



Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, California 94583
Phone: (925) 275-3801
Fax: (925) 275-3815

25 July 2008

Re: Second Quarter 2008 Ground-Water Monitoring Report
Former BP Station #11127
5425 Martin Luther King Jr. Way
Oakland, California
ACEH Case #RO0000241



RECEIVED

3:42 pm, Jul 30, 2008

Alameda County
Environmental Health

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

Paul Supple
Environmental Business Manager

Second Quarter 2008 Ground-Water Monitoring Report

Former BP Station #11127
5425 Martin Luther King Jr. Way
Oakland, California

Prepared for

Mr. Paul Supple
Environmental Business Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by



1324 Mangrove Avenue, Suite 212
Chico, California 95926
(530) 566-1400
www.broadbentinc.com

25 July 2008

Project No. 07-08-601

25 July 2008

Project No. 07-08-601

Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583
Submitted via ENFOS

Attn.: Mr. Paul Supple

Re: Second Quarter 2008 Ground-Water Monitoring Report, Former BP Service Station #11127
5425 Martin Luther King Jr. Way, Oakland, California; ACEH Case #RO0000241

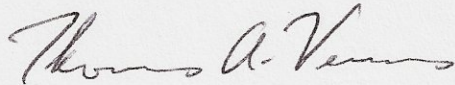
Dear Mr. Supple:

Provided herein is the *Second Quarter 2008 Ground-Water Monitoring Report* for Former BP Service Station #11127 (herein referred to as Station #11127), located at 5425 Martin Luther King Jr. Way, Oakland, Alameda County, California (Site). Case closure was requested from Alameda County Environmental Health (ACEH) on 3 June 1997 and 1 December 1999. A follow-up letter reminding ACEH that a request for a finding of "no further action" and "case closure" was sent to ACEH dated 23 April 2003. BP is currently awaiting a response from ACEH.

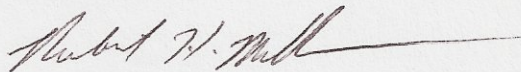
Should you have questions regarding this submission, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.



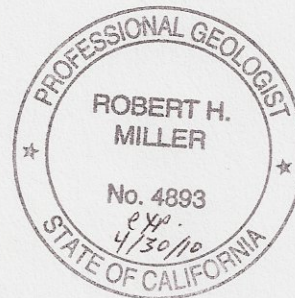
Thomas A. Venus, P.E.
Senior Engineer



Robert H. Miller, P.G., C.HG.
Principal Hydrogeologist

Enclosures

cc: Mr. Paresh Khatri, ACEH (Submitted via ACEH ftp site)
Ms. Shelby Lathrop, ConocoPhillips, 76 Broadway, Sacramento, California 95818
Electronic copy uploaded to GeoTracker



STATION #11127 QUARTERLY GROUND-WATER STATUS REPORT

Facility: #11127	Address: 5425 Martin Luther King Jr. Way, Oakland, California
Environmental Business Manager:	Mr. Paul Supple
Consulting Company/Contact Person:	Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus (530)566-1400
Consultant Project No.:	07-08-601
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000241

WORK PERFORMED THIS QUARTER (Second Quarter 2008):

1. Prepared and submitted First Quarter 2008 Status Report.
2. Conducted a one-time, ground-water monitoring and sampling event at the Site during the Second Quarter of 2008. Work was performed by Stratus Environmental, Inc.

WORK PROPOSED FOR NEXT QUARTER (Third Quarter 2008):

1. Prepared and submitted this Second Quarter 2008 Ground-water Monitoring Report (contained herein).
2. No environmental work is scheduled for the Site during the Third Quarter of 2008.

GROUND-WATER MONITORING RESULTS SUMMARY:

Current phase of project:	Case Closure Request Pending
Frequency of ground-water monitoring:	One-Time (MW-1, MW-2, and MW-4)
Frequency of ground-water sampling:	One-Time (MW-1, MW-2, and MW-4)
Is free product (FP) present on-site:	No
Current remediation techniques:	NA
Depth to ground water (below TOC):	9.22 ft (MW-1) to 10.40 ft (MW-2)
General ground-water flow direction:	Northeast
Approximate hydraulic gradient:	0.003 ft/ft

DISCUSSION:

Case closure was requested from ACEH on 3 June 1997 and 1 December 1999. A follow-up letter reminding ACEH that a request for a finding of "no further action" and "case closure" was sent to ACEH dated 23 April 2003. BP is currently awaiting a response from ACEH. In the meantime, BP conducted a one-time ground-water monitoring and sampling event at the Site on 29 April 2008.

Second quarter 2008 ground-water monitoring/sampling was conducted at Former BP Station #11127 by Stratus personnel. Depth-to-water measurements were made at wells MW-1, MW-2, and MW-4. A sheen of some sort was noted in well MW-1. Furthermore, the Stratus technician was unable to locate well MW-3 (believed to be paved over), and therefore was not gauged. No other irregularities were noted during water level gauging. Ground-water monitoring field data sheets are provided within Appendix A. Depth-to-water level measurements ranged from 9.22 ft at MW-1 to 10.40 ft at MW-2. Resulting ground-water surface elevations ranged from 73.13 ft at well MW-1 to 72.95 ft at well MW-4. Water level elevations were within historic minimum and maximum values for each well, as summarized in the ground-water monitoring and sampling report dated 22 October 1996, provided within Appendix B. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the northeast

at approximately 0.003 ft/ft. Measured depths to ground water and respective ground-water elevations are summarized in Table 1. Potentiometric ground-water elevation contours are presented in Drawing 1.

Table 1: Second Quarter 2008 Ground-Water Monitoring Results

Well ID	Casing Elevation (ft)	Depth to Water (ft)	GW Elevation (ft)
MW-1	82.35	9.22	73.13
MW-2	83.48	10.40	73.08
MW-4	82.70	9.75	72.95

Ground-water samples were collected from wells MW-1, MW-2, and MW-4. As mentioned previously, the Stratus technician was unable to locate well MW-3 and therefore was not sampled. Well MW-1 also purged dry at 23 gallons prior to reaching the three wetted-casings purge volume target of 32 gallons. No other irregularities were reported during sampling. Samples were submitted to Calscience Environmental Laboratories, Inc. (Garden Grove, California) under chain-of-custody protocol for laboratory analysis of Gasoline Range Organics (GRO, C6-C12) by EPA Method 8015B; Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and Methyl tert-butyl ether (MTBE), Ethyl tert-butyl ether (ETBE), Ethanol, 1,2-Dichloroethane (1,2-DCA), 1,2-Dibromomethane (EDB), Di-isopropyl ether (DIPE), tert-Butyl alcohol (TBA), and tert-Amyl methyl ether (TAME) by EPA Method 8260B. The laboratory noted that the hydrocarbon pattern for GRO in the sample collected from well MW-1 does not match that of the gasoline standard used to calculate concentrations. No other significant irregularities were encountered during laboratory analysis of the samples. Ground-water sampling field data sheets and the laboratory analytical report, including chain-of-custody documentation, are provided in Appendix A.

Gasoline Range Organics (GRO) were detected above the laboratory reporting limit in two of the three wells sampled at concentrations up to 1,700 micrograms per liter ($\mu\text{g/L}$) in well MW-1 (however with the laboratory qualification noted above) and 110 $\mu\text{g/L}$ in well MW-2. Ethylbenzene was detected above the laboratory reporting limit in one of the three wells sampled at a concentration of 1.5 $\mu\text{g/L}$ in well MW-2. MTBE was detected above the laboratory reporting limit in each of the three wells sampled at concentrations up to 330 $\mu\text{g/L}$ in well MW-1. The remaining fuel additives and oxygenates were not detected above their respective laboratory reporting limits in the three wells sampled this event. Laboratory analytical results for analytes detected above their reporting limits are summarized in Table 2.

Table 2: Second Quarter 2008 Ground-Water Sampling Analytical Results ($\mu\text{g/l}$)

Well ID	GRO	Ethylbenzene	MTBE
MW-1	1,700	<2.5	330
MW-2	110	1.5	3.1
MW-4	<50	<0.50	0.52

Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well with the following exceptions: well MW-1 produced an historic maximum concentration for GRO and historic minimum concentrations for MTBE. Historic laboratory analytical results are summarized in Appendix B. The most recent GRO, Benzene, and MTBE concentrations are presented in Drawing 1. A copy of the laboratory analytical report, including chain-of-custody documentation, is provided in Appendix A. Ground-water monitoring data (GEO_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation pages are provided in Appendix C.

With this Second Quarter 2008 report, BAI proposes ACEH consideration and approval of the pending requests for “no further action” and “case closure.” At this time, no decision will be made regarding this proposal without discussion and approval from ACEH.

CLOSURE:

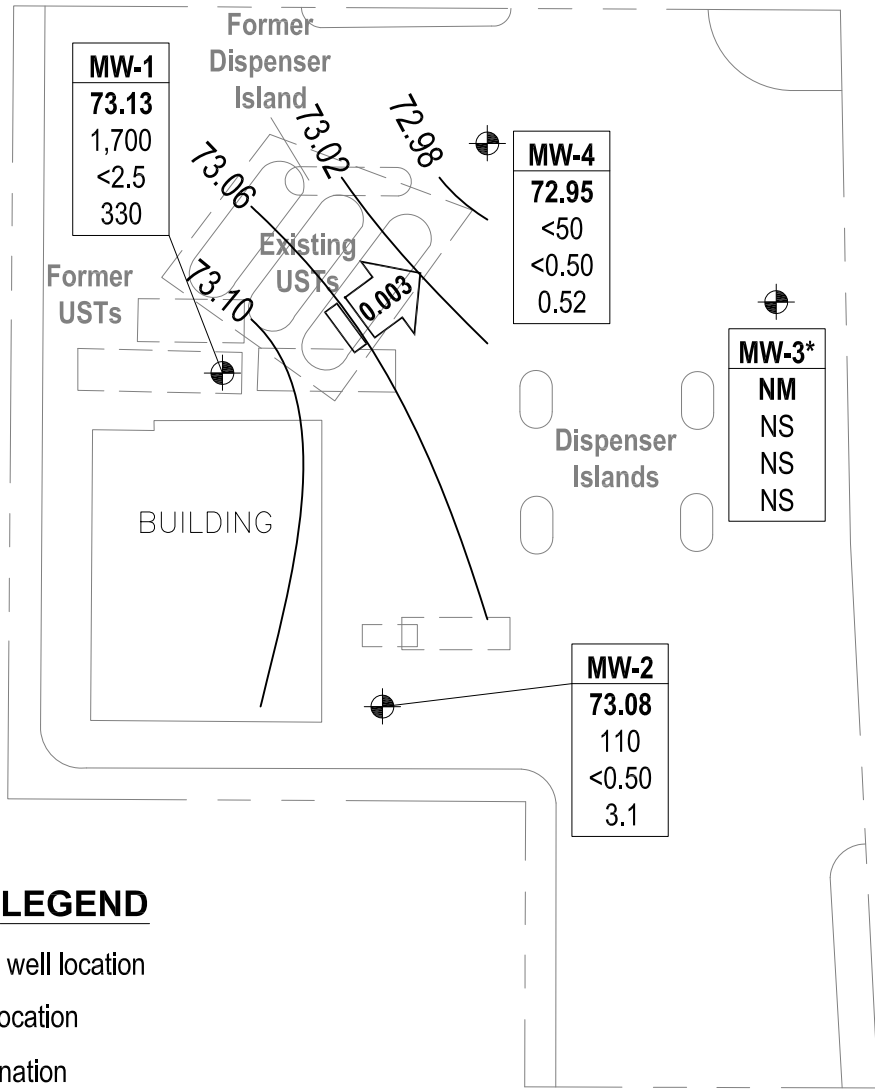
The findings presented in this report are based upon: observations of Stratus field personnel (see Attachment A), the points investigated, and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty, expressed or implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

ATTACHMENTS:

- Drawing 1 Ground-Water Elevation Contours and Analytical Summary Map, 29 April 2008, Station #11127, 5425 Martin Luther King Jr. Way, Oakland, California
- Appendix A Stratus Ground-Water Sampling Data Package (Includes Field Data Sheets, Laboratory Analytical Report with Chain-of-Custody Documentation, and Field Procedures)
- Appendix B BP Oil Company Groundwater Monitoring and Sampling Report , 16 December 1996
- Appendix C GeoTracker Upload Confirmations

