



Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, CA 94583
Phone: (925) 275-3801
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23 January 2008

Re: Fourth 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

RECEIVED

11:21 am, Jan 29, 2009

Alameda County
Environmental Health



Fourth 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

23 January 2009

Project No. 06-08-652

23 January 2009

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

Dear Mr. Supple:

Attached is the *Fourth 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 Fourth 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 (Fourth Quarter 2008):

1. Submitted Third Quarter 2008 Ground-Water Monitoring Report.
2. Conducted ground-water monitoring/sampling for Fourth Quarter 2008. Work performed by Stratus Environmental, Inc. (Stratus) on 13 November 2008.

WORK PROPOSED FOR NEXT QUARTER (First Quarter 2009):

1. Prepared and submitted Fourth Quarter 2008 Ground-Water Monitoring Report (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for First Quarter 2009.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	Ground-Water Monitoring/Sampling
Frequency of ground-water monitoring:	Quarterly: Wells MW-1, MW-2, MW-4, MW-5 and MW-6
Frequency of ground-water sampling:	Quarterly: Wells MW-1, MW-5 and MW-6 Annually (Second Quarter): Wells MW-2 and MW-4
Is free product (FP) present on-site:	No
Current remediation techniques:	NA
Depth to ground water (below TOC):	10.11 ft (MW-2) to 12.10 ft (MW-5)
General ground-water flow direction:	Southwest
Approximate hydraulic gradient:	0.09 ft/ft

DISCUSSION:

Fourth quarter 2008 ground-water monitoring/sampling was conducted at Former BP Station #11124 on 13 November 2008 by Stratus personnel. Water levels were gauged in the five wells at the Site. No irregularities were noted during water level gauging. Depth-to-water level measurements ranged from 10.11 ft at MW-2 to 12.10 ft at MW-5. Resulting ground-water surface elevations ranged from 146.61 ft above mean sea level (msl) at well MW-1 to 143.35 ft above msl at well MW-5. 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 143.35 ft above msl in well MW-5. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the southwest at approximately 0.09 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.

Generally 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. Ground-water samples were inadvertently collected from wells MW-2 and MW-4. These wells will not be sampled again until Second Quarter 2009 in accordance with the sampling schedule. No other irregularities were reported during sampling. Samples were submitted to Calscience Environmental Laboratories, Inc. (Garden Grove, California) under chain-of-custody protocol for laboratory analysis of Gasoline Range Organics (GRO, C6-C12) by EPA Method 8015B; Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and Methyl tert-butyl ether (MTBE), Ethyl tert-butyl ether (ETBE), Ethanol, 1,2-Dichloroethane (1,2-DCA), 1,2-Dibromomethane (EDB), Di-isopropyl ether (DIPE), tert-Butyl alcohol (TBA), and tert-Amyl methyl ether (TAME) by EPA Method 8260B. 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 1,100 micrograms per liter ($\mu\text{g/L}$) in well MW-5. GRO 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: MTBE reached a historic maximum concentration in well MW-6 (160 $\mu\text{g/L}$). 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.

CLOSURE:

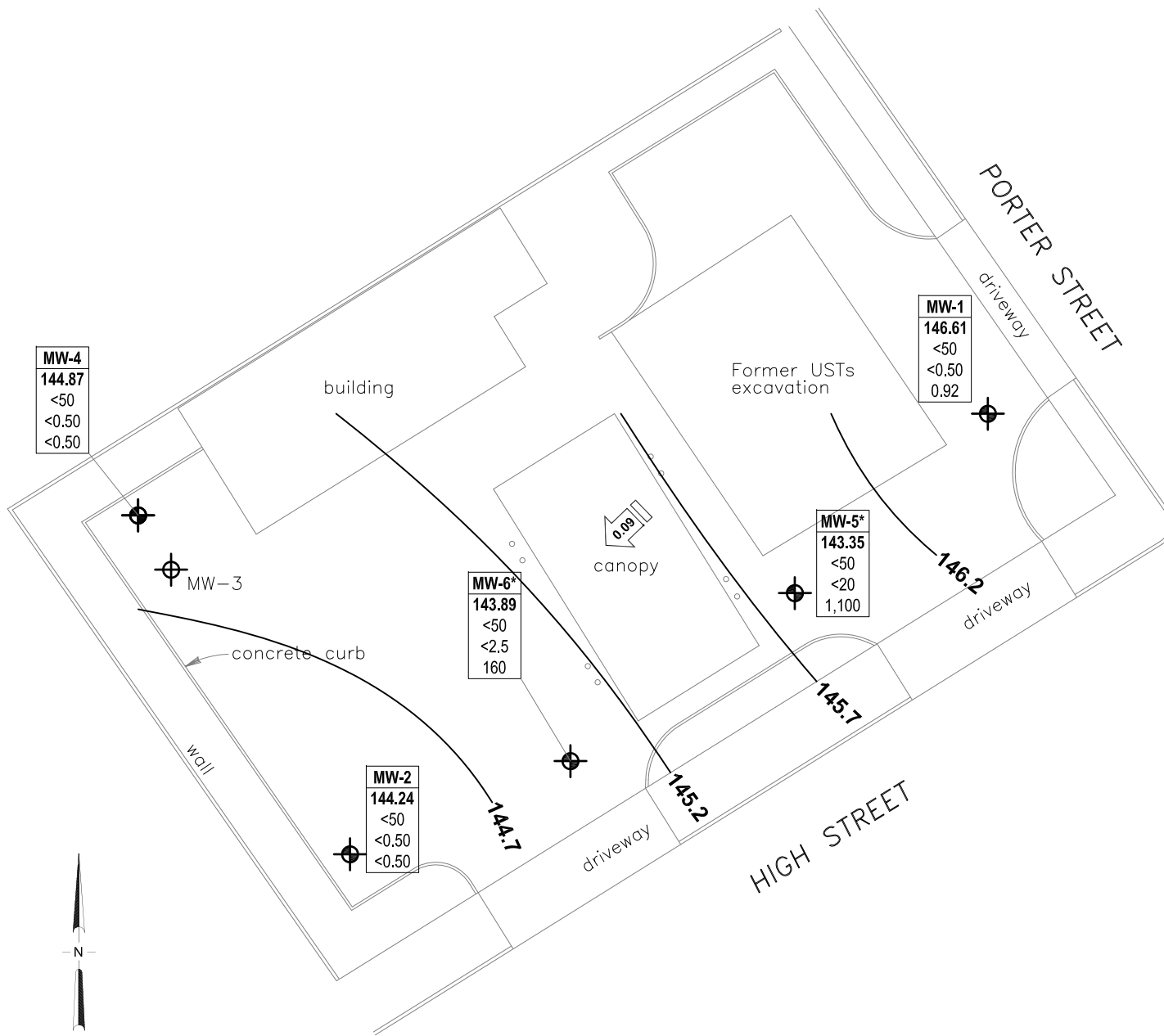
The findings presented in this report are based upon: observations of Stratus field personnel (see Appendix A), the points investigated, and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Our services were performed in accordance with 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, 13 November 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
 144.87
 <50
 <0.50
 <0.50

