



Atlantic Richfield Company  
(a BP affiliated company)

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San Ramon, CA 94583  
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**RECEIVED**

3:23 pm, Jul 30, 2008

Alameda County  
Environmental Health

25 July 2008

Re: Second Quarter 2008 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

**Second Quarter 2008 Ground-Water Monitoring Report**

Former BP Station #11124

3315 High Street  
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. 06-08-652

25 July 2008

Project No. 06-08-652

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

Attn.: Mr. Paul Supple

Re: Second Quarter 2008 Ground-Water Monitoring Report, Former BP Station #11124,  
3315 High Street, Oakland, California; ACEH Case # RO0000239

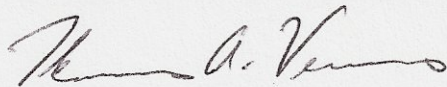
Dear Mr. Supple:

Attached is the *Second Quarter 2008 Ground-Water Monitoring Report* for Former BP Station #11124 located at 3315 High Street, Oakland California (Site). This report presents a summary of results from ground-water monitoring and sampling conducted at the Site during the Second Quarter of 2008.

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

Sincerely,

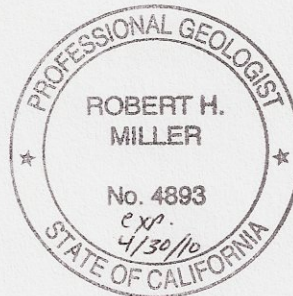
BROADBENT & ASSOCIATES, INC.



Thomas A. Venus, P.E.  
Senior Engineer



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



Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)  
Ms. Shelby Lathrop, ConocoPhillips, 76 Broadway, Sacramento, California 95818  
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:	None

### WORK PERFORMED THIS QUARTER (Second Quarter 2008):

1. Submitted First Quarter 2008 Ground-Water Monitoring Report.
2. Submitted letter dated 20 May 2008 to ACEH requesting modification to the existing monitoring/sampling program schedule.
3. Conducted ground-water monitoring/sampling for Second Quarter 2008. Work performed by Stratus Environmental, Inc. (Stratus) on 23 May 2008.

### WORK PROPOSED FOR NEXT QUARTER (Third Quarter 2008):

1. Prepare and submit Second Quarter 2008 Ground-Water Monitoring Report (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for Third Quarter 2008.

### QUARTERLY RESULTS SUMMARY:

Current phase of project:	<b>Ground-Water Monitoring/Sampling</b>
Frequency of ground-water monitoring:	<b>Quarterly: Wells MW-1, MW-2, MW-4, MW-5 and MW-6</b>
Frequency of ground-water sampling:	<b>Quarterly: Wells MW-1, MW-2, MW-4, MW-5 and MW-6</b>
Is free product (FP) present on-site:	<b>No</b>
Current remediation techniques:	<b>NA</b>
Depth to ground water (below TOC):	<b>9.28 ft (MW-2) to 10.73 ft (MW-1)</b>
General ground-water flow direction:	<b>Southwest</b>
Approximate hydraulic gradient:	<b>0.01 ft/ft</b>

### DISCUSSION:

Second quarter 2008 ground-water monitoring/sampling was conducted at Former BP Station #11124 on 23 May 2008 by Stratus personnel. No irregularities were noted during water level gauging. Depth-to-water level measurements ranged from 9.28 ft at MW-2 to 10.73 ft at MW-1. Resulting ground-water surface elevations ranged from 146.61 ft above mean sea level (msl) at well MW-1 to 144.61 ft above msl at well MW-6. Water level elevations were between historic minimum and maximum ranges for each well, as summarized in Table 1, with the following exception: the water level elevation reached a historic minimum value of 144.61 ft above msl in well MW-6. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the southwest at approximately 0.01 ft/ft, consistent with historical data (see Table 3). Ground-water monitoring field data sheets are provided within Appendix A. 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.

Consistent with the current ground-water sampling schedule, water samples were collected from wells MW-1, MW-2, MW-4, MW-5, and MW-6. No 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; Diesel Range Organics (DRO, C10-C28) 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. No 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.

MTBE was detected above the laboratory reporting limit in three of the five wells sampled at concentrations up to 1,200 µg/L in well MW-5. DRO and the remaining fuel additives and oxygenates were not detected above their respective laboratory reporting limits in the five wells sampled this quarter. Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well with the following exception: the MTBE concentration for the sample collected from well MW-6 reached a historic maximum value of 150 µg/L. 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.

Within the First Quarter 2008 Ground-Water Monitoring Report, BAI proposed for ACEH consideration and approval a modification to the future monitoring and sampling schedule. A letter dated 20 May 2008 was sent to Mr. Paresh Khatri of ACEH via email and GeoTracker describing the modified monitoring and sampling schedule. This letter was followed by a telephone conversation between Mr. Tom Venus of BAI and Mr. Paresh Khatri of ACEH on 27 June 2008. BAI is currently awaiting comments or approval from ACEH regarding the modified schedule.

