

**RECEIVED**

By dehloptoxic at 11:36 am, Feb 01, 2007



Atlantic Richfield Company  
(a BP affiliated company)

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

30 January 2007

Re: Fourth Quarter, 2006 Ground-Water Monitoring Report  
Former BP Station # 11124  
3315 High Street  
Oakland, California  
ACEH Case # RO0000239

"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 Manger



A BP affiliated company

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](http://www.broadbentinc.com)

30 January 2007

Project No. 06-08-652

**Fourth Quarter 2006 Ground-Water Monitoring Report**

Former BP Station #11124

3315 High Street  
Oakland, California

30 January 2007

Project No. 06-08-652

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

Attn.: Mr. Paul Supple

Re: Fourth Quarter 2006 Ground-Water Monitoring Report, Former BP Station #11124,  
3315 High Street, Oakland, California; ACEH Case # RO0000239

Dear Mr. Supple:

Attached is the *Fourth Quarter 2006 Ground-Water Monitoring Report* for Former BP Station #11124 (herein referred to as Station #11124) located at 3315 High Street, Oakland California (Site). This report presents a summary of results from ground-water monitoring and sampling during Fourth Quarter 2006.

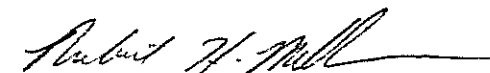
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

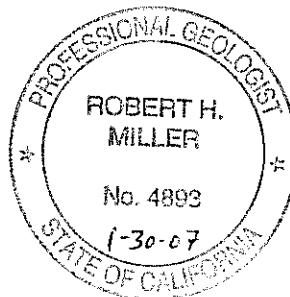
BROADBENT & ASSOCIATES, INC.



Thomas A. Venus  
Senior Engineer, P.E.



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



Enclosures

cc: Mr. Steven Plunkett, Alameda County Environmental Health (Submitted via ACEH ftp site)  
Ms. Shelby Lathrop, ConocoPhillips (Submitted via WebXtender)  
Electronic copy uploaded to GeoTracker

## STATION #11124 QUARTERLY GROUND-WATER MONITORING REPORT

Facility: #11124	Address: 3315 High Street, Oakland, California
Environmental Business Manager:	Mr. Paul Supple
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus (530) 566-1400
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case # RO0000239
Consultant Project No.:	06-08-652
Facility Permits/Permitting Agency:	NA

### WORK PERFORMED THIS QUARTER (Fourth Quarter 2006):

1. Submitted Third Quarter 2006 Ground-Water Monitoring Report.
2. Conducted ground-water monitoring/sampling for Fourth Quarter 2006. Work performed by Stratus Environmental, Inc. (Stratus) on 2 November 2006.
3. Installed two on-site monitoring wells along border with High Street.

### WORK PROPOSED FOR NEXT QUARTER (First Quarter 2007):

1. Prepared and submitted Fourth Quarter 2006 Ground-Water Monitoring Report (contained herein).
2. Prepare and submit Soil & Water Investigation Report describing findings from installation of two new on-site monitoring wells along border with High Street.
3. Conduct quarterly ground-water monitoring/sampling for First Quarter 2007.
4. Investigate reason why latest total depth measurement of well MW-2 was significantly less than original installed total depth.

### QUARTERLY RESULTS SUMMARY:

Current phase of project:	<u>Ground-Water Monitoring/Sampling</u>
Frequency of ground-water monitoring:	<u>Quarterly: Wells MW-1, MW-2, and MW-4</u>
Frequency of ground-water sampling:	<u>Quarterly: Wells MW-1, MW-2, and MW-4</u>
Is free product (FP) present on-site:	<u>No</u>
FP recovered this quarter:	<u>None</u>
Cumulative FP recovered:	<u>None</u>
Current remediation techniques:	<u>None</u>
Depth to ground water (below TOC):	<u>9.85 (MW-2) to 10.83 (MW-1)</u>
General ground-water flow direction:	<u>South</u>
Approximate hydraulic gradient:	<u>0.013 ft/ft</u>

### DISCUSSION:

Fourth quarter 2006 ground-water monitoring/sampling was conducted at Former BP Station #11124 on 2 November 2006 by Stratus personnel. No irregularities were noted during depth to water level monitoring. However, the total depth of well MW-2 was found to be greatly reduced from its original installed depth. Depths to water levels were measured at the three existing wells at the Site. Depth to water level measurements ranged from 9.85 ft at MW-2 to 10.83 ft at MW-1. Calculated ground-water elevations ranged from 144.16 ft above mean sea level at MW-1 to 142.17 ft at MW-2. Water level elevations were within the historic minimum and maximum ranges for well MW-1. The

water level elevations for wells MW-2 (142.17 ft.) and MW-4 (142.85 ft.) were the lowest on record. Water level monitoring field data sheets are provided within Appendix A. Depth to water measurements and calculated water level elevations are summarized within Table 1. Calculated water level elevations yielded a potentiometric ground-water flow direction and gradient of south at 0.0013 ft/ft, consistent with historical data (see Table 3). Ground-water elevation contours are provided on Drawing 1.

Quarterly ground-water samples were collected from two of the three onsite wells without problems. Well MW-2 was not sampled due to insufficient column of water within the well. Samples were submitted to Test America Analytical Testing Corporation (Morgan Hill, California) under chain-of-custody protocol for laboratory analysis of Gasoline Range Organics (GRO, C4-C12) by LUFT GC/MS method; Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and Methyl tert-butyl ether (MTBE), Ethyl tert-butyl ether, Ethanol, 1,2-Dichloroethane, 1,2-Dibromomethane, Di-isopropyl ether, tert-Butyl alcohol (TBA), and tert-Amyl methyl ether (TAME) by EPA Method 8260B. No analytical irregularities were reported by the laboratory for the samples.

