



Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, CA 94583
Phone: (925) 275-3801
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30 April 2009

Re: First Quarter 2009 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

9:45 am, May 01, 2009

Alameda County
Environmental Health



First Quarter 2009 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
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30 April 2009

Project No. 06-88-652

30 April 2009

Project No. 06-88-652

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

Attn.: Mr. Paul Supple

Re: First Quarter 2009 Ground-Water Monitoring Report, Former BP Station #11124,
3315 High Street, Oakland, California; ACEH Case # RO0000239

Dear Mr. Supple:

Attached is the *First Quarter 2009 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 First Quarter of 2009.

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.:		06-88-652
Facility Permits/Permitting Agency:		None

WORK PERFORMED THIS QUARTER (First Quarter 2009):

1. Submitted Fourth Quarter 2008 Ground-Water Monitoring Report.
2. Conducted ground-water monitoring/sampling for First Quarter 2009. Work performed by Stratus Environmental, Inc. (Stratus) on 5 February 2009.

WORK PROPOSED FOR NEXT QUARTER (Second Quarter 2009):

1. Prepared and submitted First Quarter 2009 Ground-Water Monitoring Report (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for Second 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):	9.32 ft (MW-4) to 10.85 ft (MW-6)
General ground-water flow direction:	Southwest
Approximate hydraulic gradient:	0.01 ft/ft

DISCUSSION:

First quarter 2009 ground-water monitoring/sampling was conducted at Former BP Station #11124 on 5 February 2009 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 9.32 ft at MW-4 to 10.85 ft at MW-6. Resulting ground-water surface elevations ranged from 146.91 ft above mean sea level (msl) at well MW-1 to 143.74 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. 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-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; 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.

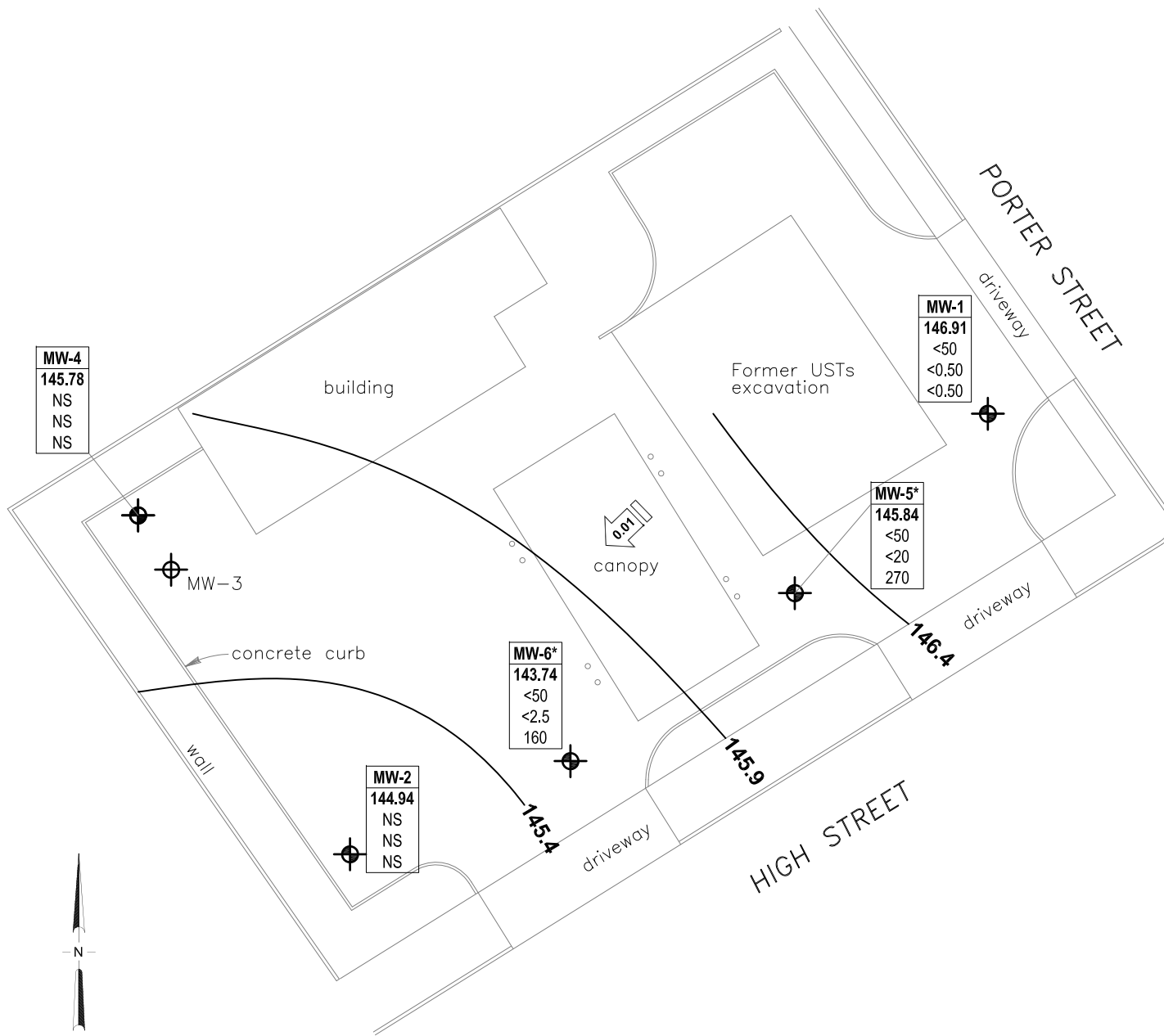
MTBE was detected above the laboratory reporting limit in two of the three wells sampled at concentrations up to 270 micrograms per liter ($\mu\text{g/L}$) in well MW-5. GRO and the remaining fuel constituents were not detected above their respective laboratory reporting limits in the three wells sampled 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 minimum concentration in well MW-5 (270 $\mu\text{g/L}$). 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, 5 February 2009, 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