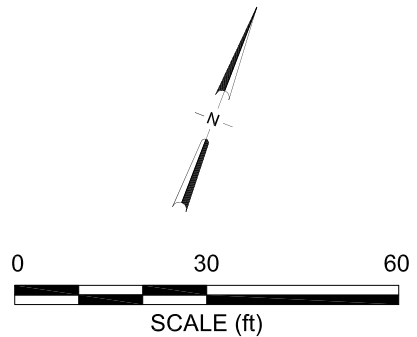
55TH STREET

MARTIN LUTER KING JR. WAY



LEGEND

- Monitoring well location
- DPE well location
- | | |
|----------------|---|
| Well | Well designation |
| ELEV | Ground-water elevation (ft/MSL) |
| GRO | GRO, Benzene and MTBE concentrations in micrograms per liter (µg/L) |
| Benzene | |
| MTBE | |
- 0.003 Ground-water flow gradient and direction (ft/ft)
- 73.10 — Ground-water elevation contour (ft/MSL)
- < Not detected at or above laboratory reporting limit
- NM Not measured
- NS Not sampled
- * Elevation not used for contours



NOTE: SITE MAP ADAPTED FROM URS FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

APPENDIX A

STRATUS GROUND-WATER SAMPLING DATA PACKAGE
(INCLUDES FIELD DATA SHEETS, LABORATORY ANALYTICAL REPORT WITH CHAIN-OF-
CUSTODY DOCUMENTATION, AND FIELD PROCEDURES)



3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

May 16, 2008

Mr. Rob Miller
Broadbent & Associates, Inc.
2000 Kirman Avenue
Reno, NV 89502

Re: Groundwater Sampling Data Package, ARCO Service Station No.11127, located at
5425 Martin Luther King Jr. Way, Oakland, California.

General Information

Data Submittal Prepared / Reviewed by: Becky Carroll / Jay Johnson

Phone Number: (530) 676-6000

On-Site Supplier Representative: Josh Slater

Sampling Date: April 29, 2008

Arrival: 05:30 *Departure:* 09:00

Weather Conditions: Clear

Unusual Field Conditions: None noted.

Scope of Work Performed: Quarterly groundwater monitoring and sampling.

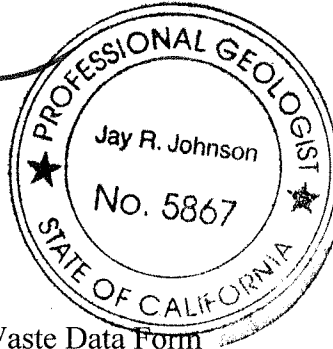
Variations from Work Scope: Well MW-1 purged dry before three casing volumes were removed. A sheen was noted in well MW-1. Technician was unable to locate well MW-3. A Stratus technician will go out and attempt to locate well MW-3 with a metal detector before the next sampling event.

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include field data sheets, non-hazardous waste data form, chain of custody documentation, certified analytical results, and field procedures for groundwater sampling documentation. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations. Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Jay R. Johnson, P.G.
Project Manager



Attachments:

- Field Data Sheets
- Non-Hazardous Waste Data Form
- Chain of Custody Documentation
- Certified Analytical Results
- Field Procedures for Groundwater Sampling

cc: Mr. Paul Supple, BP/ARCO



Site Address 5425 Marint Luther King Jr., Way
 City Oakland, Ca
 Sampled by: J. Slater
 Signature J. Slater

Site Number Arco 11127
 Project Number E11127-04
 Project PM J. Johnson
 DATE 4-29-08

Water Level Data					Purge Volume Calculations					Purge Method				Sample Record		Field Data	
Well ID	Time	Depth to Product (feet)	Depth to Water (feet)	Total Depth (feet)	Water column (feet)	Diameter (inches)	Multiplier	3 casing volumes (gallons)	Actual water purged (gallons)	No Purge	Bailer	Pump	other	DTW at sample time (feet)	Sample I.D	Sample Time	DO (mg/L)
MW-1	0609		9.22	27.33	18.11	4	2	36.22	23		X		Day @ 23	23.68	MW-1	0757	METER NOT WORKING
MW-2	0613		10.40	26.57	16.17	4	2	32.34	32		X			12.11	MW-2	0700	
MW-3	UNABLE TO LOCATE WELL														MW-3		
MW-4	0557		9.75	21.52	11.77	2	0.5	5.88	6		X			11.67	MW-4	0832	
TB																	

Multiplier
 2" = 0.5 3" = 1.0 4" = 2.0 6" = 4.4

Please refer to groundwater sampling field procedures
 pH/Conductivity/temperature Meter - Oakton Model PC-10
 DO Meter - Oakton 300 Series (DO is always measured before purge)

CALIBRATION DATE _____
 pH 4-29
 Conductivity 4-29
 DO 4-29

Site Address _____
 City _____
 Site Sampled by _____

Site Number _____
 Project No. _____
 Project PM _____
 Date Sampled _____

Well ID MW-2 0700					Well ID MW-1 0857				
purge start time BAILER NO ODOR					purge start time BAILER NO ODOR				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	17.4	6.75	480	0	time	17.2	7.12	351	0
time	17.6	6.67	456	16	time	17.4	7.15	385	18
time	17.6	6.63	458	32	time	Dry @ 23 ggi			
time					time	17.3	7.13	405	(23)
purge stop time					purge stop time				
Well ID MW-4 0832					Well ID				
purge start time BAILER NO ODOR					purge start time				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time	17.2	6.95	201	0	time				
time	17.2	6.74	198	6	time				
time					time				
time					time				
purge stop time					purge stop time				
Well ID					Well ID				
purge start time					purge start time				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time					time				
time					time				
time					time				
time					time				
purge stop time					purge stop time				
Well ID					Well ID				
purge start time					purge start time				
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time					time				
time					time				
time					time				
time					time				
purge stop time					purge stop time				

SHEEN*

NO. 668610

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

SITE: 5725 HUNTERS LANE - EPA I.D. NO. CALIFORNIA

NAME BP WEST COAST PRODUCTS LLC ARCO # 11127

EPA I.D. NO. NOT REQUIRED

ADDRESS P.O. BOX 80249
RANCHO SANTA MARGARITA
CITY, STATE, ZIP CA 92688

PROFILE NO. _____

PHONE NO. () _____

CONTAINERS: No. _____ VOLUME 61991 WEIGHT _____

TYPE: TANK TRUCK DUMP TRUCK DRUMS CARTONS OTHER _____

WASTE DESCRIPTION: NON-HAZARDOUS WATER GENERATING PROCESS: WELL PURGING/DECON WATER

COMPONENTS OF WASTE			COMPONENTS OF WASTE		
	PPM	%		PPM	%
1. <u>WATER</u>	<u>99-100%</u>		5. _____		
2. <u>TPH</u>	<u><1%</u>		6. _____		
3. _____			7. <u>BESI#</u>		
4. _____			8. _____		

PROPERTIES: 7-10 pH SOLID LIQUID SLUDGE SLURRY OTHER _____

HANDLING INSTRUCTIONS: WEAR ALL APPROPRIATE PROTECTIVE CLOTHING

THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.

Larry Meethart BESI for BP
TYPED OR PRINTED FULL NAME & SIGNATURE

4-29-08
DATE

TRANSPORTER

NAME Transporter #1 STRATUS ENVIRONMENTAL Transporter #2

EPA I.D. NO. _____

ADDRESS 3330 CAMERON PARK DR

SERVICE ORDER NO. _____

CITY, STATE, ZIP CAMERON PARK, CA 95682

PICK UP DATE _____

PHONE NO. 530-676-2031

J. Slater
TYPED OR PRINTED FULL NAME & SIGNATURE

4-29-08
DATE

TRUCK, UNIT, I.D. NO. _____

TSD FACILITY

NAME INSTRAT, INC

EPA I.D. NO. _____

DISPOSAL METHOD

ADDRESS 1105 AIRPORT RD #C

LANDFILL OTHER _____

CITY, STATE, ZIP BIO VISTA, CA 94571

PHONE NO. 530-732-1829

TYPED OR PRINTED FULL NAME & SIGNATURE

DATE

GEN	OLD/NEW	L	A	TONS
TRANS		S	B	
C/Q		RT/CD	HWDF	NONE

DISCREPANCY

Chain of Custody Record

Project Name: ARCO 11127
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda > 11127
 State or Lead Regulatory Agency: _____
 Requested Due Date (mm/dd/yy): STD / TAT

On-site Time: <u>0530</u>	Temp: <u>50's</u>
Off-site Time: <u>0900</u>	Temp: <u>60's</u>
Sky Conditions: <u>CLEAR</u>	
Meteorological Events: _____	
Wind Speed: _____	Direction: _____

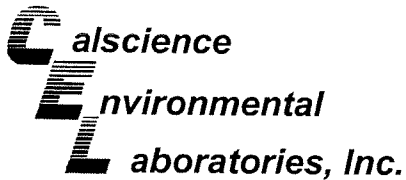
Lab Name: <u>Cal Science</u>	BP/AR Facility No.: <u>11127</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>7440 Lincoln way</u>	BP/AR Facility Address: <u>5425 Martin Luther King Jr. Way, Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
Garden Grove Ca. <u>92841-1427</u>	Site Lat/Long: _____	<u>Cameron Park, CA 95682</u>
Lab PM: <u>Linda Sharpenberg</u>	California Global ID No.: <u>T0600100206</u>	Consultant/Contractor Project No.: <u>E11127-04</u>
Tele/Fax: <u>714-895-5494 714-895-7501 (fax)</u>	Enfos Project No.: <u>G0D0M-0003</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or OOC (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level I with EDF</u>
<u>San Ramon, CA</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail EDD To: <u>shayes@stratusinc.net</u>
Tele/Fax: <u>925-275-3506</u>	Cost Element: <u>01-Contractor labor</u>	Invoice to: <u>Atlantic Richfield Co.</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis						Sample Point Lat/Long and Comments			
				Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GREO	BTEX	Soxy	EDB	1,2 DCA	ETHANOL				
1	MW-1	0757	3/29	X			6																
2	MW-2	0700	↓				↓																
3	MW-4	0832	↓				↓																
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Sampler's Name: <u>J. SLATER</u>	Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time
Sampler's Company: <u>STRATUS</u>	<u>J. Slater / STRATUS</u>		<u>4-29-08</u>	<u>1300</u>				
Shipment Date: <u>4-29-08</u>								
Shipment Method: <u>GSO</u>								
Shipment Tracking No: <u>9255051640</u>								

Special Instructions: Please cc results to rmiller@broadbentinc.com

Custody Seals In Place: Yes / No	Temp Blank: Yes / No	Cooler Temp on Receipt: °F/C	Trip Blank: Yes / No	MS/MSD Sample Submitted: Yes / No
----------------------------------	----------------------	------------------------------	----------------------	-----------------------------------



May 13, 2008

Jay Johnson
Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Subject: **Calscience Work Order No.: 08-04-2544**
Client Reference: **ARCO 11127**

Dear Client:

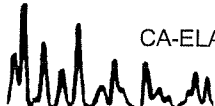
Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 4/30/2008 and analyzed in accordance with the attached chain-of-custody.

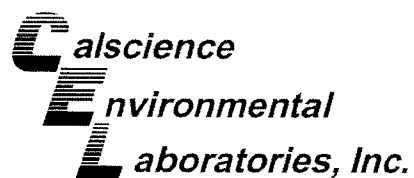
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Linda Scharpenberg
Project Manager





CASE NARRATIVE – 08-04-2544

Data Qualifiers - EPA 8260:

080507S02:

The % recoveries for DIPE and ETBE in the MS/MSD were above acceptance criteria. The % recoveries were within criteria in the LCS/LCSD. The MS/MSD has been flagged “3” within the report.

“3” = LM, AY

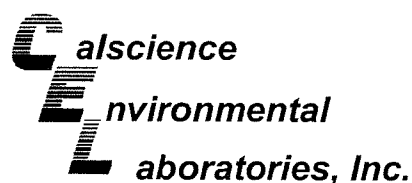
LM = MS and/or MSD above acceptance limits. See Blank Spike (LCS).

