



Atlantic Richfield Company
(a BP affiliated company)

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

April 30, 2007

Re: First Quarter, 2007 Ground-Water Monitoring Report
Atlantic Richfield Company Station #4977
2770 Castro Valley Boulevard
Castro Valley, California
ACEH Case No. RO0002436

“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

2:27 pm, May 01, 2007

Alameda County
Environmental Health



First Quarter, 2007 Ground-Water Monitoring Report
Atlantic Richfield Company Station #4977
2770 Castro Valley Boulevard
Castro Valley, 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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April 2007

Project No. 06-02-625

Broadbent & Associates, Inc.
1324 Mangrove Ave., Suite 212
Chico, CA 95926
Voice (530) 566-1400
Fax (530) 566-1401



April 30, 2007

Project No. 06-02-625

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

Attn.: Mr. Paul Supple

Re: First Quarter, 2007 Ground-Water Monitoring Report, Atlantic Richfield Company (a BP affiliated company) Station #4977, 2770 Castro Valley Boulevard, Castro Valley, CA. ACEH Case No. RO0002436.

Dear Mr. Supple:

Provided herein is the *First Quarter, 2007 Ground-Water Monitoring Report* for Atlantic Richfield Company Station #4977 (herein referred to as Station #4977) located at 2770 Castro Valley Boulevard, Castro Valley, CA (Property). This report presents a summary of First Quarter, 2007 ground-water monitoring results.

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.

A handwritten signature in black ink, appearing to read 'Matt Herrick', written over a horizontal line.

Matthew Herrick, P.G.
Project Hydrogeologist

A handwritten signature in black ink, appearing to read 'Robert H. Miller', written over a horizontal line.

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



Enclosures

cc: Mr. Steven Plunkett, Alameda County Environmental Health (submitted via ACEH ftp site)

STATION #4977 QUARTERLY GROUND-WATER MONITORING REPORT

Facility: #4977	Address:	2770 Castro Valley Boulevard, Castro Valley, CA
Station #4977	Environmental Business Manager:	Mr. Paul Supple
	Consulting Co./Contact Persons:	Broadbent & Associates, Inc. (BAI) / Rob Miller & Matt Herrick
Consultant Project No.:		06-02-625
Facility Permits/Permitting Agency.:		NA

WORK PERFORMED THIS QUARTER (First Quarter, 2007):

1. Submitted Fourth Quarter, 2006 Ground-Water Monitoring Report. Work performed by BAI.
2. Conducted ground-water monitoring/sampling for First Quarter, 2007. Work performed by Stratus Environmental, Inc.

WORK PROPOSED FOR NEXT QUARTER (Second Quarter, 2007):

1. Submit First Quarter, 2007 Ground-Water Monitoring Report (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for Second Quarter, 2007.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	Ground-water monitoring/sampling
Frequency of ground-water sampling:	Wells MW-1 through MW-3: Quarterly
Frequency of ground-water monitoring:	Quarterly
Is free product (FP) present on-site:	No
Current remediation techniques:	None
Depth to ground water (below TOC):	6.03 (MW-2) to 7.70 (MW-1) feet
General ground-water flow direction:	South
Approximate hydraulic gradient:	0.020 Feet per foot

DISCUSSION:

Gasoline range organics (GRO) were detected in MW-2 and MW-3 at 16,000 micrograms per liter ($\mu\text{g/L}$) and 390 $\mu\text{g/L}$, respectively. Benzene was detected in MW-2 and MW-3 at 530 $\mu\text{g/L}$ and 3.0 $\mu\text{g/L}$, respectively. Ethylbenzene was detected in MW-2 and MW-3 at 1,100 $\mu\text{g/L}$ and 9.1 $\mu\text{g/L}$, respectively. Xylenes were detected in MW-2 and MW-3 at 1,100 $\mu\text{g/L}$ and 0.60 $\mu\text{g/L}$, respectively. Methyl tert-butyl ether (MTBE) was detected in MW-1, MW-2, and MW-3 at concentrations ranging from 2.3 $\mu\text{g/L}$ (MW-1) to 80 $\mu\text{g/L}$ (MW-2). Tert-Butyl alcohol was detected in MW-3 at 130 $\mu\text{g/L}$. No other analytes were detected in ground-water samples collected during First Quarter, 2007.

Analytes detected during First Quarter, 2007 were all within the historic minimum and maximum concentration ranges recorded for each well. Ground-water elevations measured during First Quarter, 2007 were also within historic minimum and maximum ranges for each well.

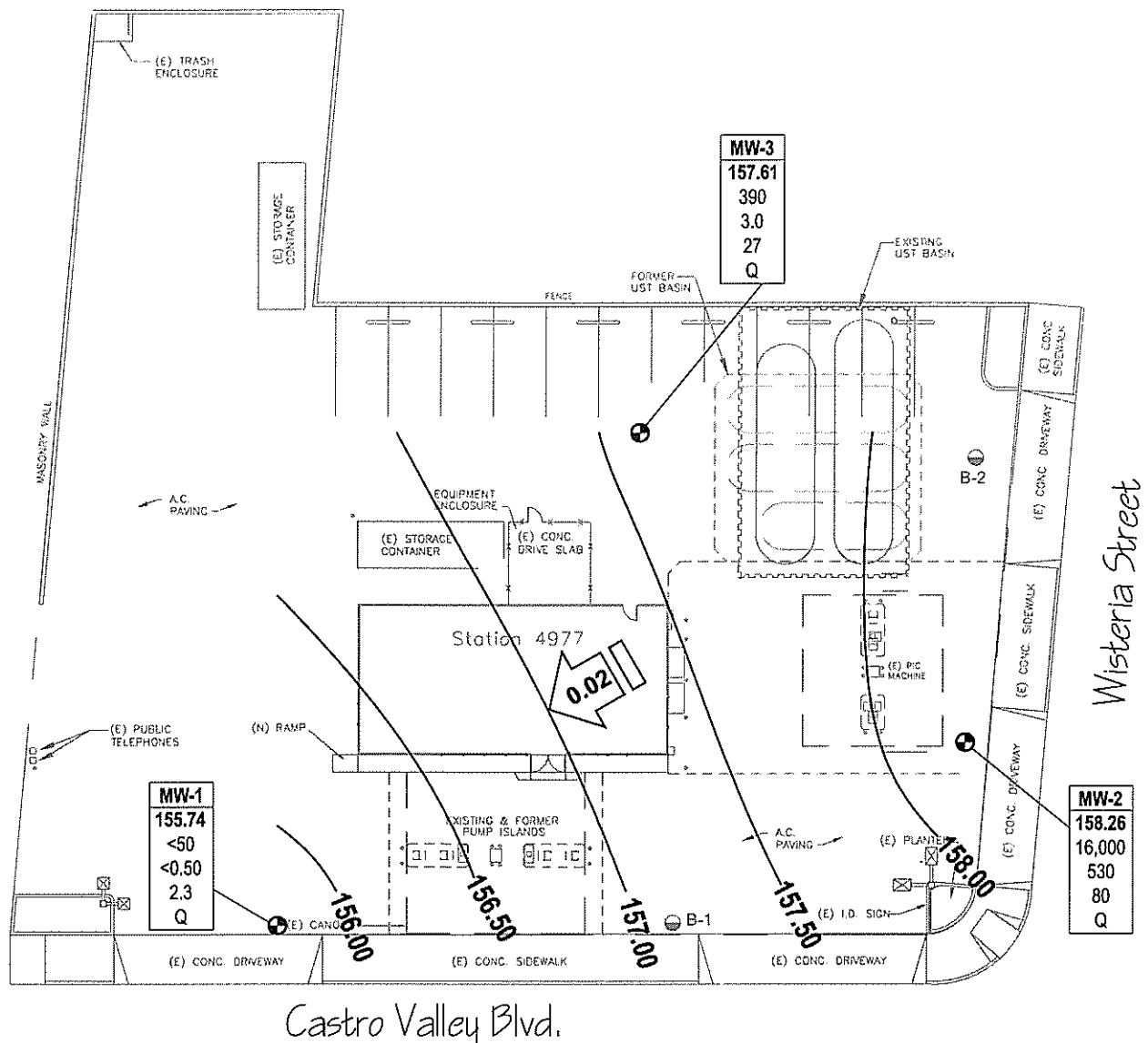
Drawing 1 depicts the ground-water elevation contour and an analytical summary map for the First Quarter, 2007. Table 1 includes a summary of ground-water monitoring data including relative water elevations and laboratory analyses. Table 2 provides a summary of fuel additives analytical data. Table 3 presents historical ground-water flow direction and gradient.