MW-3

MW-6*
 143.89
 <50
 <2.5
 160

MW-2
 144.24
 <50
 <0.50
 <0.50

MW-1
 146.61
 <50
 <0.50
 0.92

MW-5*
 143.35
 <50
 <20
 1,100

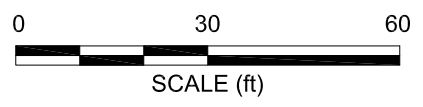
NOTE: SITE MAP ADAPTED FROM STRATUS ENVIRONMENTAL, INC FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

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	

- 145.2 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: 12/10/08

Former Station #11124
 3315 High Street
 Oakland, California

Ground-Water Elevation Contours
 and Analytical Summary Map
 13 November 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					
MW-1																	
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	--
5/23/2008	P		157.34	10.73	--	146.61	<50	<0.50	<0.50	<0.50	<0.50	1.9	1.76	CEL	6.83	<50	--
8/20/2008	P		157.34	11.35	--	145.99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.01	CEL	6.73	<50	--
11/13/2008	P		157.34	10.73	--	146.61	<50	<0.50	<0.50	<0.50	<0.50	0.92	3.96	CEL	7.07	--	--
MW-2																	
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	--

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					
MW-2 Cont.																	
5/23/2008	P		154.35	9.28	--	145.07	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.93	CEL	7.07	<50	--
8/20/2008	P		154.35	10.74	--	143.61	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.0	CEL	6.91	<50	--
11/13/2008	P		154.35	10.11	--	144.24	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.03	CEL	7.00	--	--
MW-4																	
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	--
5/23/2008	P		155.10	9.32	--	145.78	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.43	CEL	7.11	<50	--
8/20/2008	P		155.10	10.86	--	144.24	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.01	CEL	7.10	<50	--
11/13/2008	P		155.10	10.23	--	144.87	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.97	CEL	7.09	--	--
MW-5																	
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	--
5/23/2008	P		155.45	9.80	--	145.65	<50	<20	<20	<20	<20	1,200	0.49	CEL	6.89	<50	--
8/20/2008	P		155.45	10.88	--	144.57	<50	<20	<20	<20	<20	1,200	3.11	CEL	6.80	<50	--
11/13/2008	P		155.45	12.10	--	143.35	<50	<20	<20	<20	<20	1,100	2.99	CEL	7.16	--	--

**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					
MW-6																	
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	--
5/23/2008	P		154.59	9.98	--	144.61	<50	<2.5	<2.5	<2.5	<2.5	150	0.62	CEL	7.12	<50	--
8/20/2008	P		154.59	10.98	--	143.61	<50	<2.5	<2.5	<2.5	<2.5	140	2.20	CEL	6.96	<50	--
11/13/2008	P		154.59	10.70	--	143.89	<50	<2.5	<2.5	<2.5	<2.5	160	2.30	CEL	7.13	--	--

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.

GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008. The analysis for GRO was changed to EPA method 8015B (C6-C12) for samples collected from the time period February 5, 2008 through the present.

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	
MW-1									
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	
5/23/2008	<300	<10	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2008	<300	<10	0.92	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-2									
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	
5/23/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-4									
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	

**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	
MW-4 Cont.									
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	
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	
5/23/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-5									
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	
5/23/2008	<12,000	<400	1,200	<20	<20	<20	<20	<20	
8/20/2008	<12,000	<400	1,200	<20	<20	<20	<20	<20	
11/13/2008	<12,000	<400	1,100	<20	<20	<20	<20	<20	
MW-6									
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	
5/23/2008	<1,500	<50	150	<2.5	<2.5	<2.5	<2.5	<2.5	
8/20/2008	<1,500	<50	140	<2.5	<2.5	<2.5	<2.5	<2.5	
11/13/2008	<1,500	<50	160	<2.5	<2.5	<2.5	<2.5	<2.5	

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**

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
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
5/23/2008	Southwest	0.01
8/20/2008	Southwest	0.02
11/13/2008	Southwest	0.09

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

November 25, 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: Roberto Heimlich

Sampling Date: November 13, 2008

Arrival: 9:00 *Departure:* 11:30

Weather Conditions: Clear

Unusual Field Conditions: None noted.