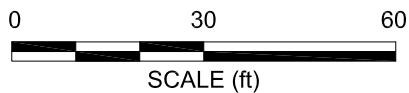
LEGEND

- 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	

- 145.9 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)

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



BROADBENT & ASSOCIATES, INC.
 ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
 1324 Mangrove Ave., Suite 212 Chico, CA
 Project No.: 06-08-652 Date: 3/6/09

Former Station #11124
 3315 High Street
 Oakland, California

Ground-Water Elevation Contours
 and Analytical Summary Map
 5 February 2009

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	--	--
2/5/2009	P		157.34	10.43	--	146.91	<50	<0.50	<0.50	<0.50	<0.50	<0.50	3.20	CEL	7.10	--	--
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	--	--

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.																	
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	--
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	--	--
2/5/2009	--		154.35	9.41	--	144.94	--	--	--	--	--	--	--	--	--	--	--
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	--	--
2/5/2009	--		155.10	9.32	--	145.78	--	--	--	--	--	--	--	--	--	--	--
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	--

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-5 Cont.																	
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	--	--
2/5/2009	P		155.45	9.64	--	145.81	<50	<20	<20	<20	<20	270	2.87	CEL	7.07	--	--
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	--	--
2/5/2009	P		154.59	10.85	--	143.74	<50	<2.5	<2.5	<2.5	<2.5	160	2.34	CEL	7.06	--	--

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	
2/5/2009	<300	<10	<0.50	<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	

**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.									
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	
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	
2/5/2009	<12,000	<400	270	<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	

**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-6 Cont.									
11/13/2008	<1,500	<50	160	<2.5	<2.5	<2.5	<2.5	<2.5	
2/5/2009	<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	0.02
2/5/2009	Southwest	0.01

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

February 12, 2009

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: Carol Huff / Jay Johnson

Phone Number: (530) 676-6000

On-Site Supplier Representative: Roberto Heimlich

Sampling Date: February 5, 2009

Unusual Field Conditions: None noted.

Scope of Work Performed: Quarterly monitoring and sampling.

Variations from Work Scope: None noted.

This submittal presents the 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.