CLOSURE:

The findings presented in this report are based upon: observations of Stratus Environmental, Inc. and/or their subcontractor(s) field personnel (see Appendix A), the points investigated, and results of laboratory tests performed by TestAmerica (Morgan Hill, CA). 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 Contour and Analytical Summary Map, Station #4977, Castro Valley, CA
- Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses, Station #4977, Castro Valley, CA
- Table 2. Summary of Fuel Additives Analytical Data, Station #4977, Castro Valley, CA
- Table 3. Historical Ground-Water Flow Direction and Gradient, Station #4977, Castro Valley, CA
- Appendix A. Stratus Environmental, Inc. Ground-Water Sampling Data Package (Includes Bill of Lading, Field Data Sheets, and Laboratory Report and Chain of Custody Documentation)
- Appendix B. GeoTracker Upload Confirmation



LEGEND

- ⊕ MONITORING WELL
- SOIL BORING

Well	WELL DESIGNATION
ELEV	GROUND-WATER ELEVATION (FT ABOVE MSL)
GRO	CONCENTRATION OF GRO, BENZENE AND MTBE IN GROUND WATER (µg/L)
BZ	
MTBE	
Q	SAMPLING FREQUENCY

- < NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMITS
- Q SAMPLED QUARTERLY

—156.50 GROUND-WATER ELEVATION CONTOUR (FT ABOVE MSL)

←0.02 GROUND-WATER FLOW DIRECTION AND GRADIENT (FT/FT)

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

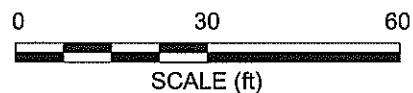
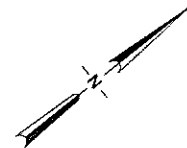


Table 1. Summary of Ground-Water Monitoring Data: Relative Water Elevations and Laboratory Analyses

Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-1															
4/19/2002	--		161.11	5.0	15.0	11.21	149.90	660	12	1.3	4.3	0.8	38	--	--
9/27/2002	--		161.11	5.0	15.0	9.29	151.82	130	7.7	0.87	5.4	0.79	39	1.7	6.9
12/16/2002	--	a	161.11	5.0	15.0	8.55	152.56	77	1.8	<0.50	0.69	<1.0	42	1.6	6.9
3/11/2003	--		161.11	5.0	15.0	8.07	153.04	140	9.8	<0.50	5.6	<0.50	20	1.4	7.4
6/17/2003	--		161.11	5.0	15.0	8.31	152.80	510	60	1.4	81	<1.0	23	2.2	7
9/18/2003	--	b	161.11	5.0	15.0	9.45	151.66	72	2.4	1.4	1.6	1.5	39	2.7	7
12/11/2003	P		161.11	5.0	15.0	8.80	152.31	79	1.5	<0.50	1.5	4.4	48	2.1	7.0
03/11/2004	P		163.44	5.0	15.0	7.61	155.83	<50	1.3	<0.50	0.77	1.3	17	1.4	6.8
06/02/2004	P		163.44	5.0	15.0	8.95	154.49	53	1.4	<0.50	0.93	<0.50	39	2.3	7.1
09/22/2004	P		163.44	5.0	15.0	9.42	154.02	70	<0.50	<0.50	<0.50	<0.50	48	1.7	6.8
12/15/2004	P		163.44	5.0	15.0	7.88	155.56	63	<0.50	<0.50	<0.50	<0.50	45	1.8	6.9
03/07/2005	P		163.44	5.0	15.0	7.02	156.42	<50	<0.50	<0.50	<0.50	<0.50	4.0	2.4	6.8
06/27/2005	P		163.44	5.0	15.0	7.53	155.91	52	2.0	<0.50	1.9	0.78	8.1	2.8	7.1
09/16/2005	P		163.44	5.0	15.0	9.20	154.24	<50	<0.50	<0.50	<0.50	0.76	14	1.82	6.9
12/27/2005	P		163.44	5.0	15.0	7.60	155.84	<50	1.3	<0.50	1.5	<0.50	9.4	2.02	7.87
03/16/2006	P		163.44	5.0	15.0	6.97	156.47	71	3.0	<0.50	3.5	<0.50	3.4	1.6	7.1
6/26/2006	P		163.44	5.0	15.0	8.58	154.86	71	0.69	<0.50	1.1	3.5	3.2	2.2	6.9
9/29/2006	P		163.44	5.0	15.0	8.85	154.59	<50	<0.50	<0.50	<0.50	<0.50	5.2	2.35	6.7
12/19/2006	P		163.44	5.0	15.0	8.00	155.44	<50	<0.50	<0.50	<0.50	<0.50	4.3	4.80	7.21
3/29/2007	P		163.44	5.0	15.0	7.70	155.74	<50	<0.50	<0.50	<0.50	<0.50	2.3	3.44	7.18
MW-2															
4/19/2002	--		161.87	5.0	15.0	6.59	155.28	28,000	970	120	860	6,900	760	--	--
9/27/2002	--		161.87	5.0	15.0	7.18	154.69	17,000	1,400	<50	1,200	3,700	1,400	1.5	6.8
12/16/2002	--	a	161.87	5.0	15.0	7.31	154.56	17,000	1,000	<50	980	3,300	980	1.9	6.8
3/11/2003	--		161.87	5.0	15.0	6.02	155.85	24,000	1,600	70	1,300	4,300	920	1.7	7.4
6/17/2003	--		161.87	5.0	15.0	6.31	155.56	28,000	1,300	55	1,300	4,500	610	1.4	6.9
9/18/2003	--		161.87	5.0	15.0	7.61	154.26	19,000	960	63	1,100	3,100	580	2.7	6.8
12/11/2003	P		161.87	5.0	15.0	6.50	155.37	29,000	710	53	1,300	3,800	490	2.0	7.0
03/11/2004	P		164.29	5.0	15.0	6.02	158.27	19,000	830	49	1,500	4,000	410	0.8	6.5
06/02/2004	P		164.29	5.0	15.0	7.14	157.15	25,000	680	<50	1,300	3,900	240	4.3	7.1

