/24/98	COV CII T	Q	737702	B	02-043208	0	18	18	24.34	24.34
09/24/98	COV CII T	Q	737702	B	02-043209	0	18	18	24.58	24.58
09/24/98	COV CII T	Q	737702	B	02-043210	0	18	18	19.81	19.81
09/24/98	COV CII T	Q	737702	B	02-043211	0	18	18	21.70	21.70
09/24/98	COV CII T	Q	737702	B	02-043212	0	18	18	23.35	23.35
09/24/98	COV CII T	Q	737702	B	02-043213	0	18	18	31.19	31.19
09/24/98	COV CII T	Q	737702	B	02-043214	0	18	18	24.69	24.69
09/24/98	COV CII T	Q	737702	B	02-043215	0	18	18	28.18	28.18
09/24/98	COV CII T	Q	737702	B	02-043216	0	18	18	27.66	27.66
09/24/98	COV CII T	Q	737702	B	02-043217	0	18	18	22.84	22.84
09/24/98	COV CII T	Q	737702	B	02-043218	0	18	18	26.38	26.38
09/24/98	COV CII T	Q	737702	B	02-043219	0	18	18	20.87	20.87
09/24/98	COV CII T	Q	737702	B	02-043220	0	18	18	25.77	25.77
09/24/98	COV CII T	Q	737702	B	02-043221	0	18	18	22.90	22.90
09/24/98	COV CII T	Q	737702	B	02-043222	0	18	18	24.48	24.48
09/24/98	COV CII T	Q	737702	B	02-043223	0	18	18	34.40	34.40
09/24/98	COV CII T	Q	737702	B	02-043224	0	18	18	26.86	26.86
09/24/98	COV CII T	Q	737702	B	02-043225	0	18	18	24.92	24.92
09/24/98	COV CII T	Q	737702	B	02-043226	0	18	18	28.45	28.45
09/24/98	COV CII T	Q	737702	B	02-043227	0	18	18	19.86	19.86
09/24/98	COV CII T	Q	737702	B	02-043228	0	18	18	23.18	23.18
09/24/98	COV CII T	Q	737702	B	02-043229	0	18	18	22.24	22.24
09/24/98	COV CII T	Q	737702	B	02-043230	0	18	18	26.21	26.21
09/24/98	COV CII T	Q	737702	B	02-043231	0	18	18	23.97	23.97
09/24/98	COV CII T	Q	737702	B	02-043232	0	18	18	22.06	22.06
09/24/98	COV CII T	Q	737702	B	02-043233	0	18	18	31.25	31.25
09/24/98	COV CII T	Q	737702	B	02-043234	0	18	18	26.10	26.10
09/24/98	COV CII T	Q	737702	B	02-043235	0	18	18	22.98	22.98
09/24/98	COV CII T	Q	737702	B	02-043236	0	18	18	20.90	20.90
09/24/98	COV CII T	Q	737702	B	02-043237	0	18	18	19.80	19.80
09/24/98	COV CII T	Q	737702	B	02-043238	0	18	18	24.14	24.14
09/24/98	COV CII T	Q	737702	B	02-043239	0	18	18	21.96	21.96
09/24/98	COV CII T	Q	737702	B	02-043240	0	18	18	24.90	24.90
09/24/98	COV CII T	Q	737702	B	02-043241	0	18	18	23.86	23.86
09/24/98	COV CII T	Q	737702	B	02-043242	0	18	18	21.32	21.32
09/24/98	COV CII T	Q	737702	B	02-043243	0	18	18	24.34	24.34
09/24/98	COV CII T	Q	737702	B	02-043244	0	18	18	22.77	22.77

Date 09/24/98
Time 13:31:03

FORWARD. INC.

P

MATERIAL ANALYSIS REPORT BY ACCOUNT

Sold

For the period / / - 09/24/98
Detailed report for sites 00 - 99

Accounts 737702 - 737702 Customer Types - Z Materials - ZZZZZZZZZZ Material Types - Z

Date	Material	Type	Customer	Type	Tickets	Count	Est. vol.	Act. Vol.	Est. Wt.	Actual Wt.
09/24/98	COV CII T	Q	737702	B	02-043245	0	18	18	24.55	24.55
09/24/98	COV CII T	Q	737702	B	02-043246	0	18	18	25.68	25.68
09/24/98	COV CII T	Q	737702	B	02-043247	0	18	18	22.75	22.75
09/24/98	COV CII T	Q	737702	B	02-043248	0	18	18	25.47	25.47
09/24/98	COV CII T	Q	737702	B	02-043249	0	18	18	27.40	27.40
09/24/98	COV CII T	Q	737702	B	02-043250	0	18	18	21.45	21.45
09/24/98	COV CII T	Q	737702	B	02-043251	0	18	18	20.04	20.04
09/24/98	COV CII T	Q	737702	B	02-043252	0	18	18	29.63	29.63
09/24/98	COV CII T	Q	737702	B	02-043253	0	18	18	26.86	26.86
09/24/98	COV CII T	Q	737702	B	02-043254	0	18	18	30.19	30.19
09/24/98	COV CII T	Q	737702	B	02-043255	0	18	18	23.52	23.52
09/24/98	COV CII T	Q	737702	B	02-043256	0	18	18	25.91	25.91
09/24/98	COV CII T	Q	737702	B	02-043257	0	18	18	21.52	21.52
09/24/98	COV CII T	Q	737702	B	02-043258	0	18	18	24.17	24.17
09/24/98	COV CII T	Q	737702	B	02-043259	0	18	18	25.44	25.44
09/24/98	COV CII T	Q	737702	B	02-043260	0	18	18	25.57	25.57
09/24/98	COV CII T	Q	737702	B	02-043261	0	18	18	22.73	22.73
09/24/98	COV CII T	Q	737702	B	02-043262	0	18	18	19.37	19.37
09/24/98	COV CII T	Q	737702	B	02-043263	0	18	18	27.34	27.34
09/24/98	COV CII T	Q	737702	B	02-043264	0	18	18	27.52	27.52
09/24/98	COV CII T	Q	737702	B	02-043265	0	18	18	23.00	23.00
09/24/98	COV CII T	Q	737702	B	02-043266	0	18	18	22.76	22.76
09/24/98	COV CII T	Q	737702	B	02-043267	0	18	18	24.44	24.44
09/24/98	COV CII T	Q	737702	B	02-043268	0	18	18	21.34	21.34
09/24/98	COV CII T	Q	737702	B	02-043269	0	18	18	22.50	22.50
09/24/98	COV CII T	Q	737702	B	02-043270	0	18	18	24.20	24.20
09/24/98	COV CII T	Q	737702	B	02-043271	0	18	18	27.25	27.25
09/24/98	COV CII T	Q	737702	B	02-043272	0	18	18	31.99	31.99
09/24/98	COV CII T	Q	737702	B	02-043273	0	18	18	23.13	23.13
09/24/98	COV CII T	Q	737702	B	02-043274	0	18	18	19.56	19.56
	B P OIL RESOURCES MANAGEMENT				76	0	1368	1368	1847.27	1847.27
	Average					0	18	18	24.00	24.00
	Report Total				76	0	1368	1368	1847.27	1847.27
	Report Average					0	18	18	24.00	24.00