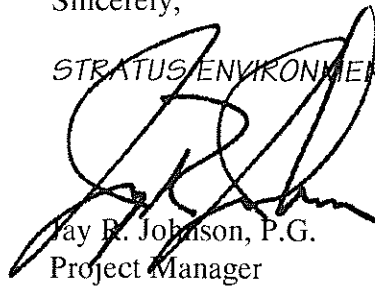
Mr. Rob Miller, Broadbent & Associates, Inc.
Groundwater Sampling Data Package
ARCO Service Station No. 11124, Oakland, Ca
Page 2

February 12, 2009

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

HYDROLOGIC DATA SHEET

AT: 11:00

Gauge Date: 2/5/09

Project Name: 3315 High Street, Oakland

Field Technician: ROBERTO

Project Number: 11124

TOC = Top of Well Casing Elevation
 TOS = Depth to Top of Screen
 DTW = Depth to Groundwater Below TOC
 DTB = Depth to Bottom of Well Casing Below TOC

DIA = Well Casing Diameter
 ELEV = Groundwater Elevation
 DUP = Duplicate

WELL OR LOCATION	TIME	MEASUREMENT						PURGE & SAMPLE	SHEEN CONFIRMATION (w/baller)	COMMENTS
		TOC	TOS	DTW	DTB	DIA	ELEV			
MW-1	11:06			10.43	36.61	2"		YES		
MW-2	11:18			9.41	28.07	2"				
MW-4	11:30			9.32	30.11	2"				
MW-5	11:12			9.61	29.75	2"		YES		
MW-6	11:24			10.85	29.50	2"		YES		

pH/Conductivity/temperature Meter - YSI Model 63 Calibration Date

DO Meter - YSI 55 Series (DO is always measured before purge) pH 2/5/09

Please refer to groundwater sampling field procedures Conductivity 2/5/09

DO 2/5/09

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 11124 PURGED BY: RH WELL I.D.: MW-1
 CLIENT NAME: _____ SAMPLED BY: RH SAMPLE I.D.: MW-1
 LOCATION: Oakland - 3315 High Street QA SAMPLES: _____

DATE PURGED 2/5/09 START (2400hr) 12:13 END (2400hr) 12:22
 DATE SAMPLED 2/5/09 SAMPLE TIME (2400hr) 12:25
 SAMPLE TYPE: Groundwater Surface Water _____ Treatment Effluent _____ Other _____

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

DEPTH TO BOTTOM (feet) = 31.61 CASING VOLUME (gal) = 3.6
 DEPTH TO WATER (feet) = 10.43 CALCULATED PURGE (gal) = 10.8
 WATER COLUMN HEIGHT (feet) = 21.1 ACTUAL PURGE (gal) = 11

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>2/5/09</u>	<u>12:15</u>	<u>4</u>	<u>21.8</u>	<u>352.9</u>	<u>7.58</u>	<u>clear</u>	_____
<u>✓</u>	<u>12:17</u>	<u>8</u>	<u>21.2</u>	<u>303.5</u>	<u>7.21</u>	<u>✓</u>	_____
	<u>12:19</u>	<u>11</u>	<u>21.0</u>	<u>299.8</u>	<u>7.10</u>	<u>✓</u>	_____

SAMPLE DEPTH TO WATER: 12.57 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: SWD
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 UOAS / HCL

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: 600D LOCK#: MASTER
 REMARKS: DO 3.20

SIGNATURE: [Signature] Page _____ of _____

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

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

DATE PURGED 2/5/09 START (2400hr) 11:38 END (2400hr) 11:45
 DATE SAMPLED 2/5/09 SAMPLE TIME (2400hr) 11:50
 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) = 29.75 CASING VOLUME (gal) = 3.4
 DEPTH TO WATER (feet) = 9.61 CALCULATED PURGE (gal) = 10.2
 WATER COLUMN HEIGHT (feet) = 20.1 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>2/5/09</u>	<u>11:40</u>	<u>3</u>	<u>19.2</u>	<u>628</u>	<u>6.96</u>	<u>clear</u>	_____
<u>✓</u>	<u>11:42</u>	<u>6</u>	<u>20.0</u>	<u>571</u>	<u>7.02</u>	_____	_____
<u>✓</u>	<u>11:44</u>	<u>10.5</u>	<u>20.6</u>	<u>523</u>	<u>7.07</u>	<u>✓</u>	_____

SAMPLE DEPTH TO WATER: 11.02 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: SWD
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6 VOAS/HCL