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

Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-2 Cont.															
09/22/2004	--		164.29	5.0	15.0	7.63	156.66	15,000	980	<25	980	940	390	--	6.7
12/15/2004	P	c	164.29	5.0	15.0	6.48	157.81	22,000	610	26	1,300	3,200	290	0.3	6.9
03/07/2005	P		164.29	5.0	15.0	6.08	158.21	25,000	570	33	1,400	3,900	120	2.3	6.8
06/27/2005	P		164.29	5.0	15.0	6.90	157.39	24,000	630	32	1,200	2,900	86	2.5	7.2
09/16/2005	P		164.29	5.0	15.0	7.66	156.63	25,000	550	<25	1,400	3,000	82	1.41	7.0
12/27/2005	P		164.29	5.0	15.0	5.60	158.69	33,000	540	<25	1,300	2,700	100	2.26	7.19
03/16/2006	P	c	164.29	5.0	15.0	7.25	157.04	29,000	710	<50	1,400	2,600	78	1.4	7.1
6/26/2006	P	c	164.29	5.0	15.0	6.60	157.69	20,000	630	<25	1,200	1,100	110	0.64	6.8
9/29/2006	P		164.29	5.0	15.0	6.85	157.44	24,000	530	<25	1,300	1,800	86	1.36	6.7
12/19/2006	P		164.29	5.0	15.0	6.02	158.27	21,000	500	<25	1,400	1,700	70	1.11	7.42
3/29/2007	P		164.29	5.0	15.0	6.03	158.26	16,000	530	<25	1,100	1,100	80	2.98	7.18
MW-3															
4/19/2002	--		162.14	5.0	15.0	6.94	155.20	1,200	29	1.1	43	62	1,700	--	--
9/27/2002	--		162.14	5.0	15.0	8.26	153.88	740	7.8	<2.5	6.8	4.4	1,100	1	6.7
12/16/2002	--	a	162.14	5.0	15.0	6.76	155.38	1,200	13	<10	170	88	910	2.3	6.8
3/11/2003	--		162.14	5.0	15.0	6.92	155.22	<2,500	<25	<25	<25	<25	470	1.7	7.5
6/17/2003	--		162.14	5.0	15.0	7.44	154.70	<1,000	<10	<10	14	<10	530	1.9	7
9/18/2003	--		162.14	5.0	15.0	8.43	153.71	470	4.8	<2.5	10	9.2	300	2.9	6.8
12/11/2003	P		162.14	5.0	15.0	6.72	155.42	<500	<5.0	<5.0	7.0	13	180	1.9	6.9
03/11/2004	P		164.53	5.0	15.0	6.09	158.44	360	1.9	<1.0	5.6	5.0	110	2.6	6.8
06/02/2004	P		164.53	5.0	15.0	7.50	157.03	380	2.8	<0.50	8.0	2.1	43	3.6	7.3
09/22/2004	P		164.53	5.0	15.0	8.00	156.53	270	<0.50	<0.50	0.54	<0.50	50	1.8	6.9
12/15/2004	P		164.53	5.0	15.0	6.43	158.10	390	3.5	<0.50	20	3.7	49	1.1	6.9
03/07/2005	P		164.53	5.0	15.0	6.12	158.41	1,900	13	<1.0	93	29	70	2.3	6.8
06/27/2005	P		164.53	5.0	15.0	7.08	157.45	830	4.0	<0.50	13	2.8	33	3.3	7.3
09/16/2005	P		164.53	5.0	15.0	7.28	157.25	320	2.1	<0.50	5.4	0.60	21	2.11	7.0
12/27/2005	P		164.53	5.0	15.0	6.47	158.06	770	6.0	<0.50	33	2.7	36	2.96	7.42
03/16/2006	P		164.53	5.0	15.0	6.10	158.43	1,600	11	<0.50	59	6.4	45	1.4	7.1
6/26/2006	P		164.53	5.0	15.0	6.92	157.61	400	<0.50	<0.50	1.6	2.1	26	2.41	7.0
9/29/2006	P		164.53	5.0	15.0	7.38	157.15	220	0.86	<0.50	2.2	0.58	14	1.95	7.0

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

Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well and Sample Date	P/NP	Comments	TOC (feet msl)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet msl)	Concentrations in (µg/L)					DO (mg/L)	pH	
								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes			MTBE
MW-3 Cont.															
12/19/2006	P		164.53	5.0	15.0	6.65	157.88	450	4.3	<0.50	19	1.4	19	3.68	7.30
3/29/2007	P		164.53	5.0	15.0	6.92	157.61	390	3.0	<0.50	9.1	0.60	27	1.98	7.16

SYMBOLS AND ABBREVIATIONS:

< = Not detected at or above specified laboratory reporting limits

-- = Not measured, sampled, analyzed, applicable

ft bgs = Feet below ground surface

DO = Dissolved oxygen

DTW = Depth to water in ft bgs

GRO = Gasoline range organics

GWE = Groundwater elevation in ft MSL

mg/L = Milligrams per liter

ft MSL = Feet above mean sea level

MTBE = Methyl tert-butyl ether analyzed by EPA Method 8021 B unless otherwise noted (before 12/16/02)

P/NP = Well was purged/not purged prior to sampling

TPH-g = Total petroleum hydrocarbons as gasoline (C5-C9)

TOC = Top of casing measured in ft MSL

µg/L = Micrograms per liter

FOOTNOTES:

a = TPH, benzene, toluene, ethylbenzene, total xylenes, and MTBE analyzed by EPA Method 8260B beginning on 4th quarter sampling event (12/16/02).

b = This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be used for their intended purpose.

c = Sheen in well.

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 inclusion of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported.

Wells were re-surveyed on 3/23/2004.

Values for DO and pH were field measurements.