APPENDIX G

FIELD PROCEDURES FOR SOIL SAMPLING

FIELD PROCEDURES
FOR SOIL SAMPLING

Soil Sampling

The sample was retained within the stainless steel tube, and both ends were immediately covered with Teflon sheeting and polyurethane caps. The caps were sealed with tape and labeled with the following information: Alisto's project number, boring number, sample depth interval, sampler's initials, and date of collection. The sample was immediately placed in a waterproof plastic bag and stored in a cooler containing blue ice. Possession of the samples was documented from the field to a state-certified analytical laboratory by using a chain of custody form.

APPENDIX H

LABORATORY REPORTS AND CHAIN OF CUSTODY

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

September 8, 1998

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

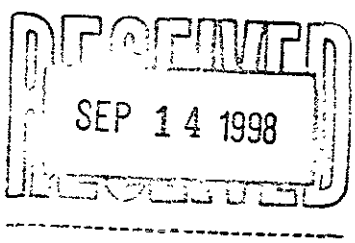
The following report contains analytical results for the sample(s) received at Southern Petroleum Laboratories (SPL) on August 27, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9808B47 and analyzed for all parameters as listed on the chain of custody.

Any data flag or quality control exception 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



Joel Grice
Senior Project Manager

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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-08-B47

Approved for Release by:

Joel Grice, Senior Organic Project Manager

Date: 9/9/98

Greg Grandits
Laboratory Director

Cynthia Schreiner
Quality Assurance Officer

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

Certificate of Analysis No. H9-9808B47-01

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

P.O.# H448924, COC#098287
DATE: 09/08/98

PROJECT: #11116, 7197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1-8ft

PROJECT NO: 10-017-9-3
MATRIX: SOIL
DATE SAMPLED: 08/19/98 15:03:00
DATE RECEIVED: 08/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	ug/kg
Benzene	ND	1.0 P	ug/kg
Toluene	ND	2.0 P	ug/kg
Ethylbenzene	ND	2.0 P	ug/kg
Total Xylene	ND	2.0 P	ug/kg

Surrogate	% Recovery
1,4-Difluorobenzene	93
4-Bromofluorobenzene	100

Method 8020A***
Analyzed by: YN
Date: 08/28/98

Gasoline Range Organics	0.050	0.05 P	mg/kg

Surrogate	% Recovery
1,4-Difluorobenzene	97
4-Bromofluorobenzene	90

California LUFT Manual for Gasoline
Analyzed by: YN
Date: 08/28/98 05:27:00

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. H9-9808B47-02

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

P.O.# H448924, COC#098287
DATE: 09/08/98

PROJECT: #11116, 7197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2-9ft

PROJECT NO: 10-017-9-3
MATRIX: SOIL
DATE SAMPLED: 08/19/98 15:26:00
DATE RECEIVED: 08/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	ug/kg
Benzene	ND	1.0 P	ug/kg
Toluene	ND	2.0 P	ug/kg
Ethylbenzene	ND	2.0 P	ug/kg
Total Xylene	ND	2.0 P	ug/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	100		
Method 8020A***			
Analyzed by: YN			
Date: 08/28/98			
Gasoline Range Organics	ND	0.05 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	90		
California LUFT Manual for Gasoline			
Analyzed by: YN			
Date: 08/28/98 06:03:00			

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. H9-9808B47-03

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

P.O.# H448924, COC#098287
DATE: 09/08/98

PROJECT: #11116, 7197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-3-9ft

PROJECT NO: 10-017-9-3
MATRIX: SOIL
DATE SAMPLED: 08/19/98 15:29:00
DATE RECEIVED: 08/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	170	100 P	ug/kg
Benzene	130	1.0 P	ug/kg
Toluene	19	2.0 P	ug/kg
Ethylbenzene	11	2.0 P	ug/kg
Total Xylene	25.5	2.0 P	ug/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	113		
4-Bromofluorobenzene	117		
Method 8020A***			
Analyzed by: YN			
Date: 08/28/98			
Gasoline Range Organics	1.2	0.05 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	127		
California LUFT Manual for Gasoline			
Analyzed by: YN			
Date: 08/28/98 06:34:00			

(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. H9-9808B47-04

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

P.O.# H448924, COC#098287
DATE: 09/08/98

PROJECT: #11116, 7197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-4-8.5ft