Methyl tert-butyl ether (MTBE) was detected above the laboratory reporting limit in well MW-1 at a concentration of 9.8 µg/L. The remaining fuel additives and oxygenates were not detected above their respective laboratory reporting limits in the two wells sampled this quarter. Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well. Historic laboratory analytical results are summarized in Table 1 and Table 2. The most recent GRO, Benzene, and MTBE concentrations are also 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 B.

## **CLOSURE:**

The findings presented in this report are based upon: observations of Stratus field personnel (see Appendix A), the points investigated, and results of laboratory tests performed by Test America (Morgan Hill, 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:**

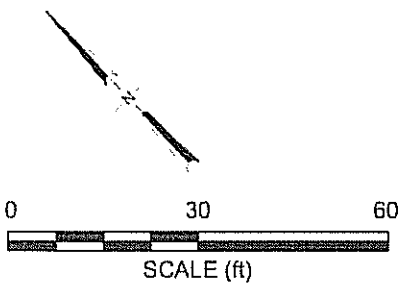
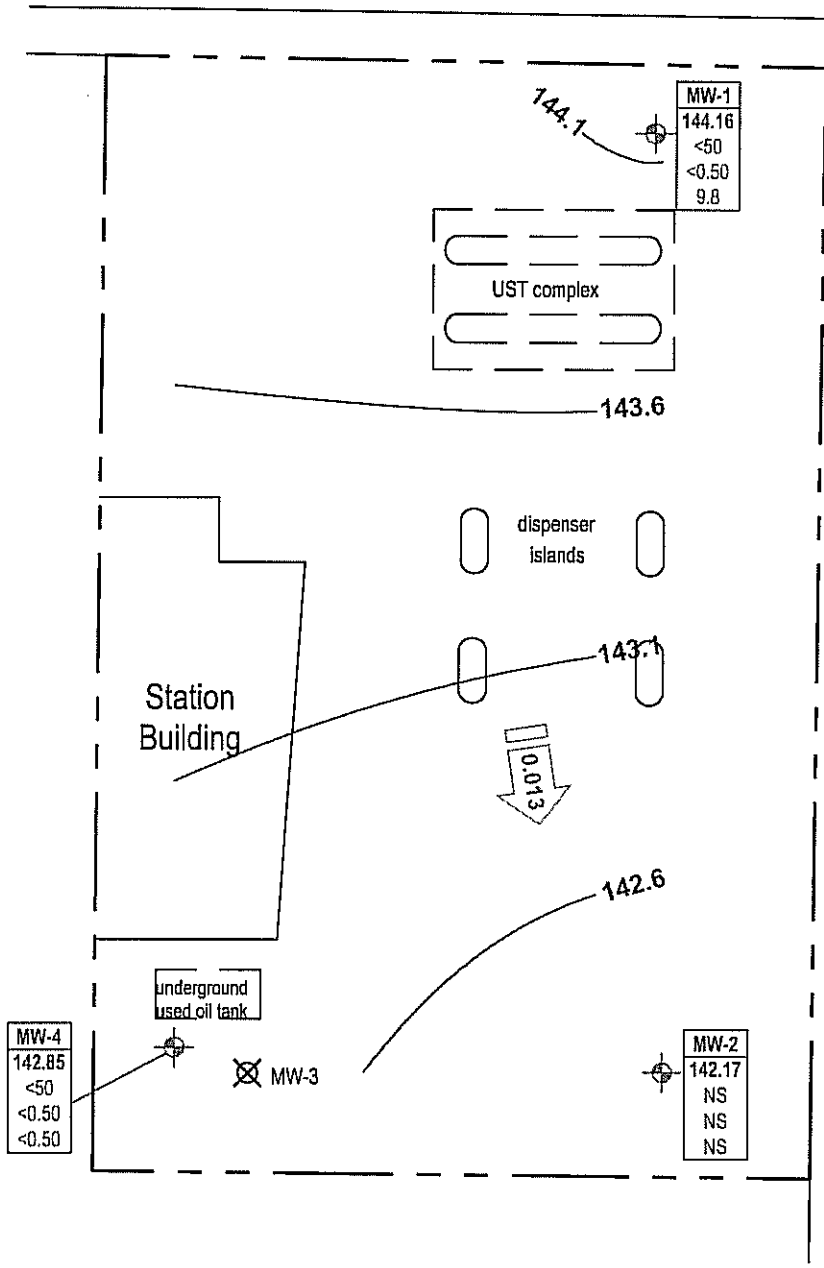
- Drawing 1. Ground-Water Elevation Contours and Analytical Summary Map, 2 November 2006, Former BP Service Station #11124, 3315 High Street, Oakland, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #11124, 3315 High St., Oakland, CA
- Table 2. Summary of Fuel Additives Analytical Data, Station #11124, 3315 High St., Oakland, CA
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #11124, 3315 High St., Oakland, CA

Appendix A. Stratus Ground-Water Sampling Data Package (Includes Field Data Sheets and Laboratory Analytical Report with Chain-of-Custody Documentation)

Appendix B. GeoTracker Upload Confirmation

PORTER STREET

HIGH STREET



**LEGEND**

- Ground-water monitoring well
- Abandoned monitoring well
- |         |
|---------|
| Well    |
| ELEV    |
| GRO     |
| Benzene |
| MTBE    |

 Well Designation
- 143.1 Ground-water elevation (ft MSL)
- < Not detected at or above laboratory reporting limits
- Ground-water flow direction and gradient (ft/ft)

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

Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #11124, 3315 High St., Oakland, CA