## **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 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:**

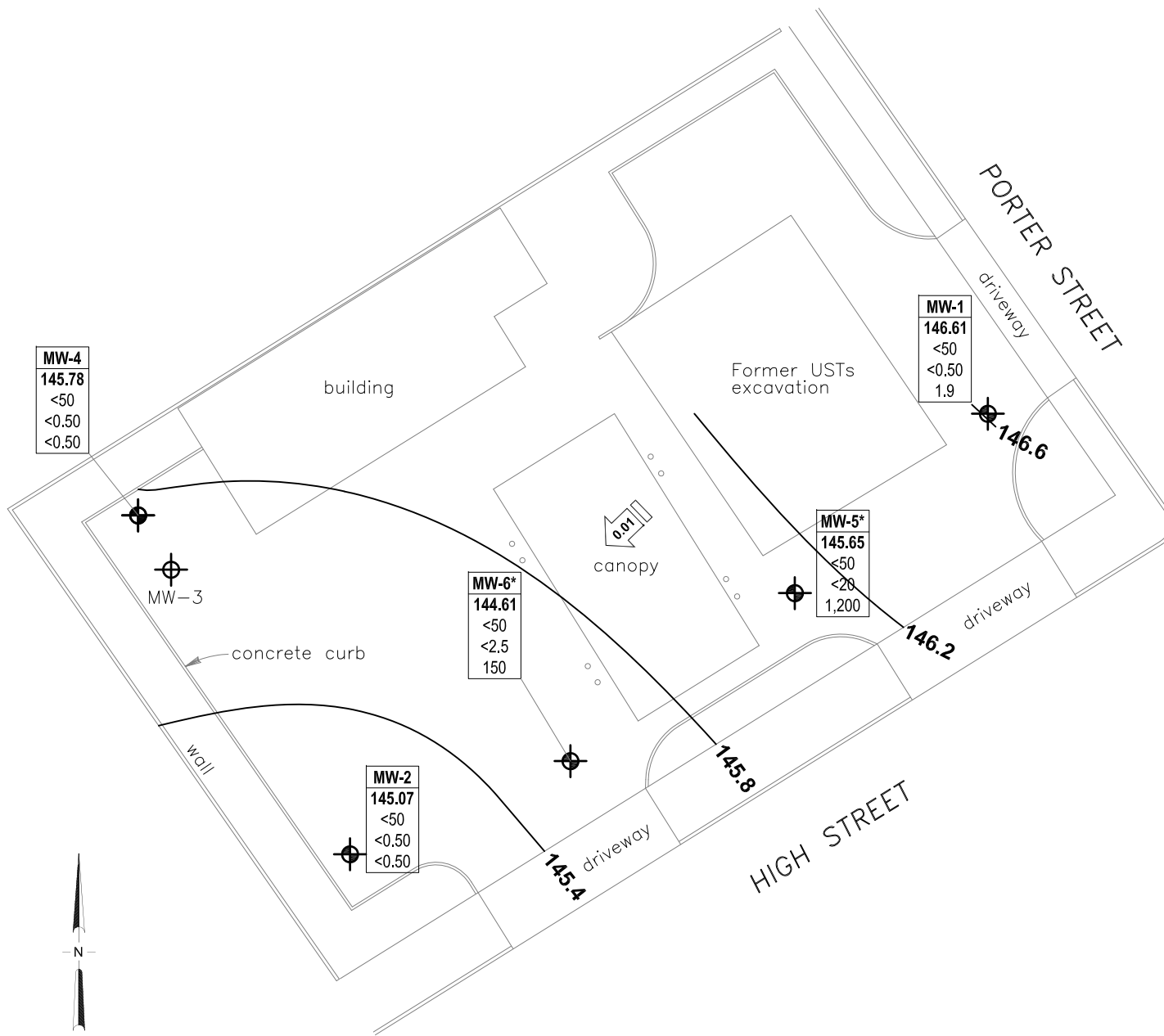
- Drawing 1. Ground-Water Elevation Contours and Analytical Summary Map, 23 May 2008, Former BP Service Station #11124, 3315 High Street, Oakland, California
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #11124, 3315 High St., Oakland, California

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

Table 3. Historical Ground-Water Flow Direction and Gradient, Station #11124, 3315 High St., 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. GeoTracker Upload Confirmations



**MW-4**  
145.78  
<50  
<0.50  
<0.50

MW-3

**MW-6\***  
144.61  
<50  
<2.5  
150

**MW-2**  
145.07  
<50  
<0.50  
<0.50

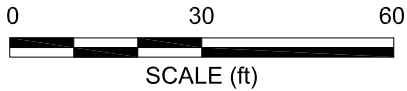
**MW-1**  
146.61  
<50  
<0.50  
1.9

**MW-5\***  
145.65  
<50  
<20  
1,200

NOTE: SITE MAP ADAPTED FROM STRATUS ENVIRONMENTAL, INC FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

**LEGEND**

- Ground-water monitoring well
- Abandoned monitoring well
- |         |   |
|---------|---|
| Well    | Well Designation                          |
| ELEV    | Ground-water elevation (ft MSL)           |
| GRO     | GRO, Benzene & MTBE concentrations (µg/L) |
| Benzene |   |
| MTBE    |   |
- 145.8 Ground-water elevation (ft MSL)
- \* Elevation not used in contours
- < Not detected at or above laboratory reporting limits
- Ground-water flow direction and gradient (ft/ft)



**BROADBENT & ASSOCIATES, INC.**  
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL  
1324 Mangrove Ave., Suite 212 Chico, CA  
Project No.: 06-08-652 Date: 7/3/08

Former Station #11124  
3315 High Street  
Oakland, California

Ground-Water Elevation Contours  
and Analytical Summary Map  
23 May 2008

Drawing  
**1**



**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	Footnote	TOC Elevation (feet msl)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/TPHd (µg/L)	TOG (µg/L)
							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	c	154.99	10.42	--	144.57	55	<0.50	<0.50	<0.50	<0.50	51	--	SEQM	6.8	--	--
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	--	--
2/6/2007	P	d	157.34	9.88	--	147.46	<50	<0.50	<0.50	<0.50	<0.50	1.1	2.76	TAMC	7.10	--	--
3/13/2007	P		157.34	9.62	--	147.72	--	--	--	--	--	--	2.63	TAMC	7.30	<48	--
5/8/2007	P		157.34	9.62	--	147.72	<50	<0.50	<0.50	<0.50	<0.50	19	2.65	TAMC	7.01	<49	--
8/7/2007	P		157.34	10.82	--	146.52	<50	<0.50	<0.50	<0.50	<0.50	5.0	3.15	TAMC	7.33	<49	--
11/13/2007	--		157.34	10.52	--	146.82	--	--	--	--	--	--	4.79	TAMC	6.58	<48	--
12/20/2007	NP	e	157.34	10.47	--	146.87	<50	<0.50	<0.50	<0.50	<0.50	10	1.14	TAMC	6.97	--	--
2/29/2008	P		157.34	9.32	--	148.02	<50	<0.50	<0.50	<0.50	<0.50	7.4	3.14	CEL	7.64	<50	--
<b>5/23/2008</b>	<b>P</b>		<b>157.34</b>	<b>10.73</b>	--	<b>146.61</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.9</b>	<b>1.76</b>	<b>CEL</b>	<b>6.83</b>	<b>&lt;50</b>	--
<b>MW-2</b>																	
10/19/2004	--	b	152.02	9.45	--	142.57	--	--	--	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--	--	--	--
2/6/2007	P	d	154.35	8.40	--	145.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50	5.10	TAMC	7.02	--	--
3/13/2007	P		154.35	7.55	--	146.80	--	--	--	--	--	--	4.83	TAMC	7.17	52	--
5/8/2007	P		154.35	7.70	--	146.65	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.40	TAMC	7.12	<48	--
8/7/2007	P		154.35	9.77	--	144.58	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.47	TAMC	7.19	<47	--
11/13/2007	--		154.35	9.30	--	145.05	--	--	--	--	--	--	4.90	TAMC	7.02	<48	--
12/20/2007	NP	e	154.35	9.34	--	145.01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.62	TAMC	7.44	--	--
2/29/2008	P	f	154.35	7.35	--	147.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.39	CEL	7.76	64	--
<b>5/23/2008</b>	<b>P</b>		<b>154.35</b>	<b>9.28</b>	--	<b>145.07</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>0.93</b>	<b>CEL</b>	<b>7.07</b>	<b>&lt;50</b>	--