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

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 #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
12/16/2002	<50	<5.0	42	<0.50	<0.50	<0.50	<0.50	<0.50	
3/11/2003	<100	<20	20	<0.50	<0.50	<0.50	<0.50	<0.50	
6/17/2003	<200	<40	23	<1.0	<1.0	<1.0	<1.0	<1.0	
9/18/2003	<100	<20	39	<0.50	<0.50	<0.50	<0.50	<0.50	a
12/11/2003	<100	<20	48	<0.50	<0.50	<0.50	<0.50	<0.50	
03/11/2004	<100	<20	17	<0.50	<0.50	<0.50	<0.50	<0.50	
06/02/2004	<100	<20	39	<0.50	<0.50	<0.50	<0.50	<0.50	
09/22/2004	<100	<20	48	<0.50	<0.50	<0.50	<0.50	<0.50	
12/15/2004	<100	<20	45	<0.50	<0.50	<0.50	<0.50	<0.50	a
03/07/2005	<100	<20	4.0	<0.50	<0.50	<0.50	<0.50	<0.50	
06/27/2005	<100	<20	8.1	<0.50	<0.50	<0.50	<0.50	<0.50	
09/16/2005	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
12/27/2005	<100	<20	9.4	<0.50	<0.50	<0.50	<0.50	<0.50	b
03/16/2006	<300	<20	3.4	<0.50	<0.50	<0.50	<0.50	<0.50	c
6/26/2006	<300	<20	3.2	<0.50	<0.50	<0.50	<0.50	<0.50	
9/29/2006	<300	<20	5.2	<0.50	<0.50	<0.50	<0.50	<0.50	
12/9/2006	<300	<20	4.3	<0.50	<0.50	<0.50	<0.50	--	b
3/29/2007	<300	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-2									
12/16/2002	<5,000	<500	980	<50	<50	<50	<50	<50	
3/11/2003	<10,000	<2,000	920	<50	<50	<50	<50	<50	
6/17/2003	<10,000	<2,000	610	<50	<50	<50	<50	<50	
9/18/2003	<5,000	<1,000	580	<25	<25	<25	<25	<25	
12/11/2003	<5,000	<1,000	490	<25	<25	<25	<25	<25	
03/11/2004	<2,000	<400	410	<10	<10	<10	<10	<10	
06/02/2004	<10,000	<2,000	240	<50	<50	<50	<50	<50	
09/22/2004	<5,000	<1,000	390	<25	<25	<25	<25	<25	
12/15/2004	<2,000	<400	290	<10	<10	<10	<10	<10	a
03/07/2005	<5,000	<1,000	120	<25	<25	<25	<25	<25	
06/27/2005	<5,000	<1,000	86	<25	<25	<25	<25	<25	
09/16/2005	<5,000	<1,000	82	<25	<25	<25	<25	<25	

Table 2. Summary of Fuel Additives Analytical Data
Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-2 Cont.									
12/27/2005	<5,000	<1,000	100	<25	<25	<25	<25	<25	b
03/16/2006	<30,000	<2,000	78	<50	<50	<50	<50	<50	c
6/26/2006	<15,000	<1,000	110	<25	<25	<25	<25	<25	
9/29/2006	<15,000	<1,000	86	<25	<25	<25	<25	<25	
12/9/2006	<15,000	<1,000	70	<25	<25	<25	<25	-	b
3/29/2007	<15,000	<1,000	80	<25	<25	<25	<25	<25	
MW-3									
12/16/2002	<1,000	<100	910	<10	<10	12	<10	<10	
3/11/2003	<5,000	<1,000	470	<25	<25	<25	<25	<25	
6/17/2003	<2,000	<400	530	<10	<10	<10	<10	<10	
9/18/2003	<500	<100	300	<2.5	<2.5	3.2	<2.5	<2.5	
12/11/2003	<1,000	<200	180	<5.0	<5.0	<5.0	<5.0	<5.0	
03/11/2004	<200	570	110	<1.0	<1.0	<1.0	<1.0	<1.0	
06/02/2004	<100	130	43	<0.50	<0.50	0.56	<0.50	<0.50	
09/22/2004	<100	28	50	<0.50	<0.50	0.51	<0.50	<0.50	
12/15/2004	<100	110	49	<0.50	0.52	0.61	<0.50	<0.50	a
03/07/2005	<200	190	70	<1.0	<1.0	<1.0	<1.0	<1.0	
06/27/2005	<100	130	33	<0.50	<0.50	<0.50	<0.50	<0.50	
09/16/2005	<100	44	21	<0.50	<0.50	<0.50	<0.50	<0.50	
12/27/2005	<100	150	36	<0.50	<0.50	<0.50	<0.50	<0.50	b
03/16/2006	<300	160	45	<0.50	<0.50	0.84	<0.50	<0.50	c
6/26/2006	<300	53	26	<0.50	<0.50	<0.50	<0.50	<0.50	
9/29/2006	<300	55	14	<0.50	<0.50	<0.50	<0.50	<0.50	
12/9/2006	<300	<20	19	<0.50	<0.50	<0.50	<0.50	-	b
3/29/2007	<300	130	27	<0.50	<0.50	<0.50	<0.50	<0.50	

SYMBOLS AND ABBREVIATIONS:

< = Not detected at or above specified laboratory reporting limit

1,2-DCA = 1,2-Dichloroethane

DIPE = Di-isopropyl ether

EDB = 1,2-Dibromoethane

ETBE = Ethyl tert-butyl ether

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether

TBA = tert-Butyl alcohol

µg/L = Micrograms per liter

FOOTNOTES:

a = This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be used for their intended purpose.

b = Calibration verification for ethanol was within method limits but outside contract limits.

c = Possible high bias for DIPE, 1,2-DCA, and ethanol due to CCV falling outside acceptance criteria.

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 #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
4/19/2002	Southwest	0.038
9/27/2002	Southwest	0.021
12/16/2002	Southeast	0.029
3/11/2003	South	0.024
6/17/2003	South-Southwest	0.022
9/18/2003	South-Southwest	0.022
3/11/2004	South-Southwest	0.024
6/2/2004	South	0.025
9/22/2004	South	0.025
12/15/2004	South	0.020
3/7/2005	South	0.02
6/27/2005	South	0.01
9/16/2005	Southeast	0.03
12/27/2005	South-Southeast	0.02
3/16/2006	Southeast	0.02
6/26/2006	South	0.03
9/29/2006	South	0.025
12/19/2006	South	0.024
3/29/2007	South	0.020

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 ENVIRONMENTAL, INC. GROUND-WATER SAMPLING DATA PACKAGE
(INCLUDES BILL OF LADING, FIELD DATA SHEETS, AND LABORATORY
REPORT AND CHAIN OF CUSTODY DOCUMENTATION)**



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

April 17, 2007

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

Re: Groundwater Sampling Data Package, BP Service Station No. 4977, located at 2770 Castro Valley Road, Castro Valley, California (Quarterly Monitoring performed on March 29, 2007)

General Information

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

Phone Number: (530) 676-6000

On-Site Supplier Representative: Jerry Gonzales

Date: March 29, 2007

Arrival: 10:00 *Departure:* 12:30

Weather Conditions: Clear

Unusual Field Conditions: None

Scope of Work Performed: Quarterly monitoring and sampling

Variations from Work Scope: None noted

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

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Jay R. Johnson, P.G.
Project Manager



Attachments:

- Bill of Lading
- Field Data Sheets
- Chain of Custody Documentation
- Certified Analytical Results

CC: Mr. Paul Supple, BP/ARCO

BP GEM OIL COMPANY

TYPE A BILL OF LADING

SOURCE RECORD BILL OF LADING FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT BP GEM OIL COMPANY FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGEWATER WHICH HAS BEEN RECOVERED FROM GROUNDWATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY BELSHIRE ENVIRONMENTAL TO SEAPORT ENVIRONMENTAL IN REDWOOD CITY, CALIFORNIA.

The contractors performing this work are Stratus Environmental, Inc. [Stratus, 3330 Cameron Park Drive, Suite 550, Cameron Park, CA 95682, (530) 676-6004], and Doulos Environmental, Inc. [Doulos, PO Box 2559, Orangevale, CA 95662, (916) 990-0333]. Stratus is authorized by BP GEM OIL COMPANY to recover, collect, and apportion into loads the non-hazardous well purgewater that is drawn from wells at BP GEM Oil Company facilities and deliver that purgewater to BP GEM Oil Company facility 5786 located in West Sacramento, California. Doulos also performs these services under subcontract to Stratus. Transport routing of the non-hazardous well purgewater may be direct from one BP GEM facility to the designated destination point; from one BP GEM facility to the designated destination point via another BP GEM facility; from a BP GEM facility to the designated destination point via the contractor's facility, or any combination thereof. The non-hazardous well purgewater is and remains the property of BP GEM Oil Company.

