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 and Remediation System Status Report
Atlantic Richfield Company (a BP affiliated company) Station #2111
1156 Davis Street
San Leandro, California
ACEH Case #RO0000494

"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

First Quarter 2009 Ground-Water Monitoring
and
Remediation System Status Report
Atlantic Richfield Company Station #2111
1156 Davis Street
San Leandro, California

Prepared for

Mr. Paul Supple
Environmental Business Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

1324 Mangrove Avenue, Suite 212
Chico, California 95926
(530) 566-1400
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30 April 2009

Project No. 06-88-615

Broadbent & Associates, Inc.
1324 Mangrove Ave., Suite 212
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BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL, WATER RESOURCES & ENGINEERING

30 April 2009

Project No. 06-88-615

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 and Remediation System Status Report, Atlantic Richfield Company (a BP affiliated company) Station #2111, 1156 Davis Street, San Leandro, California; ACEH Case #RO0000494

Dear Mr. Supple:

Attached is the *First Quarter 2009 Ground-Water Monitoring and Remediation System Status Report* for Atlantic Richfield Company Station #2111 located at 1156 Davis Street, San Leandro, California (Site). This report presents results of ground-water monitoring conducted at the Site during the First Quarter 2009, and summarizes the performance of the remediation system during the same period.

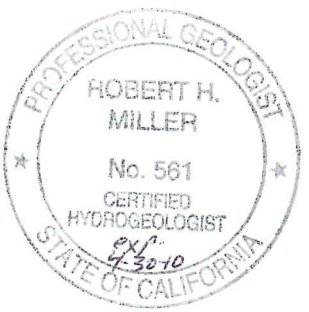
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

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)
Mr. Karl Busche, City of San Leandro Environmental Services Division, 835 East 14th Street, San Leandro, California 94577
Electronic copy uploaded to GeoTracker

STATION #2111 QUARTERLY GROUND-WATER MONITORING AND REMEDIATION SYSTEM STATUS REPORT

Facility: #2111 Address:	1156 Davis Street, San Leandro, California
Environmental Business Manager:	Mr. Paul Supple
Consulting Co./Contact Persons:	Broadbent & Associates, Inc.(BAI)/Rob Miller & Tom Venus (530) 566-1400
Consultant Project No.:	06-88-615
Primary Agency/Regulatory ID No.:	Alameda County Environmental Health (ACEH) ACEH Case #RO0000494
Facility Permits/Permitting Agency:	City of San Leandro Special Discharge Permit SD-036; Bay Area Air Quality Management District Plant 16189

WORK PERFORMED THIS QUARTER (First Quarter 2009):

1. Prepared and submitted *Fourth Quarter 2008 Ground-Water Monitoring and Remediation System Status Report* (BAI, 01/28/2009).
2. Conducted ground-water monitoring/sampling for First Quarter 2009. Work performed on 3 February 2009 by Stratus Environmental, Inc (Stratus).
3. Performed routine and special operation, maintenance and performance monitoring of the Dual-Phase Extraction (DPE) treatment system. Work performed by Stratus.
4. Submitted monthly discharge reports for January, February and March 2009 to the City of San Leandro. Work performed by Stratus.
5. Conducted carbon change-out for the vapor-phase carbon vessels. Work performed on 31 March 2009 by Stratus.

WORK PROPOSED FOR NEXT QUARTER (Second Quarter 2009):

1. Prepared and submitted this *First Quarter 2009 Ground-Water Monitoring and Remediation System Status Report* (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for Second Quarter 2009.
3. Continue operation, maintenance and performance monitoring of the DPE treatment system.
4. Submit monthly discharge reports for April, May and June 2009.
5. Respond to letter dated 24 April 2009 from Mr. Paresh Khatri of ACEH on or before 23 June 2009 as requested.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	**Ground-Water Monitoring/Sampling/DPE Remediation**
Frequency of ground-water monitoring:	**Quarterly: MW-1 through MW-8**
Frequency of ground-water sampling:	**Quarterly: MW-1 through MW-5, MW-7 and MW-8** **Annually (3Q): MW-6**
Is free product (FP) present on-site:	**No**
FP recovered this quarter:	**0 gallons**
Cumulative FP recovered:	**1.44 gallons (MW-2)**
Depth to ground-water (below TOC):	**15.23 ft (MW-6) to 18.08 ft (MW-1)**
General ground-water flow direction:	**South-southeast**
Approximate hydraulic gradient:	**0.01 ft/ft**

QUARTERLY RESULTS SUMMARY (Continued):

Current remediation techniques:	**DPE treatment system**			
System startup:	**01/29/2007**			
Extraction wells:	**SVE: V-1, V-2, V-3, MW-1, MW-3, MW-7, MW-8** **GWE: MW-2 (temporarily discontinued since 2/18/2009)**			
Frequency of DPE system field monitoring:	**Weekly**			
Frequency of DPE system sampling:	**Monthly**			
Gallons of ground water treated and discharged:	**This Quarter** **316,277**		**Cumulative** **1,402,083**	
Total operating hours:	**1,123**		**3,615**	
Mass Removal (pounds)				
Gasoline range organics (GRO):	**0.231 (GWE)**	**153.34 (SVE)**	**5.820 (GWE)**	**869.14 (SVE)**
Benzene:	**0.007 (GWE)**		**0.093 (GWE)**	
Methyl-tert butyl ether (MTBE):	**0.327 (GWE)**		**8.420 (GWE)**	
Ground-water DPE system influent sample results (2111ASWINF):	**01/7/2009**	**02/03/2009**	**03/03/2009**	
GRO (µg/L):	**<50**	**66**	**<50**	
Benzene (µg/L):	**<2.5**	**<2.0**	**<0.50**	
MTBE (µg/L):	**90**	**65**	**27**	
Ground-water DPE system effluent sample results (2111WEFF):				
GRO (µg/L):	**<50**	**<50**	**<50**	
Benzene (µg/L):	**<0.50**	**<0.50**	**<0.50**	
MTBE (µg/L):	**<0.50**	**<0.50**	**<0.50**	
Soil vapor DPE system influent sample results (2111ASYSINF):				
GRO (mg/M^3):	**170**	**120**	**<50**	
Benzene (mg/M^3):	**0.065**	**0.023**	**0.054**	
MTBE (mg/M^3):	**4.3**	**1.0**	**0.70**	
Soil vapor DPE system effluent sample results (2111AEFF):				
GRO (mg/M^3):	**<50**	**<50**	**<50**	
Benzene (mg/M^3):	**0.0047**	**<0.0016**	**<0.0016**	
MTBE (mg/M^3):	**<0.0072**	**0.055**	**0.37**	

DISCUSSION:

First quarter 2009 ground-water monitoring and sampling was conducted at Station #2111 on 3 February 2009 by Stratus personnel. Water levels were gauged in the eight wells associated with the Site. No irregularities were noted during water level gauging. Depth to water measurements ranged from 15.23 ft at MW-6 to 18.08 ft at MW-1. Resulting ground-water surface elevations ranged from 21.95 ft above mean sea level in well MW-8 to 20.68 ft in well MW-7. 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 south-southeast at approximately 0.01 ft/ft, generally consistent with the highly variable range of 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. Historic free product thickness and

cumulative product recovery from well MW-2 is presented in Table 4. 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 through MW-5, MW-7, and MW-8. No irregularities were reported during well sampling this quarter. Samples were submitted under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove, California), for analysis of Gasoline Range Organics (GRO, C6-12) by the EPA Method 8015B; for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260B; and tert-Amyl methyl ether (TAME), tert-Butyl alcohol (TBA), Di-isopropyl ether (DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Ethanol, Ethyl tert-butyl ether (ETBE), and Methyl tert-butyl ether (MTBE) 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.

Concentrations of GRO were detected above the laboratory reporting limit in one of the seven wells sampled at a concentration of 86 micrograms per liter (µg/L) in well MW-2. Benzene was detected above the laboratory reporting limit in one of the seven wells sampled at a concentration of 3.5 µg/L in well MW-2. TBA was detected above the laboratory reporting limit in four of the seven wells sampled at concentrations up to 230 µg/L in well MW-2. MTBE was detected above the laboratory reporting limit in six of the seven wells sampled at concentrations up to 31 µg/L in well MW-2. The remaining fuel additives and oxygenates were not detected above their laboratory reporting limits in the seven wells sampled this quarter.

Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well, with the following exceptions: GRO reached a historic minimum concentration in well MW-2 (86 µg/L); Benzene reach a historic minimum concentration in well MW-2 (3.5 µg/L); TBA reached historic minimum concentrations in wells MW-5 (94 µg/L) and MW-8 (17 µg/L); and MTBE reached historic minimum concentrations in wells MW-2 (31 µg/L), MW-4 (0.67 µg/L), MW-5 (<0.50 µg/L), and MW-7 (18 µg/L). Historic laboratory analytical results are summarized in Table 1 and Table 2. The most recent GRO, Benzene, and MTBE concentrations are also presented in Drawing 1. A copy of the laboratory analytical report, including chain-of-custody documentation is provided in Appendix A. Ground-water monitoring data (GEO_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation pages are provided in Appendix B.

For the First Quarter 2009 period from 1 January 2009 to 31 March 2009, the DPE system reportedly operated approximately 52 percent of the time. During this period, a total of 316,277 gallons of ground water was treated and discharged. During the First Quarter 2009, approximately 0.231 pounds of GRO (0.038 gallons), approximately 0.007 pounds of Benzene (0.001 gallons), and approximately 0.327 pounds of MTBE (0.053 gallons) were removed. Ground-water extraction system performance and analytical data is summarized in Tables 5, 6 and 7. Soil vapor extraction system performance and analytical data is summarized in Tables 8, 9 and 10.

The DPE system operated for approximately 1,123 hours between 1 January and 31 March 2009 based on the hour meter reading. Stratus found the system operational upon arrival at the Site on 7 January 2009. System samples were collected and the system was shut down upon departure pending receipt of the laboratory analytical results. The system was restarted on 15 January following receipt of the laboratory analytical results. The system was left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 20 January 2009 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted upon departure and left operational. Stratus found the system non-operational upon arrival at the Site on 29 January 2009 due to

a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted upon departure and left operational.

Stratus found the system operational upon arrival at the Site on 3 February 2009. System samples were collected and the system was shut down upon departure pending receipt of the laboratory analytical results. The system was restarted on 10 February 2009 following acceptable review of the laboratory analytical results. The system was left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 12 February 2009 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted upon departure and left operational. Stratus found the system non-operational upon arrival at the Site on 18 February 2009 due to a power outage. During this visit, the ground-water extraction pump within well MW-2 was shut down upon direction from BAI in an effort to increase operational efficiency of the remediation system, and optimize soil-vapor extraction at a time when the ground-water elevations are low. The system was restarted upon departure and left operational. Stratus found the system operational upon arrival at the Site on 24 February 2009. The system was left operational upon departure.

Stratus found the system operational upon arrival at the Site on 3 March 2009. System samples were collected and the system was shut down upon departure pending receipt of the laboratory analytical results. The system was restarted on 11 March 2009 following acceptable review of the laboratory analytical results. Stratus found the system operational upon arrival at the Site on 16 March 2009. The system was left operational upon departure. Stratus found the system operational upon arrival at the Site on 23 March 2009. The system was left operational upon departure. Stratus found the system operational upon arrival at the Site on 31 March 2009. During this visit, Stratus oversaw EnviroSupply and Service, Inc. conduct a carbon change-out of the vapor phase carbon vessels on-site due to consistent low concentrations of MTBE observed within the effluent vapor samples. The system was left operational upon departure. Copies of Stratus' remediation system operation and maintenance data packages for First Quarter 2009 are contained within Appendix C. Copies of Stratus' remediation system monthly discharge reports for First Quarter 2009 are contained within Appendix D.

CLOSURE:

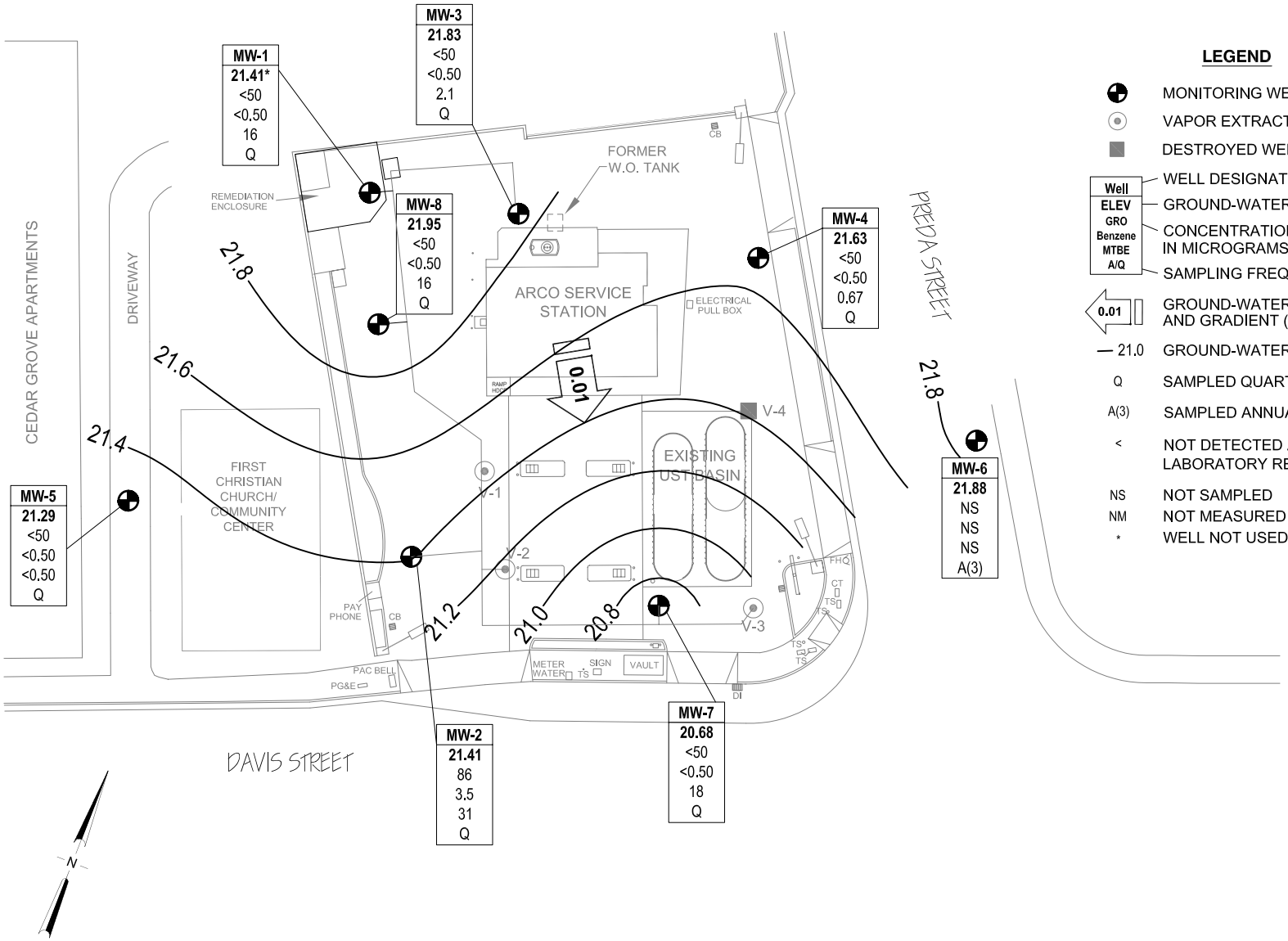
The findings presented in this report are based upon: observations of Stratus field personnel (see Appendices A, C, D), the points investigated, and results of laboratory tests performed by Calscience Environmental Laboratories, Inc. (Garden Grove, California). Our services were performed in accordance 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 Contour and Analytical Summary Map – 3 February 2009

Drawing 2. DPE Treatment System Process Flow Diagram with Sample Locations

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



LEGEND

- MONITORING WELL LOCATION
- VAPOR EXTRACTION WELL LOCATION
- DESTROYED WELL LOCATION
- Well — WELL DESIGNATION
- ELEV — GROUND-WATER ELEVATION (FT MSL)
- GRO, Benzene, MTBE — CONCENTRATIONS OF GRO, BENZENE & MTBE IN MICROGRAMS PER LITER (µg/L)
- A/Q — SAMPLING FREQUENCY
- 0.01 — GROUND-WATER FLOW DIRECTION AND GRADIENT (FT/FT)
- 21.0 — GROUND-WATER ELEVATION CONTOUR (FT MSL)
- Q — SAMPLED QUARTERLY
- A(3) — SAMPLED ANNUALLY, THIRD QUARTER
- < — NOT DETECTED AT OR ABOVE LABORATORY REPORTING LIMIT
- NS — NOT SAMPLED
- NM — NOT MEASURED
- * — WELL NOT USED TO GENERATE CONTOURS