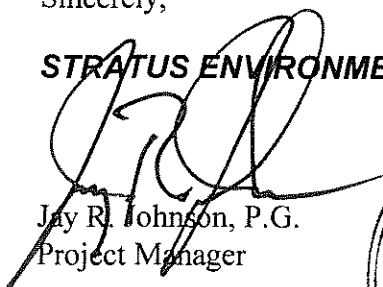
Scope of Work Performed: Quarterly monitoring and sampling.

Variations from Work Scope: None noted.

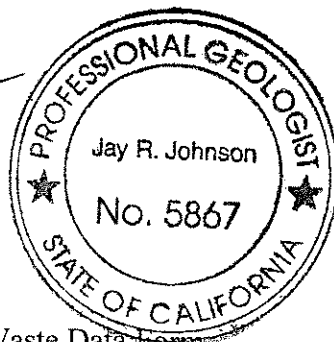
This submittal presents the tabulation of data collected in association with routine groundwater monitoring. The attachments include field data sheets, non-hazardous waste data form, chain of custody documentation, certified analytical results, and field procedures for groundwater sampling documentation. 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: RY WELL ID: MW-1
 CLIENT NAME: _____ SAMPLED BY: RY SAMPLE ID: MW-1
 LOCATION: Oakland - 3315 High Street QA SAMPLES: _____

DATE PURGED: 11/13/08 START (2400hr): 8:27 END (2400hr): 8:40
 DATE SAMPLED: 11/13/08 SAMPLE TIME (2400hr): 8:43
 SAMPLE TYPE: Groundwater x Surface Water _____ Treatment Effluent _____ Other _____

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

DEPTH TO BOTTOM (feet) = 34.47 CASING VOLUME (gal) = 4.0
 DEPTH TO WATER (feet) = 10.73 CALCULATED PURGE (gal) = 12.01
 WATER COLUMN HEIGHT (feet) = 23.7 ACTUAL PURGE (gal) = 12.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP (degrees C)	CONDUCTIVITY (micro/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11/13/08</u>	<u>8:30</u>	<u>4</u>	<u>21.2</u>	<u>302.6</u>	<u>7.27</u>	<u>clear</u>	_____
<u>✓</u>	<u>8:33</u>	<u>8</u>	<u>23.3</u>	<u>302.0</u>	<u>7.12</u>	<u>✓</u>	_____
<u>✓</u>	<u>8:35</u>	<u>12.5</u>	<u>23.4</u>	<u>321.8</u>	<u>7.07</u>	<u>✓</u>	_____

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 12.82 SAMPLE TURBIDITY: clear
 80% RECHARGE: ✓ YES NO ANALYSIS: SWW
 ODOR: NO SAMPLE VESSEL PRESERVATIVE: EVAP/HC2 - 2 - 500 ppm BGL

PURGING EQUIPMENT

SAMPLING EQUIPMENT

Bladder Pump _____ Bailer (Teflon) _____
~~Centrifugal Pump~~ Bailer (PVC) _____
 Submersible Pump _____ Bailer (Stainless Steel) _____
 Peristaltic Pump _____ Dedicated _____
 Other: _____
 Pump Depth: 34

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: DO 3-96

SIGNATURE: [Signature]

BP ALAMEDA PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11124 PURGED BY: RH WELL ID.: MW-2
 CLIENT NAME: _____ SAMPLED BY: RH SAMPLE I.D.: MW-2
 LOCATION: Oakland - 3315 High Street QA SAMPLES: _____

DATE PURGED: 11/13/08 START (2400hr): 7:50 END (2400hr): 8:01
 DATE SAMPLED: 11/13/08 SAMPLE TIME (2400hr): 8:03
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

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

DEPTH TO BOTTOM (feet) = 28.80 CASING VOLUME (gal) = 3.1
 DEPTH TO WATER (feet) = 10.11 CALCULATED PURGE (gal) = 9.5
 WATER COLUMN HEIGHT (feet) = 18.6 ACTUAL PURGE (gal) = 10

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11/13/08</u>	<u>7:52</u>	<u>3</u>	<u>21.7</u>	<u>604</u>	<u>7.12</u>	<u>clear</u>	
<u>✓</u>	<u>7:54</u>	<u>6</u>	<u>21.4</u>	<u>604</u>	<u>6.94</u>	<u>✓</u>	
<u>✓</u>	<u>7:56</u>	<u>10</u>	<u>21.6</u>	<u>576</u>	<u>7.00</u>	<u>✓</u>	

SAMPLE DEPTH TO WATER: 11.56 SAMPLE INFORMATION: _____ SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: SWS
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: EVAPAS/MCL - 2 - 500 AMBER

PURGING EQUIPMENT
 Bladder Pump Bailor (Teflon)
 Centrifugal Pump Bailor (PVC)
 Submersible Pump Bailor (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____
 Pump Depth: 28

SAMPLING EQUIPMENT
 Bladder Pump Bailor (Teflon)
 Centrifugal Pump Bailor (PVC or disposable)
 Submersible Pump Bailor (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____

WELL INTEGRITY: GOOD LOCK#: MASTER
 REMARKS: NO 4.03

SIGNATURE: [Signature] Page of

BP ALAMEDA PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11124 PURGED BY: RH WELL I.D.: MW-4
 CLIENT NAME: _____ SAMPLED BY: RV SAMPLE I.D.: MW-4
 LOCATION: Oakland - 3315 High Street QA SAMPLES: _____