Well and Sample Date	P/NP	TOC Elevation (feet msl)	Depth to Water (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						(mg/L) DO	Lab	pH	Comments
						GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE				
<b>MW-1</b>															
10/19/2004	P	154.99	10.50	--	144.49	<50	<0.50	<0.50	<0.50	<0.50	14	0.96	SEQM	6.9	
01/13/2005	P	154.99	9.00	--	145.99	<50	<0.50	<0.50	<0.50	<0.50	33	2.5	SEQM	6.4	
02/24/2006	P	154.99	10.42	--	144.57	55	<0.50	<0.50	<0.50	<0.50	51	--	SEQM	6.8	c
5/30/2006	P	154.99	10.94	--	144.05	50	<0.50	<0.50	<0.50	<0.50	58	--	SEQM	6.6	
8/28/2006	P	154.99	10.61	--	144.38	50	<0.50	<0.50	<0.50	<0.50	<0.50	--	TAMC	7.0	
11/2/2006	P	154.99	10.83	--	144.16	<50	<0.50	<0.50	<0.50	<0.50	9.8	1.40	TAMC	6.99	
<b>MW-2</b>															
10/19/2004	--	152.02	9.45	--	142.57	--	--	--	--	--	--	--	--	--	b
01/13/2005	P	152.02	6.43	--	145.59	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.47	SEQM	6.4	
02/24/2006	P	152.02	7.88	--	144.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	SEQM	6.7	
5/30/2006	P	152.02	7.98	--	144.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	SEQM	6.7	
8/28/2006	P	152.02	9.38	--	142.64	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	TAMC	6.7	
11/2/2006	--	152.02	9.85	--	142.17	--	--	--	--	--	--	--	--	--	
<b>MW-4</b>															
10/19/2004	P	152.77	9.55	--	143.22	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.82	SEQM	7.0	
01/13/2005	--	152.77	--	--	--	--	--	--	--	--	--	--	--	--	a
02/24/2006	P	152.77	7.86	--	144.91	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	SEQM	7.1	
5/30/2006	P	152.77	8.04	--	144.73	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	SEQM	6.9	
8/28/2006	P	152.77	9.36	--	143.41	<50	<0.50	<0.50	<0.50	<0.50	16	--	TAMC	6.5	
11/2/2006	P	152.77	9.92	--	142.85	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.23	TAMC	6.79	



ABBREVIATIONS AND SYMBOLS:

-- = Not analyzed/measured/applicable  
< = Not detected at or above laboratory reporting limit  
DO = Dissolved oxygen  
ft bgs = Feet below ground surface  
ft MSL = Feet above mean sea level  
DTW = Depth to water in ft bgs  
GRO = Gasoline range organics  
GWE = Groundwater elevation in ft MSL  
mg/L = Milligrams per liter  
MTBE = Methyl tert-butyl ether  
NP = Well not purged prior to sampling  
P = Well purged prior to sampling  
TOC = Top of casing in ft MSL  
TPH-g = Total petroleum hydrocarbons as gasoline  
µg/L = Micrograms per liter  
SEQM = Sequoia Analytical Morgan Hill (Laboratory)

FOOTNOTES:

a = Well inaccessible.  
b = Well is dry.  
c = Hydrocarbon result for GRO partly due to individual peak(s) in quantitative range.

NOTES:

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g was changed to GRO. The resulting data may be impacted by the potential of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported.

Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12.

Values for DO and pH were obtained through field measurements.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

**Table 2. Summary of Fuel Additives Analytical Data**  
**Station #11124, 3315 High St., Oakland, CA**

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
<b>MW-1</b>									
10/19/2004	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
01/13/2005	<100	<20	33	<0.50	<0.50	<0.50	<0.50	<0.50	
02/24/2006	<300	<20	51	<0.50	<0.50	<0.50	<0.50	<0.50	
5/30/2006	<300	<20	58	<0.50	<0.50	<0.50	<0.50	<0.50	
8/28/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/2/2006	<300	<20	9.8	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>MW-2</b>									
10/19/2004	—	—	—	—	—	—	—	—	
01/13/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
02/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
5/30/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/28/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/2/2006	—	—	—	—	—	—	—	—	
<b>MW-4</b>									
10/19/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
01/13/2005	—	—	—	—	—	—	—	—	
02/24/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
5/30/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/28/2006	<300	<20	16	<0.50	<0.50	<0.50	<0.50	<0.50	
11/2/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

ABBREVIATIONS AND SYMBOLS:

TBA = tert-Butyl alcohol

MTBE = Methyl tert-butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tert-butyl ether

TAME = tert-Amyl methyl ether

1,2-DCA = 1,2-Dichloroethane

EDB = 1,2-Dibromomethane

µg/L = micrograms per liter

< = Not detected at or above laboratory reporting limit

NOTES:

All fuel oxygenate compounds are analyzed using EPA Method 8260B.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

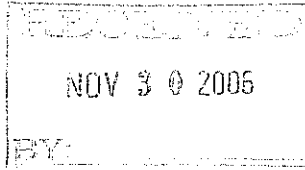
**Table 3. Historical Ground-Water Flow Direction and Gradient**  
**Station #11124, 3315 High St., Oakland, CA**

<b>Date Sampled</b>	<b>Approximate Flow Direction</b>	<b>Approximate Hydraulic Gradient</b>
5/30/2006	East-Southeast	0.007
8/28/2006	South	0.012
11/2/2006	South	0.013

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

**APPENDIX A**

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



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

November 20 2006

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

Re: Groundwater Sampling Data Package, BP Service Station No. 11124, located at 3315 High Street, Oakland, California (Quarterly Monitoring performed on November 2, 2006)