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

0 40 80
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California 95926
Project No.: 06-08-615 Date: 4/16/09

Station #2111
1156 Davis Street
San Leandro, California

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

Drawing
1

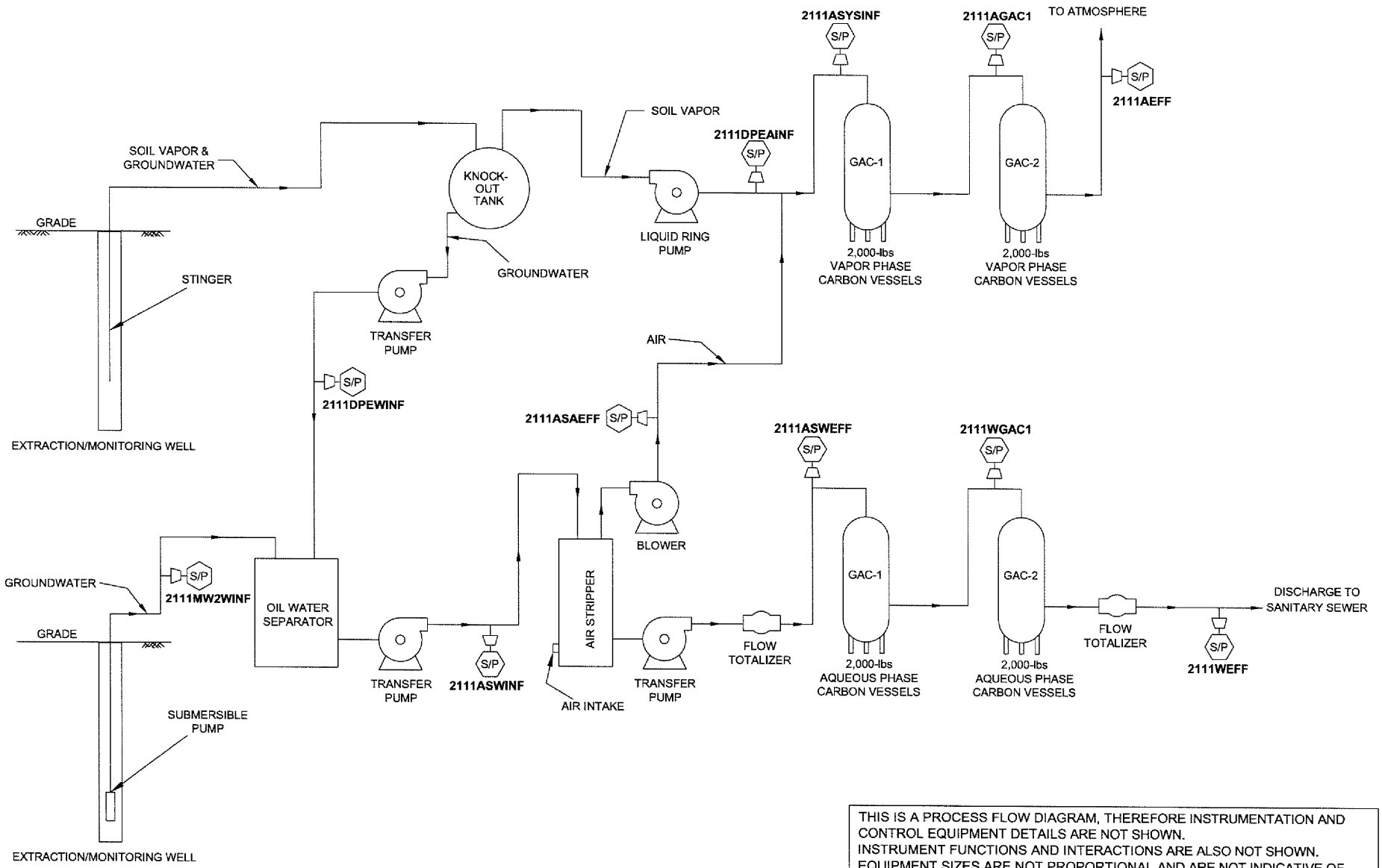


Diagram from Stratus Environmental Inc.

NOT TO SCALE	BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California 95926 Project No.: 06-08-615 Date: 7/28/08	Station #2111 1156 Davis Street San Leandro, California	DPE Treatment System Process Flow Diagram with Sample Locations

Drawing
2

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

Station #2111, 1156 Davis St, San Leandro, 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															
6/26/2000	--		39.60	12.50	26.00	16.46	23.14	--	--	--	--	--	--	--	--
7/20/2000	--		39.60	12.50	26.00	16.89	22.71	360	110	<0.5	<0.5	2.7	2,100	--	--
9/19/2000	--		39.60	12.50	26.00	17.62	21.98	290	76	<0.5	<0.5	2.3	1,500	--	--
12/21/2000	--		39.60	12.50	26.00	17.39	22.21	257	64	2.89	1.31	4.57	1,080/1,060	--	--
3/13/2001	--		39.60	12.50	26.00	15.70	23.90	<500	52.5	<5.0	<5.0	<5.0	1,430/1,370	--	--
9/18/2001	--		39.60	12.50	26.00	18.24	21.36	<500	64	7.3	<5.0	52	810/1,100	--	--
12/28/2001	--		39.60	12.50	26.00	15.95	23.65	<500	<5.0	<5.0	5	22	1,200/1,100	--	--
3/14/2002	--		39.60	12.50	26.00	16.01	23.59	<50	<0.5	<0.5	<0.5	<0.5	34/40	--	--
4/23/2002	--		39.60	12.50	26.00	15.43	24.17	<50	<0.5	<0.5	<0.5	<0.5	30	--	--
7/17/2002	NP		39.60	12.50	26.00	17.50	22.10	<50	1.2	<0.50	<0.50	<0.50	29	6.9	6.9
10/9/2002	--	c	39.60	12.50	26.00	18.27	21.33	240	4.9	<1.0	4.1	7.0	290	6.5	6.5
1/13/2003	--	c	39.60	12.50	26.00	15.37	24.23	760	34	11	17	56	300	6.8	6.8
04/07/03	--		39.60	12.50	26.00	16.61	22.99	<50	<0.50	<0.50	<0.50	<0.50	22	6.8	6.8
7/9/2003	--		39.60	12.50	26.00	17.27	22.33	<2,500	<25	<25	<25	<25	690	6.7	6.7
02/05/2004	NP	m	39.49	12.50	26.00	16.28	23.21	2,800	31	<25	<25	<25	1,100	0.9	6.5
04/05/2004	NP		39.49	12.50	26.00	16.25	23.24	5,800	46	<25	<25	<25	1,700	1.0	--
07/13/2004	NP		39.49	12.50	26.00	17.57	21.92	<1,000	<10	<10	<10	<10	730	0.5	6.6
11/04/2004	NP		39.49	12.50	26.00	17.78	21.71	560	<5.0	<5.0	<5.0	<5.0	380	0.8	6.5
01/20/2005	NP		39.49	12.50	26.00	15.50	23.99	670	<5.0	<5.0	<5.0	<5.0	570	0.6	6.0
04/11/2005	NP		39.49	12.50	26.00	14.82	24.67	<2,500	<25	<25	<25	25	1,100	0.9	6.9
08/01/2005	NP		39.49	12.50	26.00	16.77	22.72	2,200	33	<10	110	<10	1,400	1.27	7.3
10/21/2005	NP		39.49	12.50	26.00	17.71	21.78	<2,500	<25	<25	<25	<25	970	1.17	6.6
01/18/2006	NP	n	39.49	12.50	26.00	14.70	24.79	300	<2.5	<2.5	<2.5	<2.5	330	1.07	6.6
04/14/2006	NP		39.49	12.50	26.00	13.41	26.08	330	<2.5	<2.5	<2.5	<2.5	310	0.79	6.6
7/19/2006	NP	q	39.49	12.50	26.00	15.86	23.63	<250	<2.5	<2.5	<2.5	<2.5	180	1.2	6.7
10/24/2006	P		39.49	12.50	26.00	17.15	22.34	710	4.2	<2.5	19	13	360	--	6.68
1/15/2007	P		39.49	12.50	26.00	16.81	22.68	470	2.8	<2.5	14	8.4	220	1.14	7.12
4/18/2007	NP		39.49	12.50	26.00	16.69	22.80	100	<2.5	<2.5	<2.5	<2.5	150	1.20	6.85
7/17/2007	NP		39.49	12.50	26.00	20.85	18.64	<50	<1.0	<1.0	<1.0	<1.0	94	1.91	6.98
10/11/2007	NP		39.49	12.50	26.00	18.10	21.39	66	<0.50	<0.50	<0.50	<0.50	62	1.60	7.00
1/8/2008	NP	n	39.49	12.50	26.00	15.97	23.52	140	<0.50	<0.50	<0.50	<0.50	90	1.19	5.60

