



BP OIL

25
STID 1771
BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931
(425) 251-0667
Fax No: (425) 251-0736

April 10, 1998

Alameda County Health Care Services Agency
Attention Ms. Juliet Shin - Senior Hazardous Materials Specialist
1131 Harbor Bay Parkway, STE 250
Alameda, CA 94502-6577

RE: Former BP Oil Site No. 11270
3255 McCartney Road (at Island)
Alameda, CA
STID 1771

Dear Mr. Seto:

In response to your letter of 16 January 1998, enclosed find the 12 March 1998 Groundwater Monitoring and Sampling Report prepared by Alisto Engineering Group on behalf of BP.

You will recall that two additional rounds of groundwater sampling for well MW-6 were requested. The basis for the request was MTBE monitoring data, where 150 ug/l MTBE was detected in a sample obtained during 1/96, followed by 1400 ug/l during 9/97. The data in the enclosed report show that MTBE concentrations of 38,000 ug/l and 35,000 ug/l were detected in replicate samples obtained from MW-6 on 27 January 1998.

The Alameda County Health Care Services Agency previously communicated plans to resume case closure review if the analytical results show that MTBE concentrations are stable or decreasing. However, if concentrations appear to be increasing, or significant migration is occurring, further assessments may be warranted to assure that there are no potential releases or on-going releases.

We believe that the monitoring data indicated that a petroleum release has occurred at this site subsequent to BP's ownership. We are taking the matter up with the current operator of the facility. If you can agree that this situation can best be addressed by the current operator, please request further actions from them. The terms of our contract with the current operator (Tosco) requires them to be responsible for and bear the cost of Corrective Action that may arise as a consequence of the ownership or operation of the property after the purchase date of August, 1994.

Please give me a call at (425) 251-0689 if you have any questions or concerns about this submission.

Sincerely,


Scott Hooton

attachment

cc: site file
Tina Berry - Tosco (w/attachment)
B. Nagle - Alisto
RREEF Engineering Group, Attention Mr. Larry Cummins, 1301 Dove Street, #460, Newport Beach, CA 92660 (w/attachment)

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



January 16, 1998

Mr. Scott Hooton
BP Oil Company
Environmental Remediation Management
295 SW 41st Street
Renton, Washington 98055-4931

STID 1771

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700

RE: 3255 McCartney Road (at Island Dr.), Alameda, CA 94501

Dear Mr. Hooton:

I have reviewed your Groundwater Monitoring and Sampling Report dated November 4, 1997 that was prepared by Alisto Engineering . The monitoring schedule at the site can be modified using the following schedule:

MW -5 - Okay to discontinue monitoring

MW - 6 - Continue monitoring for a minimum of two additional quarters (MTBE)
increased in 9/97 to 1400 ppb from 150 ppb in 1/96

MW -7 - Continue monitoring for a minimum of one additional quarter


XW - 1 - Okay to discontinue monitoring

XW - 2 - Okay to discontinue monitoring

XW -3 - Continue monitoring for a minimum of one additional quarter

If you have any questions, please contact me at (510) 567-6774.

Sincerely,



Larry Seto

Sr. Hazardous Materials Specialist

FILED

#3838
BC

o 2301 Santa Clara Avenue, Alameda - A feasibility study discussing remediation options is due to this office. Contact Peter Hudson, ENSR, for an update.

#3952
LS

o 2425 Encinal Avenue, Alameda - A workplan was recently approved to further delineate the groundwater contaminant plume at the site, to assure that the site's contaminant concentrations are not affecting the adjacent residences. If it is confirmed that the contaminant plume is limited to the site, then the site may be allowed closure, with site management requirements outlined in the Case Closure Summary.

Other Alameda cases (formerly Juliet's):

#3565
LS

o 3126 Fernside Blvd., Alameda - Continued groundwater monitoring at the site. A risk assessment for the site has been conducted. There is still some concern that the plume may eventually migrate to the Inner Harbor. The french-drain extraction system was recently discontinued, and we are keeping a close watch on whether this plume, without the extraction system containing it, will migrate more readily. Residences are also potential sensitive receptors.

#1202
LS

o 1801 Hibbard St., Alameda - Continued groundwater monitoring and vapor extraction system at site. I have explained to Brian West, consultant, that the vapor extraction system is only effecting the TPH and BTEX concentrations, and may actually be hindering the degradation of the chlorinateds in the water, which degrade more readily in anaerobic situations with TPH as the electron acceptors.

#5844
PE

o 510 Lincoln Avenue, Alameda - I believe that investigations were recently conducted at the site in response to contamination being identified at the time of the tank removal. The files for this site, I believe, are with Ron O. in Room 201 or on the file shelf under Alameda.

#3566
LS

o 1127 Lincoln Avenue, Alameda - Currently continuing quarterly groundwater monitoring. Operation of extraction system was discontinued at the site recently, per approval of the County. Primary concern is the potential impact to the residences based on the ASTM RBCA threshold values.

#2765
LS

o 2900 Main Street, Alameda - Work plan approved in April 1997, and the work plan should have been implemented by now, and a report should be due to this office shortly. Need to call and check on status of workplan implementation.

#1771
LS

o 3251 Mechanic Rd., Alameda - MTBE is only remaining concern. Quarterly groundwater monitoring currently required. Please refer to County's June 9, 1997 letter.

#598
LS

o 900 Otis Drive, Alameda - One more round of quarterly groundwater monitoring and the site may be considered for closure.

Larry - Please take over

LOP - CHANGE RECORD REQUEST FORM

printed:
08/08/97

Mark Out What Needs Changing and Hand to LOP Data Entry
(Name/Address changes go to Annual Programs Data Entry)

Insp:

AGENCY # : 10000	SOURCE OF FUNDS: F	SUBSTANCE: 8006619
StID : 1771	LOC:	
SITE NAME: BP Oil Facility #11270		DATE REPORTED : 11/04/92
ADDRESS : 3255 Mecartney Rd		DATE CONFIRMED: 11/04/92
CITY/ZIP : Alameda 94501		MULTIPLE RPs : Y

SITE STATUS

CASE TYPE: O	CONTRACT STATUS: 4	PRIOR CODE:	EMERGENCY RESP:
RP SEARCH: S			DATE COMPLETED: 04/07/93
PRELIMINARY ASMNT: U	DATE UNDERWAY: 10/29/92		DATE COMPLETED:
REM INVESTIGATION:	DATE UNDERWAY:		DATE COMPLETED:
REMEDIAL ACTION:	DATE UNDERWAY:		DATE COMPLETED:
POST REMED ACT MON:	DATE UNDERWAY:		DATE COMPLETED:
ENFORCEMENT ACTION TYPE: 6		DATE ENFORCEMENT ACTION TAKEN: 07/01/94	
LUFT FIELD MANUAL CONSID: HSCAWG			
CASE CLOSED:		DATE CASE CLOSED:	
DATE EXCAVATION STARTED :		REMEDIAL ACTIONS TAKEN:	

RESPONSIBLE PARTY INFORMATION

RP#1-CONTACT NAME: Scott Hooton
 COMPANY NAME: BP Oil Company
 ADDRESS: 295 Sw - 41st St.
 CITY/STATE: Renton, Washington 98055