DATE PURGED: 11/13/08 START (2400hr): 8:08 END (2400hr): 8:19
 DATE SAMPLED: 11/13/08 SAMPLE TIME (2400hr): 8:21
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____
 Casing Volume (gallons per foot): (0.17) (0.28) (0.67) (1.02) (1.50) (2.60) ()

DEPTH TO BOTTOM (feet) = 30.18 CASING VOLUME (gal) = 3.3
 DEPTH TO WATER (feet) = 10.23 CALCULATED PURGE (gal) = 12.1
 WATER COLUMN HEIGHT (feet) = 19.9 ACTUAL PURGE (gal) = 10.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11/13/08</u>	<u>8:10</u>	<u>4</u>	<u>18.2</u>	<u>475.6</u>	<u>7.21</u>	<u>clear</u>	_____
<u>↓</u>	<u>8:12</u>	<u>7</u>	<u>18.8</u>	<u>488.4</u>	<u>7.14</u>	<u>↓</u>	_____
<u>↓</u>	<u>8:14</u>	<u>10.5</u>	<u>19.3</u>	<u>497.6</u>	<u>7.09</u>	<u>↓</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 12.38 SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSIS: SWD
 ODOR: NO SAMPLE VESSEL PRESERVATIVE: 100% MEQ - 2 - 500 PAPER

PURGING EQUIPMENT

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

Other: _____
 Pump Depth: 30

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: NO 3 97

SIGNATURE: [Signature] Page _____ of _____

BP ALAMEDA PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT # 11124 PURGED BY RH WELL ID: MW-5
 CLIENT NAME: _____ SAMPLED BY: RH SAMPLE ID: MW-5
 LOCATION: Oakland - 3315 High Street QA SAMPLES: _____

DATE PURGED 11/13/08 START (2400hr) 7:14 END (2400hr) 7:25
 DATE SAMPLED 11/13/08 SAMPLE TIME (2400hr) 7:27
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____
 Casing Volume (gallons per foot) (0.17) (0.28) (0.67) (1.02) (1.50) (2.60) ()

DEPTH TO BOTTOM (feet) = 29.82 CASING VOLUME (gal) = 3.0
 DEPTH TO WATER (feet) = 12.10 CALCULATED PURGE (gal) = 9.0
 WATER COLUMN HEIGHT (feet) = 17.7 ACTUAL PURGE (gal) = 9.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11/13/08</u>	<u>7:16</u>	<u>3</u>	<u>18.7</u>	<u>545</u>	<u>7.37</u>	<u>clear</u>	_____
<u>✓</u>	<u>7:18</u>	<u>6</u>	<u>21.7</u>	<u>513</u>	<u>7.22</u>	<u>✓</u>	_____
<u>✓</u>	<u>7:20</u>	<u>9.5</u>	<u>21.4</u>	<u>501</u>	<u>7.16</u>	<u>✓</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

SAMPLE DEPTH TO WATER: 13.23 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: AWO
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOA9/HCL - 2 - 500 AMPHIB

PURGING EQUIPMENT

SAMPLING EQUIPMENT

Bladder Pump _____ Boiler (Teflon) _____
 Centrifugal Pump _____ Boiler (PVC) _____
 Submersible Pump _____ Boiler (Stainless Steel) _____
 Peristaltic Pump _____ Dedicated _____
 Other: _____
 Pump Depth: 29

Bladder Pump _____ Boiler (Teflon) _____
 Centrifugal Pump _____ Boiler (PVC or disposable) _____
 Submersible Pump _____ Boiler (Stainless Steel) _____
 Peristaltic Pump _____ Dedicated _____
 Other: _____

WELL INTEGRITY G001 LOCK#: MASTERS
 REMARKS: 00 2.99

SIGNATURE: [Signature]

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

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

DATE PURGED: 11/13/08 START (2400hr): 7:33 END (2400hr): 7:43
 DATE SAMPLED: 11/13/08 SAMPLE TIME (2400hr): 7:45
 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) (0.97) (1.02) (1.50) (2.60) _____

DEPTH TO BOTTOM (feet): 29.55 CASING VOLUME (gal) = 3.2
 DEPTH TO WATER (feet): 10.70 CALCULATED PURGE (gal) = 9.6
 WATER COLUMN HEIGHT (feet) = 18.8 ACTUAL PURGE (gal) = 10

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP (degree C)	CONDUCTIVITY (microhm/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>11/13/08</u>	<u>7:35</u>	<u>3.5</u>	<u>23.8</u>	<u>564</u>	<u>7.22</u>	<u>clear</u>	_____
<u>✓</u>	<u>7:37</u>	<u>7</u>	<u>23.4</u>	<u>568</u>	<u>7.10</u>	<u>✓</u>	_____
<u>✓</u>	<u>7:39</u>	<u>10</u>	<u>23.8</u>	<u>558</u>	<u>7.13</u>	<u>✓</u>	_____

SAMPLE DEPTH TO WATER: 12.09 SAMPLE INFORMATION: _____ SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSIS: SW
 ODOR: NO SAMPLE VESSEL/PRESERVATIVE: 6 LITERS / HCL - 2-50 AMPHIB

PURGING EQUIPMENT

Bladder Pump
 Centrifugal Pump
 Submersible Pump
 Peristaltic Pump
 Other: _____
 Pump Depth: 29

Bailor (Teflon)
 Bailor (PVC)
 Bailor (Stainless Steel)
 Dedicated _____

SAMPLING EQUIPMENT

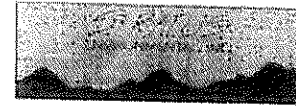
Bladder Pump
 Centrifugal Pump
 Submersible Pump
 Peristaltic Pump
 Other: _____