This **Source Record BILL OF LADING** was initiated to cover the recovery of non-hazardous well purgewater from wells at the BP GEM Oil Company facility described below:

4977

Station #

Castro Valley – 2770 Castro Valley Rd.

Station Address

Total Gallons Collected From Groundwater Monitoring Wells:

49

Added Equipment

Rinse Water 5

Any Other

Adjustments 0

TOTAL GALS. RECOVERED 54

loaded onto Doulos vehicle # _____

Stratus Project # _____

time date

1230 3/29/07

Signature Jerry G.

RECEIVED AT

time date

BP 5786

1845 3/29/07

Unloaded by

Signature Jerry G.

total 4977

BP ALAMEDA PORTFOLIO

HYDROLOGIC DATA SHEET

AK 10:00 DP-1230

Gauge Date: 3-29-09

Project Name: Castro Valley - 2770 Castro Valley Rd.

Field Technician: Jerry

Project Number: 4977

TOC = Top of Well Casing Elevation
DTP = Depth to Free Product (FP or NAPL) Below TOC
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/bailer)	COMMENTS
		TOC	DTP	DTW	DTB	DIA	ELEV			
MW-1	10:20			7.70	1500	4"				
MW-2	10:30			6.03	1458	4"				
MW-3	10:24			6.92	1485	4"				

BP ALAMEDA PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 4977 PURGED BY: Jo WELL ID.: MW-1
 CLIENT NAME: _____ SAMPLED BY: JB SAMPLE I.D.: MW-1
 LOCATION: Castro Valley - 2770 Castro Valley Road QA SAMPLES: _____

DATE PURGED 3-29-07 START (2400hr) 11:05 END (2400hr) 11:16
 DATE SAMPLED 3-29-07 SAMPLE TIME (2400hr) 12:15
 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) = 1500 CASING VOLUME (gal) = 4.8
 DEPTH TO WATER (feet) = 7.70 CALCULATED PURGE (gal) = 14.6
 WATER COLUMN HEIGHT (feet) = 7.3 ACTUAL PURGE (gal) = 15.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>3-29-07</u>	<u>11:07</u>	<u>5</u>	<u>22.0</u>	<u>967</u>	<u>7.13</u>	<u>clear</u>	_____
<u>1</u>	<u>11:08</u>	<u>10</u>	<u>20.7</u>	<u>1136</u>	<u>7.12</u>	<u>1</u>	_____
<u>1</u>	<u>11:11</u>	<u>15</u>	<u>20.9</u>	<u>1162</u>	<u>7.18</u>	_____	_____

SAMPLE DEPTH TO WATER: 9.84 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: see work order
 ODOR: NO SAMPLE VESSEL / PRESERVATIVE: 3 Vol. HCL

PURGING EQUIPMENT

_____ Bladder Pump _____ Bailer (Teflon)
 Centrifugal Pump _____ Bailer (PVC)
 _____ Submersible Pump _____ Bailer (Stainless Steel)
 _____ Peristaltic Pump _____ Dedicated _____
 Other: _____
 Pump Depth: 14

SAMPLING EQUIPMENT

_____ Bladder Pump _____ Bailer (Teflon)
 _____ Centrifugal Pump Bailer (_____ PVC or disposable)
 _____ Submersible Pump _____ Bailer (Stainless Steel)
 _____ Peristaltic Pump _____ Dedicated _____
 Other: Drop-Tubing

WELL INTEGRITY: good LOCK#: Master

REMARKS: Do 3.44

SIGNATURE: [Signature] Page _____ of _____

BP ALAMEDA PORTFOLIO
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 4977 PURGED BY: J WELL I.D.: MW-2
 CLIENT NAME: _____ SAMPLED BY: J SAMPLE I.D.: 2007
 LOCATION: Castro Valley - 2770 Castro Valley Road QA SAMPLES: _____

DATE PURGED 3-29-07 START (2400hr) 10:35 END (2400hr) 10:41
 DATE SAMPLED 3-29-07 SAMPLE TIME (2400hr) 11:20
 SAMPLE TYPE: Groundwater x Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER: 2" _____ 3" _____ 4" X 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) = 14.58 CASING VOLUME (gal) = 5.7
 DEPTH TO WATER (feet) = 6.03 CALCULATED PURGE (gal) = 13.1
 WATER COLUMN HEIGHT (feet) = 8.5 ACTUAL PURGE (gal) = 18.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>3-29-07</u>	<u>10:37</u>	<u>6</u>	<u>20.5</u>	<u>674</u>	<u>7.50</u>	<u>clear</u>	
<u>1</u>	<u>10:39</u>	<u>12</u>	<u>20.9</u>	<u>751</u>	<u>7.51</u>	<u>1</u>	
<u>1</u>	<u>10:41</u>	<u>18</u>	<u>21.3</u>	<u>768</u>	<u>7.18</u>	<u>1</u>	

SAMPLE DEPTH TO WATER: 7.43 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: X YES _____ NO ANALYSES: See work order
 ODOR: Yes SAMPLE VESSEL / PRESERVATIVE: 3 Vol HCl

PURGING EQUIPMENT

Bladder Pump
 Centrifugal Pump
 Submersible Pump
 Peristaltic Pump
 Other: _____
 Pump Depth: 15

SAMPLING EQUIPMENT

Bladder Pump
 Centrifugal Pump
 Submersible Pump
 Peristaltic Pump
 Other: _____

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

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

WELL INTEGRITY: good LOCK#: MW-2
 REMARKS: DD 2-98

SIGNATURE: [Signature] Page _____ of _____

20.9
-10

BP ALAMEDA PORTFOLIO

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 4977 PURGED BY: Jo WELL I.D.: MW-3
 CLIENT NAME: _____ SAMPLED BY: J- SAMPLE I.D.: MW-3
 LOCATION: Castro Valley - 2770 Castro Valley Road QA SAMPLES: _____

DATE PURGED 3-29-07 START (2400hr) 10:49 END (2400hr) 10:55
 DATE SAMPLED 3-29-07 SAMPLE TIME (2400hr) 11:32
 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) = 19.58 CASING VOLUME (gal) = 5.1
 DEPTH TO WATER (feet) = 6.92 CALCULATED PURGE (gal) = 15.3
 WATER COLUMN HEIGHT (feet) = 7.6 ACTUAL PURGE (gal) = 15.6

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>3-29-07</u>	<u>10:51</u>	<u>5.3</u>	<u>20.0</u>	<u>739</u>	<u>7.13</u>	<u>cloudy</u>	
	<u>10:53</u>	<u>10.5</u>	<u>20.0</u>	<u>744</u>	<u>7.16</u>	<u>clear</u>	
	<u>10:55</u>	<u>15.6</u>	<u>19.6</u>	<u>745</u>	<u>7.16</u>	<u>1</u>	