**General Information**

*Data Submittal Prepared / Reviewed by:* Sandy Hayes / Jay Johnson

*Phone Number:* (530) 676-6000

*On-Site Supplier Representative:* Jerry Gonzales

*Date:* November 2, 2006

*Arrival:* 06:25                      *Departure:* 07:55

*Weather Conditions:* Cloudy

*Unusual Field Conditions:* None

*Scope of Work Performed:* Quarterly monitoring and sampling

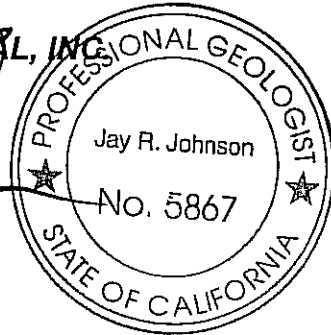
*Variations from Work Scope:* None noted

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include field data sheets, chain of custody documentation, and analytical results. 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
- Chain of Custody Documentation
- Analytical Results

CC: Mr. Paul Supple, BP/ARCO





**BP ALAMEDA PORTFOLIO**  
**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 11124 PURGED BY: JG WELL I.D.: MU-1  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: JG SAMPLE I.D.: MU-1  
 LOCATION: Oakland - 3315 High Street QA SAMPLES: \_\_\_\_\_

DATE PURGED 11-2-04 START (2400hr) 7:25 END (2400hr) 7:28  
 DATE SAMPLED 11-2-06 SAMPLE TIME (2400hr) 7:40  
 SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  3" \_\_\_\_\_ 4" \_\_\_\_\_ 5" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_ Other \_\_\_\_\_  
 Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 31.47 CASING VOLUME (gal) = 3.5  
 DEPTH TO WATER (feet) = 10.83 CALCULATED PURGE (gal) = 10.5  
 WATER COLUMN HEIGHT (feet) = 20.6 ACTUAL PURGE (gal) = 11.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11-2-06</u>	<u>7:26</u>	<u>3.5</u>	<u>21.3</u>	<u>313.8</u>	<u>7.16</u>	<u>cloudy</u>	<u>—</u>
<u>✓</u>	<u>7:27</u>	<u>7.0</u>	<u>21.8</u>	<u>312.3</u>	<u>7.04</u>	<u>1</u>	<u>—</u>
<u>✓</u>	<u>7:28</u>	<u>11.0</u>	<u>21.8</u>	<u>32.54</u>	<u>6.99</u>	<u>1</u>	<u>—</u>

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 1106 SAMPLE TURBIDITY: cloudy  
 80% RECHARGE:  YES  NO ANALYSES: seawater  
 ODOR: no SAMPLE VESSEL / PRESERVATIVE: 3 Vol HCl

PURGING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer (PVC)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: 25

SAMPLING EQUIPMENT

Bladder Pump  Bailer (Teflon)  
 Centrifugal Pump  Bailer (  PVC or  disposable)  
 Submersible Pump  Bailer (Stainless Steel)  
 Peristaltic Pump  Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_

WELL INTEGRITY: good LOCK#: DMK/TG

REMARKS: DO 1.40

SIGNATURE: JG Page \_\_\_\_\_ of \_\_\_\_\_

# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11124 PURGED BY: [Signature] WELL I.D.: WV-9  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: [Signature] SAMPLE I.D.: WV-9  
 LOCATION: Oakland - 3315 High Street QA SAMPLES: \_\_\_\_\_

DATE PURGED 11-2-06 START (2400hr) 7:00 END (2400hr) 7:03  
 DATE SAMPLED 11-2-06 SAMPLE TIME (2400hr) 7:10  
 SAMPLE TYPE: Groundwater  Surface Water \_\_\_\_\_ Treatment Effluent \_\_\_\_\_ Other \_\_\_\_\_

CASING DIAMETER: 2"  3" \_\_\_\_\_ 4" \_\_\_\_\_ 5" \_\_\_\_\_ 6" \_\_\_\_\_ 8" \_\_\_\_\_ Other \_\_\_\_\_  
 Casing Volume: (gallons per foot) (0.17) (0.38) (0.67) (1.02) (1.50) (2.60) ( )

DEPTH TO BOTTOM (feet) = 30.18 CASING VOLUME (gal) = 3.6  
 DEPTH TO WATER (feet) = 9.92 CALCULATED PURGE (gal) = 10.8  
 WATER COLUMN HEIGHT (feet) = 21.2 ACTUAL PURGE (gal) = 11.0

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11-2-06</u>	<u>7:01</u>	<u>3.6</u>	<u>19.8</u>	<u>449.8</u>	<u>6.59</u>	<u>clear</u>	<u>—</u>
<u>/</u>	<u>7:02</u>	<u>7</u>	<u>18.5</u>	<u>457.3</u>	<u>6.72</u>	<u>1</u>	<u>—</u>
<u>/</u>	<u>7:03</u>	<u>11</u>	<u>18.9</u>	<u>464.1</u>	<u>6.79</u>	<u>1</u>	<u>—</u>

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.14 SAMPLE TURBIDITY: clear  
 80% RECHARGE:  YES  NO ANALYSES: all gen  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: Vac HCL

#### PURGING EQUIPMENT

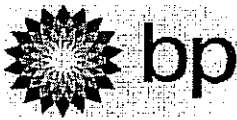
Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_ Bailer (PVC) \_\_\_\_\_  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: 25

#### SAMPLING EQUIPMENT

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_ Bailer ( \_\_\_\_\_ PVC or  disposable)  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_

WELL INTEGRITY: good LOCK#: master  
 REMARKS: D.O 2.23

SIGNATURE: [Signature] Page    of



# Chain of Custody Record

Project Name: Arco 11124  
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > CA > Alameda > 11124  
 State or Lead Regulatory Agency: \_\_\_\_\_  
 Requested Due Date (mm/dd/yy): \_\_\_\_\_

On-site Time: 6:25 Temp: cool  
 Off-site Time: 7:55 Temp: 64  
 Sky Conditions: cloud  
 Meteorological Events: Rain  
 Wind Speed: 0 Direction: NE