Bailor (Teflon)
 Bailor (PVC or disposable)
 Bailor (Stainless Steel)
 Dedicated _____

WELL INTEGRITY: GOOD LOCK#: MASTER
 REMARKS: DO 2.30

SIGNATURE: [Signature] Page _____ of _____

WELLHEAD OBSERVATION FORM



Site Name/Number: 1127

Date: 11/13/99 Technician: ROBERTO

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 lid, concrete cracks, pipe extent, or other - explain)</small>
	X = Yes Blank = No	X = Yes (replace) Blank = No	X = Yes Blank = No	A = Above cap B = Below cap L = Level w/cap	I = Intact M = Missing or Compromised (fractured)	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	/	—	—	—	I	NA	NA	NA	—	—	—	NO BOLTS TYPE LID
MW-2	/	—	—	—	I	NA	NA	NA	—	—	—	NO BOLTS TYPE LID
MW-4	/	—	—	—	I	X	—	—	—	—	—	NO BOLTS TYPE LID
MW-5	/	—	—	—	I	—	—	—	—	—	—	
MW-6	/	—	—	—	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.)

(updated 3-29-98, 95)

NO. 672225

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR	SITE:		EPA ID NO.	NOT REQUIRED	
	NAME <u>BE WEST COAST PRODUCTS LLC ARCD # 1174</u>		PROFILE NO.		
	ADDRESS <u>P.O. BOX 80249</u> <u>RANCHO SANTA MARGARITA</u>				
	CITY, STATE ZIP <u>CA 92688</u>		PHONE NO. _____		
	CONTAINERS: No. _____ VOLUME <u>52.5</u> WEIGHT _____				
	TYPE: <input type="checkbox"/> TANK TRUCK <input type="checkbox"/> DUMP TRUCK <input type="checkbox"/> DRUMS <input type="checkbox"/> CARTONS <input type="checkbox"/> OTHER _____				
	WASTE DESCRIPTION <u>NON-HAZARDOUS WATER</u>		GENERATING PROCESS <u>WELL PURGING/DECK WATER</u>		
	COMPONENTS OF WASTE		COMPONENTS OF WASTE		
	1 <u>WATER</u> <u>99-100%</u>	5 _____			
	2 <u>10%</u> <u>1%</u>	6 _____			
3 _____	7 <u>NOISE</u>				
4 _____	8 _____				
PROPERTIES <input checked="" type="checkbox"/> LIQ. <input type="checkbox"/> SOLID <input type="checkbox"/> LIQID <input type="checkbox"/> SLUDGE <input type="checkbox"/> SLURRY <input type="checkbox"/> OTHER _____					
HANDLING INSTRUCTIONS: <u>WEAR ALL APPROPRIATE PROTECTIVE CLOTHING</u>					
THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.					
		<u>LARRY ROOTHART</u> <u>DEPT. 102 80</u> TYPED OR PRINTED FULL NAME & SIGNATURE DATE: <u>1/1/82</u>			
TRANSPORTER	NAME <u>Transporter #1</u> <u>STRATUS ENVIRONMENTAL</u>		EPA ID NO.		
	ADDRESS <u>2335 CAMERON PARK DR</u>		SERVICE ORDER NO. _____		
	CITY, STATE, ZIP <u>ANENSON PARK, CA 94552</u>		PICK UP DATE _____		
	PHONE NO. <u>530-676-2061</u>				
	TRUCK UNIT ID NO. _____		<u>[Signature]</u> TYPED OR PRINTED FULL NAME & SIGNATURE DATE: <u>1/1/82</u>		
TSD FACILITY	NAME <u>INSTRAT, INC</u>		EPA ID NO.		
	ADDRESS <u>1200 AIRPORT RD #1</u>		DISPOSAL METHOD: <input type="checkbox"/> LANDFILL <input type="checkbox"/> OTHER _____		
	CITY, STATE, ZIP <u>LA JOLLA VISTA, CA 92081</u>				
	PHONE NO. <u>619-753-1825</u>				
			TYPED OR PRINTED FULL NAME & SIGNATURE _____ DATE _____		
GEN	OLD/NEW	L	A	TONS	DISCREPANCY
TRANS		S	B		
CO	RT/GB	H/WDF		NONE	



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): _____

1330

On-site Time: <u>6:39</u>	Temp: <u>57</u>
Off-site Time: <u>8:53</u>	Temp: <u>59</u>
Sky Conditions: <u>clear</u>	
Meteorological Events: <u>NA</u>	
Wind Speed: <u>0</u>	Direction: <u>NA</u>

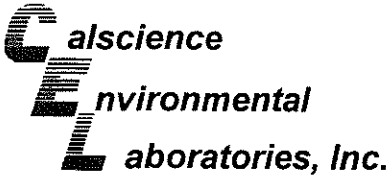
Lab Name: <u>Calscience</u>	BP/AR Facility No.: <u>11124</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>7440 Lincoln Way</u>	BP/AR Facility Address: <u>3315 High Street, Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
<u>Garden Grove, CA 92841</u>	Site Lat/Long: _____	<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>	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>bcarroll@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 *Oxy = MTBD, TAME, ETBE, DIPE, TBA	
				Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	BTEX/Oxy* by 8260	1,2 DCA	EDB	Ethanol by 8260	GRO by 8015m		
1	MW-1	8:43	11/13/08	X				8												
2	MW-2	8:03		X				8			X				X	X	X	X	X	
3	MW-4	8:21		X				8			X				X	X	X	X	X	
4	MW-5	7:27		X				8			X				X	X	X	X	X	
5	MW-6	7:45		X				8			X				X	X	X	X	X	
6	TB 11124	4:00	11/13/08	X				8			X				X	X	X	X	X	
7								2			X				X	X	X	X	X	HOLD
8																				
9																				
10																				