PURGING EQUIPMENT

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

Other: _____
 Pump Depth: 29

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: DD 2.87

SIGNATURE: [Signature] Page _____ of _____

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 2/5/09 START (2400hr) 11:55 END (2400hr) 12:05
 DATE SAMPLED 2/5/09 SAMPLE TIME (2400hr) 12:07
 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) = 29.50 CASING VOLUME (gal) = 3.1
 DEPTH TO WATER (feet) = 10.85 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>2/5/09</u>	<u>11:57</u>	<u>3</u>	<u>20.6</u>	<u>571</u>	<u>7.31</u>	<u>clear</u>	
<u>✓</u>	<u>11:59</u>	<u>6</u>	<u>21.7</u>	<u>561</u>	<u>7.08</u>		
	<u>12:01</u>	<u>10</u>	<u>24.2</u>	<u>584</u>	<u>7.06</u>	<u>↓</u>	

SAMPLE DEPTH TO WATER: 11.97 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: SLVD
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 6VOAS/HCL

PURGING EQUIPMENT

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

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: DO 2.34

SIGNATURE: [Signature] Page ___ of ___

WELLHEAD OBSERVATION FORM



Site Name/Number: BP 11124

Date: 2/5/09 Technician: ROBERTO

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

DRUM INVENTORY

Drums on site? (Yes) No (circle)
 Type and # 1 Steel: X Plastic: _____

Note whether drums are full or empty, solids or liquids:
3/4 CONCRETE - REST WATER

Drum label info (description, date, contact info):
NONE

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 AND BUILDING ARE FENCED IN & LOCKED. HOWEVER SOMEONE HAS BROKEN INTO BUILDING, AND STARTED STEALING ELECTRICAL WIRES. DOOR HAS BEEN RIPPED OPEN, WINDOWS ARE BROKEN AND WINDOW FENCE ON REAR SIDE IS BEING REMOVED.

NO. 669829

NON-HAZARDOUS WASTE DATA FORM

SITE:

EPA I.D. NO.

NOT REQUIRED

NAME **BP WEST COAST PRODUCTS LLC ARCO # 11124**
ADDRESS **P.O. BOX 80249**
RANCHO SANTA MARGARITA
CITY, STATE, ZIP **CA 92688**
3315 HIGH STREET OAKLAND

PROFILE NO.

PHONE NO. ()

CONTAINERS: No. _____ VOLUME **31.5** WEIGHT _____

TYPE: TANK TRUCK DUMP TRUCK DRUMS CARTONS OTHER _____

WASTE DESCRIPTION **NON-HAZARDOUS WATER** GENERATING PROCESS **WELL PURGING/DECON WATER**
COMPONENTS OF WASTE PPM % COMPONENTS OF WASTE PPM %

1. **WATER 99-100%** 5. _____
2. **TPH <1%** 6. _____
3. _____ 7. **BESI#**
4. _____ 8. _____

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

HANDLING INSTRUCTIONS: **WEAR ALL APPROPRIATE PROTECTIVE CLOTHING**

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

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

2/5/04
DATE

NAME **Transporter #1 STRATUS ENVIRONMENTAL** **Transporter #2**

EPA I.D. NO.

ADDRESS **3330 CAMERON PARK DR**
CITY, STATE, ZIP **CAMERON PARK, CA 95682**
PHONE NO. **530-676-2031**

SERVICE ORDER NO. _____

PICK UP DATE _____

TRUCK, UNIT, I.D. NO. _____

ROBERTO HEIMANN
TYPED OR PRINTED FULL NAME & SIGNATURE

EPA I.D. NO.

2/5/04
DATE

NAME **INSTRAT, INC**

DISPOSAL METHOD

ADDRESS **1105 AIRPORT RD #C**

LANDFILL OTHER _____

CITY, STATE, ZIP **RIO VISTA, CA 94571**

PHONE NO. **530-753-1829**

TYPED OR PRINTED FULL NAME & SIGNATURE

DATE

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

DISCREPANCY

TO BE COMPLETED BY GENERATOR

TRANSPORTER

TSD FACILITY

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: BP/ARCO 11124
BP/ARC Facility No: 11124

Req Due Date (mm/dd/yy): 14 Day TAT Rush TAT: Yes No
Lab Work Order Number: _____