AY = Matrix Interference Suspected

Data Qualifiers - EPA 8015, GRO:

The hydrocarbon pattern in the sample 1 does not match that of the gasoline standard used to calculate results. The data has been flagged “LW”.





Analytical Report

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 04/30/08
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 11127

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1.	08-04-2544-1-D	04/29/08 07:57	Aqueous	GC 4	04/30/08	05/01/08 16:58	080501B01

Comment(s): -LW = Quantitation of unknown hydrocarbon(s) in sample based on gasoline.

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	1700	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	110	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	08-04-2544-2-B	04/29/08 07:00	Aqueous	GC 4	05/02/08	05/03/08 11:26	080502B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	110	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	101	38-134			

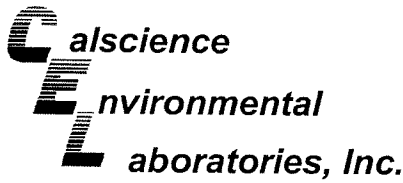
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	08-04-2544-3-D	04/29/08 08:32	Aqueous	GC 4	04/30/08	05/01/08 18:03	080501B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	111	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-124	N/A	Aqueous	GC 4	04/30/08	05/01/08 03:23	080501B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	112	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Stratus Environmental, inc.
 3330 Cameron Park Drive, Suite 550
 Cameron Park, CA 95682-8861

Date Received: 04/30/08
 Work Order No: 08-04-2544
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

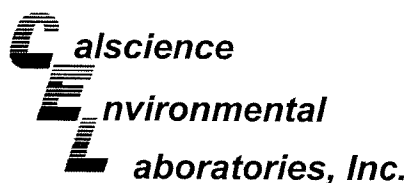
Project: ARCO 11127

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-126	N/A	Aqueous	GC 4	05/02/08	05/03/08 02:54	080502B02

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	86	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 04/30/08
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO 11127

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	08-04-2544-1-A	04/29/08 07:57	Aqueous	GC/MS BB	05/05/08	05/06/08 08:44	080505L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.5	5		Methyl-t-Butyl Ether (MTBE)	330	10	20	
1,2-Dibromoethane	ND	2.5	5		Tert-Butyl Alcohol (TBA)	ND	50	5	
1,2-Dichloroethane	ND	2.5	5		Diisopropyl Ether (DIPE)	ND	2.5	5	
Ethylbenzene	ND	2.5	5		Ethyl-t-Butyl Ether (ETBE)	ND	2.5	5	
Toluene	ND	2.5	5		Tert-Amyl-Methyl Ether (TAME)	ND	2.5	5	
Xylenes (total)	ND	2.5	5		Ethanol	ND	1500	5	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	99	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	103	82-112			1,4-Bromofluorobenzene	88	75-105		

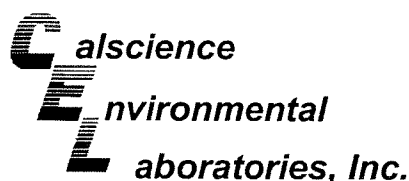
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	08-04-2544-2-D	04/29/08 07:00	Aqueous	GC/MS BB	05/05/08	05/06/08 09:17	080505L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	3.1	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	1.5	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	94	73-157			Dibromofluoromethane	96	82-142		
Toluene-d8	103	82-112			1,4-Bromofluorobenzene	98	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	08-04-2544-3-A	04/29/08 08:32	Aqueous	GC/MS BB	05/05/08	05/06/08 09:50	080505L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.52	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	93	73-157			Dibromofluoromethane	101	82-142		
Toluene-d8	92	82-112			1,4-Bromofluorobenzene	87	75-105		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Analytical Report



Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: 04/30/08
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO 11127

Page 2 of 2

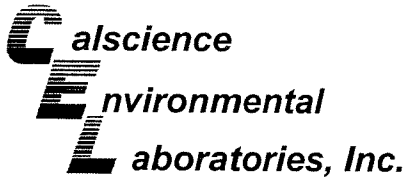
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-208	N/A	Aqueous	GC/MS BB	05/05/08	05/06/08 05:26	080505L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	105	73-157			Dibromofluoromethane	105	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	86	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-210	N/A	Aqueous	GC/MS Z	05/07/08	05/08/08 00:05	080507L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	126	73-157			Dibromofluoromethane	119	82-142		
Toluene-d8	98	82-112			1,4-Bromofluorobenzene	88	75-105		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Quality Control - Spike/Spike Duplicate



Stratus Environmental, inc.
 3330 Cameron Park Drive, Suite 550
 Cameron Park, CA 95682-8861

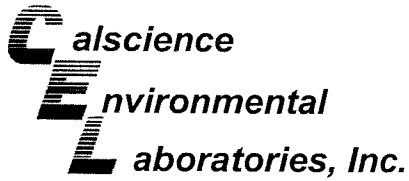
Date Received: 04/30/08
 Work Order No: 08-04-2544
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project ARCO 11127

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-04-2532-1	Aqueous	GC 4	05/01/08	05/01/08	080501S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	94	95	38-134	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.
 3330 Cameron Park Drive, Suite 550
 Cameron Park, CA 95682-8861

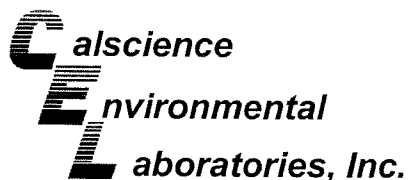
Date Received: 04/30/08
 Work Order No: 08-04-2544
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project ARCO 11127

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-04-2542-20	Aqueous	GC 4	05/02/08	05/03/08	080502S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	93	92	38-134	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - Spike/Spike Duplicate



Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

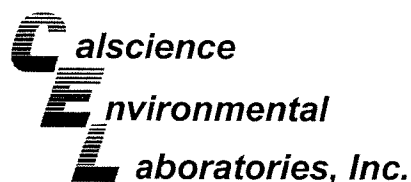
Date Received: 04/30/08
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8260B

Project ARCO 11127

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-05-0167-5	Aqueous	GC/MS BB	05/05/08	05/05/08	080505S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	102	86-122	1	0-8	
Carbon Tetrachloride	101	103	78-138	3	0-9	
Chlorobenzene	100	103	90-120	4	0-9	
1,2-Dibromoethane	96	104	70-130	7	0-30	
1,2-Dichlorobenzene	98	107	89-119	9	0-10	
1,1-Dichloroethene	99	104	52-142	5	0-23	
Ethylbenzene	103	104	70-130	1	0-30	
Toluene	100	104	85-127	4	0-12	
Trichloroethene	96	98	78-126	2	0-10	
Vinyl Chloride	98	102	56-140	4	0-21	
Methyl-t-Butyl Ether (MTBE)	95	103	64-136	7	0-28	
Tert-Butyl Alcohol (TBA)	117	102	27-183	10	0-60	
Diisopropyl Ether (DIPE)	102	107	78-126	5	0-16	
Ethyl-t-Butyl Ether (ETBE)	100	107	67-133	6	0-21	
Tert-Amyl-Methyl Ether (TAME)	103	106	63-141	2	0-21	
Ethanol	95	111	11-167	16	0-64	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

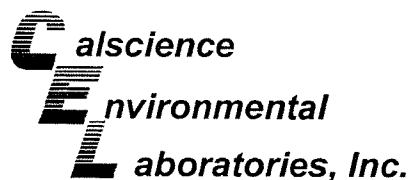
Date Received: 04/30/08
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8260B

Project ARCO 11127

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-05-0573-2	Aqueous	GC/MS Z	05/07/08	05/08/08	080507S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	115	117	86-122	2	0-8	
Carbon Tetrachloride	106	109	78-138	3	0-9	
Chlorobenzene	105	109	90-120	3	0-9	
1,2-Dibromoethane	108	114	70-130	5	0-30	
1,2-Dichlorobenzene	112	113	89-119	1	0-10	
1,1-Dichloroethene	105	107	52-142	2	0-23	
Ethylbenzene	114	118	70-130	3	0-30	
Toluene	113	115	85-127	1	0-12	
Trichloroethene	107	110	78-126	2	0-10	
Vinyl Chloride	106	112	56-140	5	0-21	
Methyl-t-Butyl Ether (MTBE)	128	132	64-136	3	0-28	
Tert-Butyl Alcohol (TBA)	117	118	27-183	1	0-60	
Diisopropyl Ether (DIPE)	128	128	78-126	0	0-16	3
Ethyl-t-Butyl Ether (ETBE)	134	137	67-133	2	0-21	3
Tert-Amyl-Methyl Ether (TAME)	130	134	63-141	3	0-21	
Ethanol	91	86	11-167	6	0-64	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

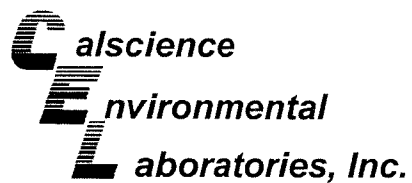
Date Received: N/A
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 11127

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-124	Aqueous	GC 4	04/30/08	05/01/08	080501B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	101	102	78-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate



Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

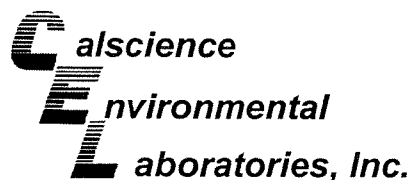
Date Received: N/A
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 11127

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-126	Aqueous	GC 4	05/02/08	05/03/08	080502B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	100	101	78-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

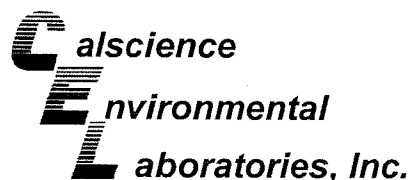
Date Received: N/A
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 11127

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-208	Aqueous	GC/MS BB	05/05/08	05/06/08	080505L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	106	87-117	4	0-7	
Carbon Tetrachloride	95	91	78-132	5	0-8	
Chlorobenzene	98	96	88-118	1	0-8	
1,2-Dibromoethane	94	96	80-120	2	0-20	
1,2-Dichlorobenzene	100	100	88-118	1	0-8	
1,1-Dichloroethene	97	92	71-131	5	0-14	
Ethylbenzene	100	98	80-120	2	0-20	
Toluene	101	104	85-127	3	0-7	
Trichloroethene	116	116	85-121	0	0-11	
Vinyl Chloride	102	97	64-136	6	0-10	
Methyl-t-Butyl Ether (MTBE)	96	111	67-133	15	0-16	
Tert-Butyl Alcohol (TBA)	98	98	34-154	0	0-19	
Diisopropyl Ether (DIPE)	103	107	80-122	4	0-8	
Ethyl-t-Butyl Ether (ETBE)	102	111	73-127	9	0-11	
Tert-Amyl-Methyl Ether (TAME)	105	110	69-135	4	0-12	
Ethanol	97	76	34-124	24	0-44	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

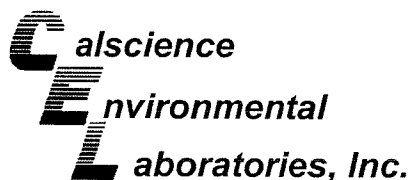
Date Received: N/A
Work Order No: 08-04-2544
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 11127

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-210	Aqueous	GC/MS Z	05/07/08	05/07/08	080507L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	110	112	87-117	2	0-7	
Carbon Tetrachloride	104	105	78-132	1	0-8	
Chlorobenzene	106	107	88-118	1	0-8	
1,2-Dibromoethane	112	115	80-120	3	0-20	
1,2-Dichlorobenzene	109	110	88-118	1	0-8	
1,1-Dichloroethene	102	103	71-131	1	0-14	
Ethylbenzene	114	114	80-120	0	0-20	
Toluene	108	110	85-127	2	0-7	
Trichloroethene	108	116	85-121	7	0-11	
Vinyl Chloride	101	103	64-136	2	0-10	
Methyl-t-Butyl Ether (MTBE)	113	111	67-133	2	0-16	
Tert-Butyl Alcohol (TBA)	96	99	34-154	4	0-19	
Diisopropyl Ether (DIPE)	118	116	80-122	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	116	114	73-127	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	120	116	69-135	3	0-12	
Ethanol	87	101	34-124	15	0-44	