RP#2-CONTACT NAME: Chester Bennett
 COMPANY NAME: Tosco Corporation
 ADDRESS: 2130 Professional Dr #100
 CITY/STATE: Roseville CA 95661-3738

INSPECTOR VERIFICATION:			
NAME	SIGNATURE	DATE	
DATA ENTRY INPUT:			
Name/Address Changes Only		Case Progress Changes	
ANNPGMS	LOP	DATE	
			LOP
			DATE

THIS MEMORANDUM

is an acknowledgment that a Bill of Lading has been issued and is not the Original Bill of Lading nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

RECEIVED, subject to the classifications and tariffs in effect on the date of the receipt by the carrier of the property described on the Original Bill of Lading

FROM: (Company Name) SHELL OIL COMPANY

35H 60-1

AT 6000 Jurvis Rd / Newark Del, Newark DATE SHIPPED 3-13-90 SHIPPER'S NO. **449341**

BY Crosby + Denton CARRIER

CONSIGNEE TO (Mail or street address for notification only)

**SHELL OIL COMPANY
MARTINEZ MANUFACTURING COMPLEX
MARINA VISTA/NORTH GATE
MARTINEZ, CA 94553**

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination, and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the Uniform Domestic Straight Bill of Lading in form (1) in Uniform Freight Classification in effect on the date hereof, if this is a rail or a rail-water shipment, or (2) in the applicable motor carrier classification or tariff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including those on the back thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

If this document evidences a delivery by shipper's truck or vice consignee's truck, it is not a bill of lading but consignee's receipt for the delivery.

Subject to Section 3 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

PREPAID COLLECT

ROUTE _____ ORDER NO. MOH * 9206 SHIPPING MEMO NO. MATERIAL TRANSFER

ROUTE CODE _____ CAR/TRUCK NO. 60 SEAL NO. _____ CUSTOMER ORDER NO. _____

PACKAGES		HM	DESCRIPTION OF MATERIALS, SPECIAL MARKS AND EXCEPTIONS PLACE "X" IN HM COLUMN IF MATERIAL IS DOT HAZARDOUS	WEIGHT* Subject to correction	CLASS OR RATE	TOTAL VALUE OF ITEMS	NEW	USED
NO.	KIND							
1	VACUUM TRUCK	X	Flammable liquid, n.o.s., UN1893 (GASOLINE/WATER MIXTURE) GASOLINE <u>1</u> % WATER <u>99</u> % DOT-E # _____ USE "FLAMMABLE" PLACARDING. REFERENCE 1993. "RECYCLEABLE MATERIAL"	GALLONS	<u>100</u>			
◀ TOTAL NO. OF PACKAGES				TOTAL WEIGHT ▶				

COLLECT ON DELIVERY \$ _____ REMIT TO _____ C.O.D. CHARGE TO BE PAID BY SHIPPER CONSIGNEE

MAIL FREIGHT BILL IN DUPLICATE WITH NO. 3 COPY OF BILL OF LADING TO SHELL OIL COMPANY, ATTN: DISBURSEMENTS, P.O. BOX 4843, ANAHEIM, CA 92803

FOR PRODUCT EMERGENCY Spill, Leak, Fire, Exposure or Accident CALL CHEMTREC -DAY OR NIGHT 800-424-9300

SHIPMENTS VIA MOTOR CARRIER SHIPPER CARRIER

DOT HAZARDOUS MATERIALS PLACARDS FURNISHED BY

* If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is "carrier's or shipper's weight"

1. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding 150 \$ per pound where the rate is dependent on value

2. Description and gross weight thereof as shown herein are correct, per Agreement filed with Weighing and Inspection Bureau, if applicable

3. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

CARRIER certifies that the container supplied by Carrier for this shipment is a proper container for transportation of the Products as above described.

CARRIER Crosby + Denton PER John W. ... AGENT

SHIPPER (Company Name) SHELL OIL COMPANY PER [Signature]

MATERIAL RECEIVED 3 Cola DATE RECEIVED 3-19-90



BP OIL

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

97 NOV 12 PM 1:22

November 6, 1997

Alameda County Health Care Services Agency
Attention Ms. Juliet Shin - Senior Hazardous Materials Specialist
1131 Harbor Bay Parkway, STE 250
Alameda, CA 94502-6577

RE: Former BP Oil Site No. 11270
3255 McCartney Road (at Island)
Alameda, CA
STID 1771

Dear Ms. Shin:

In response to your letter of 9 June 1997, enclosed find the 4 November 1997 Groundwater Monitoring and Sampling Report prepared by Alisto Engineering Group on behalf of BP.

You will recall that one additional round of groundwater sampling was requested in order to obtain additional MTBE data. You explained that the Alameda County Health Care Services Agency will resume case closure review if the analytical results show that MTBE concentrations are stable or decreasing. However, if concentrations appear to be increasing, or significant migration is occurring, further assessments may be warranted to assure that there are no potential releases or on-going releases.

The enclosed report includes chemical data for samples obtained from the groundwater monitoring wells on September 11, 1997. You will recall that the previous MTBE concentration reported for XW-3 was of particular concern because the MTBE concentration of 480 ug/l was reported during October 1995 followed by a concentration of 1100 ug/l in January 1996. The enclosed report shows that a concentration of 60 ug/l was detected in a sample obtained from XW-3 during September, 1997. Lower concentrations were also reported in well MW-7, where an MTBE concentration of 63 ug/l was reported in a sample obtained during September 1997 as compared to 300 ug/l in a sample obtained during January 1996.

MW-6 -- on the other hand -- showed higher concentrations in a sample obtained during September, 1997 (1400 ug/l) as compared to January, 1996 (150 ug/l and 170 ug/l). MW-6 is located immediately adjacent to and downgradient from the underground storage tanks at this site. It is noted that the underground storage tank system will require upgrading to comply with 1998 federal requirements for leak detection and prevention. I understand that this will include the installation spill buckets around the fill tubes, overflow protection devices, and dispenser pans. Given the proximity of well MW-6 to the USTs, it is

ENVIRONMENTAL
PROTECTION
97 NOV 12 PM 4:22

reasonable to conclude that the lack of these spill prevention devices and the increased MTBE concentrations are related. The lack of these prophylactic appurtenances most likely explains the variable MTBE concentrations detected in groundwater samples collected from the monitoring wells installed at this site.

If you can agree that this situation can best be addressed by the current operator, please request further actions from them. The terms of our contract with the current operator (Tosco) requires them to be responsible for and bear the cost of Corrective Action that may arise as a consequence of the ownership or operation of the property after the purchase date of August, 1994.

Please give me a call at (425) 251-0689 if you have any questions or concerns about this submission. I will defer further action until I hear from you.

Sincerely,


Scott Hooton

attachment

cc: site file
Tina Berry - Tosco (w/attachment)
K. Graves - RWQCB-SFBR (w/attachment)
B. Nagle - Alisto

GROUNDWATER MONITORING AND SAMPLING REPORT

**BP Oil Company Service Station No. 11270
3255 Mecartney Road
Alameda, California**

Project No. 10-206-04-002

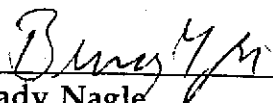
Prepared for:

**BP Oil Company
Environmental Resources Management
295 S.W. 41st Street
Building 13, Suite N
Renton, Washington**

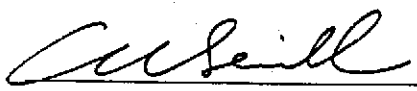
Prepared by:

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

March 12, 1998



**Brady Nagle
Project Manager**



**Al Sevilla, P.E.
Principal**



GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11270
3255 Mecartney Road
Alameda, California

Project No. 10-206-04-002

March 12, 1998

INTRODUCTION

This report presents the results and findings of the January 27, 1998 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11270, 3255 Mecartney Road, Alameda, California. A site vicinity map is shown on Figure 1.