Lab Name: CalScience	BP/ARC Facility Address: 3315 High Street	Consultant/Contractor: Stratus Environmental Inc.
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: Oakland, CA	Consultant/Contractor Project No:
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda County	Address: 3330 Cameron Park Drive, #550, Cameron Park, CA 95682
Lab Phone: 714-895-5494 Fax: 714-895-7501	California Global ID No.: T06001001919	Consultant/Contractor PM: Jay Johnson
Lab Shipping Acct:	Enfos Proposal No:	Phone: 530-676-6000 Fax: 530-676-6005
Lab Bottle Order No:	Accounting Mode: Provision <input checked="" type="checkbox"/> OOC-BU <input type="checkbox"/> OOC-RM <input type="checkbox"/>	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: BP/ARC WBS Stage Activity: BP/ARC WBS Activity	Invoice To: BP/ARC <input checked="" type="checkbox"/> Contractor <input type="checkbox"/>

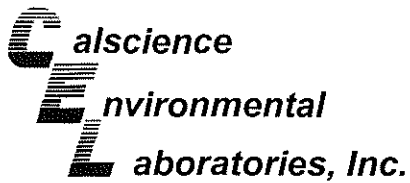
BP/ARC EBM: Paul Supple				Matrix			No. Containers / Preservative										Requested Analyses					Report Type & QC Level			
EBM Phone: 925-275-3801 Fax:				Soil / Solid	Water / Liquid	Air / Vapor	Total Number of Containers	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GRO by 8015M	BTEX/5 FO* by 8260	Ethanol by 8260	EDB by 8260	1,2-DCA by 8260							Standard <input checked="" type="checkbox"/>	
EBM Email: paul.supple@bp.com																								Full Data Package <input type="checkbox"/>	
Lab No.	Sample Description	Date	Time																					Comments	
	MW-1	2/5/09	12:25	X			6			X		X	X	X	X	X									
	MW-5		11:50	X			6			X		X	X	X	X	X									
	MW-6		12:07	X			6			X		X	X	X	X	X									
	TB11124 2/5/09-5:00		5:00	X			2			X														ON HOLD	

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.
*Oxy = MTBE, TAME, ETBE, DIPE, TBA

Sampler's Name: <u>ROBERTO HEIMLICH</u>	Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation		Date	Time
Sampler's Company: Stratus Environmental Inc.								
Shipment Method:	Ship Date:							
Shipment Tracking No:								

Special Instructions: TB Sample ON HOLD! Cc results to miller@broadbentinc.com

THIS LINE - LAB USE ONLY: 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



09-02-0581

February 19, 2009

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

Subject: **Calscience Work Order No.: 09-02-0581**
Client Reference: BP / ARCO 11124

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/6/2009 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.

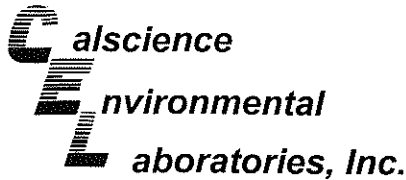
If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Villafania".

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

A handwritten signature in black ink, appearing to read "Richard Villafania".



Analytical Report

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

Date Received: 02/06/09
Work Order No: 09-02-0581
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP / ARCO 11124

Page 1 of 1

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-1, 09-02-0581-1-C, 02/05/09 12:25, Aqueous, GC 30, 02/13/09, 02/13/09 17:48, 090213B01

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Rows: Gasoline Range Organics (C6-C12) ND, 50, 1, ug/L; Surrogates: REC (%) Control Limits Qual; 1,4-Bromofluorobenzene 88, 38-134

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-5, 09-02-0581-2-B, 02/05/09 11:50, Aqueous, GC 30, 02/13/09, 02/13/09 18:22, 090213B01

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Rows: Gasoline Range Organics (C6-C12) ND, 50, 1, ug/L; Surrogates: REC (%) Control Limits Qual; 1,4-Bromofluorobenzene 94, 38-134

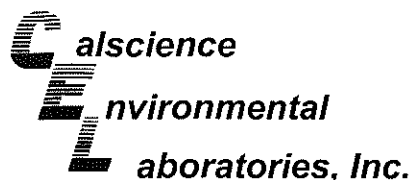
Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: MW-6, 09-02-0581-3-B, 02/05/09 12:07, Aqueous, GC 30, 02/13/09, 02/13/09 15:34, 090213B01