SAMPLE DEPTH TO WATER: 8.50 SAMPLE INFORMATION SAMPLE TURBIDITY: clear

80% RECHARGE: YES NO ANALYSES: see work order
 ODOR: yes SAMPLE VESSEL / PRESERVATIVE: 6 voc-HCL

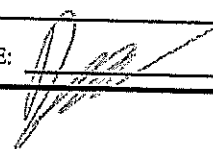
PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____
 Pump Depth: 13

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#: MW-3
 REMARKS: 17.0 7-98

SIGNATURE:  Page ___ of ___



bp
A BP affiliated company

Chain of Custody Record

Project Name: ARCO 4977
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda > 4977
 State or Lead Regulatory Agency: _____
 Requested Due Date (mm/dd/yy): _____

On-site Time: <u>10:00</u>	Temp: <u>65</u>
Off-site Time: <u>12:30</u>	Temp: <u>65</u>
Sky Conditions: <u>Clear</u>	
Meteorological Events: <u>NONE</u>	
Wind Speed: <u>0</u>	Direction: _____

Lab Name: <u>TestAmerica</u>	BP/AR Facility No.: <u>4977</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>2770 Castro Valley Road, Castro Valley</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
<u>Morgan Hill, CA 95937</u>	Site Lat/Long: _____	<u>Cameron Park, CA 95682</u>
Lab PM: <u>Lisa Race</u>	California Global ID No.: <u>T060010089</u>	Consultant/Contractor Project No.: _____
Tele/Fax: <u>408-782-8156 408-782-6308 (fax)</u>	Enfos Project No.: <u>G0C2H-0017</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or OOC (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level 1 with BDF</u>
<u>San Ramon, CA</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail EDD To: <u>cjewitt@stratusinc.net</u>
Tele/Fax: <u>925-275-3506</u>	Cost Element: <u>01-Contractor labor</u>	Invoice to: <u>Atlantic Richfield Co.</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments			
				Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	CRO/BTEX/Oxy*	1,2-DCA	Ethanol	EDB	DRO				
1	MW-1	1215	3-29-97	X				3				X	X	X	X							
2	MW-2	1120		X				3				X	X	X	X							
3	MW-3	1132		X				6				X	X	X	X							
4	TB-4977-32907	530						2				X	X	X	X							
5																						
6																						
7																						
8																						
9																						
10																						

Sampler's Name: <u>Jerry Gonzalez</u>	Relinquished By / Affiliation: _____	Date: <u>4/2/07</u>	Time: <u>1030</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>4/2/07</u>	Time: <u>1030</u>
Sampler's Company: <u>Doulos ENV</u>						
Shipment Date: _____						
Shipment Method: _____						
Shipment Tracking No: _____						

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

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

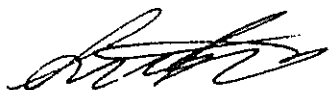
13 April, 2007

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

RE: ARCO #4977, Castro Valley, CA
Work Order: MQD0208

Enclosed are the results of analyses for samples received by the laboratory on 04/03/07 09:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa Race
Senior Project Manager

CA ELAP Certificate # 1210

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

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G0C2H-0017
Project Manager: Jay Johnson

MQD0208
Reported:
04/13/07 16:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MQD0208-01	Water	03/29/07 12:15	04/03/07 09:00
MW-2	MQD0208-02	Water	03/29/07 11:20	04/03/07 09:00
MW-3	MQD0208-03	Water	03/29/07 11:32	04/03/07 09:00
TB-4977-32907	MQD0208-04	Water	03/29/07 05:30	04/03/07 09:00

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

These samples were received with no custody seals.

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G0C2H-0017
Project Manager: Jay Johnson

MQD0208
Reported:
04/13/07 16:26

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MQD0208-01) Water Sampled: 03/29/07 12:15 Received: 04/03/07 09:00									
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	7D11014	04/11/07	04/12/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		103 %	75-120		"	"	"	"	
MW-2 (MQD0208-02) Water Sampled: 03/29/07 11:20 Received: 04/03/07 09:00									
Gasoline Range Organics (C4-C12)	16000	2500	ug/l	50	7D11014	04/11/07	04/12/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		102 %	75-120		"	"	"	"	
MW-3 (MQD0208-03) Water Sampled: 03/29/07 11:32 Received: 04/03/07 09:00									
Gasoline Range Organics (C4-C12)	390	50	ug/l	1	7D11014	04/11/07	04/12/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		102 %	75-120		"	"	"	"	

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G0C2H-0017
Project Manager: Jay Johnson

MQD0208
Reported:
04/13/07 16:26

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MQD0208-01) Water Sampled: 03/29/07 12:15 Received: 04/03/07 09:00									
tert-Amyl methyl ether	ND	0.50	ug/l	1	7D11014	04/11/07	04/12/07	EPA 8260B	
Benzene	ND	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	ND	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	2.3	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		95 %		75-120	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %		75-120	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95 %		80-120	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		84 %		60-135	"	"	"	"	
MW-2 (MQD0208-02) Water Sampled: 03/29/07 11:20 Received: 04/03/07 09:00									
tert-Amyl methyl ether	ND	25	ug/l	50	7D11014	04/11/07	04/12/07	EPA 8260B	
Benzene	530	25	"	"	"	"	"	"	
tert-Butyl alcohol	ND	1000	"	"	"	"	"	"	
Di-isopropyl ether	ND	25	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	25	"	"	"	"	"	"	
1,2-Dichloroethane	ND	25	"	"	"	"	"	"	
Ethanol	ND	15000	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	25	"	"	"	"	"	"	
Ethylbenzene	1100	25	"	"	"	"	"	"	
Methyl tert-butyl ether	80	25	"	"	"	"	"	"	
Toluene	ND	25	"	"	"	"	"	"	
Xylenes (total)	1100	25	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		98 %		75-120	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %		75-120	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		96 %		80-120	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		87 %		60-135	"	"	"	"	

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G0C2H-0017
Project Manager: Jay Johnson

MQD0208
Reported:
04/13/07 16:26

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3 (MQD0208-03) Water Sampled: 03/29/07 11:32 Received: 04/03/07 09:00									
tert-Amyl methyl ether	ND	0.50	ug/l	1	7D11014	04/11/07	04/12/07	EPA 8260B	
Benzene	3.0	0.50	"	"	"	"	"	"	
tert-Butyl alcohol	130	20	"	"	"	"	"	"	
Di-isopropyl ether	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Ethanol	ND	300	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	9.1	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	27	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	0.60	0.50	"	"	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		99 %		75-120	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %		75-120	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %		80-120	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		85 %		60-135	"	"	"	"	

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G0C2H-0017
Project Manager: Jay Johnson

MQD0208
Reported:
04/13/07 16:26

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7D11014 - EPA 5030B P/T / LUFT GCMS

Blank (7D11014-BLK1)

Prepared: 04/11/07 Analyzed: 04/12/07

Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.37		"	2.50		95	75-120			

Laboratory Control Sample (7D11014-BS2)

Prepared & Analyzed: 04/11/07

Gasoline Range Organics (C4-C12)	505	50	ug/l	500		101	65-120			
Surrogate: 1,2-Dichloroethane-d4	2.56		"	2.50		102	75-120			