Lab Name: TestAmerica	BP/AR Facility No.: 11124	Consultant/Contractor: Stratus Environmental, Inc.
Address: 885 Jarvis Drive Morgan Hill, CA 95937	BP/AR Facility Address: 3315 High Street, Oakland	Address: 3330 Cameron Park Drive, Suite 550 Cameron Park, CA 95682
Lab PM: Lisa Race	Site Lat/Long:	Consultant/Contractor Project No.:
Tele/Fax: 408-782-8156 408-782-6308 (fax)	California Global ID #: T0600100919	Consultant/Contractor PM: Jay Johnson
BP/AR PM Contact: Paul Supple	Enfos Project No.:	Tele/Fax: (530) 676-6000 / (530) 676-6005
Address: 2010 Crow Canyon Place, Suite 150 San Ramon, CA	Provision or RCOP (circle one) Provision	Report Type & QC Level: Level 1 with EDF
Tele/Fax: 925-275-3506	Phase/WBS: 04-Monitoring	E-mail EDD To: <a href="mailto:cjewitt@stratusinc.net">cjewitt@stratusinc.net</a>
	Sub Phase/Task: 03-Analytical	Invoice to: Atlantic Richfield Co.
	Cost Element: 01-Contractor labor	

Lab Bottle Order No:				Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis						Sample Point Lat/Long and Comments: Oxygenates include MtBE, TAME, DIPE, EtBE, TBA, ethanol, 1,2-DCA & EDB
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	BTEX 8021	BTEX/TPH	BTEX/Oxy*/TPHE	EPA 8270	1,2-DCA	EDB	
	MW-1	740	11-24	X			3			X				X	X	X	X			
	<del>MW-2</del>	<del>740</del>	<del>11-24</del>	<del>X</del>			<del>3</del>			<del>X</del>				<del>X</del>	<del>X</del>	<del>X</del>	<del>X</del>			
	MW-4	740	11/24	X			6			X				X	X	X	X			
	TB-11124 11/24	600	11/24				2			X				X	X					

Hold

3.4<sup>oc</sup>

Sampler's Name: <u>Jerry Gorka</u>	Relinquished By / Affiliation: <u>[Signature]</u>	Date: <u>11/30/06</u>	Time: <u>1230</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>11/30/06</u>	Time: <u>1230</u>
Sampler's Company: <u>Dow</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions: Please cc results to bpvalley@secor.com

Custody Seals In Place Yes  No  Temp Blank Yes  No  Cooler Temperature on Receipt  °F/C  Trip Blank Yes  No

20 November, 2006

Jay Johnson  
Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park, CA 95682

RE: BP Heritage #11124, Oakland ,CA  
Work Order: MPK0167

Enclosed are the results of analyses for samples received by the laboratory on 11/04/06 15:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa Race  
Senior Project Manager

CA ELAP Certificate # 1210

The results in this laboratory report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the BPGCLN Technical Specifications, applicable Federal, State, local regulations and certification requirements as well as the methodologies as described in laboratory SOPs reviewed by the BPGCLN. This entire report was reviewed and approved for release.

Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland ,CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MPK0167-01	Water	11/02/06 07:40	11/04/06 15:30
MW-4	MPK0167-02	Water	11/02/06 07:10	11/04/06 15:30
TB-11124-11206	MPK0167-03	Water	11/02/06 06:00	11/04/06 15:30

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies.

These samples were received with no custody seals.

Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland ,CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

**Total Purgeable Hydrocarbons by GC/MS (CA LUFT)**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-1 (MPK0167-01) Water</b> Sampled: 11/02/06 07:40 Received: 11/04/06 15:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6K16004	11/16/06	11/16/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		120 %	60-145		"	"	"	"	
<b>MW-4 (MPK0167-02RE1) Water</b> Sampled: 11/02/06 07:10 Received: 11/04/06 15:30									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	6K13002	11/13/06	11/13/06	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		108 %	60-145		"	"	"	"	

Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland, CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

**Volatile Organic Compounds by EPA Method 8260B**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
<b>MW-1 (MPK0167-01) Water</b> Sampled: 11/02/06 07:40 Received: 11/04/06 15:30									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6K13003	11/13/06	11/13/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	9.8	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		100 %		75-130	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96 %		60-145	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99 %		70-130	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		91 %		60-120	"	"	"	"	
<b>MW-4 (MPK0167-02RE1) Water</b> Sampled: 11/02/06 07:10 Received: 11/04/06 15:30									
tert-Amyl methyl ether	ND	0.50	ug/l	1	6K13002	11/13/06	11/13/06	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		111 %		75-130	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		108 %		60-145	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96 %		70-130	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		87 %		60-120	"	"	"	"	

Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland, CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

**Total Purgeable Hydrocarbons by GC/MS (CA LUFT) - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6K13002 - EPA 5030B P/T / LUFT GCMS**

<b>Blank (6K13002-BLK1)</b>										
										Prepared & Analyzed: 11/13/06
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.60		"	2.50		104	60-145			
<b>Laboratory Control Sample (6K13002-BS2)</b>										
										Prepared & Analyzed: 11/13/06
Gasoline Range Organics (C4-C12)	357	50	ug/l	440		81	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.72		"	2.50		109	60-145			
<b>Laboratory Control Sample Dup (6K13002-BSD2)</b>										
										Prepared & Analyzed: 11/13/06
Gasoline Range Organics (C4-C12)	357	50	ug/l	440		81	75-140	0	20	
Surrogate: 1,2-Dichloroethane-d4	2.79		"	2.50		112	60-145			