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Rows: Gasoline Range Organics (C6-C12) ND, 50, 1, ug/L; Surrogates: REC (%) Control Limits Qual; 1,4-Bromofluorobenzene 95, 38-134

Table with 8 columns: Client Sample Number, Lab Sample Number, Date/Time Collected, Matrix, Instrument, Date Prepared, Date/Time Analyzed, QC Batch ID. Row 1: Method Blank, 099-12-695-435, N/A, Aqueous, GC 30, 02/13/09, 02/13/09 13:53, 090213B01

Table with 6 columns: Parameter, Result, RL, DF, Qual, Units. Rows: Gasoline Range Organics (C6-C12) ND, 50, 1, ug/L; Surrogates: REC (%) Control Limits Qual; 1,4-Bromofluorobenzene 97, 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: 02/06/09
Work Order No: 09-02-0581
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: BP / ARCO 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	09-02-0581-1-D	02/05/09 12:25	Aqueous	GC/MS BB	02/18/09	02/18/09 15:05	090218L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	106	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	80	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	09-02-0581-2-D	02/05/09 11:50	Aqueous	GC/MS BB	02/18/09	02/18/09 18:50	090218L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	20	40		Methyl-t-Butyl Ether (MTBE)	270	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	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	109	73-157			Dibromofluoromethane	111	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	80	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	09-02-0581-3-D	02/05/09 12:07	Aqueous	GC/MS BB	02/18/09	02/18/09 19:22	090218L01

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	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	111	73-157			Dibromofluoromethane	111	82-142		
Toluene-d8	91	82-112			1,4-Bromofluorobenzene	86	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: 02/06/09
Work Order No: 09-02-0581
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

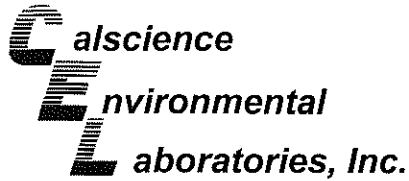
Project: BP / ARCO 11124

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-703-719	N/A	Aqueous	GC/MS BB	02/18/09	02/18/09 14:33	090218L01

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	107	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	86	75-105		

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



Quality Control - Spike/Spike Duplicate

09-02-0581
EPA 5030B
EPA 8015B (M)

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

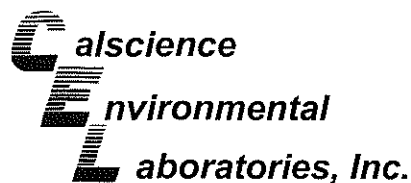
Date Received: 02/06/09
Work Order No: 09-02-0581
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project BP / ARCO 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-6	Aqueous	GC 30	02/13/09	02/13/09	090213S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	85	96	38-134	12	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

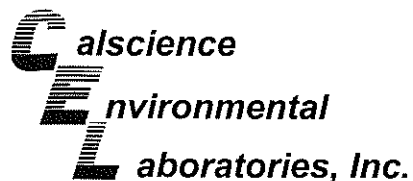
Date Received: 02/06/09
Work Order No: 09-02-0581
Preparation: EPA 5030B
Method: EPA 8260B

Project BP / ARCO 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	Aqueous	GC/MS BB	02/18/09	02/18/09	090218S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	108	104	86-122	4	0-8	
Carbon Tetrachloride	116	112	78-138	3	0-9	
Chlorobenzene	106	102	90-120	4	0-9	
1,2-Dibromoethane	102	98	70-130	4	0-30	
1,2-Dichlorobenzene	107	106	89-119	1	0-10	
1,1-Dichloroethene	96	89	52-142	8	0-23	
Ethylbenzene	104	98	70-130	5	0-30	
Toluene	109	102	85-127	6	0-12	
Trichloroethene	105	102	78-126	3	0-10	
Vinyl Chloride	79	80	56-140	1	0-21	
Methyl-t-Butyl Ether (MTBE)	105	107	64-136	2	0-28	
Tert-Butyl Alcohol (TBA)	107	102	27-183	5	0-60	
Diisopropyl Ether (DIPE)	107	108	78-126	0	0-16	
Ethyl-t-Butyl Ether (ETBE)	107	106	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	107	105	63-141	3	0-21	
Ethanol	108	109	11-167	1	0-64	