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

Station #2111, 1156 Davis St, San Leandro, 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 Cont.															
4/8/2008	NP		39.49	12.50	26.00	16.53	22.96	88	<0.50	<0.50	<0.50	<0.50	110	1.73	6.89
8/20/2008	NP		39.49	12.50	26.00	18.32	21.17	<50	<0.50	<0.50	<0.50	<0.50	3.3	2.37	6.95
11/17/2008	NP		39.49	12.50	26.00	18.38	21.11	<50	<0.50	<0.50	<0.50	<0.50	21	0.94	6.96
2/3/2009	**NP**		**39.49**	**12.50**	**26.00**	**18.08**	**21.41**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**16**	**1.66**	**6.95**
MW-2															
6/26/2000	--	a	37.99	12.0	26.00	14.60	23.39	--	--	--	--	--	--	--	--
7/20/2000	--		37.99	12.0	26.00	15.14	22.85	95,000	2,300	18,000	2,500	19,000	13,000	--	--
9/19/2000	--		37.99	12.0	26.00	15.95	22.04	63,000	1,200	6,300	2,000	14,000	19,000	--	--
12/21/2000	--		37.99	12.0	26.00	15.60	22.39	45,900	--	2,130	1,160	9,460	22,400/24,700	--	--
12/21/00	--	b	37.99	12.0	26.00	--	--	5,010	360	189	213	626	54,300/89,200	--	--
3/13/2001	--		37.99	12.0	26.00	13.77	24.22	3,650	98.1	<5.0	<5.0	6.42	3,590/3,260	--	--
3/13/2001	--	b	37.99	12.0	26.00	--	--	<20,000	525	466	408	1,460	91,700/76,000	--	--
9/18/2001	--	a	37.99	12.0	26.00	16.86	21.13	--	--	--	--	--	--	--	--
12/28/2001	--		37.99	12.0	26.00	14.28	23.71	31,000	1,500	3,800	1,300	4,800	9,300/8,800	--	--
3/14/2002	--		37.99	12.0	26.00	14.15	23.84	1,800	25	43	43	270	990/960	--	--
4/23/2002	--		37.99	12.0	26.00	13.60	24.39	9,000	220	110	470	2,500	8,500	--	--
7/17/2002	NP	a, c	37.99	12.0	26.00	15.75	22.24	74,000	280	290	820	10,000	19,000/0.4	6.8	6.8
10/9/02	NP	g	37.99	12.0	26.00	16.69	21.30	--	--	--	--	--	--	--	--
1/13/03	--	g, h	37.99	12.0	26.00	13.59	24.40	--	--	--	--	--	--	--	--
04/07/03	--	g, h	37.99	12.0	26.00	14.70	23.29	--	--	--	--	--	--	--	--
07/09/03	--	g, h	37.99	12.0	26.00	15.48	22.51	--	--	--	--	--	--	--	--
02/05/2004	NP	g,m	37.86	12.0	26.00	14.43	23.43	--	--	--	--	--	--	--	--
04/05/2004	NP		37.86	12.0	26.00	14.35	23.51	2,300	33	<5.0	<5.0	200	750	0.6	--
07/13/2004	NP		37.86	12.0	26.00	15.79	22.07	59,000	380	<50	2,100	7,900	5,800	0.3	6.4
08/31/2004	--		37.86	12.0	26.00	15.89	21.97	--	--	--	--	--	--	--	--
11/04/2004	--	g, h	37.86	12.0	26.00	15.92	21.94	--	--	--	--	--	--	--	--
01/20/2005	NP	o	37.86	12.0	26.00	13.71	24.15	30,000	450	<50	1,300	3,300	7,000	0.7	6.2
04/11/2005	NP		37.86	12.0	26.00	12.70	25.16	11,000	170	<50	580	630	2,700	0.9	6.8
08/01/2005	NP		37.86	12.0	26.00	14.89	22.97	24,000	170	<50	1,100	2,700	2,700	0.64	6.9
10/21/2005	--	a	37.86	12.0	26.00	16.05	21.81	--	--	--	--	--	--	--	--

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

Station #2111, 1156 Davis St, San Leandro, 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.															
01/18/2006	NP	a	37.86	12.0	26.00	12.81	25.05	21,000	71	<50	470	1,400	1,600	1.18	6.6
04/14/2006	NP	a	37.86	12.0	26.00	12.24	25.62	7,800	78	<50	94	130	2,100	0.81	6.7
7/19/2006	NP	q	37.86	12.0	26.00	14.00	23.86	4,900	31	<10	98	75	930	1.1	6.5
10/24/2006	--	g	37.86	12.0	26.00	15.38	22.48	--	--	--	--	--	--	--	6.45
1/15/2007	P		37.86	12.0	26.00	15.00	22.86	5,000	51	<10	49	34	1,400	1.85	7.13
4/18/2007	NP		37.86	12.0	26.00	14.82	23.04	3,000	39	<10	32	22	1,100	1.95	7.10
7/17/2007	NP	n	37.86	12.0	26.00	18.00	19.86	1,100	53	<10	28	<10	1,300	4.84	7.09
10/11/2007	NP		37.86	12.0	26.00	16.38	21.48	1,800	17	<10	<10	11	1,000	1.52	7.05
1/8/2008	NP	n	37.86	12.0	26.00	14.10	23.76	1,900	65	<10	37	28	1,300	1.06	4.22
4/8/2008	NP		37.86	12.0	26.00	14.70	23.16	200	34	<0.50	<0.50	<0.50	690	3.24	6.95
8/20/2008	NP		37.86	12.0	26.00	16.66	21.20	990	21	<10	<10	<10	190	1.54	6.91
11/17/2008	NP		37.86	12.0	26.00	19.28	18.58	290	9.3	<5.0	<5.0	<5.0	89	0.71	6.75
2/3/2009	**NP**		**37.86**	**12.0**	**26.00**	**16.45**	**21.41**	**86**	**3.5**	**<2.5**	**<2.5**	**<2.5**	**31**	**2.71**	**6.96**
MW-3															
6/26/2000	--		39.32	12.00	**26.00**	15.96	23.36	--	--	--	--	--	--	--	--
7/20/2000	--		39.32	12.00	**26.00**	16.42	22.90	<50	<0.5	<0.5	<0.5	<1.0	130	--	--
9/19/2000	--		39.32	12.00	**26.00**	17.18	22.14	190	17	<0.5	1.4	2.4	160	--	--
12/21/2000	--		39.32	12.00	**26.00**	16.97	22.35	187	17.8	<0.5	2.47	2.5	143/125	--	--
3/13/2001	--		39.32	12.00	**26.00**	15.17	24.15	72.4	2.83	<0.5	<0.5	<0.5	126/122	--	--
9/18/2001	--		39.32	12.00	**26.00**	17.81	21.51	140	6.4	<0.5	3.5	1.6	110/75	--	--
12/28/2001	--		39.32	12.00	**26.00**	15.44	23.88	130	5.9	<0.5	0.99	0.55	90/63	--	--
3/14/2002	--		39.32	12.00	**26.00**	15.50	23.82	<50	<0.5	<0.5	<0.5	<0.5	100/88	--	--
4/23/2002	--		39.32	12.00	**26.00**	14.96	24.36	<50	<0.5	<0.5	<0.5	<0.5	77	--	--
7/17/2002	NP		39.32	12.00	**26.00**	17.09	22.23	<50	<0.50	<0.50	<0.50	<0.50	47	7.2	7.2
10/9/2002	NP		39.32	12.00	**26.00**	17.87	21.45	<50	<0.50	<0.50	<0.50	<0.50	26/29	7.2	7.2
1/13/2003	NP	l	39.32	12.00	**26.00**	14.78	24.54	<50	<0.50	<0.50	<0.50	<0.50	59	6.8	6.8
04/07/03	NP		39.32	12.00	**26.00**	16.15	23.17	88	<0.50	<0.50	<0.50	<0.50	75	7.0	7.0
7/9/2003	--		39.32	12.00	**26.00**	16.79	22.53	100	<0.50	<0.50	<0.50	<0.50	52	6.5	6.5
02/05/2004	NP	m	39.19	12.00	26.00	15.66	23.53	240	<0.50	<0.50	<0.50	<0.50	37	0.5	--
04/05/2004	NP		39.19	12.00	26.00	15.78	23.41	140	<0.50	<0.50	<0.50	0.60	53	1.0	6.6