RPD - Relative Percent Difference, CL - Control Limit



Glossary of Terms and Qualifiers

Work Order Number: 08-04-2544

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Chain of Custody Record

Project Name: ARCO 11127
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda > 11127
 State or Lead Regulatory Agency: _____
 Requested Due Date (mm/dd/yy): STD / TAT

2544

On-site Time: <u>0530</u>	Temp: <u>50's</u>
Off-site Time: <u>0900</u>	Temp: <u>60's</u>
Sky Conditions: <u>CLEAR</u>	
Meteorological Events: _____	
Wind Speed: _____	Direction: _____

Lab Name: <u>Cal Science</u>	BP/AR Facility No.: <u>11127</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>7440 Lincoln way</u>	BP/AR Facility Address: <u>5425 Martin Luther King Jr. Way, Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
<u>Garden Grove Ca. 92841-1427</u>	Site Lat/Long: _____	<u>Cameron Park, CA 95682</u>
Lab PM: <u>Linda Sharpenberg</u>	California Global ID No.: <u>T0600100206</u>	Consultant/Contractor Project No.: <u>E11127-04</u>
Tele/Fax: <u>714-895-5494 714-895-7501 (fax)</u>	Enfos Project No.: <u>G0D0M-0003</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or OOC (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
<u>San Ramon, CA</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail EDD To: <u>shayes@stratusinc.net</u>
Tele/Fax: <u>925-275-3506</u>	Cost Element: <u>01-Contractor labor</u>	Invoice to: <u>Atlantic Richfield Co.</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis						Sample Point Lat/Long and Comments	
				Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	Geo	BTEX	Soxy	EDB	1,2 DCA	ETHANOL		
1	MW-1	0757	3/24	X			6							X	X	X	X	X	X		
2	MW-2	0700																			
3	MW-4	0832																			
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Sampler's Name: <u>J. SHATER</u>	Relinquished By / Affiliation: <u>J. Shater / STRATUS</u>	Date: <u>4-29-08</u>	Time: <u>1300</u>	Accepted By / Affiliation: _____	Date: _____	Time: _____
Shipment Date: <u>4-29-08</u>						
Shipment Method: <u>G50</u>						
Shipment Tracking No: <u>9255051640</u>						

Special Instructions: Please cc results to rmiller@broadbentinc.com

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

PAGE 6 OF 18

Philip Sanelle

From: Sandy Hayes [shayes@stratusinc.net]
Sent: Monday, May 12, 2008 5:22 PM
To: Philip Sanelle
Subject: RE: COC for site 11127



Revised COC
11127.pdf

Philip,

The correct date is 4/29/08. Please see the revised COC attached.

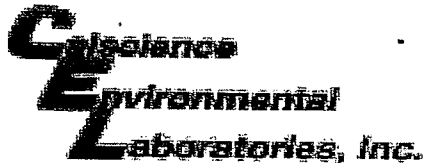
Thank you,

Sandy Hayes
Stratus Environmental, Inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682
shayes@stratusinc.net
Phone: 530.313.9964
Fax: 530.676.6005

-----Original Message-----

From: Philip Sanelle [mailto:PSanelle@calscience.com]
Sent: Monday, May 12, 2008 3:16 PM
To: Broadbent EDF (E-mail); Kiran Nagaraju (E-mail); Sandy Hayes (E-mail); Sonia Nandi (E-mail)
Subject: COC for site 11127

> > <<08-04-2544.PDF>>
> All,
> Please check date of samples on COC. It is written as 3/29/08. I believe that it should be 4/29/08. Is that correct?
> Thank you,
> Philip Sanelle
> Assistant Project Manager
> Calscience Environmental
> Laboratories, Inc.
> 7440 Lincoln Way
> Garden Grove, CA 92841-1427
> Tel.: 714-895-5494
> Fax : 714-894-7501
> PSanelle@calscience.com
>
> PRIVACY NOTICE:
> This email (and/or the documents attached to it) is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential, or exempt from disclosure under applicable Federal or State law. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone or else to arrange for the return of the documents.
> REPORT SECURITY NOTICE:
> The client or recipient of any attached analytical report is specifically prohibited from making material changes to said report and, to the extent



WORK ORDER #: 08 - 04 - 2544

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Skrabus

DATE: 4/30/08

TEMPERATURE - SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

LABORATORY (Other than Calscience Courier):

- Chilled, cooler with temperature blank provided.
Chilled, cooler without temperature blank.
Chilled and placed in cooler with wet ice.
Ambient and placed in cooler with wet ice.
Ambient temperature.
C Temperature blank.

- 3.6 C Temperature blank.
C IR thermometer.
Ambient temperature.

Initial: JP

CUSTODY SEAL INTACT:

Sample(s): Cooler: [checked] No (Not Intact): Not Present:

Initial: JP

SAMPLE CONDITION:

Table with 4 columns: Item, Yes, No, N/A. Rows include Chain-Of-Custody document(s), Sampler's name indicated on COC, Sample container label(s), Sample container(s) intact and good condition, Correct containers and volume for analyses requested, Proper preservation noted on sample label(s), VOA vial(s) free of headspace, Tedlar bag(s) free of condensation.

Initial: JP

COMMENTS:

Blank lines for handwritten comments.

ATTACHMENT

FIELD PROCEDURES FOR GROUNDWATER SAMPLING

The sampling procedures for groundwater monitoring events are contained in this appendix.

Equipment Calibration

Standard groundwater sampling equipment – pH/Conductivity/Temperature meter, and dissolved oxygen (DO) meters are calibrated prior to all field work. All calibration is conducted in accordance with equipment manufacturer's recommended procedure and buffer solutions. MSDS for all buffer solutions are maintained in Stratus vehicles. Calibration is completed everyday prior to field work and also once a week. The pH probe is calibrated for a pH of 7.0 daily and for 4.0, 7.0 and 10.0 weekly. The conductivity probe is calibrated for 1413 μs daily and 1413 μs and 447 μs weekly. The temperature probe is calibrated weekly with a NIST-traceable thermometer. The DO probe is calibrated for 100% oxygen daily and 0% and 100% oxygen weekly. All calibration logs are maintained in the Stratus office.

Groundwater and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

Prior to measuring the depth to liquid in the well, the well caps are removed and the liquid level allowed to stabilize. A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the groundwater depth in monitoring wells that do not contain LPH. Depth to groundwater or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typically a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Groundwater

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Sampling

In many cases, determining whether to purge or not to purge wells prior to sample collection is made in the field and is often based on depth to water relative to the screen interval of the well. Site-specific field data sheets present details associated with the purge method and equipment used.

Monitoring wells, when purged, use a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water has been removed. Field measuring equipment is calibrated and maintained according to the manufacturer's instructions. If three well volumes cannot be removed in one half hour's time the well is allowed to recharge to 80% of original level. After recharging, a groundwater sample is then collected from each of the wells using disposable bailers.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These bottles will be filled completely to prevent air accumulation in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Groundwater Sample Labeling and Preservation

Samples are collected in appropriate containers supplied by the laboratory. All required chemical preservation is added to the bottles prior to delivery to Stratus. Sample label information includes a unique sample identification number, job identification number, date, and time. After labeling, all groundwater samples are placed in a Ziploc[®] type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip and temperature blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and

contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

Equipment Cleaning

All reusable sampling equipments are cleaned using phosphate-free detergents and rinsed with de-ionized water.

APPENDIX B

BP OIL COMPANY GROUNDWATER MONITORING REPORT, 16 DECEMBER 1996



BP OIL

BP Oil Company
Environmental Resources Management
Building 13, Suite N
295 SW 41st Street
Renton, Washington 98055-4931
(206) 251-0667
Fax No: (206) 251-0736

December 16, 1996

Alameda County Health Care Services Agency
Attention Ms. Susan L. Hugo - Senior Hazardous Materials Specialist
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

RE: BP Oil Site No. 11127
5425 Martin Luther King, Jr. Way
Oakland, CA 94609
STID# 3105

ENVIRONMENTAL
PROTECTION
96 DEC 27 PM 3:03

Dear Ms. Hugo:

This letter transmits a report titled Groundwater Monitoring and Sampling Report, dated October 22, 1996. You may recall that we have been sampling this site on a semi-annual basis per BP's February 2, 1993 letter to Rafat Shahid and Eddy So.

The enclosed report summarizes chemical data obtained from the monitoring wells since 1991. Upon review of the results reported in the enclosed report, you will note that fuel constituents (TPH-G, TPH-D, benzene, ethylbenzene, toluene, xylenes) and chlorinated solvents were not detected in any of the samples submitted for laboratory analysis. Figure 2, Potentiometric Groundwater Elevation Contour Map, shows a northwesterly direction of groundwater flow.

You will recall that BP performed this sampling event to provide the information you requested to close this site. This letter, therefore, serves as a request for a finding for "no further action" and "case closure". I understand that further monitoring and sampling will not be required at this time, and we will remove or destroy the monitoring wells upon confirmation that a closure letter is forthcoming.

Please give me a call if you have any further comments or questions. I can be reached at (206) 251-0689.

Sincerely,

Scott Hooton
Environmental Remediation Management

attachment

cc: site file
B. Nagle - AEG
CRWQCB-SFBR, Attention Mr. K. Graves, 2101 Webster Street, Ste. 500, Oakland, CA 94612

GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11127
5425 Martin Luther King, Jr. Way
Oakland, California

Project No. 10-022-06-001

Prepared for:

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

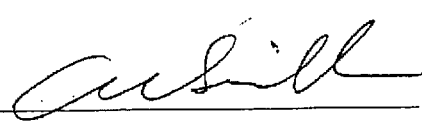
Prepared by:

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

October 22, 1996



Ken Simas
Project Manager



Al Sevilla, P.E.
Principal



GROUNDWATER MONITORING AND SAMPLING REPORT

BP Oil Company Service Station No. 11127
5425 Martin Luther King, Jr. Way
Oakland, California

Project No. 10-022-06-001

October 22, 1996

INTRODUCTION

This report presents the results and findings of the July 23, 1996 groundwater monitoring and sampling conducted by Alisto Engineering Group at BP Oil Company Service Station No. 11127, 5425 Martin Luther King, Jr. Way, Oakland, 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.

Groundwater monitoring was performed concurrently at the neighboring Chevron service station, 5509 Martin Luther King, Jr. Way. The results are presented in Table 3.

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 Tables 1 and 2. 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. 11127
 5425 MARTIN LUTHER KING, JR. WAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-022

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)	TOG (ug/l)	MTBE (ug/l)	DO (ppm)	LAB
MW-4	11/12/92	82.70	10.44	72.26	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-4	02/05/93	82.70	9.14	73.56	92	---	0.7	ND<0.5	ND<0.5	1.2	---	---	---	PACE
MW-4	08/16/93	82.70	10.57	72.13	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-1 (c)	08/16/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-4	03/14/94	82.70	9.70	73.00	220	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
MW-4	12/15/94	82.70	8.39	74.31	---	---	---	---	---	---	---	---	---	---
MW-4	07/06/95	82.70	10.03	72.67	---	---	---	---	---	---	---	---	---	---
MW-4	01/17/96	82.70	8.67	74.03	---	---	---	---	---	---	---	---	---	---
MW-4	01/19/96	---	---	---	71	---	2.6	ND<0.50	ND<0.50	ND<1.0	---	170	7.0	ATI
QC-1 (c)	01/19/96	---	---	---	68	---	2.4	ND<0.50	ND<0.50	ND<1.0	---	200	7.0	ATI
MW-4	07/23/96	82.70	10.27	72.43	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	---	ND<10	7.5	SPL
QC-1 (c)	07/23/96	---	---	---	ND<50	---	ND<0.5	ND<1	ND<1	ND<1	---	ND<10	---	SPL
QC-2 (e)	09/03/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	ANA
QC-2 (e)	11/12/92	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (e)	02/05/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (e)	08/16/93	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (e)	03/14/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (e)	12/15/94	---	---	---	ND<50	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	---	PACE
QC-2 (e)	07/06/95	---	---	---	ND<50	---	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	---	ATI
QC-2 (e)	01/19/96	---	---	---	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
 TOG Total oil and grease
 MTBE Methyl tert butyl ether
 DO Dissolved oxygen
 ug/l Micrograms per liter
 ppm Parts per million
 ND Not detected above reported detection limit
 --- Not analyzed/applicable/measured
 SUP Superior Analytical Laboratory
 ANA Anametrix, Inc.
 PACE Pace, Inc.
 ATI Analytical Technologies, Inc.
 SPL Southern Petroleum Laboratories

NOTES:

- (a) Top of casing elevations surveyed in reference to the City of Oakland Benchmark No. 1967, on the curb at the southwest corner of Martin Luther King, Jr. Way and 55th Street.
 (b) Groundwater elevations in feet above mean sea level.
 (c) Blind duplicate.
 (d) A sheen of unknown origin was observed before groundwater purging.
 (e) Travel blank.