**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	Footnote	TOC Elevation (feet msl)	DTW (feet bgs)	Product Thickness (feet)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	Lab	pH	DRO/TPHd (µg/L)	TOG (µg/L)
							GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MtBE					
<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	--	a	152.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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	--	--
2/6/2007	P	d	155.10	8.40	--	146.70	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.43	TAMC	7.10	--	--
3/13/2007	P		155.10	7.56	--	147.54	--	--	--	--	--	--	2.53	TAMC	7.18	<49	--
5/8/2007	P		155.10	7.68	--	147.42	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.78	TAMC	7.28	<48	--
8/7/2007	P		155.10	9.83	--	145.27	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.70	TAMC	7.13	<48	--
11/13/2007	--		155.10	9.28	--	145.82	--	--	--	--	--	--	5.71	TAMC	7.11	<48	--
12/20/2007	NP	e	155.10	9.23	--	145.87	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.13	TAMC	7.16	--	--
2/29/2008	P		155.10	7.27	--	147.83	<50	<0.50	<0.50	<0.50	<0.50	1.5	4.26	CEL	8.03	<50	--
<b>5/23/2008</b>	<b>P</b>		<b>155.10</b>	<b>9.32</b>	--	<b>145.78</b>	<b>&lt;50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>1.43</b>	<b>CEL</b>	<b>7.11</b>	<b>&lt;50</b>	--
<b>MW-5</b>																	
3/13/2007	P	d	155.45	8.72	--	146.73	880	<0.50	<0.50	<0.50	<0.50	1,400	1.84	TAMC	7.36	<48	--
5/8/2007	P	c	155.45	8.42	--	147.03	920	<5.0	<5.0	<5.0	<5.0	1,300	3.26	TAMC	7.50	<48	--
8/7/2007	P	c	155.45	9.88	--	145.57	1,300	<10	<10	<10	<10	1,600	3.54	TAMC	7.34	<48	--
11/13/2007	P	c	155.45	9.68	--	145.77	950	<10	<10	<10	<10	1,400	4.68	TAMC	6.99	<48	--
2/29/2008	P		155.45	8.15	--	147.30	<50	<0.50	<0.50	<0.50	<0.50	1,100	4.84	CEL	7.93	<50	--
<b>5/23/2008</b>	<b>P</b>		<b>155.45</b>	<b>9.80</b>	--	<b>145.65</b>	<b>&lt;50</b>	<b>&lt;20</b>	<b>&lt;20</b>	<b>&lt;20</b>	<b>&lt;20</b>	<b>1,200</b>	<b>0.49</b>	<b>CEL</b>	<b>6.89</b>	<b>&lt;50</b>	--
<b>MW-6</b>																	
3/13/2007	P	d	154.59	7.82	--	146.77	86	<0.50	<0.50	<0.50	<0.50	88	1.92	TAMC	7.21	<48	--
5/8/2007	P	c	154.59	7.92	--	146.67	88	<0.50	<0.50	<0.50	<0.50	120	1.87	TAMC	7.50	<48	--
8/7/2007	P	c	154.59	9.85	--	144.74	67	<0.50	<0.50	<0.50	<0.50	85	3.60	TAMC	7.25	<47	--
11/13/2007	P	c	154.59	9.71	--	144.88	67	<1.0	<1.0	<1.0	<1.0	98	4.44	TAMC	7.16	<48	--
2/29/2008	P		154.59	8.86	--	145.73	<50	<0.50	<0.50	<0.50	<0.50	130	4.35	CEL	7.82	<50	--
<b>5/23/2008</b>	<b>P</b>		<b>154.59</b>	<b>9.98</b>	--	<b>144.61</b>	<b>&lt;50</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>150</b>	<b>0.62</b>	<b>CEL</b>	<b>7.12</b>	<b>&lt;50</b>	--

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.  
d = Well survey by Morrow Surveying on 12/27/2006.  
e = Well re-sampled due to insufficient laboratory analysis of previous sampling event on 11/13/2007. The depth to water and resulting water level elevation from 11/13/2007 will be used for reporting purposes for Fourth Quarter 2007.  
f = The hydrocarbon pattern for DRO in the sample does not match that of the diesel standard used to calculate results.

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	
2/6/2007	<300	<20	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	
5/8/2007	<300	<20	19	<0.50	<0.50	<0.50	<0.50	<0.50	
8/7/2007	<300	<20	5.0	<0.50	<0.50	<0.50	<0.50	<0.50	
12/20/2007	<300	<20	10	<0.50	<0.50	<0.50	<0.50	<0.50	
2/29/2008	<300	<10	7.4	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>5/23/2008</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>1.9</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>MW-2</b>									
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	
2/6/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
5/8/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/7/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
12/20/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/29/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>5/23/2008</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>MW-4</b>									
10/19/2004	<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	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	
2/6/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

**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-4 Cont.</b>									
5/8/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/7/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
12/20/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/29/2008	<300	<10	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	
<b>5/23/2008</b>	<b>&lt;300</b>	<b>&lt;10</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	<b>&lt;0.50</b>	
<b>MW-5</b>									
3/13/2007	<3,000	<200	1,400	<5.0	<5.0	6.5	<5.0	<5.0	
5/8/2007	<3,000	<200	1,300	<0.50	<0.50	7.0	<0.50	<0.50	
8/7/2007	<6,000	<400	1,600	<10	<10	<10	<10	<10	
11/13/2007	<6,000	<400	1,400	<10	<10	<10	<10	<10	
2/29/2008	<300	42	1,100	<0.50	<0.50	4.9	<0.50	<0.50	
<b>5/23/2008</b>	<b>&lt;12,000</b>	<b>&lt;400</b>	<b>1,200</b>	<b>&lt;20</b>	<b>&lt;20</b>	<b>&lt;20</b>	<b>&lt;20</b>	<b>&lt;20</b>	
<b>MW-6</b>									
3/13/2007	<300	<20	88	<0.50	<0.50	<0.50	<0.50	<0.50	
5/8/2007	<300	<20	120	<0.50	<0.50	0.61	<0.50	<0.50	
8/7/2007	<300	<20	85	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2007	<600	<40	98	<1.0	<1.0	<1.0	<1.0	<1.0	
2/29/2008	<300	<10	130	<0.50	<0.50	0.71	<0.50	<0.50	
<b>5/23/2008</b>	<b>&lt;1,500</b>	<b>&lt;50</b>	<b>150</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	<b>&lt;2.5</b>	

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>
11/12/1990	--	--
7/15/1991	Southwest	0.0174
10/15/1991	Southwest	0.0182
1/15/1992	South-Southwest	0.014
4/17/1992	South	0.014
9/30/1992	South-Southwest	0.018
12/17/1992	North	0.01
3/15/1993	South	0.007
10/19/2004	South-Southwest	0.022
1/13/2005	--	--
2/24/2006	Southeast	0.01
5/30/2006	East-Southeast	0.007
8/28/2006	South	0.012
11/2/2006	South	0.013
3/13/2007	Southwest	0.006
5/8/2007	South-Southwest	0.009
8/7/2007	Southwest	0.01
11/13/2007	Southwest	0.01
12/17/2007	Southwest	0.01
2/29/2008	Southwest	0.009
<b>5/23/2008</b>	<b>Southwest</b>	<b>0.01</b>

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, 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

June 17, 2008

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

Re: Groundwater Sampling Data Package, ARCO Service Station No. 11124, located at  
3315 High Street, Oakland, California

**General Information**

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

*Phone Number:* (530) 676-6000

*On-Site Supplier Representative:* Jerry Gonzales

*Sampling Date:* May 23, 2008

*Arrival:* 15:50      *Departure:* 18:05

*Weather Conditions:* Partly Cloudy

*Unusual Field Conditions:* None noted.