**Batch 6K16004 - EPA 5030B P/T / LUFT GCMS**

<b>Blank (6K16004-BLK1)</b>										
										Prepared & Analyzed: 11/16/06
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.82		"	2.50		113	60-145			
<b>Laboratory Control Sample (6K16004-BS2)</b>										
										Prepared & Analyzed: 11/16/06
Gasoline Range Organics (C4-C12)	438	50	ug/l	440		100	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.83		"	2.50		113	60-145			
<b>Laboratory Control Sample Dup (6K16004-BSD2)</b>										
										Prepared & Analyzed: 11/16/06
Gasoline Range Organics (C4-C12)	441	50	ug/l	440		100	75-140	0.7	20	
Surrogate: 1,2-Dichloroethane-d4	2.83		"	2.50		113	60-145			



Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland ,CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6K13002 - EPA 5030B P/T / EPA 8260B**

**Blank (6K13002-BLK1)**

Prepared & Analyzed: 11/13/06

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
<i>Surrogate: Dibromofluoromethane</i>	2.66		"	2.50		106	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.60		"	2.50		104	60-145			
<i>Surrogate: Toluene-d8</i>	2.39		"	2.50		96	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.17		"	2.50		87	60-120			

**Laboratory Control Sample (6K13002-BS1)**

Prepared & Analyzed: 11/13/06

tert-Amyl methyl ether	8.51	0.50	ug/l	10.0		85	65-135			
Benzene	9.40	0.50	"	10.0		94	70-125			
tert-Butyl alcohol	168	20	"	200		84	60-135			
Di-isopropyl ether	9.53	0.50	"	10.0		95	70-130			
1,2-Dibromoethane (EDB)	9.16	0.50	"	10.0		92	80-125			
1,2-Dichloroethane	9.42	0.50	"	10.0		94	75-125			
Ethanol	252	300	"	200		126	15-150			
Ethyl tert-butyl ether	9.23	0.50	"	10.0		92	65-130			
Ethylbenzene	9.04	0.50	"	10.0		90	70-130			
Methyl tert-butyl ether	8.57	0.50	"	10.0		86	50-140			
Toluene	9.49	0.50	"	10.0		95	70-120			
Xylenes (total)	27.7	0.50	"	30.0		92	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.72		"	2.50		109	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.60		"	2.50		104	60-145			
<i>Surrogate: Toluene-d8</i>	2.57		"	2.50		103	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.15		"	2.50		86	60-120			

TestAmerica - Morgan Hill, CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland ,CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 6K13002 - EPA 5030B P/T / EPA 8260B

Matrix Spike (6K13002-MS1)	Source: MPK0331-04			Prepared & Analyzed: 11/13/06						
tert-Amyl methyl ether	212	12	ug/l	250	ND	85	65-135			
Benzene	318	12	"	250	90	91	70-125			
tert-Butyl alcohol	4400	500	"	5000	ND	88	60-135			
Di-isopropyl ether	239	12	"	250	ND	96	70-130			
1,2-Dibromoethane (EDB)	230	12	"	250	ND	92	80-125			
1,2-Dichloroethane	241	12	"	250	ND	96	75-125			
Ethanol	7160	7500	"	5000	ND	143	15-150			
Ethyl tert-butyl ether	230	12	"	250	ND	92	65-130			
Ethylbenzene	279	12	"	250	64	86	70-130			
Methyl tert-butyl ether	248	12	"	250	35	85	50-140			
Toluene	515	12	"	250	320	78	70-120			
Xylenes (total)	2290	12	"	750	1900	52	80-125			BB,LN
<i>Surrogate: Dibromofluoromethane</i>	2.75		"	2.50		110	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.89		"	2.50		116	60-145			
<i>Surrogate: Toluene-d8</i>	2.54		"	2.50		102	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.22		"	2.50		89	60-120			

Matrix Spike Dup (6K13002-MSD1)	Source: MPK0331-04			Prepared & Analyzed: 11/13/06						
tert-Amyl methyl ether	212	12	ug/l	250	ND	85	65-135	0	25	
Benzene	322	12	"	250	90	93	70-125	1	15	
tert-Butyl alcohol	4660	500	"	5000	ND	93	60-135	6	35	
Di-isopropyl ether	230	12	"	250	ND	92	70-130	4	35	
1,2-Dibromoethane (EDB)	236	12	"	250	ND	94	80-125	3	15	
1,2-Dichloroethane	233	12	"	250	ND	93	75-125	3	10	
Ethanol	6840	7500	"	5000	ND	137	15-150	5	35	
Ethyl tert-butyl ether	224	12	"	250	ND	90	65-130	3	35	
Ethylbenzene	276	12	"	250	64	85	70-130	1	15	
Methyl tert-butyl ether	242	12	"	250	35	83	50-140	2	25	
Toluene	530	12	"	250	320	84	70-120	3	15	
Xylenes (total)	2250	12	"	750	1900	47	80-125	2	15	BB,LN
<i>Surrogate: Dibromofluoromethane</i>	2.79		"	2.50		112	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.77		"	2.50		111	60-145			
<i>Surrogate: Toluene-d8</i>	2.63		"	2.50		105	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.17		"	2.50		87	60-120			

TestAmerica - Morgan Hill, CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland ,CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6K13003 - EPA 5030B P/T / EPA 8260B**

**Blank (6K13003-BLK1)**

Prepared & Analyzed: 11/13/06

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	5.0	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
<i>Surrogate: Dibromofluoromethane</i>	2.42		"	2.50		97	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.30		"	2.50		92	60-145			
<i>Surrogate: Toluene-d8</i>	2.49		"	2.50		100	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.30		"	2.50		92	60-120			