PROJECT NO: 10-017-9-3
MATRIX: SOIL
DATE SAMPLED: 08/19/98 15:39:00
DATE RECEIVED: 08/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10000 P	ug/kg
Benzene	260	100 P	ug/kg
Toluene	ND	200 P	ug/kg
Ethylbenzene	2300	200 P	ug/kg
Total Xylene	10300	200 P	ug/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	110		
4-Bromofluorobenzene	113		
Method 8020A***			
Analyzed by: YN			
Date: 08/29/98			
Gasoline Range Organics	130	12 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	95		
4-Bromofluorobenzene	173MI		
California LUFT Manual for Gasoline			
Analyzed by: YN			
Date: 08/28/98 08:12:00			

ND - Not detected.
MI - Matrix interference.
(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 LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808B47-05

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

P.O.# H448924, COC#098287
DATE: 09/08/98

PROJECT: #11116, 7197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-5-9ft

PROJECT NO: 10-017-9-3
MATRIX: SOIL
DATE SAMPLED: 08/25/98 14:40:00
DATE RECEIVED: 08/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	460	100 P	ug/kg
Benzene	21	5.0 P	ug/kg
Toluene	ND	10.0 P	ug/kg
Ethylbenzene	12	10.0 P	ug/kg
Total Xylene	ND	10.0 P	ug/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: CJ			
Date: 09/02/98			
Gasoline Range Organics	0.73	0.05 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	113		
California LUFT Manual for Gasoline			
Analyzed by: YN			
Date: 08/29/98 04:02:00			

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

Certificate of Analysis No. H9-9808B47-06

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

P.O.# H448924, COC#098287
DATE: 09/08/98

PROJECT: #11116, 7197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-6-9ft

PROJECT NO: 10-017-9-3
MATRIX: SOIL
DATE SAMPLED: 08/25/98 14:45:00
DATE RECEIVED: 08/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	5000 P	ug/kg
Benzene	1800	50.0 P	ug/kg
Toluene	960	100.0 P	ug/kg
Ethylbenzene	8700	100.0 P	ug/kg
Total Xylene	23600	100.0 P	ug/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	147		
Method 8020A***			
Analyzed by: YN			
Date: 08/29/98			
Gasoline Range Organics	540	25 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	187MI		
California LUFT Manual for Gasoline			
Analyzed by: YN			
Date: 08/29/98 05:05:00			

ND - Not detected.
MI - Matrix interference.
(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 LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9808B47-07

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

P.O.# H448924, COC#098287
DATE: 09/08/98

PROJECT: #11116, 7197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-7-8.5ft

PROJECT NO: 10-017-9-3
MATRIX: SOIL
DATE SAMPLED: 08/25/98 14:50:00
DATE RECEIVED: 08/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	ug/kg
Benzene	7.6	1.0 P	ug/kg
Toluene	3.7	2.0 P	ug/kg
Ethylbenzene	10	2.0 P	ug/kg
Total Xylene	18.5	2.0 P	ug/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	113		
4-Bromofluorobenzene	150		
Method 8020A***			
Analyzed by: YN			
Date: 08/28/98			
Gasoline Range Organics	1.0	0.05 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	190MI		
California LUFT Manual for Gasoline			
Analyzed by: YN			
Date: 08/28/98 10:19:00			

ND - Not detected. (P) - Practical Quantitation Limit
MI - Matrix interference.

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. H9-9808B47-08

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

P.O.# H448924, COC#098287
DATE: 09/08/98

PROJECT: #11116, 7197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-8-8.5ft

PROJECT NO: 10-017-9-3
MATRIX: SOIL
DATE SAMPLED: 08/25/98 14:55:00
DATE RECEIVED: 08/27/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	100 P	ug/kg
Benzene	ND	1.0 P	ug/kg
Toluene	ND	2.0 P	ug/kg
Ethylbenzene	ND	2.0 P	ug/kg
Total Xylene	ND	2.0 P	ug/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	107		
Method 8020A***			
Analyzed by: YN			
Date: 08/28/98			
Gasoline Range Organics	ND	0.05 P	mg/kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	93		
4-Bromofluorobenzene	100		
California LUFT Manual for Gasoline			
Analyzed by: YN			
Date: 08/28/98 10:50:00			

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

** SPL BATCH QUALITY CONTROL REPORT **
Method 8020A***

Batch Id: HP_J980828103600

Units: ug/kg

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	53	106	64 - 126
Benzene	ND	50	50	100	60 - 116
Toluene	ND	50	50	100	64 - 122
EthylBenzene	ND	50	50	100	68 - 127
O Xylene	ND	50	50	100	68 - 127
M & P Xylene	ND	100	100	100	68 - 129

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	23	115	21	105	9.09	22	27 - 196
BENZENE	ND	20	14	70.0	11	55.0	24.0	33	35 - 139
TOLUENE	ND	20	14	70.0	11	55.0	24.0	35	31 - 137
ETHYLBENZENE	ND	20	14	70.0	11	55.0	24.0	40	21 - 141
O XYLENE	ND	20	14	70.0	11	55.0	24.0	24	25 - 139
M & P XYLENE	ND	40	28	70.0	22	55.0	24.0	38	19 - 144

Analyst: YN
Sequence Date: 08/28/98
SPL ID of sample spiked: 9808B47-01A
Sample File ID: J_H4163.TX0
Method Blank File ID:
Blank Spike File ID: J_H4155.TX0
Matrix Spike File ID: J_H4159.TX0
Matrix Spike Duplicate File ID: J_H4160.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):

9808B47-03A 9808B47-07A 9808B47-08A 9808B54-01A
9808B54-02A 9808B54-03A 9808B54-04A 9808B54-05A
9808B54-06A 9808B54-07A 9808B47-06A 9808B47-01A
9808B47-02A