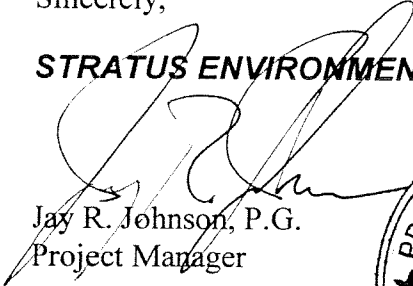
*Scope of Work Performed:* Quarterly monitoring and sampling.

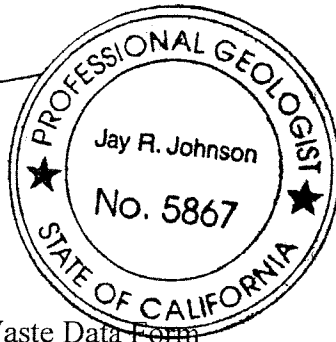
*Variations from Work Scope:* None noted.

This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include field data sheets, 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



# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11124 PURGED BY: SS WELL I.D.: 10001  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: SS SAMPLE I.D.: 10001  
 LOCATION: Oakland - 3315 High Street QA SAMPLES: \_\_\_\_\_

DATE PURGED 5/23/08 START (2400hr) 16:28 END (2400hr) 16:31  
 DATE SAMPLED 5/23/08 SAMPLE TIME (2400hr) 16:35  
 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) = 34.47 CASING VOLUME (gal) = 4.0  
 DEPTH TO WATER (feet) = 10.73 CALCULATED PURGE (gal) = 17.2  
 WATER COLUMN HEIGHT (feet) = 24.0 ACTUAL PURGE (gal) = 17.5

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>5/23/08</u>	<u>16:29</u>	<u>4</u>	<u>21.1</u>	<u>321.6</u>	<u>6.81</u>	<u>clear</u>	
	<u>16:30</u>	<u>8</u>	<u>20.7</u>	<u>322.0</u>	<u>6.84</u>		
	<u>16:31</u>	<u>17.5</u>	<u>20.6</u>	<u>320.3</u>	<u>6.83</u>		

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 11.48 SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWO  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 1.000 L HDPE - 2 AMBERS 5500 mL

#### 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#: M072

REMARKS: D.O. 1.76

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# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11124 PURGED BY: JS WELL I.D.: W-2  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: JS SAMPLE I.D.: W-2  
 LOCATION: Oakland - 3315 High Street QA SAMPLES: \_\_\_\_\_

DATE PURGED 5/22/08 START (2400hr) 17:18 END (2400hr) 17:31  
 DATE SAMPLED 5-22-08 SAMPLE TIME (2400hr) 17:27  
 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) = 28.80 CASING VOLUME (gal) = 3.3  
 DEPTH TO WATER (feet) = 9.28 CALCULATED PURGE (gal) = 9.9  
 WATER COLUMN HEIGHT (feet) = 19.5 ACTUAL PURGE (gal) = 10.5

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>5/22/08</u>	<u>17:19</u>	<u>3.3</u>	<u>17.8</u>	<u>558</u>	<u>7.23</u>	<u>cloudy</u>	
	<u>17:30</u>	<u>7.0</u>	<u>18.4</u>	<u>560</u>	<u>7.22</u>		
	<u>17:31</u>	<u>10.5</u>	<u>19.7</u>	<u>559</u>	<u>7.07</u>		

SAMPLE DEPTH TO WATER: 9.28 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWD  
 ODOR: no SAMPLE VESSEL / PRESERVATIVE: 6 Van-Hell - 2 Amber 500ml

### PURGING EQUIPMENT

Bladder Pump  
 Centrifugal Pump  
 Submersible Pump  
 Peristaltic Pump  
 Other: \_\_\_\_\_  
 Pump Depth: 20

### SAMPLING EQUIPMENT

Bladder Pump  
 Centrifugal Pump  
 Submersible Pump  
 Peristaltic Pump  
 Other: \_\_\_\_\_

WELL INTEGRITY: good LOCK#: MATH

REMARKS: DO. 0.93

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

PROJECT #: 11124 PURGED BY: Jo WELL I.D.: MW 4  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: JG SAMPLE I.D.: MW 4  
 LOCATION: Oakland - 3315 High Street QA SAMPLES: \_\_\_\_\_

DATE PURGED 5/23/08 START (2400hr) 17:35 END (2400hr) 17:38  
 DATE SAMPLED 5/23/08 SAMPLE TIME (2400hr) 17:45  
 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) = 3.5  
 DEPTH TO WATER (feet) = 9.32 CALCULATED PURGE (gal) = 10.6  
 WATER COLUMN HEIGHT (feet) = 20.8 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>5/23/08</u>	<u>1736</u>	<u>3.5</u>	<u>18.3</u>	<u>484.6</u>	<u>7.29</u>	<u>clear</u>	_____
<u>/</u>	<u>1737</u>	<u>7.0</u>	<u>18.1</u>	<u>487.1</u>	<u>7.25</u>	<u>/</u>	_____
<u>/</u>	<u>1738</u>	<u>11.0</u>	<u>11.2</u>	<u>484.7</u>	<u>7.11</u>	<u>/</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE DEPTH TO WATER: 9.71 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWD  
 ODOR: No SAMPLE VESSEL / PRESERVATIVE: 6 1/2oz 100cc - 2.1 AMB Buss 500ml 2010

PURGING EQUIPMENT

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_ Bailer (PVC) \_\_\_\_\_  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_

Other: \_\_\_\_\_

Pump Depth: \_\_\_\_\_

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#: MISTY

REMARKS: DO 1.93

SIGNATURE: [Signature]

# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11124 PURGED BY: JG WELL I.D.: N-3  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: JG SAMPLE I.D.: N-105  
 LOCATION: Oakland - 3315 High Street QA SAMPLES: \_\_\_\_\_