Sampler's Name: <u>ROBERTO WEIMLICH</u>	Relinquished By / Affiliation: _____	Date: _____	Time: _____	Accepted By / Affiliation: _____	Date: _____	Time: _____
Sampler's Company: <u>DOUGLAS ENV</u>						
Shipment Date: _____						
Shipment Method: _____						
Shipment Tracking No: <u>105748866</u>						
Special Instructions: <u>Please cc results to: rmillar@broadbentinc.com</u>				<u>[Signature]</u>	<u>11/17/08</u>	<u>1030</u>

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

Page 12 of 15



Supplemental Report 1

November 25, 2008

The original report has been revised/corrected.

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

Subject: **Calscience Work Order No.: 08-11-1330**
Client Reference: BP 11124

Dear Client:

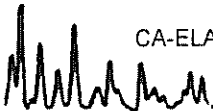
Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 11/14/2008 and analyzed in accordance with the attached chain-of-custody.

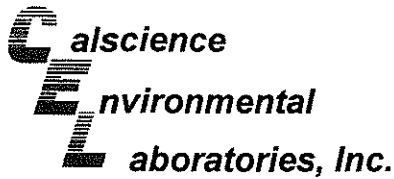
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows 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.
Richard Villafania
Project Manager





Analytical Report

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

Date Received: 11/14/08
 Work Order No: 08-11-1330
 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	08-11-1330-1-D	11/13/08 08:43	Aqueous	GC 4	11/20/08	11/21/08 15:50	081120B01

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	67	38-134			

MW-2	08-11-1330-2-D	11/13/08 08:03	Aqueous	GC 4	11/20/08	11/21/08 16:22	081120B01
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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	73	38-134			

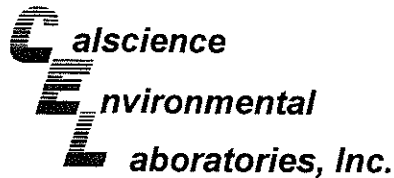
MW-4	08-11-1330-3-D	11/13/08 08:21	Aqueous	GC 4	11/20/08	11/21/08 16:55	081120B01
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Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
<u>Surrogates:</u>	<u>REC (%)</u>	<u>Control Limits</u>		<u>Qual</u>	
1,4-Bromofluorobenzene	77	38-134			

MW-5	08-11-1330-4-D	11/13/08 07:27	Aqueous	GC 4	11/20/08	11/21/08 17:28	081120B01
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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	72	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: 11/14/08
 Work Order No: 08-11-1330
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project: BP 11124

Page 2 of 2

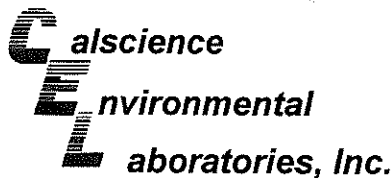
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	08-11-1330-5-D	11/13/08 07:45	Aqueous	GC 4	11/20/08	11/21/08 18:00	081120B01

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	65	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-340	N/A	Aqueous	GC 4	11/20/08	11/21/08 02:48	081120B01

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	72	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: 11/14/08
Work Order No: 08-11-1330
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	08-11-1330-1-A	11/13/08 08:43	Aqueous	GC/MS BB	11/19/08	11/19/08 14:49	081119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.92	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	115	73-157			Dibromofluoromethane	103	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	100	75-105		

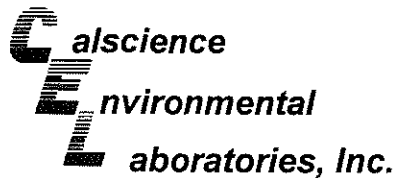
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	08-11-1330-2-A	11/13/08 08:03	Aqueous	GC/MS BB	11/19/08	11/19/08 17:10	081119L01

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	115	73-157			Dibromofluoromethane	105	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	91	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	08-11-1330-3-A	11/13/08 08:21	Aqueous	GC/MS BB	11/19/08	11/19/08 17:39	081119L01

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	120	73-157			Dibromofluoromethane	107	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	97	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: 11/14/08
Work Order No: 08-11-1330
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
MW-5	08-11-1330-4-A	11/13/08 07:27	Aqueous	GC/MS BB	11/19/08	11/19/08 18:07	081119L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	20	40		Methyl-t-Butyl Ether (MTBE)	1100	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	
<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	106	82-142		
Toluene-d8	95	82-112			1,4-Bromofluorobenzene	95	75-105		

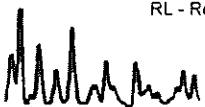
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	08-11-1330-5-A	11/13/08 07:45	Aqueous	GC/MS BB	11/19/08	11/19/08 18:35	081119L01

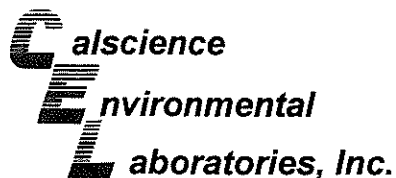
Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.5	5		Methyl-t-Butyl Ether (MTBE)	160	2.5	5	
1,2-Dibromoethane	ND	2.5	5		Tert-Butyl Alcohol (TBA)	ND	50	5	
1,2-Dichloroethane	ND	2.5	5		Diisopropyl Ether (DIPE)	ND	2.5	5	
Ethylbenzene	ND	2.5	5		Ethyl-t-Butyl Ether (ETBE)	ND	2.5	5	
Toluene	ND	2.5	5		Tert-Amyl-Methyl Ether (TAME)	ND	2.5	5	
Xylenes (total)	ND	2.5	5		Ethanol	ND	1500	5	
<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	117	73-157			Dibromofluoromethane	104	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	90	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-567	N/A	Aqueous	GC/MS BB	11/19/08	11/19/08 14:21	081119L01