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

** SPL BATCH QUALITY CONTROL REPORT **
Method 8020A***

Batch Id: HP_J980829093100

Units: ug/kg

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	51	102	64 - 126
Benzene	ND	50.0	50	100	60 - 116
Toluene	ND	50.0	51	102	64 - 122
EthylBenzene	ND	50.0	50	100	68 - 127
O Xylene	ND	50.0	50	100	68 - 127
M & P Xylene	ND	100.0	100	100	68 - 129

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	15	75.0	13	65.0	14.3	22	27 - 196
BENZENE	ND	20	16	80.0	15	75.0	6.45	33	35 - 139
TOLUENE	ND	20	16	80.0	15	75.0	6.45	35	31 - 137
ETHYLBENZENE	ND	20	16	80.0	15	75.0	6.45	40	21 - 141
O XYLENE	ND	20	16	80.0	14	70.0	13.3	24	25 - 139
M & P XYLENE	ND	40	32	80.0	28	70.0	13.3	38	19 - 144

Analyst: YN
Sequence Date: 08/29/98
SPL ID of sample spiked: 9808B81-01A
Sample File ID: J_H4205.TX0
Method Blank File ID:
Blank Spike File ID: J_H4185.TX0
Matrix Spike File ID: J_H4189.TX0
Matrix Spike Duplicate File ID: J_H4204.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): 9808C31-01A 9808B47-05A 9808B47-04A 9808A65-01A

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

** SPL BATCH QUALITY CONTROL REPORT **
Method 8020A ***

Batch Id: HP_O980902041600

Matrix: Soil

Units: ug/kg

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	64 - 126
Benzene	ND	50	44	88.0	60 - 116
Toluene	ND	50	44	88.0	64 - 122
EthylBenzene	ND	50	43	86.0	68 - 127
O Xylene	ND	50	44	88.0	68 - 127
M & P Xylene	ND	100	86	86.0	68 - 129

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	230	20	400	NC	210	NC	NC	22	27 - 196
BENZENE	24	20	24	0 *	21	-15.0	200 *	33	35 - 139
TOLUENE	ND	20	21	105	19	95.0	10.0	35	31 - 137
ETHYLBENZENE	ND	20	19	95.0	19	95.0	0	40	21 - 141
O XYLENE	ND	20	19	95.0	19	95.0	0	24	25 - 139
M & P XYLENE	ND	40	37	92.5	39	97.5	5.26	38	19 - 144

Analyst: CJ
Sequence Date: 09/02/98
SPL ID of sample spiked: 9808C17-06A
Sample File ID: O_H5071.TX0
Method Blank File ID:
Blank Spike File ID: O_H5061.TX0
Matrix Spike File ID: O_H5062.TX0
Matrix Spike Duplicate File ID: O_H5072.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): 9808C17-15A 9808C17-08A 9808C17-11A 9809023-17A 9809023-21A 9809023-23A 9808B61-05A 9808B47-05A 9808C17-06A 9808C17-05A

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

** SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

Batch Id: HP_J980828114000

Units: mg/kg

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 Range Organics	ND	1.00	0.93	93.0	53 - 137

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 RANGE ORGANICS	0.05	0.90	0.58	58.9	0.67	68.9	15.6	50	36 - 163

Analyst: YN

Sequence Date: 08/28/98

SPL ID of sample spiked: 9808B47-01A

Sample File ID: JJH4163.TX0

Method Blank File ID:

Blank Spike File ID: JJH4157.TX0

Matrix Spike File ID: JJH4161.TX0

Matrix Spike Duplicate File ID: JJH4162.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): 9808B47-04A 9808B47-07A 9808B47-08A 9808B47-01A 9808B47-02A 9808B47-03A

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

** SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

Batch Id: HP_J980829103600

Units: mg/kg

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 Range Organics	ND	1.0	0.93	93.0	53 - 137

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 RANGE ORGANICS	0.73	0.90	0.51	-24.4	0.58	-16.7	37.5	50	36 - 163

Analyst: YN
Sequence Date: 08/29/98
SPL ID of sample spiked: 9808B47-05A
Sample File ID: JJH4194.TX0
Method Blank File ID.
Blank Spike File ID: JJH4191.TX0
Matrix Spike File ID: JJH4192.TX0
Matrix Spike Duplicate File ID: JJH4193.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): 9808B47-05A 9808B47-06A

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
8/27/98	1000

SPL Sample ID:
9808B47

			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 #)	38484254	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
Amber Stark	8/27/98

9808B47

BP

CHAIN OF CUSTODY

No. 098287

Page 1 of 1

CONSULTANT'S NAME: [illegible]	CONSULTANT'S ADDRESS: 1575 Treat Blvd (201) Walnut Creek CA
BP SITE NUMBER: 1116	BP SITE / FACILITY ADDRESS: 7197 Village Parkway Dublin CA
CONSULTANT PROJECT NUMBER	10-017-9-3
CONSULTANT PROJECT MANGER: [illegible]	PHONE NUMBER: (925) 295-1650
FAX NUMBER	(925) 295-1823
CONSULTANT CONTRACT NUMBER	H418924
BP CONTACT: [illegible]	BP ADDRESS: Renton
PHONE NUMBER	—
FAX NO.	—
LAB CONTACT: [illegible]	LABORATORY ADDRESS: Houston
PHONE NUMBER	—
FAX NO.	—
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name)	RUSH REQUESTED OF (Print Consultant Contact Name)
DATE/TIME	
SHIPMENT DATE	8/26/98
SHIPMENT METHOD	
AIRBILL NUMBER	3818472541