DATE PURGED 5/23/08 START (2400hr) 1642 END (2400hr) 1645  
 DATE SAMPLED 5/23/08 SAMPLE TIME (2400hr) 16:50  
 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) = 29.82 CASING VOLUME (gal) = 3.9  
 DEPTH TO WATER (feet) = 9.80 CALCULATED PURGE (gal) = 10.2  
 WATER COLUMN HEIGHT (feet) = 20.0 ACTUAL PURGE (gal) = 10.5

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>5/23/08</u>	<u>16:40</u>	<u>3.5</u>	<u>20.9</u>	<u>507</u>	<u>6.86</u>	<u>clear</u>	_____
_____	<u>16:40</u>	<u>7.0</u>	<u>21.2</u>	<u>531</u>	<u>6.87</u>	_____	_____
_____	<u>16:45</u>	<u>10.5</u>	<u>21.4</u>	<u>560</u>	<u>6.89</u>	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.04 SAMPLE TURBIDITY: clear

80% RECHARGE:  YES  NO ANALYSES: SWD  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 Vol-HCl, 2 Amber 500 mL

### 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#: Matt

REMARKS: DO-049

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



# BP ALAMEDA PORTFOLIO

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11124 PURGED BY: JS WELL I.D.: MW 6  
 CLIENT NAME: \_\_\_\_\_ SAMPLED BY: JS SAMPLE I.D.: MW 6  
 LOCATION: Oakland - 3315 High Street QA SAMPLES: \_\_\_\_\_

DATE PURGED 5/22/08 START (2400hr) 1700 END (2400hr) 1703  
 DATE SAMPLED 5/23/08 SAMPLE TIME (2400hr) 1710  
 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) = 29.55 CASING VOLUME (gal) = 3.3  
 DEPTH TO WATER (feet) = 9.8 CALCULATED PURGE (gal) = 9.9  
 WATER COLUMN HEIGHT (feet) = 19.5 ACTUAL PURGE (gal) = 10.5

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>5/23/08</u>	<u>1701</u>	<u>3.3</u>	<u>21.8</u>	<u>619</u>	<u>7.23</u>	<u>Clear</u>	
	<u>1702</u>	<u>7.0</u>	<u>22.1</u>	<u>610</u>	<u>7.19</u>	<u>1</u>	
	<u>1703</u>	<u>10.5</u>	<u>21.8</u>	<u>606</u>	<u>7.12</u>	<u>1</u>	

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 10.85 SAMPLE TURBIDITY: Clear

80% RECHARGE:  YES  NO ANALYSES: SWO  
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 Vol. HCL - 2. AMBIC - N.P. 500ml

#### PURGING EQUIPMENT

Bladder Pump \_\_\_\_\_ Bailer (Teflon) \_\_\_\_\_  
 Centrifugal Pump \_\_\_\_\_ Bailer (PVC) \_\_\_\_\_  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel) \_\_\_\_\_  
 Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_

Other: \_\_\_\_\_

Pump Depth: \_\_\_\_\_

#### 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#: REGISTRATION

REMARKS: D.O. 0.62

SIGNATURE: [Signature]

# WELLHEAD OBSERVATION FORM



Site Name/Number: 11179

Date: 5/13/08 Technician: Jerry

Well I.D.	Box in Good Condition?	Lock Missing?	Water in Wellbox?	Water Level Relative to Cap?	Well Cap?	Bolts Missing?	Bolts Stripped?	Bolt Holes Stripped?	Cracked or Broken Lid?	Cracked or Broken Box?	Grout Level more than 1ft below TOC?	Additional Comments <small>(such as missing bolts, concrete needs replacement, etc.)</small>
	X = Yes Blank = No	X = Yes (implied) Blank = No	X = Yes Blank = No	A = Above cap B = Below cap L = Level/cap	L = Intact M = Missing or Compromised (loosened)	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	X = Yes Blank = No	
MW-1	X				I							
MW-2	X				I							
MW-4	X				I	X						
MW-5	X				I							
MW-6	X				I							

**DRUM INVENTORY**

Drums on site? Yes  No  (circle)  
 Type and # Steel: \_\_\_\_\_ Plastic: \_\_\_\_\_

Note whether drums are full or empty, solids or liquids.  
 \_\_\_\_\_  
 \_\_\_\_\_

Drum label info (description, date, contact info):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**GENERAL SITE CONDITIONS**

Make notes on housekeeping conditions (such as trash around remediation system enclosure/compound, bent or missing bollards, signs missing from compound fences, graffiti on compound, etc.)

Site closed Fence around lot Need to clean up trash around lot Broken windows

NO. 666723

# NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

SITE:

EPA I.D. NO. NOT REQUIRED

NAME HP WEST COAST PRODUCTS LLC ARCO # 111-4

ADDRESS P.O. BOX 80745

RANCHO SANTA MARGARITA

CITY, STATE, ZIP CA 92688

PHONE NO. \_\_\_\_\_

CONTAINERS: No. \_\_\_\_\_ VOLUME 3.5 gal WEIGHT \_\_\_\_\_

TYPE:  TANK TRUCK  DUMP TRUCK  DRUMS  CARTONS  OTHER \_\_\_\_\_

WASTE DESCRIPTION			GENERATING PROCESS		
NON-HAZARDOUS WATER			WELL DRILLING/DECON WATER		
COMPONENTS OF WASTE			COMPONENTS OF WASTE		
	PPM	%		PPM	%
1. <u>WATER</u>	<u>99-100%</u>		5. _____		
2. <u>TIN</u>	<u>&lt;1%</u>		6. _____		
3. _____			7. <u>BEST#</u>		
4. _____			8. _____		

PROPERTIES: 7-80  SOLID  LIQUID  SLUDGE  SLURRY  OTHER \_\_\_\_\_

HANDLING INSTRUCTIONS: WEAR ALL APPROPRIATE PROTECTIVE CLOTHING

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

James M. Smith 7/27/88  
TYPED OR PRINTED FULL NAME & SIGNATURE DATE

TRANSPORTER

Transporter #1

NAME STRATUS ENVIRONMENTAL

ADDRESS 3330 CAMERON PARK DR

CITY, STATE, ZIP CAMERON PARK, CA 95602

PHONE NO. 530-676-2031

TRUCK UNIT, I.D. NO. \_\_\_\_\_

James M. Smith 7/27/88  
TYPED OR PRINTED FULL NAME & SIGNATURE DATE

EPA I.D. NO. [REDACTED]

SERVICE ORDER NO. \_\_\_\_\_

PICK UP DATE \_\_\_\_\_

TSD FACILITY

NAME INSTRAT, INC

ADDRESS 1105 AIRPORT RD #C

CITY, STATE, ZIP RIO VISTA, CA 94521

PHONE NO. 530-752-1829

\_\_\_\_\_  
TYPED OR PRINTED FULL NAME & SIGNATURE

EPA I.D. NO. [REDACTED]