**Laboratory Control Sample (6K13003-BS1)**

Prepared & Analyzed: 11/13/06

tert-Amyl methyl ether	10.5	0.50	ug/l	10.0		105	65-135			
Benzene	9.17	0.50	"	10.0		92	70-125			
tert-Butyl alcohol	177	20	"	200		88	60-135			
Di-isopropyl ether	8.87	0.50	"	10.0		89	70-130			
1,2-Dibromoethane (EDB)	10.0	0.50	"	10.0		100	80-125			
1,2-Dichloroethane	8.62	0.50	"	10.0		86	75-125			
Ethanol	175	300	"	200		88	15-150			
Ethyl tert-butyl ether	9.43	0.50	"	10.0		94	65-130			
Ethylbenzene	9.52	0.50	"	10.0		95	70-130			
Methyl tert-butyl ether	9.85	0.50	"	10.0		98	50-140			
Toluene	9.58	0.50	"	10.0		96	70-120			
Xylenes (total)	29.7	0.50	"	30.0		99	80-125			
<i>Surrogate: Dibromofluoromethane</i>	2.50		"	2.50		100	75-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.34		"	2.50		94	60-145			
<i>Surrogate: Toluene-d8</i>	2.54		"	2.50		102	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.47		"	2.50		99	60-120			

Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland ,CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**TestAmerica - Morgan Hill, CA**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 6K13003 - EPA 5030B P/T / EPA 8260B**

Matrix Spike (6K13003-MS1)	Source: MPK0168-02			Prepared: 11/13/06		Analyzed: 11/14/06				
tert-Amyl methyl ether	360	5.0	ug/l	100	250	110	65-135			
Benzene	820	5.0	"	100	790	30	70-125			BB, LN
tert-Butyl alcohol	3260	200	"	2000	1200	103	60-135			
Di-isopropyl ether	107	5.0	"	100	ND	107	70-130			
1,2-Dibromoethane (EDB)	121	5.0	"	100	ND	121	80-125			
1,2-Dichloroethane	106	5.0	"	100	ND	106	75-125			
Ethanol	2050	3000	"	2000	ND	102	15-150			
Ethyl tert-butyl ether	112	5.0	"	100	ND	112	65-130			
Ethylbenzene	111	5.0	"	100	4.3	107	70-130			
Methyl tert-butyl ether	995	5.0	"	100	910	85	50-140			
Toluene	120	5.0	"	100	6.6	113	70-120			
Xylenes (total)	338	5.0	"	300	4.6	111	80-125			
<i>Surrogate: Dibromofluoromethane</i>	<i>2.65</i>		<i>"</i>	<i>2.50</i>		<i>106</i>	<i>75-130</i>			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.43</i>		<i>"</i>	<i>2.50</i>		<i>97</i>	<i>60-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>2.60</i>		<i>"</i>	<i>2.50</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>2.51</i>		<i>"</i>	<i>2.50</i>		<i>100</i>	<i>60-120</i>			

Matrix Spike Dup (6K13003-MSD1)	Source: MPK0168-02			Prepared: 11/13/06		Analyzed: 11/14/06				
tert-Amyl methyl ether	382	5.0	ug/l	100	250	132	65-135	6	25	
Benzene	882	5.0	"	100	790	92	70-125	7	15	
tert-Butyl alcohol	3190	200	"	2000	1200	100	60-135	2	35	
Di-isopropyl ether	119	5.0	"	100	ND	119	70-130	11	35	
1,2-Dibromoethane (EDB)	117	5.0	"	100	ND	117	80-125	3	15	
1,2-Dichloroethane	111	5.0	"	100	ND	111	75-125	5	10	
Ethanol	2030	3000	"	2000	ND	102	15-150	1	35	
Ethyl tert-butyl ether	118	5.0	"	100	ND	118	65-130	5	35	
Ethylbenzene	113	5.0	"	100	4.3	109	70-130	2	15	
Methyl tert-butyl ether	1050	5.0	"	100	910	140	50-140	5	25	
Toluene	117	5.0	"	100	6.6	110	70-120	3	15	
Xylenes (total)	327	5.0	"	300	4.6	107	80-125	3	15	
<i>Surrogate: Dibromofluoromethane</i>	<i>2.60</i>		<i>"</i>	<i>2.50</i>		<i>104</i>	<i>75-130</i>			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>2.59</i>		<i>"</i>	<i>2.50</i>		<i>104</i>	<i>60-145</i>			
<i>Surrogate: Toluene-d8</i>	<i>2.63</i>		<i>"</i>	<i>2.50</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>3.13</i>		<i>"</i>	<i>2.50</i>		<i>125</i>	<i>60-120</i>			LH, AY

TestAmerica - Morgan Hill, CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

Stratus Environmental Inc. [Arco]  
3330 Cameron Park Dr., Suite 550  
Cameron Park CA, 95682

Project: BP Heritage #11124, Oakland ,CA  
Project Number: G099D-  
Project Manager: Jay Johnson

MPK0167  
Reported:  
11/20/06 11:20

**Notes and Definitions**

LH,AY Surrogate recovery above the acceptance limits. Matrix interference suspected.  
BB,LN Sample > 4x spike concentration.  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference



# Chain of Custody Record

Project Name: Arco 11124  
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > CA > Alameda > >11124  
 State or Lead Regulatory Agency: \_\_\_\_\_  
 Requested Due Date (mm/dd/yy): \_\_\_\_\_

On-site Time: 6:25 Temp: cool  
 Off-site Time: 7:55 Temp: 60°  
 Sky Conditions: cloud  
 Meteorological Events: Rain  
 Wind Speed: 0 Direction: NE

Lab Name: <u>TestAmerica</u>	BP/AR Facility No.: <u>11124</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>3315 High Street, Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
<u>Morgan Hill, CA 95937</u>	Site Lat/Long:	<u>Cameron Park, CA 95682</u>
Lab PM: <u>Lisa Race</u>	California Global ID #: <u>T0600100919</u>	Consultant/Contractor Project No.:
Tele/Fax: <u>408-782-8156 408-782-6308 (fax)</u>	Enfos Project No.:	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or RCOP (circle one) Provision <u>MPK0167</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>cjewitt@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: <u>Oxygenates include MtBE, TAME, DIPE, EIBE, TBA, ethanol, 1,2-DCA &amp; EDB</u>				
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	BTEX 8021	BTEX/TPH	BTEX/Oxy*/TPHE	Phenols	EPA 8270	1,2-DCA	EDB		Ethanol by 8260			
	MW-1	740	11-2-06	X			01	3				X				X	X	X							
	<del>MW-2</del>	<del>740</del>	<del>11-2-06</del>	X								X				X	X	X							
	MW-4	740	11/2	X			02	6				X				X	X	X							
	TB-11124 11206	600	11/2/06				03	2				X			X	X									Hold