TAT [ ] 24 Hours [ ] 48 Hours [ ] 72 Hours [X] Standard 7 or 14 Days

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	TPH-G	BTEX	MTBE								COMMENTS
[illegible]	8/19/98	15:03	Soil	1	Tube		X	X	X								
[illegible]	↓	15:26	↓	1	↓		↓	↓	↓								
[illegible]	↓	15:29	↓	1	↓		↓	↓	↓								
[illegible]	↓	15:39	↓	1	↓		↓	↓	↓								
[illegible]	8/25/98	14:40	↓	1	↓		↓	↓	↓								
[illegible]	↓	14:45	↓	1	↓		↓	↓	↓								
[illegible]	↓	14:50	↓	1	↓		↓	↓	↓								
[illegible]	↓	14:55	↓	1	↓		↓	↓	↓								

SAMPLED BY (Please Print Name): [illegible]

SAMPLED BY (Signature): [illegible]

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION (Print Name - Signature)	DATE	TIME	ACCEPTED BY /AFFILIATION (Print Name / Signature)	DATE	TIME
[illegible]	8/26/98	15:30			
			[illegible]	8/27/98	1001

2°

CEV 16722 A (2-95)
PKG 50

DISTRIBUTION WHITE - ORIGINAL (WITH DATA) YELLOW - BP PINK - LAB BLUE - CONSULTANT FIELD STAFF

BP EXPLORATION & OIL, INC.
ENVIRONMENTAL RESOURCES MANAGEMENT
DATA REVIEW CHECKLIST

BP Site Number:	11116
ERM Contract:	H4482942
Sampling Date:	8/19 & 25/98
Matrix Description:	Soil
Date Final Report Received:	9/14/98
Laboratory & Location:	SPL, Houston, Texas

		Yes	No	N/A
1.	Is BP contract release number consistent with analytical report?	_X_	____	____
2.	Was report submitted within the specified timeframe?	_X_	____	____
3.	Does report agree with the COC?	_X_	____	____
4.	Are units consistent with the given matrix?	_X_	____	____
5.	Were any target analytes/compounds detected in blanks (i.e., trip or equipment)?	____	____	_X_
6.	Are duplicate water samples within 30%?	____	____	_X_
7.	Are holding times met?	_X_	____	____
8.	Are surrogates within limits using laboratory criteria?	See Below	____	____
9.	Are MS/MSD acceptable using laboratory criteria?	See Below	____	____
10.	Are LCS results acceptable using laboratory criteria?	_X_	____	____

Analysis of one of the two surrogates (4-Bromofluorobenzene) during TPH-G analysis of S-4, S-6, and S-7 were outside quality control limits due to matrix interference; the quality control for that method specifies that only one of two surrogate should be within the specified recovery range.

MS/MSD recovery and relative % difference for MTBE in one of three matrix spikes was not calculated due to sample exceeding spike by a factor of 4 or more. MS/MSD reovery and relative % difference values for benzene in one of three matrix spikes was outside QC range due to matrix interference. MS/MSD relative % difference value for TPH-G in one of two matrix spikes was outside QC range due to matrix interference. MS/MSD limits are advisory only; as stated in SW-846, Section 8.7 to 8.8, if the MS/MSD results fall outside the advisable ranges, a laboratory control samples (LCS) must be analyzed and fall within those ranges. LCS results are within quality control limits

Data Validation Completed by: Brady Nagle

(signature): _____

Date: 10/9/98

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

August 14, 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 August 4, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9808084 and analyzed for all parameters as listed on the chain of custody.

Any data flag or quality control exception 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

Joel Grice
Senior Organic Project Manager

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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-08-084

Approved for Release by:

Joel Grice, Senior Organic Project Manager

Date: 8/14/98

Greg Grandits
Laboratory Director

Cynthia Schreiner
Quality Assurance Officer

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

Certificate of Analysis No. H9-9808084-01

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

P.O.# H4480924, COC#095857
DATE: 08/13/98

PROJECT: #11116, 2197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: W-1

PROJECT NO: 10-017-9-3
MATRIX: WATER
DATE SAMPLED: 08/02/98 13:50:00
DATE RECEIVED: 08/04/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Cyanide-Reactive Method 7.3.3.2/9014 *** Analyzed by: GJ Date: 08/10/98 11:00:00	ND	1	mg/kg
Flash Point (PM) Method ASTM D-93 Analyzed by: TB Date: 08/05/98	>210		°F
pH Method 150.1 * Analyzed by: TK Date: 08/07/98 15:45:00	7.22		ph units
Sulfide-Reactive Method 7.3.4.2 *** Analyzed by: GJ Date: 08/10/98 11:00:00	ND	100	mg/kg
Silver, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.01	mg/L

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. H9-9808084-01

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

P.O.# H4480924, COC#095857
DATE: 08/13/98

PROJECT: #11116, 2197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: W-1

PROJECT NO: 10-017-9-3
MATRIX: WATER
DATE SAMPLED: 08/02/98 13:50:00
DATE RECEIVED: 08/04/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Arsenic, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.1	mg/L
Barium, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	0.473	0.005	mg/L
Beryllium, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.003	mg/L
Cadmium, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.005	mg/L
Cobalt, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.01	mg/L

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

Certificate of Analysis No. H9-9808084-01

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

P.O.# H4480924, COC#095857
DATE: 08/13/98

PROJECT: #11116, 2197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: W-1

PROJECT NO: 10-017-9-3
MATRIX: WATER
DATE SAMPLED: 08/02/98 13:50:00
DATE RECEIVED: 08/04/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Chromium, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.01	mg/L
Copper, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	0.01	0.01	mg/L
Mercury, Total Method 7470 A*** Analyzed by: AG Date: 08/13/98 14:04:00	ND	0.0002	mg/L
Molybdenum, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	0.10	0.02	mg/L
Nickel, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	0.03	0.02	mg/L

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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Certificate of Analysis No. H9-9808084-01