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Station #2111, 1156 Davis St, San Leandro, 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.															
07/13/2004	NP		39.19	12.00	26.00	17.20	21.99	120	<0.50	<0.50	<0.50	<0.50	35	0.8	6.7
11/04/2004	NP		39.19	12.00	26.00	17.32	21.87	160	<0.50	<0.50	<0.50	<0.50	25	0.8	6.5
01/20/2005	NP		39.19	12.00	26.00	15.07	24.12	160	<0.50	<0.50	<0.50	<0.50	27	0.6	6.1
04/11/2005	NP		39.19	12.00	26.00	14.24	24.95	<50	<0.50	<0.50	<0.50	<0.50	21	0.6	6.1
08/01/2005	NP		39.19	12.00	26.00	16.29	22.90	<50	<0.50	<0.50	<0.50	<0.50	23	1.04	7.2
10/21/2005	NP		39.19	12.00	26.00	17.41	21.78	88	<0.50	<0.50	<0.50	<0.50	19	1.9	6.6
01/18/2006	NP		39.19	12.00	26.00	13.80	25.39	73	<0.50	<0.50	<0.50	<0.50	13	1.13	6.6
04/14/2006	NP		39.19	12.00	26.00	12.55	26.64	<50	<0.50	<0.50	<0.50	<0.50	6.7	0.71	6.6
7/19/2006	NP	q	39.19	12.00	26.00	15.04	24.15	<50	<0.50	<0.50	<0.50	<0.50	11	2.0	6.6
10/24/2006	P		39.19	12.00	26.00	16.45	22.74	<50	<0.50	<0.50	<0.50	<0.50	33	--	6.77
1/15/2007	P		39.19	12.00	26.00	16.00	23.19	<50	<0.50	<0.50	0.61	<0.50	29	1.11	7.03
4/18/2007	NP		39.19	12.00	26.00	15.87	23.32	<50	<0.50	<0.50	<0.50	<0.50	9.5	1.67	7.07
7/17/2007	NP		39.19	12.00	26.00	19.40	19.79	<50	<0.50	<0.50	<0.50	<0.50	19	4.25	7.27
10/11/2007	NP		39.19	12.00	26.00	17.43	21.76	<50	<0.50	<0.50	<0.50	<0.50	5.3	1.62	7.10
1/8/2008	NP		39.19	12.00	26.00	15.16	24.03	<50	<0.50	<0.50	<0.50	<0.50	8.9	2.02	6.94
4/8/2008	NP		39.19	12.00	26.00	15.75	23.44	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.98	6.80
8/20/2008	NP		39.19	12.00	26.00	17.65	21.54	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.85	7.62
11/17/2008	NP		39.19	12.00	26.00	17.76	21.43	<50	<0.50	<0.50	<0.50	<0.50	3.6	1.36	6.90
2/3/2009	**NP**		**39.19**	**12.00**	**26.00**	**17.36**	**21.83**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**2.1**	**2.55**	**7.04**
MW-4															
6/26/2000	--		38.10	10.0	**24.00**	14.59	23.51	--	--	--	--	--	--	--	--
7/20/2000	--		38.10	10.0	**24.00**	15.04	23.06	97	7.9	<0.5	<0.5	1.1	51	--	--
9/19/2000	--		38.10	10.0	**24.00**	15.83	22.27	110	7	<0.5	<0.5	<1.0	60	--	--
12/21/2000	--		38.10	10.0	**24.00**	15.59	22.51	120	5.6	<0.5	1.72	<0.5	46.3/48.6	--	--
3/13/2001	--		38.10	10.0	**24.00**	13.73	24.37	76	0.796	<0.5	<0.5	<0.5	53.7/50	--	--
9/18/2001	--		38.10	10.0	**24.00**	16.50	21.60	<50	<0.5	<0.5	<0.5	<0.5	25/26	--	--
12/28/2001	--		38.10	10.0	**24.00**	14.03	24.07	<50	<0.5	<0.5	<0.5	<0.5	15/11	--	--
3/14/2002	--		38.10	10.0	**24.00**	14.10	24.00	<50	<0.5	<0.5	<0.5	<0.5	31/28	--	--
4/23/2002	--		38.10	10.0	**24.00**	13.57	24.53	<50	2.8	<0.5	<0.5	<0.5	42	--	--
7/17/2002	NP		38.10	10.0	**24.00**	15.76	22.34	<50	<0.50	<0.50	<0.50	<0.50	16	7.1	7.1

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								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-4 Cont.															
10/9/2002	NP		38.10	10.0	**24.00**	16.59	21.51	<50	2.2	<0.50	<0.50	<0.50	20/23	7.1	7.1
1/13/2003	NP	d	38.10	10.0	**24.00**	13.43	24.67	52	<0.50	1.6	<0.50	<0.50	22	6.6	6.6
04/07/03	NP		38.10	10.0	**24.00**	14.74	23.36	65	<0.50	<0.50	<0.50	<0.50	24	6.6	6.6
7/9/2003	--		38.10	10.0	**24.00**	15.44	22.66	120	<0.50	<0.50	<0.50	<0.50	34	6.6	6.6
02/05/2004	NP	m	37.99	10.0	24.00	14.39	23.60	120	<0.50	<0.50	<0.50	<0.50	22	0.5	6.6
04/05/2004	NP		37.99	10.0	24.00	14.37	23.62	110	<0.50	<0.50	<0.50	<0.50	27	1.1	6.5
07/13/2004	NP		37.99	10.0	24.00	15.96	22.03	77	<0.50	<0.50	<0.50	<0.50	27	0.6	6.6
11/04/2004	NP		37.99	10.0	24.00	16.02	21.97	<50	<0.50	<0.50	<0.50	<0.50	19	1.2	6.7
01/20/2005	NP		37.99	10.0	24.00	13.72	24.27	65	<0.50	<0.50	<0.50	<0.50	18	0.6	6.1
04/11/2005	NP		37.99	10.0	24.00	12.80	25.19	51	<0.50	<0.50	<0.50	<0.50	14	0.7	6.2
08/01/2005	NP		37.99	10.0	24.00	14.88	23.11	<50	<0.50	<0.50	<0.50	<0.50	18	1.46	7.3
10/21/2005	NP		37.99	10.0	24.00	15.01	22.98	<50	<0.50	<0.50	<0.50	<0.50	15	1.24	7.6
01/18/2006	NP		37.99	10.0	24.00	12.92	25.07	<50	<0.50	<0.50	<0.50	<0.50	8.9	0.77	6.5
04/14/2006	NP		37.99	10.0	24.00	11.41	26.58	<50	<0.50	<0.50	<0.50	<0.50	4.2	0.84	6.6
7/19/2006	NP		37.99	10.0	24.00	13.86	24.13	<50	<0.50	<0.50	<0.50	<0.50	3.4	1.0	6.7
10/24/2006	P		37.99	10.0	24.00	15.35	22.64	<50	<0.50	<0.50	2.0	<0.50	3.5	--	6.90
1/15/2007	P		37.99	10.0	24.00	14.96	23.03	<50	<0.50	<0.50	0.96	<0.50	3.8	--	7.04
4/18/2007	NP		37.99	10.0	24.00	14.80	23.19	<50	<0.50	<0.50	<0.50	<0.50	5.6	5.33	6.93
7/17/2007	NP		37.99	10.0	24.00	16.10	21.89	<50	<0.50	<0.50	<0.50	<0.50	6.6	3.73	6.87
10/11/2007	NP		37.99	10.0	24.00	16.45	21.54	<50	<0.50	<0.50	<0.50	<0.50	0.81	2.68	7.07
1/8/2008	NP		37.99	10.0	24.00	14.10	23.89	<50	<0.50	<0.50	<0.50	<0.50	1.2	3.50	6.74
4/8/2008	NP		37.99	10.0	24.00	14.68	23.31	<50	<0.50	<0.50	<0.50	<0.50	1.7	2.54	6.80
8/20/2008	NP		37.99	10.0	24.00	16.65	21.34	<50	<0.50	<0.50	<0.50	<0.50	0.70	2.36	6.90
11/17/2008	NP		37.99	10.0	24.00	16.73	21.26	<50	<0.50	<0.50	<0.50	<0.50	0.73	1.07	6.83
2/3/2009	**NP**		**37.99**	**10.0**	**24.00**	**16.36**	**21.63**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.67**	**3.92**	**7.34**
MW-5															
6/26/2000	--		37.21	9.50	**23.50**	14.27	22.94	--	--	--	--	--	--	--	--
7/20/2000	--		37.21	9.50	**23.50**	14.69	22.52	55	<0.5	<0.5	<0.5	<1.0	14,000	--	--
9/19/2000	--		37.21	9.50	**23.50**	15.36	21.85	54	<0.5	<0.5	<0.5	<1.0	13,000	--	--
12/21/2000	--		37.21	9.50	**23.50**	15.15	22.06	72.9	2.51	<0.5	<0.5	0.961	19,200/21,200	--	--