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	114	73-157			Dibromofluoromethane	101	82-142		
Toluene-d8	105	82-112			1,4-Bromofluorobenzene	91	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

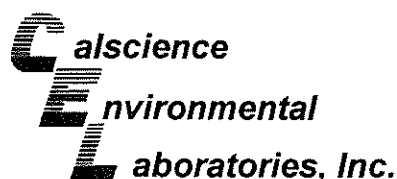
Date Received: 11/14/08
 Work Order No: 08-11-1330
 Preparation: EPA 5030B
 Method: EPA 8015B (M)

Project BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-11-1322-1	Aqueous	GC 4	11/20/08	11/21/08	081120S01

<u>Parameter</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Gasoline Range Organics (C6-C12)	106	105	38-134	0	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

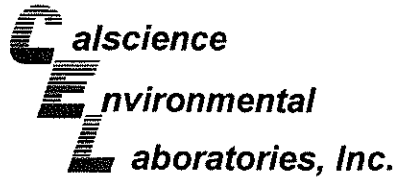
Date Received: 11/14/08
Work Order No: 08-11-1330
Preparation: EPA 5030B
Method: EPA 8260B

Project BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	Aqueous	GC/MS BB	11/19/08	11/19/08	081119S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	100	86-122	1	0-8	
Carbon Tetrachloride	116	113	78-138	3	0-9	
Chlorobenzene	103	102	90-120	1	0-9	
1,2-Dibromoethane	95	93	70-130	2	0-30	
1,2-Dichlorobenzene	99	97	89-119	2	0-10	
1,1-Dichloroethene	88	82	52-142	8	0-23	
Ethylbenzene	95	93	70-130	1	0-30	
Toluene	99	98	85-127	2	0-12	
Trichloroethene	97	98	78-126	0	0-10	
Vinyl Chloride	96	99	56-140	4	0-21	
Methyl-t-Butyl Ether (MTBE)	100	94	64-136	5	0-28	
Tert-Butyl Alcohol (TBA)	100	103	27-183	3	0-60	
Diisopropyl Ether (DIPE)	98	95	78-126	4	0-16	
Ethyl-t-Butyl Ether (ETBE)	98	93	67-133	4	0-21	
Tert-Amyl-Methyl Ether (TAME)	100	96	63-141	4	0-21	
Ethanol	87	97	11-167	11	0-64	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

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

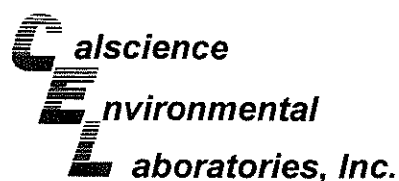
Date Received: N/A
Work Order No: 08-11-1330
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-340	Aqueous	GC 4	11/20/08	11/21/08	081120B01

<u>Parameter</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>%REC CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Gasoline Range Organics (C6-C12)	115	111	78-120	3	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: 08-11-1330
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-567	Aqueous	GC/MS BB	11/19/08	11/19/08	081119L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	105	98	87-117	82-122	7	0-7	
Carbon Tetrachloride	116	113	78-132	69-141	3	0-8	
Chlorobenzene	106	101	88-118	83-123	4	0-8	
1,2-Dibromoethane	93	94	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	101	98	88-118	83-123	3	0-8	
1,1-Dichloroethene	99	99	71-131	61-141	0	0-14	
Ethylbenzene	103	95	80-120	73-127	8	0-20	
Toluene	103	100	85-127	78-134	3	0-7	
Trichloroethene	103	97	85-121	79-127	6	0-11	
Vinyl Chloride	112	109	64-136	52-148	3	0-10	
Methyl-t-Butyl Ether (MTBE)	95	97	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	104	110	34-154	14-174	6	0-19	
Diisopropyl Ether (DIPE)	98	95	80-122	73-129	4	0-8	
Ethyl-t-Butyl Ether (ETBE)	99	98	73-127	64-136	0	0-11	
Tert-Amyl-Methyl Ether (TAME)	96	100	69-135	58-146	5	0-12	
Ethanol	107	112	34-124	19-139	4	0-44	

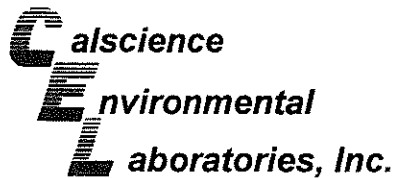
Total number of LCS compounds : 16

Total number of ME compounds : 0

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit



Glossary of Terms and Qualifiers

Work Order Number: 08-11-1330

<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
BA	There was no MS/MSD analyzed with this batch due to insufficient sample volume (NR = not reported). See Blank Spike/Blank Spike Duplicate.
BA,AY	Relative percent difference out of control, matrix interference suspected.
BB	Sample > 4x spike concentration.
BF	Reporting limits raised due to high hydrocarbon background.
BH	Reporting limits raised due to high level of non-target analytes.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
BY	Sample received at improper temperature.
CL	Initial analysis within holding time but required dilution.
CQ	Analyte concentration greater than 10 times the blank concentration.
CU	Surrogate concentration diluted to not detectable during analysis.
DF	Reporting limits elevated due to matrix interferences.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GS	Internal standard recovery is outside method recovery limit.
IB	CCV recovery above limit; analyte not detected.
IH	Calibrtn. verif. recov. below method CL for this analyte.
IJ	Calibrtn. verif. recov. above method CL for this analyte.
J,DX	J=EPA Flag -Estimated value; DX= Value < lowest standard (MQL), but > than MDL.
LA	Confirmatory analysis was past holding time.
LG	Surrogate recovery below the acceptance limit.
LH	Surrogate recovery above the acceptance limit.
LM,AY	MS and/or MSD above acceptance limits. See Blank Spike (LCS). Matrix interference suspected.
LN,AY	MS and/or MSD below acceptance limits. See Blank Spike (LCS). Matrix interference suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.