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

P.O.# H4480924, COC#095857
DATE: 08/13/98

PROJECT: #11116, 2197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: W-1

PROJECT NO: 10-017-9-3
MATRIX: WATER
DATE SAMPLED: 08/02/98 13:50:00
DATE RECEIVED: 08/04/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Acid Digestion-Aqueous, ICP Method 3010A *** Analyzed by: MR Date: 08/07/98 08:30:00	08/07/98		
Acid Digestion-Aqueous, GF Method 3020A *** Analyzed by: EE Date: 08/07/98 10:45:00	08/07/98		
Lead, Total Method 7421 *** Analyzed by: PB Date: 08/10/98 13:25:00	ND	0.005	mg/L
Antimony, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.1	mg/L
Selenium, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.1	mg/L

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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BP Oil Company
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Renton, WA 98055
ATTN: Scott Hooton

P.O.# H4480924, COC#095857
DATE: 08/13/98

PROJECT: #11116, 2197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: W-1

PROJECT NO: 10-017-9-3
MATRIX: WATER
DATE SAMPLED: 08/02/98 13:50:00
DATE RECEIVED: 08/04/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Thallium, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	ND	0.1	mg/L
Vanadium, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	0.020	0.005	mg/L
Zinc, Total Method 6010B *** Analyzed by: EG Date: 08/11/98 10:01:00	1.16	0.02	mg/L

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
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Certificate of Analysis No. H9-9808084-01

BP Oil Company
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Renton, WA 98055
ATTN: Scott Hooton

P.O.# H4480924, COC#095857
08/13/98

PROJECT: #11116, 2197 Village Parkway
SITE: Dublin, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: W-1

PROJECT NO: 10-017-9-3
MATRIX: WATER
DATE SAMPLED: 08/02/98 13:50:00
DATE RECEIVED: 08/04/98

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Benzene	18	5	ug/L
Methyl t-Butyl Ether	4400	250	ug/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
1,2-Dichloroethane-d4	50 ug/L	92	80	120
Toluene-d8	50 ug/L	104	88	110
4-Bromofluorobenzene	50 ug/L	104	86	115

ANALYZED BY: LT DATE/TIME: 08/05/98 11:14:00
METHOD: 8260 Water, Volatile Organics
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

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

QUALITY CONTROL

DOCUMENTATION

3A

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SPL Contract:

Lab Code: Case No.: 9808084 SAS No.: SDG No.:

Matrix Spike - EPA Sample No.: W-1

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene	50	0	52	104	61-145
Trichloroethene	50	0	52	104	71-120
Benzene	50	18	80	124	76-127
Toluene	50	29	78	98	76-125
Chlorobenzene	50	0	49	98	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene	50	49	98	6	14	61-145
Trichloroethene	50	52	104	0	14	71-120
Benzene	50	82	128*	3	11	76-127
Toluene	50	79	100	2	13	76-125
Chlorobenzene	50	50	100	2	13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits due to matrix interference

RPD: 0 out of 5 outside limits
Spike Recovery: 1 out of 10 outside limits

SPL Houston Labs

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: METHSPIKE-8260W/1X
Level: LOW
Data Type: MS DATA
SpikeList File: 8260_water.spk
Sublist File: 8260_lcs.sub
Method File: /var/chem/l.i/1980805.b/l8260aw.m
Misc Info: L217W1/L217B01/L217CW1

Client SDG: 1980805
Fraction: VOA
Client Smp ID: LCS
Operator: LT
SampleType: METHSPIKE
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8	1,1-Dichloroethene	50	50	100.00	61-145
29	Trichloroethene	50	50	100.00	71-120
25	Benzene	50	53	106.00	76-127
37	Toluene	50	50	100.00	76-125
45	Chlorobenzene	50	47	94.00	75-130

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 21	1,2-Dichloroethane	50	46	92.00	80-120
$ 36	Toluene-d8	50	50	100.00	88-110
$ 56	Bromofluorobenzene	50	49	98.00	86-115

Matrix: Aqueous
Sample ID: VLBLK
Batch: L980805104642

Reported on: 08/07/98 13:39
Analyzed on: 08/05/98 10:47
Analyst: LT

METHOD 8260/8240 L217B02

Compound	Result	Detection Limit	Units
Benzene	ND	5	ug/L
Methyl t-Butyl Ether	ND	10	ug/L

Surrogate	Result	QC Criteria	Units
1,2-Dichloroethane-d4	96	80-120	% Recovery
Toluene-d8	100	88-110	% Recovery
Bromofluorobenzene	100	86-115	% Recovery

Samples in Batch 9808084-01

Notes

ND - Not detected.

ICP Spectroscopy Method 6010 Quality Control Report

Analyst: EG

Matrix: Water Units: mg/L

Date:081198 Time:1001 File Name: 81198M14

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

Laboratory Control Sample

Element	Mth. Blank	True Value	Result	% Recovery	Lower Limit	Upper Limit
Silver	ND	2.00	1.90	95	1.60	2.40
Aluminum						
Arsenic	ND	4.00	3.86	97	3.20	4.80
Barium	ND	2.00	1.90	95	1.60	2.40
Beryllium	ND	2.00	1.96	98	1.60	2.40
Calcium						
Cadmium	ND	2.00	1.98	99	1.60	2.40
Cobalt	ND	2.00	1.96	98	1.60	2.40
Chromium	ND	2.00	2.00	100	1.60	2.40
Copper	ND	2.00	1.92	96	1.60	2.40
Molybdenum	ND	2.00	2.02	101	1.60	2.40
Potassium						
Magnesium						
Manganese						
Sodium						
Nickel	ND	2.00	1.99	99	1.60	2.40
Lead						
Antimony	ND	4.00	4.01	100	3.20	4.80
Selenium	ND	4.00	3.94	98	3.20	4.80
Thallium	ND	4.00	3.89	97	3.20	4.80
Vanadium	ND	2.00	1.99	99	1.60	2.40
Zinc	ND	2.00	1.97	99	1.60	2.40