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								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-5 Cont.															
3/13/2001	--		37.21	9.50	**23.50**	13.50	23.71	<500	<5	<5	<5	<5	15,900/20,000	--	--
9/18/2001	--		37.21	9.50	**23.50**	15.94	21.27	<10,000	<100	<100	<100	<1,000	22,000/20,000	--	--
12/28/2001	--		37.21	9.50	**23.50**	13.45	23.76	<10,000	<100	<100	<100	<100	10,000/10,000	--	--
3/14/2002	--		37.21	9.50	**23.50**	13.82	23.39	<5,000	<50	<50	<50	<50	7,100/7,700	--	--
4/23/2002	--		37.21	9.50	**23.50**	13.25	23.96	<5,000	<50	<50	<50	<50	8,900	--	--
7/17/2002	NP	d	37.21	9.50	**23.50**	15.27	21.94	7,900	<50	<50	<50	<50	13,000	7.5	7.5
10/9/2002	NP	e	37.21	9.50	**23.50**	16.02	21.19	2,400	<20	<20	<20	<20	7,300/7,500	6.7	6.7
1/13/2003	NP	e, k, j	37.21	9.50	**23.50**	13.20	24.01	6,400	<50	<50	<50	<50	8,900	6.8	6.8
04/07/03	NP		37.21	9.50	**23.50**	14.42	22.79	<10,000	<100	<100	<100	<100	3,700	6.8	6.8
7/9/2003	--		37.21	9.50	**23.50**	15.01	22.20	11,000	<50	<50	<50	<50	6,500	6.9	6.9
02/05/2004	NP	m	37.12	9.50	23.50	14.10	23.02	8,100	<50	<50	<50	<50	7,900	1.5	--
04/05/2004	NP		37.12	9.50	23.50	14.14	22.98	4,000	<25	<25	<25	<25	2,000	1.0	6.6
07/13/2004	NP		37.12	9.50	23.50	15.37	21.75	<5,000	<50	<50	<50	<50	4,000	0.8	6.7
11/04/2004	NP		37.12	9.50	23.50	15.53	21.59	7,400	<50	<50	<50	<50	6,300	3.5	6.7
01/20/2005	NP	n	37.12	9.50	23.50	13.51	23.61	6,500	<50	<50	<50	<50	6,900	0.7	6.5
04/11/2005	NP		37.12	9.50	23.50	12.75	24.37	<5,000	<50	<50	<50	<50	2,600	0.5	7.0
08/01/2005	NP		37.12	9.50	23.50	14.59	22.53	110	<1.0	<1.0	<1.0	<1.0	130	1.36	7.5
10/21/2005	NP		37.12	9.50	23.50	15.57	21.55	<250	<2.5	<2.5	<2.5	<2.5	86	1.53	6.8
01/18/2006	NP		37.12	9.50	23.50	12.60	24.52	<250	<2.5	<2.5	<2.5	<2.5	100	1.2	6.7
04/14/2006	NP		37.12	9.50	23.50	11.74	25.38	310	<2.5	<2.5	<2.5	<2.5	240	0.93	6.6
7/19/2006	NP		37.12	9.50	23.50	13.78	23.34	<50	<2.5	<2.5	<2.5	<2.5	84	1.2	6.6
10/24/2006	P		37.12	9.50	23.50	14.95	22.17	61	<0.50	<0.50	<0.50	<0.50	17	--	6.69
1/15/2007	P		37.12	9.50	23.50	14.63	22.49	73	<0.50	<0.50	<0.50	<0.50	36	2.8	6.73
4/18/2007	NP	n, EBZ present in method blank	37.12	9.50	23.50	14.50	22.62	93	<2.5	<2.5	<2.5	<2.5	16	1.66	6.84
7/17/2007	NP	n	37.12	9.50	23.50	15.55	21.57	53	<2.5	<2.5	<2.5	<2.5	6.6	5.02	7.02
10/11/2007	NP		37.12	9.50	23.50	15.83	21.29	<50	<0.50	<0.50	<0.50	<0.50	4.8	2.92	7.23
1/8/2008	NP		37.12	9.50	23.50	13.82	23.30	<50	<0.50	<0.50	<0.50	<0.50	5.6	1.80	6.91
4/8/2008	NP		37.12	9.50	23.50	14.38	22.74	<50	<0.50	<0.50	<0.50	<0.50	8.0	1.14	6.76
8/20/2008	NP		37.12	9.50	23.50	16.11	21.01	<50	<1.0	<1.0	<1.0	<1.0	3.6	1.65	6.86
11/17/2008	NP		37.12	9.50	23.50	16.15	20.97	<50	<0.50	<0.50	<0.50	<0.50	1.3	0.66	6.93
2/3/2009	**NP**		**37.12**	**9.50**	**23.50**	**15.83**	**21.29**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**2.38**	**6.77**

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

Station #2111, 1156 Davis St, San Leandro, 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-5															
MW-6															
6/26/2000	--		37.11	10.00	25.00	13.46	23.65	--	--	--	--	--	--	--	--
7/20/2000	--		37.11	10.00	25.00	13.94	23.17	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
9/19/2000	--		37.11	10.00	25.00	14.41	22.70	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
12/21/2000	--		37.11	10.00	25.00	14.53	22.58	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/13/2001	--		37.11	10.00	25.00	12.67	24.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/18/2001	--		37.11	10.00	25.00	15.42	21.69	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0	--	--
12/28/2001	--		37.11	10.00	25.00	12.96	24.15	<50	<0.5	<0.5	<0.5	<0.5	12/<0.5	--	--
3/14/2002	--		37.11	10.00	25.00	12.98	24.13	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/23/2002	--		37.11	10.00	25.00	12.44	24.67	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--
7/17/2002	NP		37.11	10.00	25.00	14.65	22.46	<50	<0.50	<0.50	<0.50	<0.50	<2.5	7.3	7.3
10/9/2002	NP		37.11	10.00	25.00	15.51	21.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	7.1	7.1
1/13/2003	NP		37.11	10.00	25.00	12.27	24.84	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.8	6.8
04/07/03	NP		37.11	10.00	25.00	13.61	23.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.6	6.6
7/9/2003	--		37.11	10.00	25.00	14.34	22.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	7	7.0
02/05/2004	--	m	37.11	10.00	25.00	13.38	23.73	--	--	--	--	--	--	--	--
04/05/2004	--		37.11	10.00	25.00	13.31	23.80	--	--	--	--	--	--	--	--
07/13/2004	NP		37.11	10.00	25.00	14.65	22.46	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.7	6.8
11/04/2004	--		37.11	10.00	25.00	14.95	22.16	--	--	--	--	--	--	--	--
01/20/2005	--		37.11	10.00	25.00	12.57	24.54	--	--	--	--	--	--	--	--
04/11/2005	--		37.11	10.00	25.00	12.05	25.06	--	--	--	--	--	--	--	--
08/01/2005	NP		37.11	10.00	25.00	13.79	23.32	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.15	7.6
10/21/2005	--		37.11	10.00	25.00	14.60	22.51	--	--	--	--	--	--	--	--
01/18/2006	--		37.11	10.00	25.00	11.80	25.31	--	--	--	--	--	--	--	--
04/14/2006	--		37.11	10.00	25.00	10.92	26.19	--	--	--	--	--	--	--	--
7/19/2006	NP		37.11	10.00	25.00	12.92	24.19	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	6.9
10/24/2006	--		37.11	10.00	25.00	14.23	22.88	--	--	--	--	--	--	--	--
1/15/2007	--		37.11	10.00	25.00	13.80	23.31	--	--	--	--	--	--	--	--
4/18/2007	--		37.11	10.00	25.00	13.67	23.44	--	--	--	--	--	--	--	--
7/17/2007	NP		37.11	10.00	25.00	14.08	23.03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.40	7.02