3.4<sup>cc</sup>

Sampler's Name: <u>Jerry Gorko</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>Danlos</u>	<u>[Signature]</u>	<u>11/3/06</u>	<u>1230</u>	<u>[Signature]</u>	<u>11/3/06</u>	<u>1230</u>
Shipment Date:		<u>11/3</u>	<u>1530</u>	<u>[Signature]</u>	<u>11/3/06</u>	<u>1830</u>
Shipment Method:				<u>[Signature]</u>		
Shipment Tracking No:						

Special Instructions: Please cc results to bpvalley@seccor.com

Place Yes No  Temp Blank Yes No  Cooler Temperature on Receipt 35 °F (C) Trip Blank Yes No

# TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: Bp / Arco  
 REC. BY (PRINT) EH  
 WORKORDER: NRK 6/47

DATE REC'D AT LAB: 11/1/06  
 TIME REC'D AT LAB: 1530  
 DATE LOGGED IN: 11-6-06

For Regulatory Purposes?  
 DRINKING WATER YES / NO  
 WASTE WATER YES / NO

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present / <input checked="" type="radio"/> Absent Intact / Broken*								
2. Chain-of-Custody	<input checked="" type="radio"/> Present / Absent*			<u>SEE COC</u>					
3. Traffic Reports or Packing List:	<input checked="" type="radio"/> Present / Absent								
4. Airbill:	<input checked="" type="radio"/> Airbill / Sticker <input checked="" type="radio"/> Present / Absent								
5. Airbill #:	<u>SEE ATT.</u>								
6. Sample Labels:	<input checked="" type="radio"/> Present / Absent								
7. Sample IDs:	<input checked="" type="radio"/> Listed / Not Listed on Chain-of-Custody								
8. Sample Condition:	<input checked="" type="radio"/> Intact / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree?	<input checked="" type="radio"/> Yes / No*								
10. Sample received within hold time?	<input checked="" type="radio"/> Yes / No*								
11. Adequate sample volume received?	<input checked="" type="radio"/> Yes / No*								
12. Proper preservatives used?	<input checked="" type="radio"/> Yes / No*								
13. Trip Blank / Temp Blank Received? (circle which, if yes)	<input checked="" type="radio"/> Yes / No*								
14. Read Temp: <u>5.5°C</u> Corrected Temp: <u>4.5°C</u> Is corrected temp 4 +/- 2°C? <input checked="" type="radio"/> Yes / No**									

(Acceptance range for samples requiring thermal pres.)  
 \*\*Exception (if any): METALS / DFF ON ICE or Problem COC

\*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

California Overnight Shipping Label



D10010110045427

Tracking#D10010110045427

Date Printed 11/3/2006

*Shipped From:*  
 TEST AMERICA - SACRAMENTO  
 819 STRIKER AVENUE 8  
 SACRAMENTO, CA 95834

*Sent By:* TIM ALBRIGHT  
*Phone#:* (916)921-9600  
*wgt(lbs):* 38  
*Reference:*  
*Decl. Value:* \$0.00

*Ship To Company:*  
 TESTAMERICA - MORGAN HILL  
 885 JARVIS DR  
 MORGAN HILL, CA 95037  
 SAMPLE CONTROL (408)776-9600

*Service:* **S**  
*Sort Code:* **SJC**  
*Special Services:*  
 Saturday Delivery



**APPENDIX B**

GEOTRACKER UPLOAD CONFIRMATION

## 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: 4Q06 GEO\_WELL**  
**Submittal Date/Time: 1/24/2007 3:57:09 PM**  
**Confirmation Number: 9024656534**

[Back to Main Menu](#)

Logged in as BROADBENT-C  
(CONTRACTOR)

CONTACT SITE ADMINISTRATOR.

# Electronic Submittal Information

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

Your EDF file has been successfully uploaded!

**Confirmation Number:** 4768075585

**Date/Time of Submittal:** 1/26/2007 5:15:05 PM

**Facility Global ID:** T0600100919

**Facility Name:** BP #11124

**Submittal Title:** 4Q06 GW Monitoring

**Submittal Type:** GW Monitoring Report

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

**BP #11124**  
3315 HIGH  
OAKLAND, CA 94619

**Regional Board - Case #: 01-0996**  
SAN FRANCISCO BAY RWQCB (REGION 2)  
**Local Agency (lead agency) - Case #: RO0000239**  
ALAMEDA COUNTY LOP - (SP)

<u>CONF #</u>	<u>TITLE</u>	<u>QUARTER</u>
4768075585	4Q06 GW Monitoring	Q4 2006
<u>SUBMITTED BY</u>	<u>SUBMIT DATE</u>	<u>STATUS</u>
Broadbent & Associates, Inc.	1/26/2007	PENDING REVIEW

## SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	2
# FIELD POINTS WITH DETECTIONS	1
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	0
SAMPLE MATRIX TYPES	WATER

## METHOD QA/QC REPORT

METHODS USED	8260FA,8260TPH
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	N
- MATRIX SPIKE DUPLICATE	N
- BLANK SPIKE	Y
- SURROGATE SPIKE	Y

## WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
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 &gt; REPD</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

Logged in as BROADBENT-C (CONTRACTOR)

CONTACT SITE ADMINISTRATOR.