Work Orders in Batch

Work Order	Fractions
98-07-E98	01D
98-07-C28	12D, 13D 20G
98-07-E29	01E-04E
98-07-E32	01E-05E
98-07-E80	01A
98-08-072	02B
98-08-084	01B

Matrix Spike - Spike Duplicate Results **Work Order Spiked: 9807E98-01D**

Element	Sample Result	Spike Added	Matrix Spike Result	Matrix Spike Recovery	Matrix Spike Duplicate Result	Matrix Spike Duplicate Recovery	QC Limits % Recovery		Spike RPD %	QC Limits %
Silver	ND	1.0	0.9511	95.1	0.9462	94.6	80	120	0.5	20.0
Aluminum										
Arsenic	ND	2.0	1.949	97.5	1.944	97.2	80	120	0.3	20.0
Barium	0.3527	1.0	1.319	96.6	1.294	94.1	80	120	2.6	20.0
Beryllium	ND	1.0	0.9781	97.8	0.9729	97.3	80	120	0.5	20.0
Calcium										
Cadmium	ND	1.0	0.9911	99.1	0.9871	98.7	80	120	0.4	20.0
Cobalt	ND	1.0	0.9698	97.0	0.967	96.7	80	120	0.3	20.0
Chromium	ND	1.0	0.9891	98.9	0.9845	98.5	80	120	0.5	20.0
Copper	ND	1.0	0.9622	96.2	0.9578	95.8	80	120	0.5	20.0
Molybdenum	ND	1.0	1.036	103.6	0.9909	99.1	80	120	4.5	20.0
Potassium										
Magnesium										
Manganese										
Sodium										
Nickel	ND	1.0	0.9767	97.7	0.9724	97.2	80	120	0.4	20.0
Lead										
Antimony	ND	2.0	2.04	102.0	2.026	101.3	80	120	0.7	20.0
Selenium	ND	2.0	1.991	99.6	1.961	98.1	80	120	1.5	20.0
Thallium	ND	2.0	1.925	96.3	1.937	96.9	80	120	0.6	20.0
Vanadium	ND	1.0	0.9943	99.4	0.9917	99.2	80	120	0.3	20.0
Zinc	0.6019	1.0	1.591	98.9	1.557	95.5	80	120	3.5	20.0

Checked

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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/13/98
Analyzed on: 08/13/98
Analyst: AG

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Mercury, Total
Method 7470 A***

SPL Sample ID Number	Blank Value ug/L	LCS Concentration ug/L	Measured Concentration ug/L	% Recovery	QC Limits Recovery
LCS	ND	2.00	2.14	107	80 - 120

-9808583

Samples in batch:

9807E42-04A	9808046-01A	9808084-01B	9808096-02F
9808103-01F	9808103-02F	9808103-03F	9808103-04F

COMMENTS:
LCS = SPL ID# 94-452-45-21

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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/13/98
Analyzed on: 08/13/98
Analyst: AG

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Mercury, Total
Method 7470 A***

SPL Sample ID Number	Method Blank ug/L	Sample Result ug/L	Spike Added ug/L	Matrix Spike Result ug/L	Matrix Spike Recovery %	Matrix Spike Duplicate Result ug/L	Matrix Spike Duplicate Recovery %	RPD (%)	QC LIMITS (Advisory) RPD Max	% REC
9808096-02F	ND	ND	2.00	1.90	95.0	2.13	106	11	20	75 -125

-9808583

Samples in batch:

9807E42-04A 9808046-01A 9808084-01B 9808096-02F
9808103-01F 9808103-02F 9808103-03F 9808103-04F

COMMENTS:
LCS = SPL ID# 94-452-45-21

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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/10/98
Analyzed on: 08/10/98
Analyst: PB

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Lead, Total
Method 7421 ***

SPL Sample ID Number	Blank Value ug/L	LCS Concentration ug/L	Measured Concentration ug/L	% Recovery	QC Limits Recovery
LCS	ND	40.0	42.2	106	80 - 120

-9808427

Samples in batch:

9807E80-01A 9808084-01B 9808096-02F

COMMENTS:

LCS = SPL ID # 98-1034-20-10

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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/10/98
Analyzed on: 08/10/98
Analyst: PB

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Lead, Total
Method 7421 ***

SPL Sample ID Number	Method Blank ug/L	Sample Result ug/L	Spike Added ug/L	Matrix Spike Result ug/L	Matrix Spike Recovery %	Matrix Spike Duplicate Result ug/L	Matrix Spike Duplicate Recovery %	RPD (%)	QC LIMITS (Advisory) RPD Max	% REC
9808084-01B	ND	ND	40.0	35.3	88.2	36.8	92.0	4.2	20	75 -125

-9808427

Samples in batch:

9807E80-01A 9808084-01B 9808096-02F

COMMENTS:

LCS = SPL ID # 98-1034-20-10

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

** SPL QUALITY CONTROL REPORT **

Matrix: Soil

Reported on: 08/10/98
Analyzed on: 08/10/98
Analyst: GJ

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Cyanide-Reactive
Method 7.3.3.2/9014 ***

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration mg/kg	Duplicate Sample mg/kg	RPD	RPD Max.
9808129-01C	ND	ND	0	20

-9808439

Samples in batch:

9807E92-02B	9808084-01A	9808113-05B	9808129-01C
9808131-02E	9808176-01A	9808186-11B	9808186-12B

COMMENTS:

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

® SPL Quality Control Report

Flash Point by Pensky-Marten

DATE : 8/5/98 NUMBER OF SAMPLES: 9

METHOD: ASTM D93 ANALYST: T. BENZ

UNITS : DEG. F

SAMPLE I.D. IN QC BATCH:

9807E34-01A	9808002-02E
9807E34-02A	9808084-01A
9807E34-03A	9808090-03A
9807E34-04A	9808090-04A
9807E34-05A	

STANDARD

STANDARD	FLASH POINT KNOWN	FLASH POINT FOUND . F	QA/QC LIMITS UPPER	QA/QC LIMITS LOWER	
para-XYLENE	81 DEG.F	81	82 .F	80.F	PASS

REPLICATES

SAMPLE I.D.		RESULT (# 1).F		DUPLICATE(# 2) .F	Diff .F	Range .F	RESULT
9807E34-03A		142		142	0	+/- 4	PASS

REVIEWED BY _____ DATE _____

APPROVED BY Fred W. Angelo DATE 8/6/98

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

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 08/07/98
Analyzed on: 08/07/98
Analyst: TK

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

pH
Method 150.1 *

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration pH units	Duplicate Sample pH units	RPD	RPD Max.
9807F62-01C	7.48	7.49	0.1	1.0

-9808301

Samples in batch:

9807F62-01C 9808058-01E 9808059-01E 9808084-01A

COMMENTS:

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

** SPL QUALITY CONTROL REPORT **

Matrix: Soil

Reported on: 08/10/98
Analyzed on: 08/10/98
Analyst: GJ

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Sulfide-Reactive
Method 7.3.4.2 ***

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration mg/kg	Duplicate Sample mg/kg	RPD	RPD Max.
9808129-01C	ND	ND	0	15

-9808438

Samples in batch:

9807E92-02B	9808084-01A	9808113-05B	9808129-01C
9808131-02E	9808176-01A	9808186-11B	9808186-12B

COMMENTS:

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
8-4-98	1000

SPL Sample ID:
9808084

			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:		5 C	
10	Method of sample delivery to SPL:	**SPL Delivery**		
		Client Delivery		
		FedEx Delivery (airbill #)	805188475232	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
[signature]	8-4-98

9808084

CHAIN OF CUSTODY

No. 095857

Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering	CONSULTANT'S ADDRESS: 1575 Treat Blvd #201
BP SITE NUMBER: 1116	BP SITE / FACILITY ADDRESS: 7197 Village Parkway, Dublin
CONSULTANT PROJECT NUMBER: 10-017-9-3	CONSULTANT CONTRACT NUMBER: H4480924
CONSULTANT PROJECT MANGER: Brady Nagle	PHONE NUMBER: 925.295.1650
FAX NUMBER: 925.295.1823	FAX NO.:
BP CONTACT: Scott Hooton	BP ADDRESS: Renton WA
PHONE NUMBER: 925 2510689	FAX NO.:
LAB CONTACT: Joel Grice	LABORATORY ADDRESS: SPL, Houston
PHONE NUMBER:	
BP CONTACT REQUESTING RUSH TAT (Print BP Contact Name):	RUSH REQUESTED OF (Print Consultant Contact Name):
DATE/TIME:	SHIPMENT DATE: 8/3/98
SHIPMENT METHOD: Fed Ex	AIRBILL NUMBER: 8051 88475232

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

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS NO.	CONTAINERS TYPE (VOL.)	PRESERVATIVE LAB SAMPLE #	RCI	TTLC CAM 17 Metals	Benzene & HVOC (8010)								COMMENTS
W-1	8/2/98	1350	W	14	*												

SAMPLED BY (Please Print Name): Brady Nagle

SAMPLED BY (Signature): [signature]

RELINQUISHED BY / AFFILIATION (Print Name / Signature)	DATE	TIME	ACCEPTED BY / AFFILIATION (Print Name / Signature)	DATE	TIME
[signature]	8/3/98	1500	P. U. [illegible]	8/3/98	1500
[illegible]	8/3/98	1530			
			Randy Turnell [signature]	8-4-98	1000

ADDITIONAL COMMENTS

* 3 unp liters
2 unp VOAs
8 pres. VOAs

CLV 1672 A 1/97
PKG 50

DISTRIBUTION: WHITE - ORIGINAL (WITH DATA) YELLOW - BP PINK - LAB BLUE - CONSULTANT FIELD STAFF

BP EXPLORATION & OIL, INC.
ENVIRONMENTAL RESOURCES MANAGEMENT
DATA REVIEW CHECKLIST

BP Site Number:	11116
ERM Contract:	H4482942
Sampling Date:	8/2/98
Matrix Description:	Water
Date Final Report Received:	8/17/98
Laboratory & Location:	SPL, Houston, Texas

		Yes	No	N/A
1.	Is BP contract release number consistent with analytical report?	X		
2.	Was report submitted within the specified timeframe?	X		
3.	Does report agree with the COC?	X		
4.	Are units consistent with the given matrix?	X		
5.	Were any target analytes/compounds detected in blanks (i.e., trip or equipment)?			X
6.	Are duplicate water samples within 30%?			X
7.	Are holding times met?	X		
8.	Are surrogates within limits using laboratory criteria?	X		
9.	Are MS/MSD acceptable using laboratory criteria?	See Below		
10.	Are LCS results acceptable using laboratory criteria?	X		

MS/MSD relative % difference value for benzene in a matrix spike was outside QC range due to matrix interference. MS/MSD relative % difference value for TPH-G in one of two matrix spikes was outside QC range due to matrix interference. MS/MSD limits are advisory only; as stated in SW-846, Section 8.7 to 8.8, if the MS/MSD results fall outside the advisable ranges, a laboratory control samples (LCS) must be analyzed and fall within those ranges. LCS results are within quality control limits.

Data Validation Completed by: Brady Nagle

(signature) [signature]

Date: 10/9/98