RPD - Relative Percent Difference, CL - Control Limit



Quality Control - LCS/LCS Duplicate

10/13/09

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

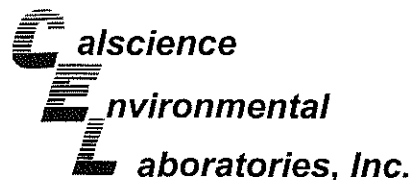
Date Received: N/A
Work Order No: 09-02-0581
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: BP / ARCO 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-435	Aqueous	GC 30	02/13/09	02/13/09	090213B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	103	6	78-120	177	0-20	LR,BA

RPD - Relative Percent Difference . CL - Control Limit



Quality Control - LCS/LCS Duplicate

09-02-0581
EPA 5030B
EPA 8260B

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

Date Received: N/A
Work Order No: 09-02-0581
Preparation: EPA 5030B
Method: EPA 8260B

Project: BP / ARCO 11124

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
099-12-703-719	Aqueous	GC/MS BB	02/18/09	02/18/09	090218L01		
Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	103	104	87-117	82-122	1	0-7	
Carbon Tetrachloride	112	112	78-132	69-141	1	0-8	
Chlorobenzene	102	103	88-118	83-123	1	0-8	
1,2-Dibromoethane	102	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	105	105	88-118	83-123	0	0-8	
1,1-Dichloroethene	103	102	71-131	61-141	1	0-14	
Ethylbenzene	104	104	80-120	73-127	0	0-20	
Toluene	104	107	85-127	78-134	3	0-7	
Trichloroethene	101	102	85-121	79-127	1	0-11	
Vinyl Chloride	81	80	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	102	103	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	104	96	34-154	14-174	7	0-19	
Diisopropyl Ether (DIPE)	102	103	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	102	104	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	103	106	69-135	58-146	3	0-12	
Ethanol	97	88	34-124	19-139	10	0-44	

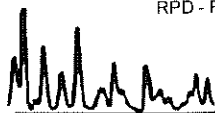
Total number of LCS compounds : 16

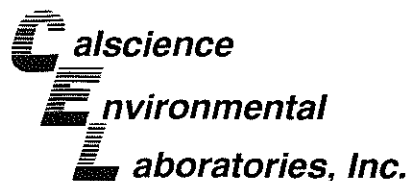
Total number of ME compounds : 0

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

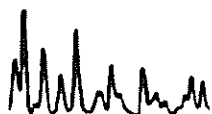
Work Order Number: 09-02-0581

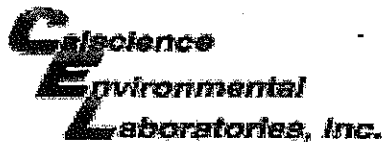
<u>Qualifier</u>	<u>Definition</u>
AX	Sample too dilute to quantify surrogate.
BA	There was no MS/MSD analyzed with this batch due to insufficient sample volume (NR = not reported). See Blank Spike/Blank Spike Duplicate.
BA,AY	Relative percent difference out of control, matrix interference suspected.
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: 09-02-0581

<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.





WORK ORDER #: 09-02-0581

SAMPLE RECEIPT FORM

Cooler ___ of ___

CLIENT: Stratus

DATE: 02/06/09

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

Temperature 3.3 °C - 0.2°C (CF) = 3.1 °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: NC

CUSTODY SEALS INTACT:

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

Sample _____ No (Not Intact) Not Present, Initial: YL

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<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 COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input 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 VOA⁶h VOAna₂ 125AGB 125AGBh 125AGBpo₄ 1AGB 1AGBna₂

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

250PBn 125PB 125PBz_{nna} 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 z_{nna}:ZnAc₂+NaOH

Checked/Labeled by: JL

Reviewed by: YL

Scanned by: YL

ATTACHMENT

FIELD PROCEDURES FOR GROUNDWATER SAMPLING

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

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>	1Q09 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>	4/15/2009 4:35:39 PM
<u>Confirmation Number:</u>	2402874171

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>	1Q09 GW Monitoring
<u>Facility Global ID:</u>	T0600100919
<u>Facility Name:</u>	BP #11124
<u>File Name:</u>	09020581.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>	4/15/2009 4:39:04 PM
<u>Confirmation Number:</u>	9399105250

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