TABLE 2 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
 BP OIL COMPANY SERVICE STATION NO. 11127
 5425 MARTIN LUTHER KING, JR. WAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-022

WELL ID	DATE OF SAMPLING/ MONITORING	1,1-DCA (ug/l)	1,2-DCA (ug/l)	1,1-DCE (ug/l)	1,1,1-TCA (ug/l)	PCE (ug/l)	Chloroform (ug/l)	LAB
MW-1	08/29/91	--	--	--	--	--	--	--
MW-1	11/20/91	--	--	--	--	--	--	--
MW-1	02/28/92	--	--	--	--	--	--	SUP
MW-1	06/08/92	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-1	09/03/92	--	--	--	--	--	--	ANA
MW-1	11/12/92	--	--	--	--	--	--	PACE
MW-1	02/05/93	--	--	--	--	--	--	PACE
MW-1	08/16/93	--	--	--	--	--	--	PACE
MW-1	03/14/94	--	--	--	--	--	--	PACE
MW-1	12/15/94	--	--	--	--	--	--	--
MW-1	07/06/95	--	--	--	--	--	--	--
MW-1	01/19/96	--	--	--	--	--	--	ATI
MW-2	08/29/91	ND	ND	ND	ND	ND	--	--
MW-2	11/20/91	ND	0.8	ND	0.7	ND	--	--
MW-2	02/28/92	ND	ND	ND	4.1	ND	--	SUP
MW-2	06/08/92	6.6	ND<0.5	ND<0.5	4.2	ND<0.5	--	ANA
MW-2	09/03/92	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	--	ANA
MW-2	11/12/92	ND<0.5	0.5	ND<0.5	ND<0.5	ND<0.5	--	PACE
MW-2	02/05/93	ND<0.5	0.9	ND<0.5	8.3	ND<0.5	--	PACE
MW-2	08/16/93	--	--	--	--	--	--	PACE
MW-2	03/14/94	0.8	0.7	ND	1.3	ND	--	PACE
MW-2	12/15/94	ND<0.5	ND<0.5	ND<0.5	4.8	ND<0.5	2.3	PACE
MW-2	07/06/95	0.28	0.24	ND	0.47	ND	ND<0.20	ATI
MW-2	01/19/96	1.3	ND<0.20	0.65	18	0.42	ND<0.20	ATI
MW-2	07/23/96	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	SPL

ABBREVIATIONS:

1,1-DCA	1,1-Dichloroethane
1,2-DCA	1,2-Dichloroethane
1,1-DCE	1,1-Dichloroethene
1,1,1-TCA	1,1,1-Trichloroethane
PCE	Tetrachloroethene
ug/l	Parts per billion
ND	Not detected above reported detection limit
--	Not analyzed/applicable/measured
SUP	Superior Analytical Laboratory
ANA	Anametrix, Inc.
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories

TABLE 3 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING
 CHEVRON STATION 9-1583
 5509 MARTIN LUTHER KING, JR. WAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-022

WELL ID	DATE OF MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)
MW-1	07/23/96	72.19	10.23	---	61.96
MW-2	07/23/96	72.57	10.91	---	61.66
MW-3	07/23/96	72.38	12.00	---	60.38
MW-4	07/23/96	70.86	13.39	---	57.47
MW-5	07/23/96	72.25	9.70	---	62.55
MW-6	07/23/96	71.86	8.74	---	63.12
MW-7	07/23/96	74.57	11.79	---	62.78
MW-8	07/23/96	74.56	11.37	---	63.19

(a) Casing elevations survey to the nearest 0.01 foot relative to mean sea level.

(b) Groundwater elevations adjusted assuming a specific gravity of 0.75 for free product.

Source: Groundwater data collected by Blaine Tech Services, Inc.



SOURCE:
 USGS MAP, OAKLAND WEST QUADRANGLE,
 CALIFORNIA. 7.5 MINUTE SERIES, 1959.
 PHOTOREVISED 1980.

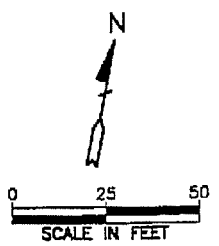
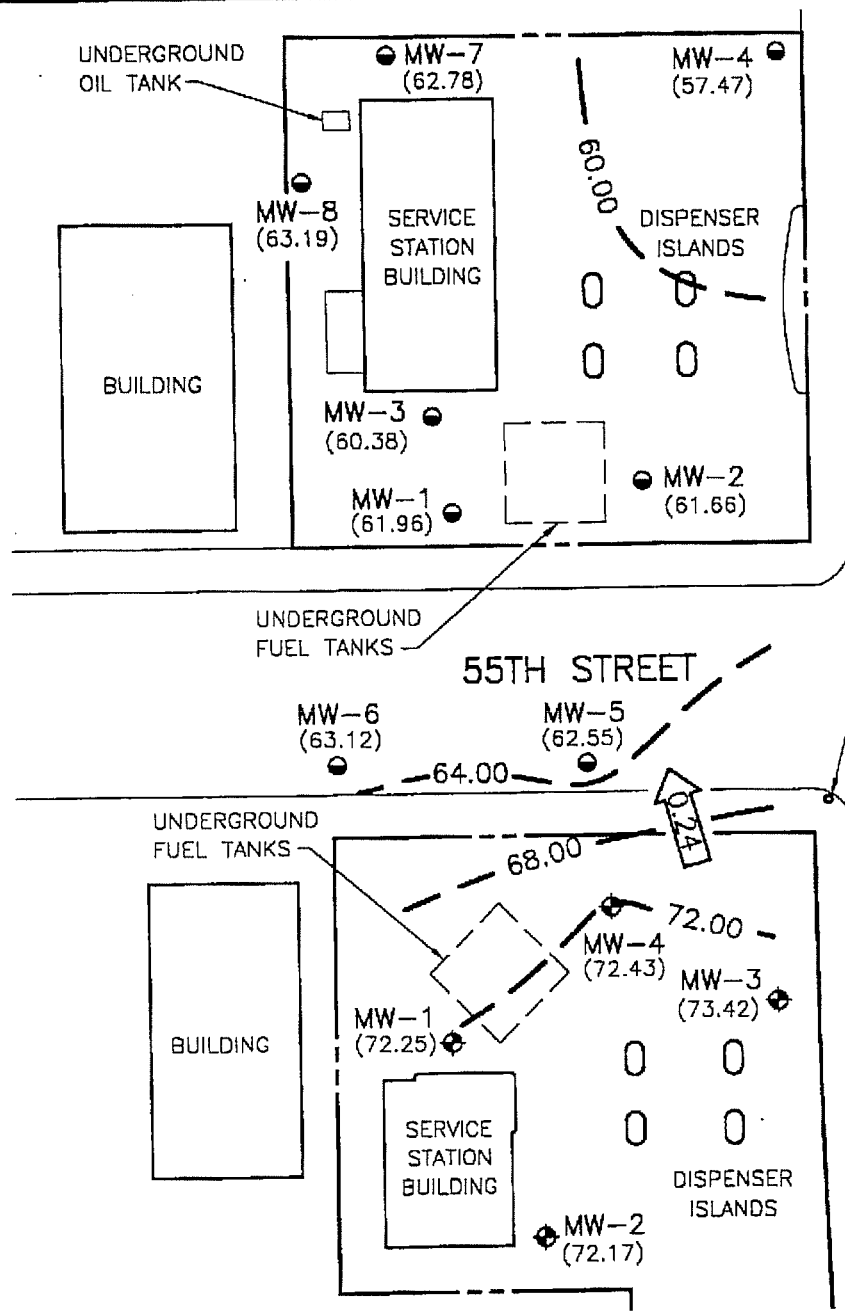
FIGURE 1

SITE VICINITY MAP

BP OIL SERVICE STATION NO. 11127
 5425 MARTIN LUTHER KING, JR. WAY
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-022



ALISTO ENGINEERING GROUP
 WALNUT CREEK, CALIFORNIA



MARTIN LUTHER KING, JR. WAY

LEGEND

- ⊕ GROUNDWATER MONITORING WELL
- CHEVRON GROUNDWATER MONITORING WELL
- (62.55) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 64.00 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL-4.00 FEET)
- ← 0.24 ← CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

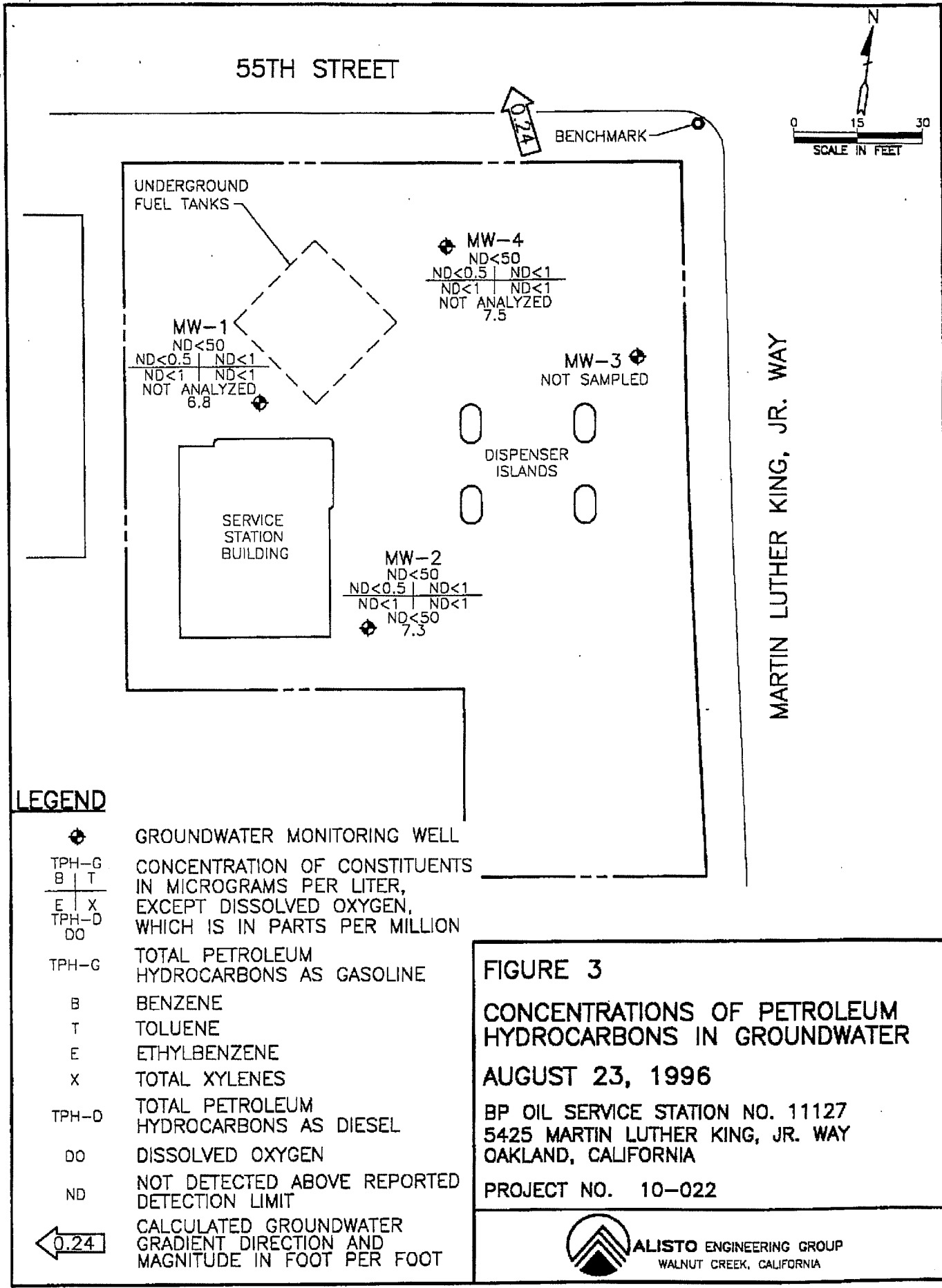
FIGURE 2
POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP

AUGUST 23, 1996

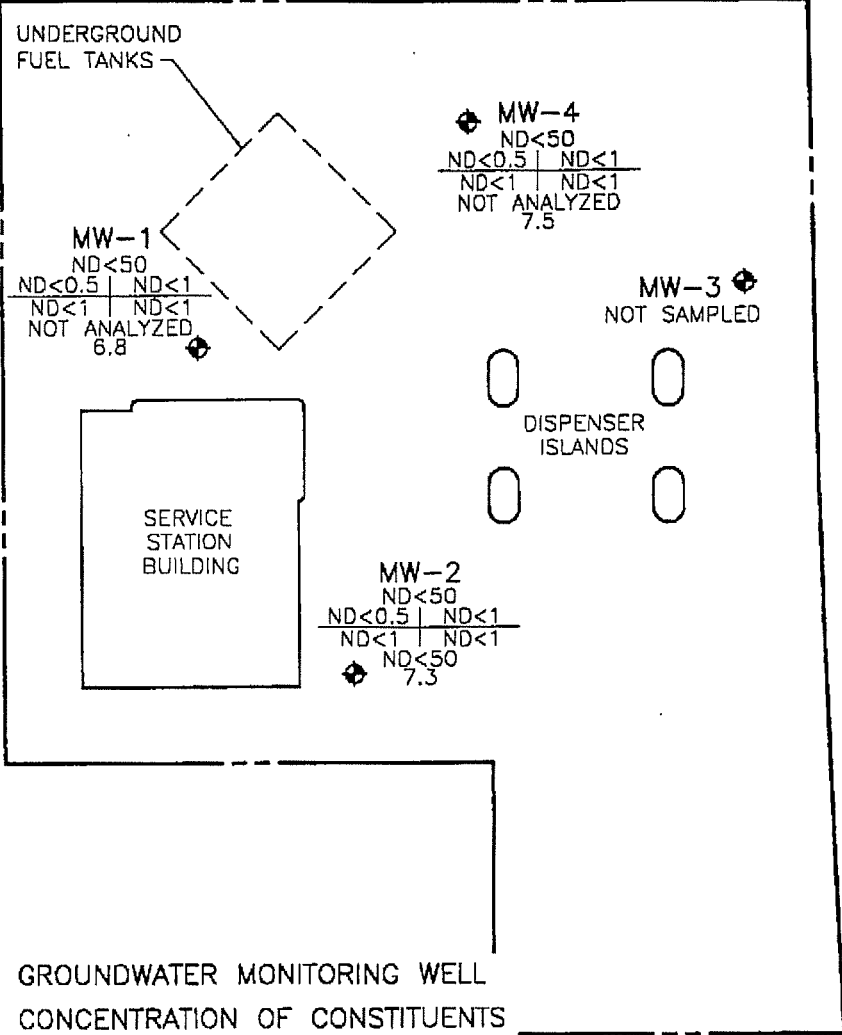
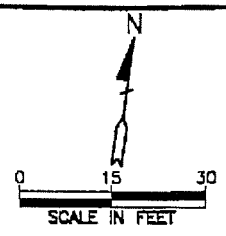
BP OIL SERVICE STATION NO. 11127
5425 MARTIN LUTHER KING, JR. WAY
OAKLAND, CALIFORNIA

PROJECT NO. 10-022





55TH STREET



MARTIN LUTHER KING, JR. WAY

LEGEND

- ◆ GROUNDWATER MONITORING WELL
- TPH-G
B | T
E | X
TPH-D
DO
TPH-G
B
T
E
X
TPH-D
DO
ND
← 0.24
- CONCENTRATION OF CONSTITUENTS IN MICROGRAMS PER LITER, EXCEPT DISSOLVED OXYGEN, WHICH IS IN PARTS PER MILLION
- TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- BENZENE
- TOLUENE
- ETHYLBENZENE
- TOTAL XYLENES
- TOTAL PETROLEUM HYDROCARBONS AS DIESEL
- DISSOLVED OXYGEN
- NOT DETECTED ABOVE REPORTED DETECTION LIMIT
- CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

FIGURE 3
CONCENTRATIONS OF PETROLEUM HYDROCARBONS IN GROUNDWATER
AUGUST 23, 1996
 BP OIL SERVICE STATION NO. 11127
 5425 MARTIN LUTHER KING, JR. WAY
 OAKLAND, CALIFORNIA
 PROJECT NO. 10-022



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. 10-022-06-001

Address 5425 M.L.King Jr. Blvd.

Contract No. Pending

Station No. BP 11127

Date: 7/23/96

Day: MOWTH F

City: Oakland

Sampler: LB

DEPTH TO GROUNDWATER SUMMARY

WELL ID	SAMPLE ID	WELL DIAM	TOTAL DEPTH	DEPTH TO WATER	PRODUCT THICKNESS	TIME MONITORED	COMMENTS:
MW-1	S-2	4"	27.55	10.10	Ø	0910	S-2
MW-2	S-1	↓	26.81	11.31	↓	0903	S-1
MW-3	NIS	↓	N/A	11.54	↓	0916	Not sampled
MW-4	S-3	2"	24.75	10.27	↓	0913	Qc-1 taken from this well (S-4)

FIELD INSTRUMENT CALIBRATION DATA

pH METER ^{Aqua check} 4.00 4 7.00 7 10.00 10 TEMPERATURE COMPENSATED N TIME 0900 WEATHER clear

D.O. METER ^{Aqua check} ZERO d.O. SOLUTION 0 BAROMETRIC PRESSURE 760 TEMP 66

CONDUCTIVITY METER ^{Aqua check} 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-2	11.31	4"	OK	Ø	Y <input checked="" type="radio"/>	10	0922	69.7	7.47	910 µS	7.0
Total Depth - Water Level =						20		69.0	7.20	883 µS	
x Well Vol. Factor =						30.5	0936	68.7	7.14	876 µS	7.3
x #vol. to Purge Purge Vol.						26.81 - 11.31 = 15.50 x .65 = 10.08 x 3 = 30.24					
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODisp. Tube <input type="checkbox"/> OWinch <input type="checkbox"/> ODisp. Baller(s) <input type="checkbox"/> OSys Port											
Comments:											0941

- EPA 601 HCL
- TPH-G/BTEX HCL
- TPH Diesel HCL
- TOG 5520 HCL

ALISTO

Field Report / Sampling Data Sheet

ENGINEERING

Project No. 10-022-06-001

Date: 7/23/96

GROUP

Address 5425 M.L.King Jr. Blvd.

Day: MON TH F

1575 TREAT BOULEVARD, SUITE 201
WALNUT CREEK CA 94598 (510) 295-1650 FAX 295-1823

Contract No. Pending

City: Oakland

Station No. BP 11127

Sampler: WB

Well ID	Depth to Water	Diam	Cap/Lock	Product	Depl	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	<input type="radio"/> EPA 601 _____ <input checked="" type="radio"/> TPH-G/BTEX <u>Hcl</u> <input type="radio"/> TPH Diesel _____ <input type="radio"/> TOG 5520 _____ TIME/SAMPLE ID <u>1025</u>
MW-1	10.10	4"	OK	Ø	Y	Ⓜ	12	0953	71.9	7.72	1.2ms	6.4	
Total Depth - Water Level=							24		70.3	7.43	1.14ms		
27.55 - 10.10 = 17.45 x .65 = 11.34 x 3 = 34.02							34.5	1017	70.0	7.36	1.06ms	6.8	
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODIsP.Tube <input type="checkbox"/> OWInch <input type="checkbox"/> ODIsP. Baller(s) <input type="checkbox"/> OSys Port													
Comments:													

Well ID	Depth to Water	Diam	Cap/Lock	Product	Depl	Iridescence	Gal.	Time	Temp *F	pH	E.C.	D.O.	<input type="radio"/> EPA 601 _____ <input checked="" type="radio"/> TPH-G/BTEX <u>Hcl</u> <input type="radio"/> TPH Diesel _____ <input type="radio"/> TOG 5520 _____ TIME/SAMPLE ID <u>1044</u>
MW-4	10.27	2"	OK	Ø	Y	Ⓜ	2	1034	71.4	7.67	963ms	6.4	
Total Depth - Water Level=							4		70.5	7.30	934ms		
24.75 - 10.27 = 14.48 x .16 = 2.32 x 3 = 6.96							7	1042	69.9	7.24	926ms	7.5	
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> ODIsP.Tube <input type="checkbox"/> OWInch <input type="checkbox"/> ODIsP. Baller(s) <input type="checkbox"/> OSys Port													
Comments: <u>AC-1 (3-4) from this well</u>													

APPENDIX B

LABORATORY REPORT AND CHAIN OF CUSTODY RECORD



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

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-07-B95

Approved for Release by:

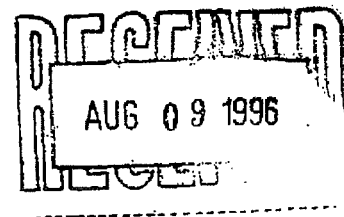


Ed Fry, Project Manager

8/5/96
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. H9-9607B95-01

Alisto Engineering
 1575 Treat Blvd.
 Walnut Creek, CA 94598
 ATTN: Brady Nagle

P.O.#
 G-797421, COC#082709
 DATE: 08/05/96

PROJECT: BP Oil #11127
 SITE: Oakland, CA.
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-1

PROJECT NO: 10-022-6-1
 MATRIX: WATER
 DATE SAMPLED: 07/23/96
 DATE RECEIVED: 07/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	18	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1 P	µg/L
Ethylbenzene	ND	1 P	µg/L
Total Xylene	ND	1 P	µg/L

Surrogate % Recovery
 1,4-Difluorobenzene 83
 4-Bromofluorobenzene 100

METHOD 8020***

Analyzed by: SB

Date: 07/30/96

Total Petroleum Hydrocarbons-Gasoline ND 0.05 P mg/L

Surrogate % Recovery
 1,4-Difluorobenzene 110
 4-Bromofluorobenzene 107

CA LUFT - Gasoline

Analyzed by: SB

Date: 07/30/96 07:08:00

Total Petroleum Hydrocarbons-Diesel ND 0.050 P mg/L

Surrogate % Recovery
 o-Terphenyl 81
 2-Fluorobiphenyl 78

CA LUFT - Diesel

Analyzed by: RR

Date: 07/30/96 07:46:00

(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. H9-9607B95-01

Alisto Engineering
 1575 Treat Blvd.
 Walnut Creek, CA 94598
 ATTN: Brady Nagle

P.O.#
 G-797421, COC#082709
 DATE: 08/05/96

PROJECT: BP Oil #11127
 SITE: Oakland, CA.
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-1

PROJECT NO: 10-022-6-1
 MATRIX: WATER
 DATE SAMPLED: 07/23/96
 DATE RECEIVED: 07/25/96

PARAMETER	ANALYTICAL DATA	RESULTS	DETECTION LIMIT	UNITS
Liquid-liquid extraction METHOD 3510B *** Analyzed by: LD Date: 07/26/96 12:00:00		07/26/96		
Hydrocarbons by Gravimetry Method 5520 B & F ** Analyzed by: MF Date: 08/02/96 12:00:00		ND	0.5	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



Certificate of Analysis No. H9-9607B95-01

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 860-0901

Alisto Engineering
1575 Treat Blvd.
Walnut Creek, CA 94598
ATTN: Brady Nagle

P.O.#
G-797421, COC#082709
08/05/96

PROJECT: BP Oil #11127
SITE: Oakland, CA.
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-1