DISPOSAL METHOD:  LANDFILL  OTHER \_\_\_\_\_

DATE \_\_\_\_\_

GEN	OLD/NEW	L	A	TONS
TRANS		S	B	
QTY		RTCD	HWD	NONE

DISCREPANCY



bp  
A BP affiliated company

### Chain of Custody Record

Project Name: BP 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: <u>1550</u>	Temp: <u>95</u>
Off-site Time: <u>1805</u>	Temp: <u>96</u>
Sky Conditions: <u>Partly Cloud</u>	
Meteorological Events: <u>AC</u>	
Wind Speed: <u>10</u>	Direction: <u>NW</u>

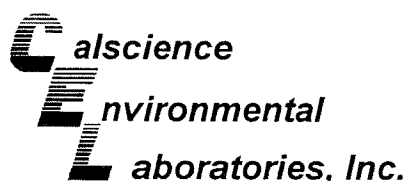
Lab Name: <u>Calscience</u>	BP/AR Facility No.: <u>11124</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>7440 Lincoln Way</u> <u>Garden Grove, CA 92841</u>	BP/AR Facility Address: <u>3315 High Street, Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u> <u>Cameron Park, CA 95682</u>
Lab PM: <u>Linda Scharpenberg</u>	California Global ID #: <u>T06001001919</u>	Consultant/Contractor Project No.: <u>E11124-04</u>
Tele/Fax: <u>714-895-5494 714-895-7501(fax)</u>	Enfos Project No.: <u>G099D-0022</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or RCOP (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u> <u>San Ramon, CA</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
Tele/Fax: <u>925-275-3506</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail EDD To: <u>shayes@stratusinc.net</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 *Oxy = MTBD, TAME, ETBE, DIPE, TBA		
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	BTEX/Oxy* by 8260	1,2 DCA	EDB	Ethanol by 8260	DRO by 8015M		CRO by 8015m	
1	MW-1	16:35	5/23/08	X				8						X	X	X	X	X	X		
2	MW-2	17:27		X				8						X	X	X	X	X	X		
3	MW-4	17:48		X				8						X	X	X	X	X	X		
4	MW-5	16:50		X				8						X	X	X	X	X	X		
5	MW-6	17:10		X				8						X	X	X	X	X	X		
6	TB 11124 <u>05232008</u>	500		X				7						X	X	X	X	X	X		(HOLD)
7																					
8																					
9																					
10																					

Sampler's Name: <u>Jerry Gonzalez</u>	Relinquished By / Affiliation: _____	Date: _____	Time: _____	Accepted By / Affiliation: _____	Date: _____	Time: _____
Sampler's Company: <u>DOE/OS ENV</u>						
Shipment Date: _____						
Shipment Method: _____						
Shipment Tracking No: _____						

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



June 10, 2008

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

Subject: **Calscience Work Order No.: 08-05-2358**  
**Client Reference: BP 11124**

Dear Client:

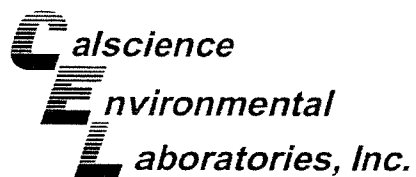
Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/28/2008 and analyzed in accordance with the attached chain-of-custody.

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 – 08-05-2358

Data Qualifiers - EPA 8260:

080603S02:

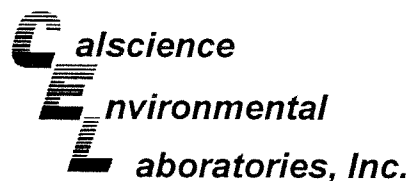
The RPDs for toluene and ethanol were outside criteria in the MS/MSD. The RPD was within criteria in the LCS/LCSD. The MS/MSD has been flagged "4" within the report.

"4" = BA, AY

BA – Relative Percent Difference out of Control

AY = Matrix Interference Suspected

A handwritten signature in black ink, appearing to be "M. M. M.", located at the bottom left of the page.



## Analytical Report

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

Date Received: 05/28/08  
Work Order No: 08-05-2358  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: BP 11124

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	08-05-2358-1-D	05/23/08 16:35	Aqueous	GC 4	05/31/08	06/01/08 05:27	080531B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	81	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	08-05-2358-2-D	05/23/08 13:29	Aqueous	GC 4	05/31/08	06/01/08 06:00	080531B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	87	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	08-05-2358-3-D	05/23/08 17:45	Aqueous	GC 4	05/31/08	06/01/08 06:33	080531B01

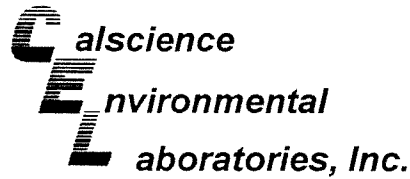
Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	80	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	08-05-2358-4-D	05/23/08 16:50	Aqueous	GC 4	05/31/08	06/01/08 07:06	080531B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	88	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: 05/28/08  
 Work Order No: 08-05-2358  
 Preparation: EPA 5030B  
 Method: EPA 8015B (M)

Project: BP 11124

Page 2 of 2

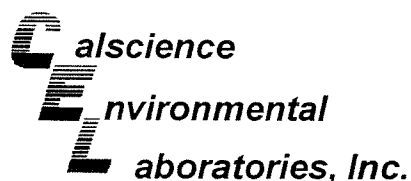
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	08-05-2358-5-D	05/23/08 17:10	Aqueous	GC 4	05/31/08	06/01/08 07:39	080531B01

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	85	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-151	N/A	Aqueous	GC 4	05/31/08	05/31/08 16:15	080531B01

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: 05/28/08  
Work Order No: 08-05-2358  
Preparation: EPA 3510C  
Method: EPA 8015B (M)

Project: BP 11124

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	08-05-2358-1-H	05/23/08 16:35	Aqueous	GC 43	05/28/08	05/29/08 09:24	080528B06

Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	134	68-140			

MW-2	08-05-2358-2-H	05/23/08 13:29	Aqueous	GC 43	05/28/08	05/29/08 09:32	080528B06
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	120	68-140			

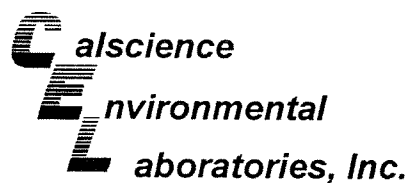
MW-4	08-05-2358-3-H	05/23/08 17:45	Aqueous	GC 43	05/28/08	05/29/08 09:40	080528B06
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	99	68-140			

MW-5	08-05-2358-4-H	05/23/08 16:50	Aqueous	GC 43	05/28/08	05/29/08 09:48	080528B06
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Parameter	Result	RL	DF	Qual	Units
Diesel Range Organics (C10-C28)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	115	68-140			