FIELD PROCEDURES

Field activities were performed in accordance with the procedures and guidelines of the Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well in reference to mean sea level. The survey data and groundwater elevation measurements collected to date are presented in Table 1.

Before sample collection, each well was purged of 3 casing volumes while recording field readings of pH, temperature, electrical conductivity, and dissolved oxygen. Groundwater samples were collected for laboratory analysis by lowering a bottom-fill, disposable bailer to just below the water level in the well. The samples were transferred from the bailer into laboratory-supplied containers. The water sampling field survey forms are presented in Appendix A.

SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples for this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown on Figure 2. The results of groundwater analysis are shown on Figure 3. The laboratory report and chain of custody record are presented in Appendix B.



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11270
 3255 MECARTNEY ROAD, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-206

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
MW-1	(c) 10/29/92	7.49	7.28	0.21	---	---	---	---	---	---	---	---	---	---
MW-1	(c) 06/21/93	7.49	5.40	2.09	---	---	---	---	---	---	---	---	---	---
MW-1	04/05/94	7.49	5.64	1.85	1700	---	20	1.1	3.9	7.6	---	---	---	PACE
MW-1	07/28/94	7.49	6.22	1.27	---	---	---	---	---	---	---	---	---	PACE
MW-1	10/26/94	7.49	6.40	1.09	---	---	---	---	---	---	---	---	---	---
MW-1	(d) 02/05/95	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	10/29/92	7.07	6.84	0.23	2500	3900	140	ND<10	65	22	---	---	---	---
MW-2	06/21/93	7.07	5.49	1.58	720	770	12	1.5	11	12	---	---	---	---
MW-2	04/05/94	7.07	5.40	1.67	420	1300	ND<0.5	ND<0.5	ND<0.5	4.0	4500 (e)	---	1.8	PACE
MW-2	07/28/94	7.07	5.97	1.10	---	---	---	---	---	---	---	---	---	PACE
MW-2	10/26/94	7.07	6.10	0.97	---	---	---	---	---	---	---	---	---	---
MW-2	(d) 02/05/95	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3	(c) 10/29/92	7.08	7.14	-0.06	---	---	---	---	---	---	---	---	---	---
MW-3	(c) 06/21/93	7.08	5.84	1.24	---	---	---	---	---	---	---	---	---	---
MW-3	04/05/94	7.08	5.83	1.25	990	4300	3.2	ND<0.5	ND<0.5	1.3	790 (e)	---	---	PACE
MW-3	07/28/94	7.08	6.32	0.76	---	---	---	---	---	---	---	---	---	PACE
MW-3	10/26/94	7.08	6.42	0.66	---	---	---	---	---	---	---	---	---	---
MW-3	(d) 02/05/95	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	10/29/92	7.13	6.90	0.23	2600	---	250	2.5	74	6.6	---	---	---	---
MW-4	06/21/93	7.13	5.54	1.59	1400	1100	24	2.9	2.6	7.9	---	---	---	---
MW-4	04/05/94	7.13	5.46	1.67	930	940	33	0.8	ND<0.5	2.8	8700 (e)	---	2.7	PACE
MW-4	07/28/94	7.13	6.02	1.11	2400	1400	19	1.8	0.5	8.0	---	---	6.7	PACE
QC-1	(f) 07/28/94	---	---	---	2300	---	19	1.7	0.5	7.4	---	---	---	PACE
MW-4	10/26/94	7.13	6.13	1.00	---	---	---	---	---	---	---	---	---	---
MW-4	(d) 02/05/95	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	06/21/93	8.36	7.44	0.92	ND<50	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	---
MW-5	04/05/94	8.36	7.42	0.94	ND<50	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	2.5	PACE
QC-1	(f) 04/05/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	07/28/94	8.36	7.88	0.48	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	7.4	PACE
MW-5	10/26/94	8.36	7.92	0.44	ND<50	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	5.5	PACE
QC-1	(f) 10/26/94	---	---	---	ND<50	---	ND<0.5	0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-5	02/05/95	8.36	7.83	0.53	ND<50	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	---	ATI
QC-1	(f) 02/05/95	---	---	---	ND<50	---	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	---	ATI
MW-5	05/05/95	8.36	9.00	-0.64	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	3.1	ATI
MW-5	07/19/95	8.36	9.03	-0.67	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	14700	4.6	ATI
MW-5	10/12/95	8.36	9.15	-0.79	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	8490	4.3	ATI
MW-5	01/08/96	8.36	9.04	-0.68	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	10000	4.9	ATI
MW-5	09/11/97	8.36	8.90	-0.54	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<1.0	---	4.0	SPL
MW-5	01/27/98	8.36	8.27	0.09	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11270
 3255 MECARTNEY ROAD, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-206