Laboratory Control Sample Dup (7D11014-BSD2)

Prepared & Analyzed: 04/11/07

Gasoline Range Organics (C4-C12)	461	50	ug/l	500		92	65-120	9	20	
Surrogate: 1,2-Dichloroethane-d4	2.60		"	2.50		104	75-120			

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G0C2H-0017
Project Manager: Jay Johnson

MQD0208
Reported:
04/13/07 16:26

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7D11014 - EPA 5030B P/T / EPA 8260B

Blank (7D11014-BLK1)

Prepared: 04/11/07 Analyzed: 04/12/07

tert-Amyl methyl ether	ND	0.50	ug/l							
Benzene	ND	0.50	"							
tert-Butyl alcohol	ND	20	"							
Di-isopropyl ether	ND	0.50	"							
1,2-Dibromoethane (EDB)	ND	0.50	"							
1,2-Dichloroethane	ND	0.50	"							
Ethanol	ND	300	"							
Ethyl tert-butyl ether	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Methyl tert-butyl ether	ND	0.50	"							
Toluene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
<i>Surrogate: Dibromofluoromethane</i>	2.34		"	2.50		94	75-120			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.37		"	2.50		95	75-120			
<i>Surrogate: Toluene-d8</i>	2.47		"	2.50		99	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.05		"	2.50		82	60-135			

Laboratory Control Sample (7D11014-BS1)

Prepared & Analyzed: 04/11/07

tert-Amyl methyl ether	11.4	0.50	ug/l	10.0		114	65-135			
Benzene	10.0	0.50	"	10.0		100	75-120			
tert-Butyl alcohol	194	20	"	200		97	60-135			
Di-isopropyl ether	9.80	0.50	"	10.0		98	70-130			
1,2-Dibromoethane (EDB)	11.9	0.50	"	10.0		119	80-135			
1,2-Dichloroethane	10.8	0.50	"	10.0		108	70-125			
Ethanol	181	300	"	200		90	15-150			
Ethyl tert-butyl ether	10.4	0.50	"	10.0		104	65-130			
Ethylbenzene	9.42	0.50	"	10.0		94	75-120			
Methyl tert-butyl ether	11.4	0.50	"	10.0		114	50-140			
Toluene	10.4	0.50	"	10.0		104	75-120			
Xylenes (total)	29.5	0.50	"	30.0		98	75-120			
<i>Surrogate: Dibromofluoromethane</i>	2.45		"	2.50		98	75-120			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.71		"	2.50		108	75-120			
<i>Surrogate: Toluene-d8</i>	2.45		"	2.50		98	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.19		"	2.50		88	60-135			

Stratus Environmental Inc. [Arco]
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Project: ARCO #4977, Castro Valley, CA
Project Number: G0C2H-0017
Project Manager: Jay Johnson

MQD0208
Reported:
04/13/07 16:26

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 7D11014 - EPA 5030B P/T / EPA 8260B

Matrix Spike (7D11014-MS1)		Source: MQD0209-01			Prepared & Analyzed: 04/11/07					
tert-Amyl methyl ether	13.1	0.50	ug/l	10.0	ND	131	65-135			
Benzene	11.8	0.50	"	10.0	ND	118	75-120			
tert-Butyl alcohol	1530	20	"	200	1300	115	60-135			BB
Di-isopropyl ether	11.6	0.50	"	10.0	ND	116	70-130			
1,2-Dibromoethane (EDB)	13.5	0.50	"	10.0	ND	135	80-135			
1,2-Dichloroethane	12.5	0.50	"	10.0	ND	125	70-125			
Ethanol	257	300	"	200	ND	128	15-150			
Ethyl tert-butyl ether	12.3	0.50	"	10.0	ND	123	65-130			
Ethylbenzene	11.7	0.50	"	10.0	ND	117	75-120			
Methyl tert-butyl ether	14.2	0.50	"	10.0	1.3	129	50-140			
Toluene	12.2	0.50	"	10.0	ND	122	75-120			LM
Xylenes (total)	35.9	0.50	"	30.0	ND	120	75-120			
<i>Surrogate: Dibromofluoromethane</i>	2.28		"	2.50		91	75-120			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.42		"	2.50		97	75-120			
<i>Surrogate: Toluene-d8</i>	2.47		"	2.50		99	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.17		"	2.50		87	60-135			

Matrix Spike Dup (7D11014-MSD1)		Source: MQD0209-01			Prepared & Analyzed: 04/11/07					
tert-Amyl methyl ether	10.8	0.50	ug/l	10.0	ND	108	65-135	19	25	
Benzene	10.2	0.50	"	10.0	ND	102	75-120	15	20	
tert-Butyl alcohol	1450	20	"	200	1300	75	60-135	5	25	BB
Di-isopropyl ether	10.0	0.50	"	10.0	ND	100	70-130	15	25	
1,2-Dibromoethane (EDB)	11.5	0.50	"	10.0	ND	115	80-135	16	30	
1,2-Dichloroethane	10.9	0.50	"	10.0	ND	109	70-125	14	25	
Ethanol	203	300	"	200	ND	102	15-150	23	25	
Ethyl tert-butyl ether	10.6	0.50	"	10.0	ND	106	65-130	15	25	
Ethylbenzene	9.62	0.50	"	10.0	ND	96	75-120	20	20	
Methyl tert-butyl ether	12.3	0.50	"	10.0	1.3	110	50-140	14	25	
Toluene	10.1	0.50	"	10.0	ND	101	75-120	19	25	
Xylenes (total)	30.4	0.50	"	30.0	ND	101	75-120	17	20	
<i>Surrogate: Dibromofluoromethane</i>	2.43		"	2.50		97	75-120			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	2.55		"	2.50		102	75-120			
<i>Surrogate: Toluene-d8</i>	2.48		"	2.50		99	80-120			
<i>Surrogate: 4-Bromofluorobenzene</i>	2.27		"	2.50		91	60-135			

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

Project: ARCO #4977, Castro Valley, CA
Project Number: G0C2H-0017
Project Manager: Jay Johnson

MQD0208
Reported:
04/13/07 16:26

Notes and Definitions

LM MS and/or MSD above acceptance limits. See Blank Spike(LCS).
BB Sample > 4x spike concentration
DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Lisa Race

From: Sandy Hayes [shayes@stratusinc.net]
Sent: Friday, April 13, 2007 5:31 PM
To: Lisa Race
Subject: Problem COC's

Hi Lisa,

Per our telephone conversation please put the trip blanks for sites 4977, 6041 and 11120 on hold.

Thank you!