PROJECT NO: 10-022-6-1
MATRIX: WATER
DATE SAMPLED: 07/23/96
DATE RECEIVED: 07/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Dichlorodifluoromethane	ND	1	µg/L
Chloromethane	ND	1	µg/L
Vinyl chloride	ND	1	µg/L
Bromomethane	ND	1	µg/L
Chloroethane	ND	1	µg/L
Trichlorofluoromethane	ND	1	µg/L
1,1-Dichloroethene	ND	1	µg/L
Methylene chloride	ND	1	µg/L
Trans-1,2-Dichloroethene	ND	1	µg/L
1,1-Dichloroethane	ND	1	µg/L
Chloroform	ND	1	µg/L
1,1,1-Trichloroethane	ND	1	µg/L
Carbon tetrachloride	ND	1	µg/L
1,2-Dichloroethane	ND	1	µg/L
2-Chloroethylvinyl ether	ND	1	µg/L
Trichloroethene	ND	1	µg/L
1,2-Dichloropropane	ND	1	µg/L
Bromodichloromethane	ND	1	µg/L
cis-1,3-Dichloropropene	ND	1	µg/L
trans-1,3-Dichloropropene	ND	1	µg/L
1,1,2-Trichloroethane	ND	1	µg/L
Tetrachloroethene	ND	1	µg/L
Dibromochloromethane	ND	1	µg/L
Chlorobenzene	ND	1	µg/L
Bromoform	ND	1	µg/L
1,1,2,2-Tetrachloroethane	ND	1	µg/L
1,3-Dichlorobenzene	ND	1	µg/L
1,4-Dichlorobenzene	ND	1	µg/L
1,2-Dichlorobenzene	ND	1	µg/L

METHOD: 601, Halogenated Volatile Organics
(continued on next page)



Certificate of Analysis No. H9-9607B95-01

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

Alisto Engineering

SAMPLE ID: S-1

SURROGATES
1-Chloro-2-Fluorobenzene

% RECOVERY
87

ANALYZED BY: DAO

DATE/TIME: 08/01/96 03:51:00

METHOD: 601, Halogenated 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.
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HOUSTON LABORATORY
 8880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9607B95-02

Alisto Engineering
 1575 Treat Blvd.
 Walnut Creek, CA 94598
 ATTN: Brady Nagle

P.O.#
 G-797421, COC#082709
 DATE: 08/05/96

PROJECT: BP Oil #11127
 SITE: Oakland, CA.
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-2

PROJECT NO: 10-022-6-1
 MATRIX: WATER
 DATE SAMPLED: 07/23/96
 DATE RECEIVED: 07/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	480	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1 P	µg/L
Ethylbenzene	ND	1 P	µg/L
Total Xylene	ND	1 P	µg/L
Surrogate		% Recovery	
1,4-Difluorobenzene		83	
4-Bromofluorobenzene		97	
METHOD 8020***			
Analyzed by: RL			
Date: 07/30/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate		% Recovery	
1,4-Difluorobenzene		110	
4-Bromofluorobenzene		80	
CA LUFT - Gasoline			
Analyzed by: RL			
Date: 07/30/96 09:17:00			

(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
 6880 INTERCHANGE DRIVE
 HOUSTON, TEXAS 77054
 PHONE (713) 660-0901

Certificate of Analysis No. H9-9607B95-03

Alisto Engineering
 1575 Treat Blvd.
 Walnut Creek, CA 94598
 ATTN: Brady Nagle

P.O.#
 G-797421, COC#082709
 DATE: 08/05/96

PROJECT: BP Oil #11127
 SITE: Oakland, CA.
 SAMPLED BY: Alisto Engineering
 SAMPLE ID: S-3

PROJECT NO: 10-022-6-1
 MATRIX: WATER
 DATE SAMPLED: 07/23/96
 DATE RECEIVED: 07/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1 P	µg/L
Ethylbenzene	ND	1 P	µg/L
Total Xylene	ND	1 P	µg/L
Surrogate		% Recovery	
1,4-Difluorobenzene		80	
4-Bromofluorobenzene		97	
METHOD 8020***			
Analyzed by: SB			
Date: 07/30/96			
Total Petroleum Hydrocarbons-Gasoline	ND	0.05 P	mg/L
Surrogate		% Recovery	
1,4-Difluorobenzene		103	
4-Bromofluorobenzene		77	
CA LUFT - Gasoline			
Analyzed by: SB			
Date: 07/30/96 02:43:00			

ND - Not detected.

(P) - Practical Quantitation Limit

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

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
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Certificate of Analysis No. H9-9607B95-04

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

Alisto Engineering
1575 Treat Blvd.
Walnut Creek, CA 94598
ATTN: Brady Nagle

P.O.#
G-797421, COC#082709
DATE: 08/05/96

PROJECT: BP Oil #11127
SITE: Oakland, CA.
SAMPLED BY: Alisto Engineering
SAMPLE ID: S-4

PROJECT NO: 10-022-6-1
MATRIX: WATER
DATE SAMPLED: 07/23/96
DATE RECEIVED: 07/25/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
MTBE	ND	10 P	µg/L
Benzene	ND	0.5 P	µg/L
Toluene	ND	1 P	µg/L
Ethylbenzene	ND	1 P	µg/L
Total Xylene	ND	1 P	µg/L

Surrogate

% Recovery

1,4-Difluorobenzene
4-Bromofluorobenzene

83
97

METHOD 8020***

Analyzed by: RL

Date: 07/30/96

Total Petroleum Hydrocarbons-Gasoline

ND 0.05 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
4-Bromofluorobenzene

103
80

CA LUFT - Gasoline

Analyzed by: RL

Date: 07/30/96 08:47:00

ND - Not detected.

(P) - Practical Quantitation Limit

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

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

QUALITY CONTROL

DOCUMENTATION



Batch Id: HP_J960729024800

Units: µg/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	43	86.0	20 - 110
Benzene	ND	50	40	80.0	62 - 121
Toluene	ND	50	41	82.0	66 - 136
EthylBenzene	ND	50	43	86.0	70 - 136
O Xylene	ND	50	47	94.0	74 - 134
M & P Xylene	ND	100	82	82.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
MTBE	ND	20	29	145	29	145	0	20	39 - 150
BENZENE	200	20	190	NC	190	NC	NC	25	39 - 150
TOLUENE	140	20	130	NC	130	NC	NC	26	56 - 134
ETHYLBENZENE	6.5	20	26	97.5	25	92.5	5.26	38	61 - 128
O XYLENE	75	20	84	45.0	81	30.0 *	40.0 *	29	40 - 130
M & P XYLENE	86	40	110	60.0	100	35.0 *	52.6 *	20	43 - 152

Analyst: SB

Sequence Date: 07/29/96

SPL ID of sample spiked: 9607A38-07A

Sample File ID: J_H6117.TX0

Method Blank File ID:

Blank Spike File ID: J_H6107.TX0

Matrix Spike File ID: J_H6110.TX0

Matrix Spike Duplicate File ID: J_H6111.TX0

* - Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

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

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

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

(**) = Source: SPL-Houston Historical Data (4th Q '95)

(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9607A68-08A 9607A38-06A 9607A38-07A 9607A68-02A
 9607A68-03A 9607A68-04A 9607A68-01A 9607A35-07A
 9607A35-08A 9607A35-10A 9607A38-05A 9607A68-06A
 9607A68-07A 9607B97-03A 9607B97-04A 9607B97-02A
 9607B97-05A 9607B97-06A 9607B95-01A

QC Officer



Batch Id: HP_J960730102600

Units: µg/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	53	106	20 - 110
Benzene	ND	50	52	104	62 - 121
Toluene	ND	50	53	106	66 - 136
EthylBenzene	ND	50	51	102	70 - 136
O Xylene	ND	50	59	118	74 - 134
M & P Xylene	ND	100	100	100	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative ‡ Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
			MTBE	ND	20	29		145	28
BENZENE	ND	20	22	110	23	115	4.44	25	39 - 150
TOLUENE	ND	20	22	110	22	110	0	26	56 - 134
ETHYLBENZENE	ND	20	21	105	21	105	0	38	61 - 128
O XYLENE	ND	20	23	115	22	110	4.44	29	40 - 130
M & P XYLENE	ND	40	40	100	39	97.5	2.53	20	43 - 152

Analyst: RL

Sequence Date: 07/30/96

SPL ID of sample spiked: 9607B95-03A

Sample File ID: J_H6148.TX0

Method Blank File ID:

Blank Spike File ID: J_H6143.TX0

Matrix Spike File ID: J_H6151.TX0

Matrix Spike Duplicate File ID: J_H6152.TX0

* = Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

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

LCS ‡ Recovery = (<1> / <3>) x 100

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

(**) = Source: SPL-Houston Historical Data (4th Q '95)

(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9607A68-05A 9607B95-04A 9607B95-02A 9607B97-08A
 9607B97-09A 9607A35-09A 9607A35-07A 9607D17-03A
 9607B97-07A 9607D17-02A 9607D17-01A 9607B98-07A
 9607B98-04A 9607B98-01A 9607B97-01A 9607B95-03A

QC Officer



Batch Id: HP_J960729034700

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 ‡	
Petroleum Hydrocarbons-Gas	ND	1.0	0.89	89.0	50 - 150

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
			PETROLEUM HYDROCARBONS-GAS	ND	0.9	0.82			

Analyst: SB

Sequence Date: 07/29/96

SPL ID of sample spiked: 9607A38-06A

Sample File ID: JJH6116.TX0

Method Blank File ID:

Blank Spike File ID: JJH6109.TX0

Matrix Spike File ID: JJH6112.TX0

Matrix Spike Duplicate File ID: JJH6113.TX0

* = Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

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

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

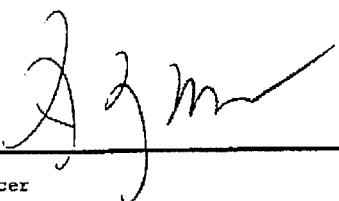
Relative Percent Difference = $|(<4> - <5> | / [(<4> + <5>) \times 0.5] \times 100$

(**) = Source: Temporary Limits

(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID):

9607A68-08A 9607A38-06A 9607A68-02A 9607A68-03A
 9607A68-04A 9607A68-01A 9607A35-07A 9607A35-08A
 9607A35-10A 9607A38-05A 9607A68-06A 9607A68-07A
 9607B97-03A 9607B97-04A 9607B97-02A 9607B97-05A
 9607B97-06A 9607B95-01A 9607A38-07A


 QC Officer



Batch Id: HP_J960730122100

Units: mg/L

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Petroleum Hydrocarbons-Gas	ND	1.0	0.92	92.0	50 - 150

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
			PETROLEUM HYDROCARBONS-GAS	ND	0.9	0.79	87.8	0.78	86.7

Analyst: RL

Sequence Date: 07/30/96

SPL ID of sample spiked: 9607B97-01A

Sample File ID: JJH6147.TX0

Method Blank File ID:

Blank Spike File ID: JJH6144.TX0

Matrix Spike File ID: JJH6153.TX0

Matrix Spike Duplicate File ID: JJH6154.TX0

* = Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

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

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

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

(**) = Source: Temporary Limits

(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID):

9607A68-05A 9607B95-04A 9607B95-02A 9607B97-09A
 9607A35-09A 9607A35-07A 9607D17-03A 9607B97-07A
 9607D17-02A 9607D17-01A 9607B98-07A 9607B98-04A
 9607B98-01A 9607B97-08A 9607B97-01A 9607B95-03A

QC Officer



Mod. 8015 - Diesel

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

Batch Id: HPTT960730040000

Units: mg/L

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Diesel Petr. Hydrocarbons	ND	5.0	4.75	95.0	20 - 130

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
			DIESEL PETR. HYDROCARBONS	ND	5.0	4.93	97.2	4.94	97.4

Analyst: RR

* = Values Outside QC Range

Sequence Date: 07/30/96

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

SPL ID of sample spiked: 9607860-04B

ND = Not Detected/Below Detection Limit

Sample File ID: TT_202.TX0

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

Method Blank File ID:

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

Blank Spike File ID: TT_267.TX0

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

Matrix Spike File ID: TT_203.TX0

(**) = Source: SPL-Houston Historical Data (2nd Q '94)

Matrix Spike Duplicate File ID: TT_204.TX0

(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9607860-04B 9607A64-04C 9607A64-05C 9607B95-01B
 9607B97-03D 9607A64-06C