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
MW-6	02/05/95	6.88	6.39	0.49	1000	1000	7.6	19	9.1	96	---	---	5.0	ATI
MW-6	05/05/95	6.88	6.85	0.03	2300	---	49	9.0	130	46	---	---	3.3	ATI
QC-1 (f)	05/05/95	---	---	---	2400	---	49	9.2	140	48	---	---	---	ATI
MW-6	07/19/95	6.88	7.13	-0.25	1500	---	84	3.3	28	24	---	818	3.7	ATI
QC-1 (f)	07/19/95	---	---	---	1500	---	89	3.8	30	26	---	---	---	ATI
MW-6	10/12/95	6.88	7.35	-0.47	1800	---	38	13	38	86	2500	868	4.1	ATI
QC-1 (f)	10/12/95	---	---	---	1100	---	33	7.0	18	44	2200	---	---	ATI
MW-6	01/08/96	6.88	7.04	-0.16	1300	---	31	4.7	60	53	170	474	4.2	ATI
QC-1 (f)	01/08/96	---	---	---	1000	---	27	4.0	49	44	150	---	---	ATI
MW-6	09/11/97	6.88	7.29	-0.41	ND<250	---	8.5	ND<5.0	11	6	1400	---	3.5	SPL
QC-1 (f)	09/11/97	---	---	---	210	---	8.7	ND<5.0	14	8.0	1400	---	---	SPL
MW-6	01/27/98	6.88	6.20	0.68	47000	---	860	150	360	690	41000	---	4.6	SPL
QC-1 (f)	01/27/98	---	---	---	51000	---	290	120	300	580	36000	---	---	SPL
MW-7	02/05/95	6.62	7.62	-1.00	280	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	5.1	ATI
MW-7	05/05/95	6.62	7.64	-1.02	290	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	3.6	ATI
MW-7	07/19/95	6.62	7.70	-1.08	150	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	12100	4.6	ATI
MW-7	10/12/95	6.62	7.88	-1.26	110	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	390	14000	4.7	ATI
MW-7	01/08/96	6.62	7.66	-1.04	90	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	300	12060	4.9	ATI
MW-7	09/11/97	6.62	7.78	-1.16	ND<50	---	ND<2.5	ND<5.0	ND<5.0	ND<5.0	63	---	3.8	SPL
MW-7	01/27/98	6.62	7.30	-0.68	1400	---	7.7	ND<1.0	ND<1.0	ND<1.0	920	---	4.4	SPL
XW-1	06/21/93	---	---	---	---	---	---	---	---	---	---	---	---	---
XW-1	04/05/94	---	5.36	---	ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	3.0	PACE
XW-1	07/28/94	---	5.92	---	---	---	---	---	---	---	---	---	---	PACE
XW-1	10/26/94	---	6.05	---	---	---	---	---	---	---	---	---	---	---
XW-1	02/05/95	7.49	5.82	1.67	ND<50	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	4.9	ATI
XW-1	05/05/95	7.49	5.57	1.92	---	---	---	---	---	---	---	---	---	---
XW-1	07/19/95	7.49	6.12	1.37	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	1680	4.3	ATI
XW-1	10/12/95	7.49	6.82	0.67	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	1150	3.8	ATI
XW-1	01/08/96	7.49	6.11	1.38	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	1300	4.7	ATI
XW-1	09/11/97	7.49	6.57	0.92	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.3	SPL
XW-1	01/27/98	7.49	5.27	2.22	---	---	---	---	---	---	---	---	---	---
XW-2	06/21/93	7.48	5.89	1.59	---	---	---	---	---	---	---	---	---	---
XW-2	04/05/94	7.48	5.77	1.71	ND<50	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	3.0	PACE
XW-2	07/28/94	7.48	6.25	1.23	---	---	---	---	---	---	---	---	---	PACE
XW-2	10/26/94	7.48	6.39	1.09	---	---	---	---	---	---	---	---	---	---
XW-2	02/05/95	7.48	5.62	1.86	ND<50	ND<500	ND<0.25	0.38	ND<0.25	ND<0.50	---	---	5.2	ATI
XW-2	05/05/95	7.48	5.66	1.82	---	---	---	---	---	---	---	---	---	---
XW-2	07/19/95	7.48	6.80	0.68	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	4750	3.9	ATI
XW-2	10/12/95	7.48	7.21	0.27	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	3630	4.3	ATI
XW-2	01/08/96	7.48	6.79	0.69	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	3440	4.2	ATI
XW-2	09/11/97	7.48	6.86	0.62	ND<50	---	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	---	3.6	SPL
XW-2	01/27/98	7.48	5.88	1.60	---	---	---	---	---	---	---	---	---	---

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11270
 3255 MECARTNEY ROAD, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-206

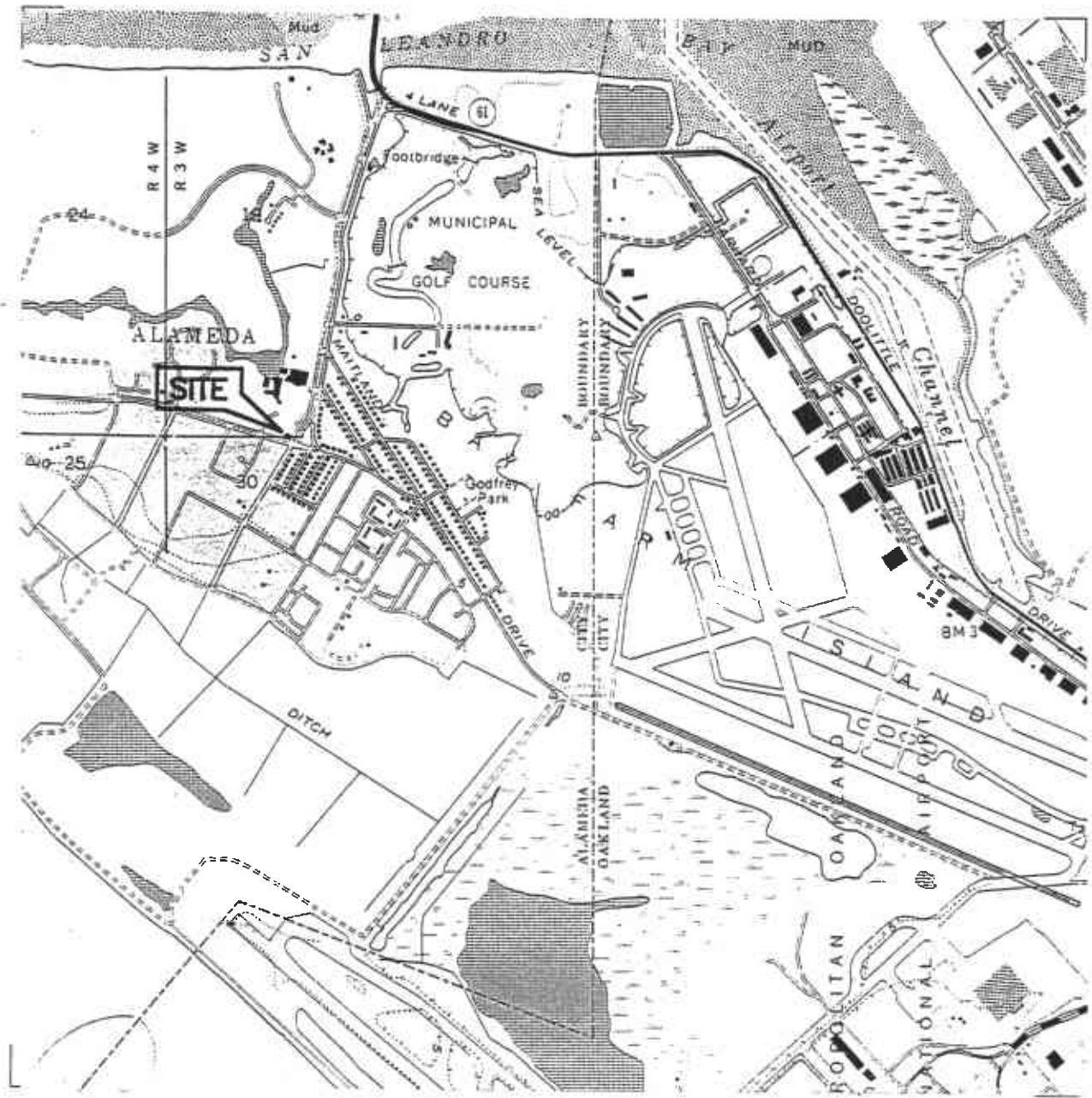
WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (mg/l)	DO (ppm)	LAB
XW-3	06/21/93	6.84	5.85	0.99	---	---	---	---	---	---	---	---	---	---
XW-3	04/05/94	6.84	5.85	0.99	ND<50	150	ND<0.5	0.7	ND<0.5	ND<0.5	---	---	3.1	PACE
XW-3	07/28/94	6.84	6.28	0.56	---	---	---	---	---	---	---	---	---	PACE
XW-3	10/26/94	6.84	6.40	0.44	---	---	---	---	---	---	---	---	---	---
XW-3	02/05/95	6.84	7.23	-0.39	280	ND<500	ND<0.50	ND<0.50	0.63	ND<1.0	---	(g)	4.9	ATI
XW-3	05/05/95	6.84	7.43	-0.59	---	---	---	---	---	---	---	---	---	---
XW-3	07/19/95	6.84	7.60	-0.76	400	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	10400	4.3	ATI
XW-3	10/12/95	6.84	7.74	-0.90	130	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	480	(e) 8430	4.7	ATI
XW-3	01/08/96	6.84	7.58	-0.74	320	---	ND<2.5	ND<2.5	ND<2.5	ND<5.0	1100	10000	4.4	ATI
XW-3	01/27/98	6.84	7.01	-0.17	9200	---	2.8	ND<1.0	ND<1.0	ND<1.0	890	---	4.3	SPL
QC-2	(h) 04/05/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(h) 07/28/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(h) 10/26/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2	(h) 02/05/95	---	---	---	ND<50	---	ND<0.25	ND<0.25	ND<0.25	ND<0.50	---	---	---	ATI
QC-2	(h) 05/05/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2	(h) 07/19/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2	(h) 10/12/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2	(h) 01/08/96	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	---	ATI