Sandy Hayes
Stratus Environmental, Inc.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682
shayes@stratusinc.net
Phone: 530-676-6004
Fax: 530.676.6005



bp
A BP affiliated company

Chain of Custody Record

Project Name: ARCO 4977
 BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda > 4977
 State or Lead Regulatory Agency: _____
 Requested Due Date (mm/dd/yy): _____

On-site Time: <u>10:00</u>	Temp: <u>65</u>
Off-site Time: <u>12:30</u>	Temp: <u>65</u>
Sky Conditions: <u>CLR</u>	
Meteorological Events: <u>NONE</u>	
Wind Speed: <u>0</u>	Direction: _____

Lab Name: <u>TestAmerica</u>	BP/AR Facility No.: <u>4977</u>	Consultant/Contractor: <u>Stratus Environmental, Inc.</u>
Address: <u>885 Jarvis Drive</u>	BP/AR Facility Address: <u>2770 Castro Valley Road, Castro Valley</u>	Address: <u>3330 Cameron Park Drive, Suite 550</u>
<u>Morgan Hill, CA 95937</u>	Site Lat/Long: _____	<u>Cameron Park, CA 95682</u>
Lab PM: <u>Lisa Race</u>	California Global ID No.: <u>T060010089</u>	Consultant/Contractor Project No.: _____
Tele/Fax: <u>408-782-8156 408-782-6308 (fax)</u>	Enfos Project No.: <u>G0C2H-0017</u>	Consultant/Contractor PM: <u>Jay Johnson</u>
BP/AR PM Contact: <u>Paul Supple</u>	Provision or OOC (circle one) <u>Provision</u>	Tele/Fax: <u>(530) 676-6000 / (530) 676-6005</u>
Address: <u>2010 Crow Canyon Place, Suite 150</u>	Phase/WBS: <u>04-Monitoring</u>	Report Type & QC Level: <u>Level 1 with EDF</u>
<u>San Ramon, CA</u>	Sub Phase/Task: <u>03-Analytical</u>	E-mail EDD To: <u>cjewitt@stratusinc.net</u>
Tele/Fax: <u>925-275-3506</u>	Cost Element: <u>01-Contractor labor</u>	Invoice to: <u>Atlantic Richfield Co.</u>

Item No.	Sample Description	Time	Date	Matrix			Laboratory No.	No. of Containers	Preservative					Requested Analysis					Sample Point Lat/Long and Comments		
				Soil/Solid	Water/Liquid	Air			Unpreserved	H ₂ SO ₄	HNO ₃	HCl	Methanol	GRO/TEX/Oxy*	1,2-DCA	Ethanol	EDB	ORO			
1	MW-1	1215	3-29-07	X			01	3			X			X	X	X	X				
2	MW-2	1120		X			02	3			X			X	X	X	X				
3	MW-3	1132		X			03	6			X			X	X	X	X				
4	TB-4977-32907	530					04	2			X			X	X	X	X				
5																					
6																					
7																					
8																					
9																					
10																					

Sampler's Name: <u>Jerry Gonzalez</u>	Relinquished By / Affiliation: _____	Date: <u>4/2/07</u>	Time: <u>1030</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>4/2/07</u>	Time: <u>1030</u>
Sampler's Company: <u>Douglas EDU</u>	_____	Date: <u>4/2/07</u>	Time: <u>1540</u>	Accepted By / Affiliation: <u>[Signature]</u>	Date: <u>4-3-07</u>	Time: <u>900</u>
Shipment Date: _____						
Shipment Method: _____						
Shipment Tracking No: _____						

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

Custody Seals In Place: Yes No | Temp Blank: Yes No | Cooler Temp on Receipt: 3.9 °C | Trip Blank: Yes No | MS/MSD Sample Submitted: Yes No

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: Arco 4977
 REC. BY (PRINT) A.M.
 WORKORDER: MQDO208

DATE REC'D AT LAB: 4-3-07
 TIME REC'D AT LAB: 9:00
 DATE LOGGED IN: 4-5-07

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

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	Present <input checked="" type="radio"/> Absent <input type="radio"/> Intact / Broken*								4-5-07 A.M. See COC
2. Chain-of-Custody	<input checked="" type="radio"/> Present / Absent*								
3. Traffic Reports or Packing List:	Present / <input checked="" type="radio"/> Absent								
4. Airbill:	<input checked="" type="radio"/> Airbill Sticker <input checked="" type="radio"/> Present / Absent								
5. Airbill #:	<u>See Attached</u>								
6. Sample Labels:	<input checked="" type="radio"/> Present / Absent								
7. Sample IDs:	<input checked="" type="radio"/> Listed / Not Listed on Chain-of-Custody								
8. Sample Condition:	<input checked="" type="radio"/> Intact / Broken* / Leaking*								
9. Does information on chain-of-custody, traffic reports and sample labels agree?	<input checked="" type="radio"/> Yes / No*								
10. Sample received within hold time?	<input checked="" type="radio"/> Yes / No*								
11. Adequate sample volume received?	<input checked="" type="radio"/> Yes / No*								
12. Proper preservatives used?	<input checked="" type="radio"/> Yes / No*								
13. Trip Blank / Temp Blank Received? (circle which, if yes)	<input checked="" type="radio"/> Yes / No*								
14. Read Temp: <u>3.9°C</u> Corrected Temp: <u>3.9°C</u> Is corrected temp $\pm 0.2^\circ\text{C}$? <input checked="" type="radio"/> Yes / No**									

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

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

California Overnight Shipping Label



Date Printed 4/2/2007

Tracking#D10010126257800

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

Sent By: TIM ALBRIGHT
Phone#: (916)921-9600
wgt(lbs): 30
Reference:
Decl. Value: \$0.00

<i>Ship To Company:</i> TESTAMERICA - MORGAN HILL 885 JARVIS DR MORGAN HILL, CA 95037 SAMPLE CONTROL (408)776-9600	<i>Service:</i> S <i>Sort Code:</i> SJC <i>Special Services:</i>
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APPENDIX B

GEOTRACKER UPLOAD CONFIRMATION

Electronic Submittal Information

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Your EDF file has been successfully uploaded!

Confirmation Number: 7003895819

Date/Time of Submittal: 4/20/2007 9:30:16 AM

Facility Global ID: T0600100089

Facility Name: ARCO #4977

Submittal Title: 1Q07 GW Monitoring

Submittal Type: GW Monitoring Report

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

ARCO #4977 2770 CASTRO VALLEY CASTRO VALLEY, CA 94546	Regional Board - Case #: 01-0097 SAN FRANCISCO BAY RWQCB (REGION 2) Local Agency (lead agency) - Case #: RO0002436 ALAMEDA COUNTY LOP - (SP)
--	---

<u>CONF #</u>	<u>TITLE</u>	<u>QUARTER</u>
7003895819	1Q07 GW Monitoring	Q1 2007
<u>SUBMITTED BY</u>	<u>SUBMIT DATE</u>	<u>STATUS</u>
Broadbent & Associates, Inc.	4/20/2007	PENDING REVIEW

SAMPLE DETECTIONS REPORT

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

METHOD QA/QC REPORT

METHODS USED	8260FA,8260TPH
TESTED FOR REQUIRED ANALYTES?	Y
LAB NOTE DATA QUALIFIERS	Y

QA/QC FOR 8021/8260 SERIES SAMPLES

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

WATER SAMPLES FOR 8021/8260 SERIES

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

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135% n/a
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30% n/a
SURROGATE SPIKES % RECOVERY BETWEEN 70-125% n/a
BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130% n/a

FIELD QC SAMPLES

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

Electronic Submittal Information

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UPLOADING A GEO_WELL FILE

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

Submittal Title: 1Q07 GEO_WELL 4977

Submittal Date/Time: 4/20/2007 9:28:26 AM

Confirmation Number: 8034376382

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