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

Station #2111, 1156 Davis St, San Leandro, 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-6 Cont.															
10/11/2007	--		37.11	10.00	25.00	15.28	21.83	--	--	--	--	--	--	--	--
1/8/2008	--		37.11	10.00	25.00	13.08	24.03	--	--	--	--	--	--	--	--
4/8/2008	--		37.11	10.00	25.00	13.52	23.59	--	--	--	--	--	--	--	--
8/20/2008	NP		37.11	10.00	25.00	15.59	21.52	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.66	6.83
11/17/2008	--		37.11	10.00	25.00	15.61	21.50	--	--	--	--	--	--	--	--
2/3/2009	--		**37.11**	**10.00**	**25.00**	**15.23**	**21.88**	--	--	--	--	--	--	--	--
MW-7															
6/26/2000	--		38.68	12.0	**27.00**	14.34	24.34	--	--	--	--	--	--	--	--
7/20/2000	--		38.68	12.0	**27.00**	15.26	23.42	14,000	5.4	<0.5	2.8	5.9	71,000	--	--
9/19/2000	--		38.68	12.0	**27.00**	15.70	22.98	8,400	420	38	470	220	5,600	--	--
12/21/2000	--		38.68	12.0	**27.00**	16.02	22.66	--	--	--	--	--	--	--	--
3/13/2001	--		38.68	12.0	**27.00**	14.18	24.50	<2,000	154	63	46.3	127	75,000/160,00	--	--
9/18/2001	--		38.68	12.0	**27.00**	17.02	21.66	<100,000	1,900	<1,000	<1,000	2,800	90,000/370,00	--	--
12/28/2001	--		38.68	12.0	**27.00**	14.81	23.87	<20,000	<200	<200	<200	<200	84,000/72,000	--	--
3/14/2002	--		38.68	12.0	**27.00**	14.60	24.08	<50,000	<500	<500	<500	<500	85,000/85,000	--	--
4/23/2002	--		38.68	12.0	**27.00**	13.94	24.74	<20,000	530	200	220	800	67,000	--	--
7/17/2002	NP	d	38.68	12.0	**27.00**	16.27	22.41	26,000	720	<250	<250	860	120,000	6.9	6.9
10/9/2002	NP	d	38.68	12.0	**27.00**	17.16	21.52	110,000	1,500	4,400	820	5,400	97,000/120,000	6.8	6.8
1/13/2003	NP	f	38.68	12.0	**27.00**	13.82	24.86	<50,000	<500	<500	<500	2,200	33,000	6.6	6.6
04/07/03	NP		38.68	12.0	**27.00**	14.52	24.16	<2,500	30	<25	<25	<25	710	7.0	7.0
7/9/2003	--		38.68	12.0	**27.00**	15.97	22.71	66,000	<500	<500	<500	<500	36,000	6.7	6.7
02/05/2004	NP	m	38.54	12.0	27.00	14.75	23.79	55,000	300	<250	<250	<250	34,000	1.0	6.7
04/05/2004	NP		38.54	12.0	27.00	14.63	23.91	62,000	520	<250	<250	380	37,000	1.0	6.7
07/13/2004	NP		38.54	12.0	27.00	16.31	22.23	<100,000	<1,000	<1,000	<1,000	<1,000	56,000	0.7	6.7
11/04/2004	--		38.54	12.0	27.00	16.46	22.08	70,000	<500	<500	<500	<500	71,000	2.0	6.6
01/20/2005	NP	n	38.54	12.0	27.00	14.05	24.49	34,000	<250	<250	<250	<250	36,000	0.6	6.3
04/11/2005	NP		38.54	12.0	27.00	12.55	25.99	<2,500	46	<25	<25	<25	1,200	0.7	6.8
08/01/2005	NP		38.54	12.0	27.00	15.11	23.43	<25,000	<250	<250	<250	<250	4,800	1.78	7.3
10/21/2005	NP	p	38.54	12.0	27.00	15.65	22.89	14,000	350	<100	<100	110	12,000	1.41	6.6
01/18/2006	NP		38.54	12.0	27.00	12.60	25.94	16,000	310	<100	<100	110	13,000	0.87	6.7

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

Station #2111, 1156 Davis St, San Leandro, 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-7 Cont.															
04/14/2006	NP		38.54	12.0	27.00	12.09	26.45	<10,000	<100	<100	<100	<100	4,700	0.88	6.9
7/19/2006	NP	q	38.54	12.0	27.00	13.58	24.96	1,300	23	<10	18	26	1,600	1.1	6.8
10/24/2006	P		38.54	12.0	27.00	15.13	23.41	6,800	100	<5.0	16	15	14,000	--	6.93
1/15/2007	P	n	38.54	12.0	27.00	14.43	24.11	2,500	<100	<100	<100	<100	3,900	2.12	7.44
4/18/2007	NP	n	38.54	12.0	27.00	14.30	24.24	3,000	50	<50	<50	<50	2,700	4.47	7.22
7/17/2007	NP	n	38.54	12.0	27.00	23.75	14.79	560	<25	<25	<25	<25	890	4.23	7.41
10/11/2007	NP	t (GRO)	38.54	12.0	27.00	16.18	22.36	210	<2.5	<2.5	<2.5	<2.5	370	2.99	7.33
1/8/2008	NP	n	38.54	12.0	27.00	13.90	24.64	5,100	45	<25	<25	<25	6,100	2.50	7.23
4/8/2008	NP		38.54	12.0	27.00	14.22	24.32	270	0.50	<0.50	1.2	0.66	1,200	1.67	7.17
8/20/2008	NP		38.54	12.0	27.00	16.57	21.97	<50	<0.50	<0.50	<0.50	<0.50	39	2.12	7.04
11/17/2008	NP		38.54	12.0	27.00	22.91	15.63	68	1.8	1.9	0.54	2.0	28	1.14	6.95
2/3/2009	**NP**		**38.54**	**12.0**	**27.00**	**17.86**	**20.68**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**18**	**2.58**	**6.97**
MW-8															
02/05/2004	P	m	38.91	--	--	15.61	23.30	3,600	<25	<25	<25	<25	1,900	6.9	6.8
04/05/2004	P		38.91	--	--	15.64	23.27	1,900	<10	<10	<10	<10	1,200	3.2	6.7
07/13/2004	P		38.91	--	--	17.22	21.69	<1,000	<10	<10	<10	<10	760	1.6	6.7
11/04/2004	P		38.91	--	--	17.19	21.72	960	<5.0	<5.0	<5.0	<5.0	820	1.8	6.7
01/20/2005	P		38.91	--	--	15.25	23.66	<2,500	<25	<25	<25	<25	1,400	1.5	6.4
04/11/2005	P		38.91	--	--	14.17	24.74	700	<5.0	<5.0	<5.0	<5.0	610	1.1	7.1
08/01/2005	P		38.91	--	--	16.10	22.81	<1,000	<10	<10	<10	<10	900	2.58	7.7
10/21/2005	P	n	38.91	--	--	17.18	21.73	530	<5.0	<5.0	<5.0	<5.0	490	1.4	6.7
01/18/2006	P		38.91	--	--	13.60	25.31	<500	<5.0	<5.0	<5.0	<5.0	500	2.28	6.6
04/14/2006	P		38.91	--	--	12.36	26.55	<500	<5.0	<5.0	<5.0	<5.0	300	1.97	6.6
7/19/2006	P		38.91	--	--	14.75	24.16	4,500	<25	<25	<25	<25	4,200	1.2	6.6
10/24/2006	--	s	--	--	--	--	--	--	--	--	--	--	--	--	--
1/15/2007	P		38.91	--	--	15.67	23.24	<50	<0.50	<0.50	<0.50	<0.50	67	1.35	6.68
4/18/2007	P	n	38.91	--	--	15.53	23.38	100	0.51	<0.50	<0.50	<0.50	130	1.49	6.86
7/17/2007	NP	n	38.91	--	--	16.76	22.15	63	<0.50	<0.50	<0.50	<0.50	96	1.85	6.97
10/11/2007	P		38.91	--	--	16.99	21.92	100	0.52	<0.50	<0.50	<0.50	130	1.67	7.18
1/8/2008	P	n	38.91	--	--	14.83	24.08	51	<0.50	<0.50	<0.50	<0.50	49	1.30	6.88