ABBREVIATIONS:

TPH-G Total petroleum hydrocarbons as gasoline
 TPH-D Total petroleum hydrocarbons as diesel
 B Benzene
 T Toluene
 E Ethylbenzene
 X Total xylenes
 MTBE Methyl tert butyl ether
 TDS Total dissolved solids
 DO Dissolved oxygen
 ug/l Micrograms per liter
 mg/l Milligrams per liter
 ppm Parts per million
 --- Not analyzed/measured/applicable
 ND Not detected above reported detection limit
 PACE Pace, Inc.
 ATI Analytical Technologies, Inc.
 SPL Southern Petroleum Laboratories

NOTES:

- (a) Casing elevations surveyed to nearest 0.01 foot relative to an arbitrary datum.
- (b) Groundwater elevations in feet above an arbitrary datum.
- (c) Not sampled due to inadequate recharge.
- (d) Wells destroyed by HETI on January 18 and 19, 1995.
- (e) A copy of the documentation for this data is included in Appendix C of Alisto report 10-206-04-001.
- (f) Blind duplicate.
- (g) MTBE peak present. See documentation for this data included in Appendix C of Alisto report 10-206-04-001.
- (h) Travel blank.



SOURCE:
 USGS MAP, SAN LEANDRO QUADRANGLE,
 7.5 MINUTE SERIES, 1959,
 PHOTOREVISED 1980.

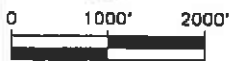


FIGURE 1

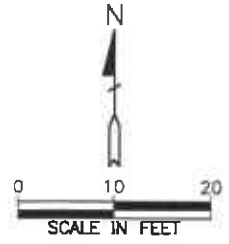
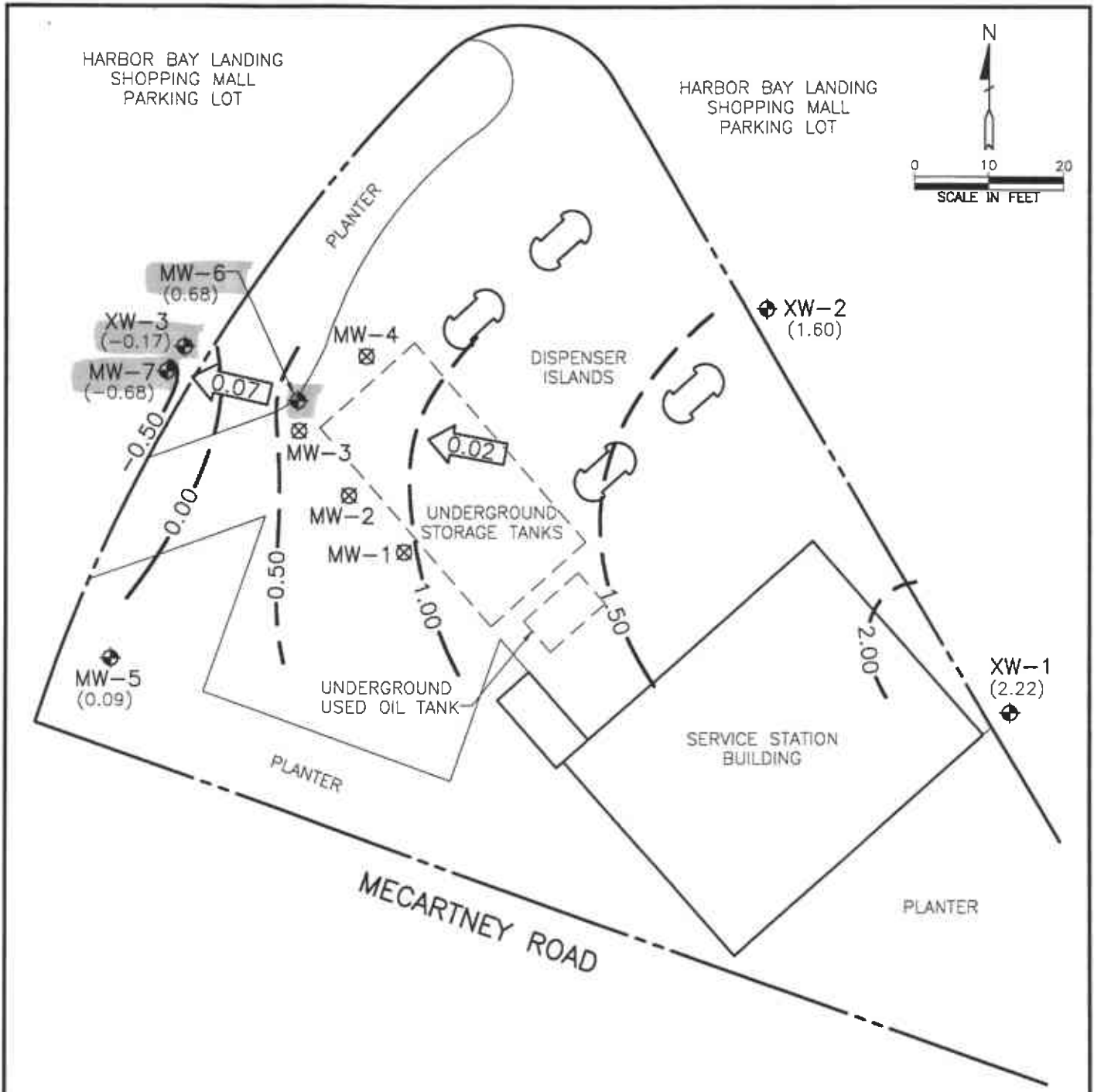
VICINITY MAP

BP OIL SERVICE STATION NO. 11270
 3255 MECARTNEY ROAD
 ALAMEDA, CALIFORNIA

PROJECT NO. 10-206



ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA



LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- ⊗ DESTROYED WELL
- (-0.68) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 0.50 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL-0.50 FOOT)
- ←0.02 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