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: 05/28/08  
Work Order No: 08-05-2358  
Preparation: EPA 3510C  
Method: EPA 8015B (M)

Project: BP 11124

Page 2 of 2

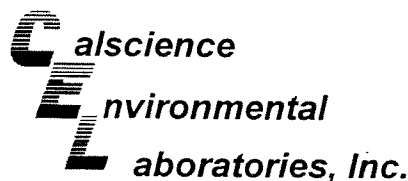
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	08-05-2358-5-H	05/23/08 17:10	Aqueous	GC 43	05/28/08	05/29/08 10:11	080528B06

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Diesel Range Organics (C10-C28)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	110	68-140			

<b>Method Blank</b>	<b>099-12-699-50</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC 43</b>	<b>05/28/08</b>	<b>05/29/08 08:13</b>	<b>080528B06</b>
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>
Diesel Range Organics (C10-C28)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
Decachlorobiphenyl	123	68-140			

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: 05/28/08  
Work Order No: 08-05-2358  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: BP 11124

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	08-05-2358-1-B	05/23/08 16:35	Aqueous	GC/MS BB	06/03/08	06/04/08 05:52	080603L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	1.9	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	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	105	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	88	75-105		

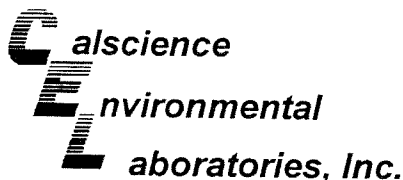
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	08-05-2358-2-B	05/23/08 13:29	Aqueous	GC/MS BB	06/03/08	06/04/08 06:24	080603L02

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	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	99	73-157			Dibromofluoromethane	99	82-142		
Toluene-d8	97	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-4	08-05-2358-3-B	05/23/08 17:45	Aqueous	GC/MS BB	06/03/08	06/04/08 06:56	080603L02

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	
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>
1,2-Dichloroethane-d4	118	73-157			Dibromofluoromethane	113	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	89	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: 05/28/08  
Work Order No: 08-05-2358  
Preparation: EPA 5030B  
Method: EPA 8260B  
Units: ug/L

Project: BP 11124

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-5</b>	<b>08-05-2358-4-B</b>	<b>05/23/08 16:50</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>06/03/08</b>	<b>06/04/08 07:29</b>	<b>080603L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	20	40		Methyl-t-Butyl Ether (MTBE)	1200	20	40	
1,2-Dibromoethane	ND	20	40		Tert-Butyl Alcohol (TBA)	ND	400	40	
1,2-Dichloroethane	ND	20	40		Diisopropyl Ether (DIPE)	ND	20	40	
Ethylbenzene	ND	20	40		Ethyl-t-Butyl Ether (ETBE)	ND	20	40	
Toluene	ND	20	40		Tert-Amyl-Methyl Ether (TAME)	ND	20	40	
Xylenes (total)	ND	20	40		Ethanol	ND	12000	40	
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	123	73-157			Dibromofluoromethane	114	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	88	75-105		

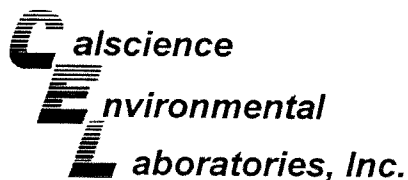
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>MW-6</b>	<b>08-05-2358-5-B</b>	<b>05/23/08 17:10</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>06/03/08</b>	<b>06/04/08 08:01</b>	<b>080603L02</b>

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.5	5		Methyl-t-Butyl Ether (MTBE)	150	2.5	5	
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	
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	132	73-157			Dibromofluoromethane	122	82-142		
Toluene-d8	96	82-112			1,4-Bromofluorobenzene	84	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-12-703-258</b>	<b>N/A</b>	<b>Aqueous</b>	<b>GC/MS BB</b>	<b>06/03/08</b>	<b>06/04/08 03:43</b>	<b>080603L02</b>

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	
<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>	<b>Surrogates:</b>	<b>REC (%)</b>	<b>Control Limits</b>		<b>Qual</b>
1,2-Dichloroethane-d4	124	73-157			Dibromofluoromethane	114	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	83	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

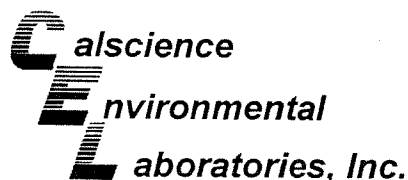
Date Received: 05/28/08  
 Work Order No: 08-05-2358  
 Preparation: EPA 5030B  
 Method: EPA 8015B (M)

Project BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-05-2133-1	Aqueous	GC 4	05/31/08	05/31/08	080531S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	106	117	38-134	5	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: 05/28/08  
Work Order No: 08-05-2358  
Preparation: EPA 5030B  
Method: EPA 8260B

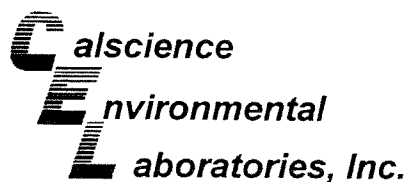
Project BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-06-0103-4	Aqueous	GC/MS BB	06/03/08	06/04/08	080603S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	107	86-122	1	0-8	
Carbon Tetrachloride	109	108	78-138	1	0-9	
Chlorobenzene	101	104	90-120	3	0-9	
1,2-Dibromoethane	98	106	70-130	8	0-30	
1,2-Dichlorobenzene	101	100	89-119	1	0-10	
1,1-Dichloroethene	110	96	52-142	13	0-23	
Ethylbenzene	108	107	70-130	0	0-30	
Toluene	103	91	85-127	13	0-12	4
Trichloroethene	97	95	78-126	2	0-10	
Vinyl Chloride	95	87	56-140	8	0-21	
Methyl-t-Butyl Ether (MTBE)	109	95	64-136	14	0-28	
Tert-Butyl Alcohol (TBA)	105	109	27-183	4	0-60	
Diisopropyl Ether (DIPE)	112	96	78-126	15	0-16	
Ethyl-t-Butyl Ether (ETBE)	109	94	67-133	14	0-21	
Tert-Amyl-Methyl Ether (TAME)	103	100	63-141	2	0-21	
Ethanol	45	90	11-167	67	0-64	4

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

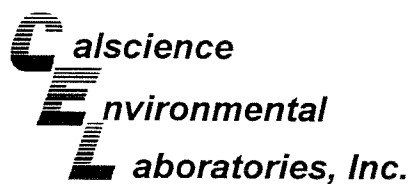
Date Received: N/A  
Work Order No: 08-05-2358  
Preparation: EPA 5030B  
Method: EPA 8015B (M)

Project: BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-151	Aqueous	GC 4	05/31/08	05/31/08	080531B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	97	99	78-120	2	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