Work Order Number: 08-11-1330

<u>Qualifier</u>	<u>Definition</u>
MB	Analyte present in the method blank.
MG	Analyte is a suspected lab contaminate.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RB	RPD exceeded method control limit; % recoveries within limits.





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): _____

1330

On-site Time: <u>6:39</u>	Temp: <u>57</u>
Off-site Time: <u>8:53</u>	Temp: <u>59</u>
Sky Conditions: <u>clear</u>	
Meteorological Events: <u>NA</u>	
Wind Speed: <u>0</u>	Direction: <u>NA</u>

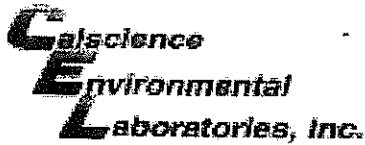
Lab Name: <u>Calscience</u>	BP/AR Facility No.: <u>11124</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>7440 Lincoln Way</u> <u>Garden Grove, CA 92841</u>	BP/AR Facility Address: <u>3315 High Street, Oakland</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u> <u>Cameron Park, CA 95682</u>
Lab PM: <u>Linda Scharpenberg</u>	Site Lat/Long:	Consultant/Contractor Project No.: <u>E11124-04</u>
Tele/Fax: <u>714-895-5494</u> <u>714-895-7501(fax)</u>	California Global ID #: <u>T06001001919</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Enfos Project No.: <u>G099D-0022</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>	Provision or RCOP (circle one) <u>Provision</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
Tele/Fax: <u>925-275-3506</u>	Phase/WBS: <u>04-Monitoring</u>	E-mail EDD To: <u>bcarroll@stratusinc.net</u>
	Sub Phase/Task: <u>03-Analytical</u>	Invoice to: <u>Atlantic Richfield Co.</u>
	Cost Element: <u>01-Contractor labor</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 ₂ SO ₄	HNO ₃	HCl	Methanol	BTEX/Oxy* by 8260	1,2 DCA	EDB	Ethanol by 8260	GRO by 8015m				
1	MW-1	8:43	11/13/08	X				8														
2	MW-2	8:03		X				8														
3	MW-4	8:21		X				8														
4	MW-5	7:27		X				8														
5	MW-6	7:45		X				8														
6	TB 11124	4:00	11/13/08	X				2														
7																						HOLD
8																						
9																						
10																						

Sampler's Name: <u>ROBERTO HEIMLICH</u>	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: <u>DOULOS ENV.</u>						
Shipment Date:						
Shipment Method:						
Shipment Tracking No: <u>105748866</u>						
Special Instructions: <u>Please cc results to: rmiller@broadbentinc.com</u>				<u>[Signature]</u>	<u>11/13/08</u>	<u>10:30</u>

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

Page 12 of 15



WORK ORDER #: 08-11-1330

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 11/14/08

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 2.3 °C - 0.2 °C (CF) = 2.1 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____).

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter Metals Only PCBs Only Initial: PS

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Initial: PS

Sample _____ No (Not Intact) Not Present Initial: PS

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct containers and volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on sample label(s).....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve EnCores® TerraCores® _____

Water: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBpo₄ 1AGB 1AGBna₂

1AGBs 500AGB 500AGBs 250CGB 250CGBs 1PB 500PB 500PBna 250PB

250PBn 125PB 125PBzanna 100PBsterile 100PBna₂ _____ _____ _____

Air: Tedlar® Summa® _____

Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle

Preservative: h:HCL n:HNO₃ na₂:Na₂S₂O₃ na:NaOH po₄:H₃PO₄ s:H₂SO₄ zanna:ZnAc₂+NaOH

Checked/Labeled by: PS

Reviewed by: NC

Scanned by: PS

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 μ S daily and 1413 μ S and 447 μ 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® 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

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

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

<u>Submittal Type:</u>	GEO_WELL
<u>Submittal Title:</u>	4Q08 GEO_WELL 11124
<u>Facility Global ID:</u>	T0600100919
<u>Facility Name:</u>	BP #11124
<u>File Name:</u>	GEO_WELL.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	12/29/2008 1:50:10 PM
<u>Confirmation Number:</u>	5973168492

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER ESI

UPLOADING A EDF FILE

SUCCESS

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

<u>Submittal Type:</u>	EDF - Monitoring Report - Quarterly
<u>Submittal Title:</u>	4Q08 GW Monitoring
<u>Facility Global ID:</u>	T0600100919
<u>Facility Name:</u>	BP #11124
<u>File Name:</u>	08111330_s1.zip
<u>Organization Name:</u>	Broadbent & Associates, Inc.
<u>Username:</u>	BROADBENT-C
<u>IP Address:</u>	67.118.40.90
<u>Submittal Date/Time:</u>	12/22/2008 12:29:51 PM
<u>Confirmation Number:</u>	1152080714

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)