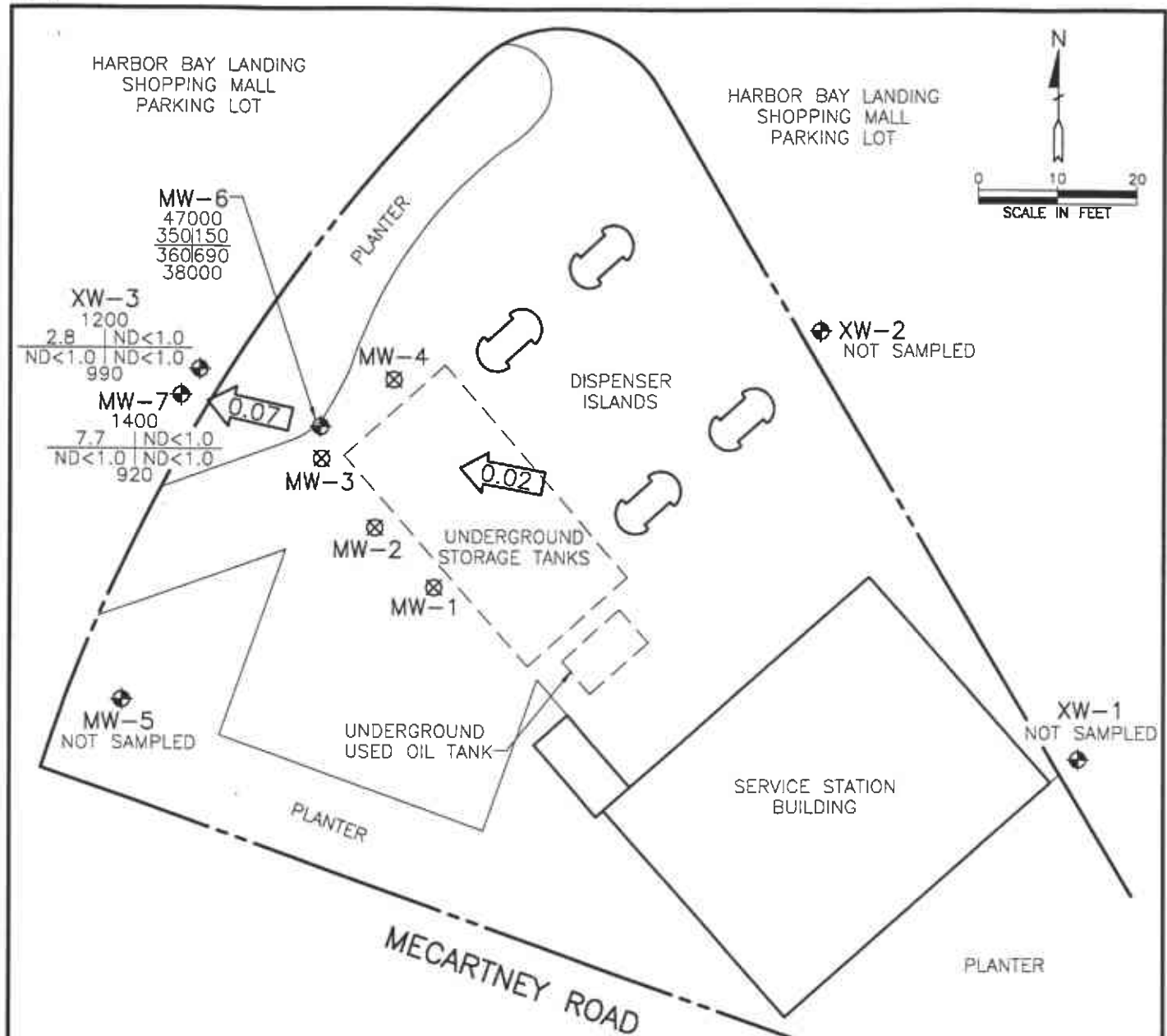
FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

JANUARY 27, 1998
 BP OIL SERVICE STATION NO. 11270
 3255 MECARTNEY ROAD
 ALAMEDA, CALIFORNIA

PROJECT NO. 10-206



10/2000-1.000 3-2-00 MW 1 of 20



LEGEND

- ◆ GROUNDWATER MONITORING WELL
- ⊗ DESTROYED WELL
- TPH-G CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER
- B I T E I X M T B E
- TPH-G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X TOTAL XYLENES
- M T B E METHYL TERT BUTYL ETHER
- ND NOT DETECTED ABOVE REPORTED DETECTION LIMIT
- ← 0.02 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
JANUARY 27, 1998
 BP OIL SERVICE STATION NO. 11270
 3255 MECARTNEY ROAD
 ALAMEDA, CALIFORNIA
 PROJECT NO. 10-206



100000-1-0000 3-2-88 RWB 11-20

APPENDIX A
WATER SAMPLING FIELD SURVEY FORMS

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING

GROUP

1575 TREAT BOULEVARD, SUITE 201

WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No. 10-206-04-002

Address 3255 McCartney Rd.

Contract No. H180266

Station No. BP 11270

Date: 1/27/18

Day: M T W T H F

City: Alameda

Sampler: WB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS:
MW-5	NIS	4"	14.51	8.27	∅	1530	DO NOT SAMPLE/MONITOR ONLY
MW-6	S-3	4"	20.00	6.20	↓	1556	Well is Below Grade inside Monument All of Run
MW-7	S-1	2"	20.00	7.30	↓	1550	
XW-1	NIS	2"	15.35	5.27	↓	1536	DO NOT SAMPLE/MONITOR ONLY
XW-2	NIS	2"	13.62	5.89	↓	1541	DO NOT SAMPLE/MONITOR ONLY
XW-3	S-2	2"	13.53	7.01	↓	1553	

FIELD INSTRUMENT CALIBRATION DATA

pH METER Jim 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED Y N TIME 1245 WEATHER Cloudy

D.O. METER Jim ZERO d.O. SOLUTION _____ BAROMETRIC PRESSURE 760 TEMP 58

CONDUCTIVITY METER Jim 10,000 _____ TURBIDITY METER _____ 5.0 NTU _____ OTHER X

Well ID	Depth to Water	Diam	Cap/Lock	Product	Dept	Iridescence	Gal.	Time	Temp °F	pH	E.C.	D.O.	
MW-7	7.30	2"	OK	∅	Y	N	2	1620	60.2	7.42	7.87ms	3.6	<input type="radio"/> EPA 601 _____
Total Depth - Water Level=							4		61.4	7.30	8.21ms		<input checked="" type="radio"/> TPH-G/BTEX _____
20 - 7.30 = 12.70 x .16 = 2.03 x 3 = 6.09							7	1630	62.1	7.22	8.37ms	4.4	<input type="radio"/> TPH Diesel _____
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Disp. Bailer(s) <input type="checkbox"/> O Sys Port													<input type="radio"/> TOG 5520 _____
Comments:													TIME/SAMPLE ID
													1633

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING

GROUP

1575 TREAT BOULEVARD, SUITE 201

WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Project No.

10-206-04-002

Date:

1/27/98

Address

3255 McCartney Rd.

Day: MON TH F

Contract No.

H180266

City: Alameda

Station No.