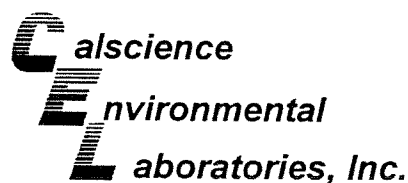
Date Received: N/A  
Work Order No: 08-05-2358  
Preparation: EPA 3510C  
Method: EPA 8015B (M)

Project: BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-699-50	Aqueous	GC 43	05/28/08	05/29/08	080528B06

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Diesel Range Organics (C10-C28)	98	92	75-117	6	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

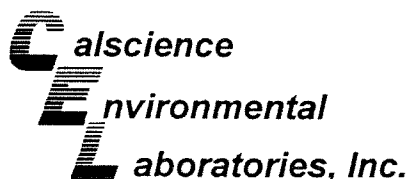
Date Received: N/A  
Work Order No: 08-05-2358  
Preparation: EPA 5030B  
Method: EPA 8260B

Project: BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-258	Aqueous	GC/MS BB	06/03/08	06/04/08	080603L02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	100	87-117	0	0-7	
Carbon Tetrachloride	107	108	78-132	0	0-8	
Chlorobenzene	98	99	88-118	0	0-8	
1,2-Dibromoethane	102	102	80-120	0	0-20	
1,2-Dichlorobenzene	98	102	88-118	3	0-8	
1,1-Dichloroethene	105	104	71-131	1	0-14	
Ethylbenzene	102	105	80-120	3	0-20	
Toluene	100	97	85-127	3	0-7	
Trichloroethene	108	110	85-121	2	0-11	
Vinyl Chloride	95	94	64-136	0	0-10	
Methyl-t-Butyl Ether (MTBE)	110	103	67-133	6	0-16	
Tert-Butyl Alcohol (TBA)	95	107	34-154	11	0-19	
Diisopropyl Ether (DIPE)	111	105	80-122	6	0-8	
Ethyl-t-Butyl Ether (ETBE)	109	105	73-127	3	0-11	
Tert-Amyl-Methyl Ether (TAME)	103	98	69-135	5	0-12	
Ethanol	82	83	34-124	2	0-44	

RPD - Relative Percent Difference, CL - Control Limit



## Glossary of Terms and Qualifiers

Work Order Number: 08-05-2358

<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.



bp  
A BP affiliated company

**Chain of Custody Record**

**Project Name:** BP 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):** \_\_\_\_\_

2358

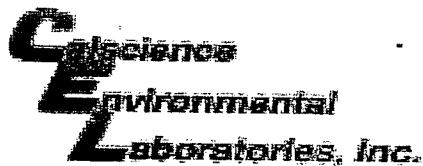
On-site Time: 1550	Temp: 55
Off-site Time: 1805	Temp: 56
Sky Conditions: Partly Cloud	
Meteorological Events: NO	
Wind Speed: 10	Direction: NW

Lab Name: Calscience	BP/AR Facility No.: 11124	Consultant/Contractor: Stratus Environmental, Inc.
Address: 7440 Lincoln Way Garden Grove, CA 92841	BP/AR Facility Address: 3315 High Street, Oakland	Address: 3330 Cameron Park Drive, Suite 550 Cameron Park, CA 95682
Lab PM: Linda Scharpenberg	Site Lat/Long:	Consultant/Contractor Project No.: E11124-04
Tele/Fax: 714-895-5494 714-895-7501(fax)	California Global ID #: T06001001919	Consultant/Contractor PM: Jay Johnson
BP/AR PM Contact: Paul Supple	Enfos Project No.: G099D-0022	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: shayes@stratusinc.net
	Sub Phase/Task: 03-Analytical	Invoice to: Atlantic Richfield Co.
	Cost Element: 01-Contractor labor	

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis						Sample Point Lat/Long and Comments *Oxy = MTBD, TAME, ETBE, DIPE, TBA			
				Soil/Solid	Water/Liquid	Air			Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	Methanol	BTEX/Oxy* by 8260	1,2 DCA	EDB	Ethanol by 8260	DRO by 8015M	GRO by 8015m				
1	MW-1	1635	5/25/08	X										X	X	X	X	X	X				
2	MW-2	17:27		X										X	X	X	X	X	X				
3	MW-4	1745		X										X	X	X	X	X	X				
4	MW-5	1650		X										X	X	X	X	X	X				
5	MW-6	1710		X										X	X	X	X	X	X				
6	TB 11124 05232004	500		X				2						X	X	X	X	X	X				HOLD
7																							
8																							
9																							
10																							

Sampler's Name: Jerré Gonzalez	Relinquished By / Affiliation: [Signature]	Date:	Time:	Accepted By / Affiliation: [Signature]	Date:	Time:
Sampler's Company: Don 105 EN						
Shipment Date:						
Shipment Method:						
Shipment Tracking No: 105748746						
Special Instructions: 1 trace of benzene in 100 ml. miller@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



WORK ORDER #: 08 - 05 - 2358

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: stratus

DATE: 5/28/08

TEMPERATURE - SAMPLES RECEIVED BY:

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.

LABORATORY (Other than Calscience Courier):

- 3.8 °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: Description, Yes, No, N/A. Rows include Chain-Of-Custody document(s), Sampler's name, Sample container label(s), Sample container(s) intact, Correct containers and volume, Proper preservation, 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  $\mu$ s daily and 1413  $\mu$ s and 447  $\mu$ s 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<sup>®</sup> 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**

**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 11124  
**Facility Global ID:** T0600100919  
**Facility Name:** BP #11124  
**Submittal Date/Time:** 6/30/2008 2:50:42 PM  
**Confirmation Number:** **6847031116**

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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:** 3935756087  
**Date/Time of Submittal:** 6/30/2008 2:52:56 PM  
**Facility Global ID:** T0600100919  
**Facility Name:** BP #11124  
**Submittal Title:** 2Q08 GW Monitoring  
**Submittal Type:** GW Monitoring Report

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

<b>BP #11124</b> 3315 HIGH OAKLAND, CA 94619	<b>Regional Board - Case #: 01-0996</b> SAN FRANCISCO BAY RWQCB (REGION 2) <b>Local Agency (lead agency) - Case #: RO0000239</b> ALAMEDA COUNTY LOP - (PK)
--	---

<u>CONF #</u>	<u>TITLE</u>	<u>QUARTER</u>
3935756087	2Q08 GW Monitoring	Q2 2008
<u>SUBMITTED BY</u>	<u>SUBMIT DATE</u>	<u>STATUS</u>
Broadbent & Associates, Inc.	6/30/2008	PENDING REVIEW

## SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	5
# 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%	Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
<b>SURROGATE SPIKES % RECOVERY BETWEEN 85-115%</b>	<b>N</b>
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

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**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)

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