QC Officer



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

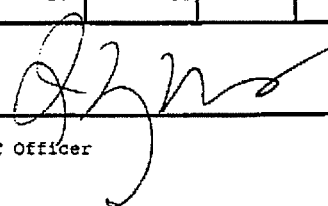
Batch Id: HP_F960731073900

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 %	
Dichlorodifluoromethane	ND	20	21	105	1 - 200
Chloromethane	ND	20	24	120	1 - 193
Vinyl chloride	ND	20	20	100	28 - 163
Bromomethane	ND	20	22	110	1 - 144
Chloroethane	ND	20	21	105	46 - 137
Trichlorofluoromethane	ND	20	19	95.0	21 - 156
1,1-Dichloroethene	ND	20	20	100	28 - 167
Methylene chloride	ND	20	19	95.0	25 - 162
Trans-1,2-Dichloroethene	ND	20	21	105	38 - 155
1,1-Dichloroethane	ND	20	22	110	34 - 132
Chloroform	ND	20	23	115	49 - 133
1,1,1-Trichloroethane	ND	20	23	115	41 - 138
Carbon tetrachloride	ND	20	24	120	43 - 143
1,2-Dichloroethane	ND	20	22	110	51 - 147
2-Chloroethylvinyl ether	ND	20	23	115	14 - 186
Trichloroethene	ND	20	20	100	35 - 146
1,2-Dichloropropane	ND	20	22	110	44 - 156
Bromodichloromethane	ND	20	23	115	42 - 172
cis-1,3-Dichloropropene	ND	20	25	125	22 - 178
trans-1,3-Dichloropropene	ND	20	22	110	33 - 178
1,1,2-Trichloroethane	ND	20	22	110	39 - 136
Tetrachloroethene	ND	20	21	105	26 - 162
Dibromochloromethane	ND	20	23	115	24 - 191
Chlorobenzene	ND	20	21	105	38 - 150
Bromoform	ND	20	20	100	13 - 159
1,1,2,2-Tetrachloroethane	ND	20	20	100	8 - 184
1,3-Dichlorobenzene	ND	20	20	100	7 - 187
1,4-Dichlorobenzene	ND	20	20	100	42 - 143
1,2-Dichlorobenzene	ND	20	19	95.0	1 - 208

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
DICHLORODIFLUOROMETHANE	ND	20	24	120	23	115	4.26	20	1 - 200
CHLOROMETHANE	ND	20	23	115	27	135	16.0	20	1 - 193
VINYL CHLORIDE	1.5	20	25	118	28	132	11.2	20	28 - 163
BROMOMETHANE	ND	20	25	125	31	155 *	21.4 *	20	1 - 144
CHLOROETHANE	1.1	20	32	105	37	130	21.3 *	20	46 - 137


QC Officer



Batch Id: HP_F960731073900

Units: µg/L

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
			TRICHLOROFLUOROMETHANE	3.4	20	26		113	28
1,1-DICHLOROETHENE	2.0	20	25	115	28	130	12.2	20	28 - 167
METHYLENE CHLORIDE	ND	20	22	110	24	120	8.70	20	25 - 162
TRANS-1,2-DICHLOROETHENE	3.0	20	27	120	25	110	8.70	20	38 - 155
1,1-DICHLOROETHANE	59	20	92	165 *	87	140 *	16.4	20	47 - 132
CHLOROFORM	ND	20	27	135 *	26	130	3.77	20	49 - 133
1,1,1-TRICHLOROETHANE	ND	20	26	130	24	120	8.00	20	41 - 138
CARBON TETRACHLORIDE	ND	20	26	130	22	110	16.7	20	43 - 143
1,2-DICHLOROETHANE	ND	20	24	120	23	115	4.26	20	51 - 147
2-CHLOROETHYLVINYL ETHER	ND	20	0	0 *	0	0 *	0	20	14 - 186
TRICHLOROETHENE	ND	20	24	120	24	120	0	20	35 - 146
1,2-DICHLOROPROPANE	ND	20	25	125	23	115	8.33	20	44 - 156
BROMODICHLOROMETHANE	ND	20	25	125	23	115	8.33	20	42 - 172
CIS-1,3-DICHLOROPROPENE	ND	20	27	135	22	110	20.4 *	20	22 - 178
TRANS-1,3-DICHLOROPROPENE	ND	20	27	135	21	105	25.0 *	20	33 - 178
1,1,2-TRICHLOROETHANE	ND	20	25	125	23	115	8.33	20	39 - 136
TETRACHLOROETHENE	ND	20	26	130	25	125	3.92	20	26 - 162
DIBROMOCHLOROMETHANE	ND	20	27	135	21	105	25.0 *	20	24 - 191
CHLOROBENZENE	ND	20	25	125	25	125	0	20	38 - 150
BROMOFORM	ND	20	26	130	19	95.0	31.1 *	20	13 - 159
1,1,2,2-TETRACHLOROETHANE	ND	20	28	140	19	95.0	38.3 *	20	8 - 184
1,3-DICHLOROBENZENE	ND	20	24	120	24	120	0	20	7 - 187
1,4-DICHLOROBENZENE	ND	20	25	125	25	125	0	20	42 - 143
1,2-DICHLOROBENZENE	ND	20	24	120	24	120	0	20	1 - 208

Analyst: DAO

Sequence Date: 07/31/96

SPL ID of sample spiked: 9607A33-05B

Sample File ID: FFH6105.TX0

Method Blank File ID:

Blank Spike File ID: FFH6097.TX0

Matrix Spike File ID: FFH6100.TX0

Matrix Spike Duplicate File ID: FFH6101.TX0

* = Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

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

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

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

(**) = Source: 601, Table 2

(***) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID):

9607A33-09B 9607A33-05B 9607A33-07B 9607B24-10B
9607A33-10B 9607A33-08B 9607B95-01C 9607A33-05B
9607A33-07B 9607B24-11B

QC Officer



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

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

Matrix: Aqueous

Reported on: 08/02/96
 Analyzed on: 08/02/96
 Analyst: MF

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:

Hydrocarbons by Gravimetry
 Method 5520 B & F **

SPL Sample ID Number	Blank Value mg/L	Amt Added mg/L	Matrix Spike Recovery %	Matrix Spike Duplicate Recovery %	Relative Percent Difference %	QC Limits Recovery	RPD Max.
BLANK	ND	4.0	105	105	0	82. - 112	9.8

960802MF

-9608129

Samples in batch:

9607B95-01D · 9607B97-03C · 9607C33-02C · 9607C34-02C ·
 9607C86-01C · 9607C89-01C ·

COMMENTS:

SPL, Incorporated

QC Officer

CHAIN OF CUSTODY
AND
SAMPLE RECEIPT CHECKLIST



#9607B95

7/26

CHAIN OF CUSTODY

No.082709

Page 1 of 1

CONSULTANT'S NAME: Alisto Engineering ADDRESS: 1575 Treat Blvd #201 W.C. CITY: Ca STATE: Ca ZIP CODE: 94598

BP SITE NUMBER: 11127 BP CORNER ADDRESS/CITY: Oakland, Ca CONSULTANT PROJECT NUMBER: 10-022-6-1

CONSULTANT PROJECT MANAGER: Brady Nigle PHONE NUMBER: (510) 295-1650 FAX NUMBER: 295-1823 CONSULTANT CONTRACT NUMBER: 6797421

BP CONTACT: Scott Hooten BP ADDRESS: Renton, WA PHONE NUMBER: - FAX NO.: -

LAB CONTACT: SPL LABORATORY ADDRESS: Texas PHONE NUMBER: - FAX NO.: -

SAMPLED BY (Please Print Name): Larry Buenvenida SAMPLED BY (Signature): [Signature] SHIPMENT DATE: 7/24/96 SHIPMENT METHOD: Fed Ex

AIRBILL NUMBER: 9404778515

TAT: 24 Hours 48 Hours 1 Week Standard 2 Weeks

ANALYSIS REQUIRED

SAMPLE DESCRIPTION	COLLECTION DATE	MATRIX SOIL/WATER	CONTAINERS		PRESERVATIVE	ANALYSIS REQUIRED						COMMENTS
			NO.	TYPE (VOL.)		PH	PH-0	PH-1	PH-2	PH-3	PH-4	
S-1	7/23/96	W	1	8		X	X	X	X	X	X	Labels may show improper Analysis Please Refer to C.O.
S-2	↓	↓	↓	3		↓	↓	↓	↓	↓	↓	
S-3	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	
S-4	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	ADDITIONAL COMMENTS
<u>[Signature]</u>	<u>7/23/96</u>	<u>0800</u>	<u>Patricia Lyeton</u>	<u>7/24/96</u>	<u>0800</u>	<u>2°C, Rec intact @ 7/26</u>
<u>Patricia Lyeton</u>	<u>7/24/96</u>		<u>[Signature]</u>	<u>7/25/96</u>	<u>1030</u>	

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 7/25/96	Time: 1600
---------------	------------

SPL Sample ID: <div style="font-size: 1.5em; text-align: center; margin-top: 10px;">9607B95</div>
--

		<u>Yes</u>	<u>No</u>
1	Chain-of-Custody (COC) form is present.	✓	
2	COC is properly completed.	✓	
3	If no, Non-Conformance Worksheet has been completed.		
4	Custody seals are present on the shipping container.	✓	
5	If yes, custody seals are intact.	✓	
6	All samples are tagged or labeled.	✓	
7	If no, Non-Conformance Worksheet has been completed.		
8	Sample containers arrived intact	✓	
9	Temperature of samples upon arrival:		2°C
10	Method of sample delivery to SPL:		
	SPL Delivery		
	Client Delivery		
	FedEx Delivery (airbill #)		9404778515
	Other:		
11	Method of sample disposal:		
	SPL Disposal	✓	
	HOLD		
	Return to Client		

Name: <i>Ruben Estrada Jr</i>	Date: 7/25/96
-------------------------------	---------------

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

BP Site Number: 11127
 ERM Contact: 6797421
 Sampling Date: 7/23/96
 Matrix Description: groundwater
 Date Final Report Received: 8/9/96
 Laboratory & Location: SPL - TX

	Yes	No	NA
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>X</u>	<u>X</u>
6. Are duplicate water samples within <u>30</u> %?	<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?	<u> </u>	<u>X</u> ^①	<u> </u>
10. Are LCS results acceptable using laboratory criteria?	<u> </u>	<u> </u>	<u> </u>

Notes/Comments: ① MS/MSD RPD exceeded for some 601 compounds

Data Validation Completed by (print): Bill Hauge II
 (signature): Bill Hauge II
 Date: 10/10/96

APPENDIX C

GEOTRACKER UPLOAD CONFIRMATIONS

Electronic Submittal Information

[Main Menu](#) | [View/Add Facilities](#) | [Upload EDD](#) | [Check EDD](#)

UPLOADING A GEO_WELL FILE

Processing is complete. No errors were found!
Your file has been successfully submitted!

Submittal Title:	2Q08 GEO_WELL 11127
Facility Global ID:	T0600100206
Facility Name:	BP #11127
Submittal Date/Time:	6/19/2008 10:28:33 AM
Confirmation Number:	7564421713

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Logged in as BROADBENT-C
(CONTRACTOR)

CONTACT SITE [ADMINISTRATOR](#).

Electronic Submittal Information

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Your EDF file has been successfully uploaded!

Confirmation Number: 5657056748

Date/Time of Submittal: 6/19/2008 10:47:32 AM

Facility Global ID: T0600100206

Facility Name: BP #11127

Submittal Title: 2Q08 GW Monitoring

Submittal Type: GW Monitoring Report

[Click here](#) to view the detections report for this upload.

BP #11127 5425 MARTIN LUTHER KING JR OAKLAND, CA 94609	Regional Board - Case #: 01-0220 SAN FRANCISCO BAY RWQCB (REGION 2) Local Agency (lead agency) - Case #: RO0000241 ALAMEDA COUNTY LOP - (PK)
---	---

<u>CONF #</u>	<u>TITLE</u>	<u>QUARTER</u>
5657056748	2Q08 GW Monitoring	Q2 2008
<u>SUBMITTED BY</u> Broadbent & Associates, Inc.	<u>SUBMIT DATE</u> 6/19/2008	<u>STATUS</u> PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	2
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	M8015,SW8260B
TESTED FOR REQUIRED ANALYTES?	Y
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	N
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	N
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%	Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	n/a

SURROGATE SPIKES % RECOVERY BETWEEN 70-125% n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% n/a

FIELD QC SAMPLES

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS > REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Logged in as BROADBENT-C (CONTRACTOR)

CONTACT SITE [ADMINISTRATOR](#).