BP 11270

Sampler:

LVB

Well ID	Depth to Water	Diam	Cap/Lock	Product Dept	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.		
XW-3	7.01	2"	Replaced		Y (N)	3	1647	58.1	7.27	947ms	4.1	<input type="checkbox"/> EPA 601	
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input checked="" type="checkbox"/> TPH-G/BTEX
13.53 - 7.01 = 6.52						x .16 = 3.13	x 3 = 9.39	7	60.3	7.09	977ms	<input type="checkbox"/> TPH Diesel	
Purge Method: OSurface Pump						ODisp.Tube	OWinch	ODisp. Bailer(s)	OSys Port				<input type="checkbox"/> TOG 5520
Comments:												TIME/SAMPLE ID	
												1710	
MW-6	6.20	4"	Replaced		Y (N)	9	1722	59.7	8.11	622ms	4.6	<input type="checkbox"/> EPA 601	
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input checked="" type="checkbox"/> TPH-G/BTEX
20.00 - 6.20 = 13.80						x .65 = 8.97	x 3 = 26.91	18	60.7	7.92	640ms	<input type="checkbox"/> TPH Diesel	
Purge Method: OSurface Pump						ODisp.Tube	OWinch	ODisp. Bailer(s)	OSys Port				<input type="checkbox"/> TOG 5520
Comments: QC-1 (S-4)												TIME/SAMPLE ID	
												1746	
					Y N							<input type="checkbox"/> EPA 601	
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input type="checkbox"/> TPH-G/BTEX
Purge Method: OSurface Pump						ODisp.Tube	OWinch	ODisp. Bailer(s)	OSys Port				<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520	
												TIME/SAMPLE ID	
					Y N							<input type="checkbox"/> EPA 601	
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input type="checkbox"/> TPH-G/BTEX
Purge Method: OSurface Pump						ODisp.Tube	OWinch	ODisp. Bailer(s)	OSys Port				<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520	
												TIME/SAMPLE ID	
					Y N							<input type="checkbox"/> EPA 601	
Total Depth - Water Level=						x Well Vol. Factor=	x#vol. to Purge	PurgeVol.					<input type="checkbox"/> TPH-G/BTEX
Purge Method: OSurface Pump						ODisp.Tube	OWinch	ODisp. Bailer(s)	OSys Port				<input type="checkbox"/> TPH Diesel
Comments:												<input type="checkbox"/> TOG 5520	
												TIME/SAMPLE ID	

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD



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

February 10, 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 January 29, 1998. The sample(s) was assigned to Certificate of Analysis No.(s) 9801D30 and analyzed for all parameters as listed on the chain of custody.

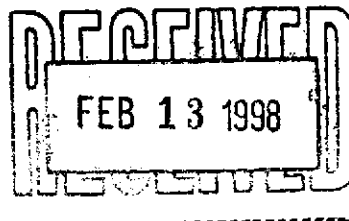
Any data flag or quality control exception associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s).

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
Joel Grice
Project Manager





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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 98-01-D30

Approved for Release by:

for Shannon Grice
Joel Grice, Project Manager

2/10/98
Date:

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.



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

Certificate of Analysis No. H9-9801D30-01

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

P.O.#
 H180266, COC#085841
 DATE: 02/10/98

PROJECT: #11270, N/A
SITE: Alameda, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1

PROJECT NO: 10-206-4-2
MATRIX: WATER
DATE SAMPLED: 01/27/98
DATE RECEIVED: 01/29/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	920	250 P	µg/L
Benzene	7.7	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

97
 100

Method 8020A***

Analyzed by: LJ/

Date: 02/05/98

Gasoline Range Organics

1.4 0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

77
 97

California LUFT Manual for Gasoline

Analyzed by: LJ/

Date: 02/05/98 05:29:00

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

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

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



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

Certificate of Analysis No. H9-9801D30-02

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

P.O.#
 H180266, COC#085841
 DATE: 02/10/98

PROJECT: #11270, N/A
SITE: Alameda, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-2

PROJECT NO: 10-206-4-2
MATRIX: WATER
DATE SAMPLED: 01/27/98
DATE RECEIVED: 01/29/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	990	250 P	µg/L
Benzene	2.8	0.5 P	µg/L
Toluene	ND	1.0 P	µg/L
Ethylbenzene	ND	1.0 P	µg/L
Total Xylene	ND	1.0 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene 100
 4-Bromofluorobenzene 100

Method 8020A***

Analyzed by: LJ/
 Date: 02/05/98

Gasoline Range Organics 1.2 0.05 P mg/L

Surrogate

% Recovery

1,4-Difluorobenzene 80
 4-Bromofluorobenzene 97

California LUFT Manual for Gasoline

Analyzed by: LJ/
 Date: 02/05/98 05:54:00

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

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

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



Certificate of Analysis No. H9-9801D30-03

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.#
H180266, COC#085841
DATE: 02/10/98

PROJECT: #11270, N/A
SITE: Alameda, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-3

PROJECT NO: 10-206-4-2
MATRIX: WATER
DATE SAMPLED: 01/27/98
DATE RECEIVED: 01/29/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	38000	2500 P	µg/L
Benzene	350	0.5 P	µg/L
Toluene	150	1.0 P	µg/L
Ethylbenzene	360	1.0 P	µg/L
Total Xylene	690	1.0 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene

127

4-Bromofluorobenzene

100

Method 8020A***

Analyzed by: LJ/

Date: 02/05/98

Gasoline Range Organics

47

12 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene

75

4-Bromofluorobenzene

92

California LUFT Manual for Gasoline

Analyzed by: LJ/

Date: 02/05/98 05:48:00

(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. H9-9801D30-04

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

P.O.#
 H180266, COC#085841
 DATE: 02/10/98

PROJECT: #11270, N/A
SITE: Alameda, CA
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-4

PROJECT NO: 10-206-4-2
MATRIX: WATER
DATE SAMPLED: 01/27/98
DATE RECEIVED: 01/29/98

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	35000	1000 P	µg/L
Benzene	290	5 P	µg/L
Toluene	120	10 P	µg/L
Ethylbenzene	300	10 P	µg/L
Total Xylene	580	10 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

100
 97

Method 8020A***

Analyzed by: LJ

Date: 02/09/98

Gasoline Range Organics

51

2.5 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
 4-Bromofluorobenzene

80
 93

California LUFT Manual for Gasoline

Analyzed by: LJ/

Date: 02/05/98 06:13:00

(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

QUALITY CONTROL

DOCUMENTATION



Batch Id: VARE980205082610

Units: $\mu\text{g/L}$

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	45	90.0	72 - 128
Benzene	ND	50	52	104	61 - 119
Toluene	ND	50	51	102	65 - 125
EthylBenzene	ND	50	51	102	70 - 118
O Xylene	ND	50	52	104	72 - 117
M & P Xylene	ND	100	100	100	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	1500	20.0	1300	NC	1500	NC	NC	20	39 - 150
BENZENE	4.7	20.0	19	71.5	23	91.5	24.5 *	21	32 - 164
TOLUENE	7.6	20.0	21	67.0	25	87.0	26.0 *	20	38 - 159
ETHYLBENZENE	6.2	20.0	19	64.0	24	89.0	32.7 *	19	52 - 142
O XYLENE	8.3	20.0	22	68.5	27	93.5	30.9 *	18	53 - 143
M & P XYLENE	7.0	40.0	36	72.5	43	90.0	21.5 *	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 = $[(\text{<1>} - \text{<2>}) / \text{<3>}] \times 100$

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

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

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

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

Analyst: LJ/

Sequence Date: 02/05/98

SPL ID of sample spiked: 9801D74-03A

Sample File ID: E_B1157.TX0

Method Blank File ID:

Blank Spike File ID: E_B1150.TX0

Matrix Spike File ID: E_B1152.TX0

Matrix Spike Duplicate File ID: E_B1153.TX0

SAMPLES IN BATCH(SPL ID):

9801D74-06A 9801D74-07A 9801D30-03A 9801C02-05A
 9801D27-10A 9802253-01A 9801C02-08A 9801D27-08A
 9801D27-09A 9801D30-01A 9801D30-02A 9801D74-01A
 9801D74-02A 9801D74-03A 9801D74-08A 9801D74-02A
 9801D74-05A



SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020

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

Matrix: Aqueous
Units: µg/L

Batch Id: VARE980209062000

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	46	92.0	72 - 128
Benzene	ND	50	47	94.0	61 - 119
Toluene	ND	50	47	94.0	65 - 125
EthylBenzene	ND	50	47	94.0	70 - 118
O Xylene	ND	50	47	94.0	72 - 117
M & P Xylene	ND	100	95	95.0	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	2.9	20	22		95.5	23
BENZENE	ND	20	19	95.0	20	100	5.13	21	32 - 164
TOLUENE	ND	20	20	100	22	110	9.52	20	38 - 159
ETHYLBENZENE	ND	20	18	90.0	20	100	10.5	19	52 - 142
O XYLENE	ND	20	19	95.0	21	105	10.0	18	53 - 143
M & P XYLENE	ND	40	38	95.0	41	102	7.11	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: LJ

Sequence Date: 02/09/98

SPL ID of sample spiked: 9802082-01A

Sample File ID: E_B2007.TX0

Method Blank File ID:

Blank Spike File ID: E_B2002.TX0

Matrix Spike File ID: E_B2008.TX0

Matrix Spike Duplicate File ID: E_B2009.TX0

SAMPLES IN BATCH (SPL ID): 9801D03-18A 9801D03-19A 9801D03-20A 9801D30-04A
9802082-01A



* SPL BATCH QUALITY CONTROL REPORT **

California LUFT Manual for Gasoline

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

Matrix: Aqueous
 Units: mg/L

Batch Id: VARE980204173800

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
	Blank Result <2>		Result <1>	Recovery %	
Gasoline Range Organics	ND	1.0	1.03	103	64 - 131

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
GASOLINE RANGE ORGANICS	1.8	0.90	2.47	74.4	2.11	34.4 *	73.5 *	36	36 - 160

* = 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 = $(\langle 1 \rangle - \langle 2 \rangle) / \langle 3 \rangle \times 100$

LCS % Recovery = $(\langle 1 \rangle / \langle 3 \rangle) \times 100$

Relative Percent Difference = $|(\langle 4 \rangle - \langle 5 \rangle) / ((\langle 4 \rangle + \langle 5 \rangle) \times 0.5) \times 100$

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

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

Analyst: LJ/

Sequence Date: 02/04/98

SPL ID of sample spiked: 9801C02-08A

Sample File ID: EEB1125.TX0

Method Blank File ID:

Blank Spike File ID: EEB1117.TX0

Matrix Spike File ID: EEB1120.TX0

Matrix Spike Duplicate File ID: EEB1121.TX0

SAMPLES IN BATCH(SPL ID):

9801D27-04A 9801D27-05A 9801D27-06A 9801D27-07A
 9801D27-08A 9801D27-09A 9801D27-10A 9801D27-11A
 9801D30-01A 9801D30-02A 9801D27-01A 9801D27-02A
 9801D27-03A



SPL BATCH QUALITY CONTROL REPORT **
California LUFT Manual for Gasoline

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

Batch Id: VARE980205085200

Matrix: Aqueous
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	0.98	98.0	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	4.1	0.90	4.57	NC	4.46	NC

Analyst: LJ/
Sequence Date: 02/05/98
SPL ID of sample spiked: 9801D74-08A
Sample File ID: EEB1158.TX0
Method Blank File ID:
Blank Spike File ID: EEB1151.TX0
Matrix Spike File ID: EEB1154.TX0
Matrix Spike Duplicate File ID: EEB1155.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 = $\frac{(\langle 1 \rangle - \langle 2 \rangle)}{\langle 3 \rangle} \times 100$
LCS % Recovery = $\frac{\langle 1 \rangle}{\langle 3 \rangle} \times 100$
Relative Percent Difference = $\frac{|\langle 4 \rangle - \langle 5 \rangle|}{[(\langle 4 \rangle + \langle 5 \rangle) \times 0.5]} \times 100$
(**) = Source: SPL-Houston Historical data (1st Q '97)
(***) = Source: SPL-Houston Historical Data (1st Q '97)

SAMPLES IN BATCH(SPL ID): 9801D30-03A 9801D30-04A

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST


SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 1-29-98	Time: 1430
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SPL Sample ID: 980/D30

		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:	20°C	
10	Method of sample delivery to SPL:	SPL Delivery	
		Client Delivery	
		FedEx Delivery (airbill #)	3948472246
		Other:	
11	Method of sample disposal:	SPL Disposal	/
		HOLD	
		Return to Client	

Name: 	Date: 1-29-98
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7801D30

CHAIN OF CUSTODY

No. 085841

Page 1 of 1

CONSULTANT'S NAME Alisto Engineering		CONSULTANT'S ADDRESS 1575 Trent Blvd #201 W.C. Ca 94598	
BP SITE NUMBER 11270	BP SITE / FACILITY ADDRESS Alameda, Ca		CONSULTANT PROJECT NUMBER 10-206-4-2
CONSULTANT PROJECT MANGER Brady Nagle	PHONE NUMBER (510) 295-1650	FAX NUMBER 295-1823	CONSULTANT CONTRACT NUMBER H180266
BP CONTACT Scott Hooton	BP ADDRESS Renton, WA	PHONE NUMBER -	FAX NO. -
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 1-28-98
			SHIPMENT METHOD Fed Ex

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

ANALYSIS REQUIRED

AIRBILL NUMBER **384842246**

SAMPLE DESCRIPTION	COLLECTION DATE	COLLECTION TIME	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	TIN-GI	BYE	MODE	COMMENTS
				NO.	TYPE (VOL.)	LAB SAMPLE #				
S-1	1/27/98		W	3	HL		X	X		
S-2	↓		↓	↓	↓		↓	↓		
S-3	↓		↓	↓	↓		↓	↓		
S-4	↓		↓	↓	↓		↓	↓		

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	<p><i>200</i></p>		
<i>J. Yelton</i>	1/28/98	1500	<i>P. Yelton</i>	1/28/98	1500			
	1/28/98	1500	<i>[Signature]</i>	1/29/98	1000			

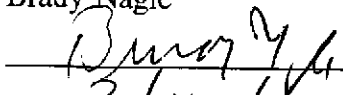
**BP EXPLORATION & OIL, INC.
ENVIRONMENTAL RESOURCES MANAGEMENT
DATA REVIEW CHECKLIST**

BP Site Number: 11270
ERM Contact: H180266
Sampling Date: 1/27/98
Matrix Description: Water
Date Final Report Received: 2/13/98
Laboratory & Location: SPL, Houston, Texas

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

MS/MSD recovery and relative % difference for MTBE in one of two matrix spikes was not calculated due to sample exceeding spike by a factor of 4 or more. MS/MSD relative % difference for benzene, toluene, ethylbenzene, and xylenes values in one of two matrix spikes was outside QC range due to matrix interference. MS/MSD relative % difference for gasoline range organics values 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: 3/12/98