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

Station #2111, 1156 Davis St, San Leandro, 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-8 Cont.															
4/8/2008	P		38.91	--	--	15.38	23.53	<50	<0.50	<0.50	<0.50	<0.50	32	1.60	6.77
8/20/2008	P		38.91	--	--	17.80	21.11	<50	<0.50	<0.50	<0.50	<0.50	13	1.18	6.94
11/17/2008	P		38.91	--	--	17.47	21.44	<50	<0.50	<0.50	<0.50	<0.50	14	3.74	6.63
2/3/2009	**P**		**38.91**	--	--	**16.96**	**21.95**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**16**	**0.83**	**6.9**

ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
ft bgs = feet below ground surface
ft MSL = feet above mean sea level
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 elevation in ft MSL
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter

FOOTNOTES:
a = Product sheen noted.
b = Well was sampled after batch extraction event.
c = Chromatogram Pattern: Gasoline C6-C10 for GRO/TPH-g.
d = Hydrocarbon pattern was present in the requested fuel quantitation range but did not resemble the pattern of the requested fuel for GRO/TPH-g.
e = Discrete peak @C6-C7 for GRO/TPH-g.
f = This sample was analyzed beyond the EPA recommended holding time for TPH-g, benzene, toluene, ethylbenzene, and total xylenes (BTEX), and MTBE. The results may still be useful for their intended purpose.
g = Well not sampled due to the detection of free product (FP).
h = GWE adjusted for FP: (thickness of FP x 0.8) + measured GWE.
j = The closing calibration for benzene and total xylenes was outside acceptance limits by 1%. This should be considered in evaluating the result. The average % difference for all analytes met the 15% requirement and the QC suggested that calibration linearity was not a factor.
k = The closing calibration was outside acceptance limits by 6%. This should be considered in evaluating the result. The average % difference for all analytes met the 15% requirement and the QC suggested that calibration linearity was not a factor.
l = Toluene and MTBE were not confirmed using a secondary column in accordance to client contract.
m = TOC elevations re-surveyed to NAVD '88 on February 23, 2004.
n = Hydrocarbon result for GRO partly due to indiv. peak(s) in quantitative range.
o = Light to moderate sheen.
p = Result for MTBE partly due to individual peak(s) in quant. range.
q = Gauged with tubing in well.
r = Calib. verif. is within method limits but outside contract limits.
s = Well inaccessible.
t = Initial analysis within holding time but required dilution.

NOTES:
Beginning with the second quarter 2003 sampling event (04/07/03), TPH-g, BTEX, and MTBE analyzed by EPA method 8260B. Prior to 04/07/03, TPH-g was analyzed by EPA method 8015 modified and MTBE was analyzed by EPA methods 8020/ 8260B.

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 #2111, 1156 Davis St, San Leandro, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
4/7/2003	<100	<20	1,100	<0.50	<0.50	<0.50	--	--	
7/9/2003	<5,000	<1,000	690	<25	<25	<25	--	--	
02/05/2004	<5,000	<1,000	1,100	<25	<25	32	<25	<25	
04/05/2004	<5,000	<1,000	1,700	<25	<25	38	<25	<25	a
07/13/2004	<2,000	780	730	<10	<10	19	<10	<10	a
11/04/2004	<1,000	<200	380	<5.0	<5.0	12	<5.0	<5.0	
01/20/2005	<1,000	<200	570	<5.0	<5.0	17	<5.0	<5.0	a
04/11/2005	<5,000	<1,000	1,100	<25	<25	34	<25	<25	
08/01/2005	<2,000	<400	1,400	<10	<10	40	<10	<10	
10/21/2005	<5,000	<1,000	970	<25	<25	<25	<25	<25	
01/18/2006	<1,500	<100	330	<2.5	<2.5	9.7	<2.5	<2.5	
04/14/2006	<1,500	<100	310	<2.5	<2.5	9.3	<2.5	<2.5	
7/19/2006	<1,500	<100	180	<2.5	<2.5	3.2	<2.5	<2.5	
10/24/2006	<1,500	<100	360	<2.5	<2.5	10	<2.5	<2.5	
1/15/2007	<1,500	<100	220	<2.5	<2.5	6.8	<2.5	<2.5	
4/18/2007	<1,500	<100	150	<2.5	<2.5	<2.5	<2.5	<2.5	
7/17/2007	<600	<40	94	<1.0	<1.0	2.3	<1.0	<1.0	
10/11/2007	<300	<20	62	<0.50	<0.50	<0.50	<0.50	<0.50	
1/8/2008	<300	74	90	<0.50	<0.50	2.5	<0.50	<0.50	a
4/8/2008	<300	57	110	<0.50	<0.50	2.6	<0.50	<0.50	
8/20/2008	<300	<10	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	
11/17/2008	<300	<10	21	<0.50	<0.50	0.52	<0.50	<0.50	
2/3/2009	**<300**	**<10**	**16**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-2									
04/05/2004	<1,000	<200	750	<5.0	<5.0	<5.0	<5.0	<5.0	
07/13/2004	<10,000	12,000	5,800	<50	<50	<50	<50	<50	a
08/31/2004	--	--	--	--	--	--	--	--	a
01/20/2005	<10,000	<2,000	7,000	<50	<50	<50	<50	<50	a
04/11/2005	<10,000	<2,000	2,700	<50	<50	<50	<50	<50	
08/01/2005	<10,000	<2,000	2,700	<50	<50	<50	<50	<50	
01/18/2006	<30,000	<2,000	1,600	<50	<50	<50	<50	<50	

Table 2. Summary of Fuel Additives Analytical Data

Station #2111, 1156 Davis St, San Leandro, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-2 Cont.									
04/14/2006	<30,000	<2,000	2,100	<50	<50	<50	<50	<50	
7/19/2006	<6,000	<400	930	<10	<10	<10	<10	<10	
1/15/2007	<6,000	1,900	1,400	<10	<10	<10	<10	<10	
4/18/2007	<6,000	1,200	1,100	<10	<10	<10	<10	<10	
7/17/2007	<6,000	1,000	1,300	<10	<10	<10	<10	<10	
10/11/2007	<6,000	1,300	1,000	<10	<10	<10	<10	<10	
1/8/2008	<6,000	2,600	1,300	<10	<10	<10	<10	<10	a
4/8/2008	<300	970	690	<0.50	<0.50	3.3	<0.50	<0.50	
8/20/2008	<6,000	470	190	<10	<10	<10	<10	<10	
11/17/2008	<3,000	740	89	<5.0	<5.0	<5.0	<5.0	<5.0	
2/3/2009	**<1,500**	**230**	**31**	**<2.5**	**<2.5**	**<2.5**	**<2.5**	**<2.5**	
MW-3									
4/7/2003	<100	<20	75	<0.50	<0.50	6.5	--	--	
7/9/2003	<100	<20	52	<0.50	<0.50	4.2	--	--	
02/05/2004	<100	<20	37	<0.50	<0.50	3.1	<0.50	<0.50	
04/05/2004	<100	<20	53	<0.50	<0.50	3.7	<0.50	<0.50	a
07/13/2004	<100	44	35	<0.50	<0.50	3.2	<0.50	<0.50	
11/04/2004	<100	<20	25	<0.50	<0.50	2.2	<0.50	<0.50	
01/20/2005	<100	<20	27	<0.50	<0.50	2.6	<0.50	<0.50	
04/11/2005	<100	<20	21	<0.50	<0.50	2.0	<0.50	<0.50	
08/01/2005	<100	<20	23	<0.50	<0.50	1.9	<0.50	<0.50	
10/21/2005	<100	<20	19	<0.50	<0.50	2.0	<0.50	<0.50	
01/18/2006	<300	<20	13	<0.50	<0.50	1.3	<0.50	<0.50	
04/14/2006	<300	<20	6.7	<0.50	<0.50	0.61	<0.50	<0.50	
7/19/2006	<300	<20	11	<0.50	<0.50	0.72	<0.50	<0.50	r
10/24/2006	<300	<20	33	<0.50	<0.50	2.8	<0.50	<0.50	
1/15/2007	<300	<20	29	<0.50	<0.50	2.9	<0.50	<0.50	
4/18/2007	<300	<20	9.5	<0.50	<0.50	0.90	<0.50	<0.50	
7/17/2007	<300	<20	19	<0.50	<0.50	1.5	<0.50	<0.50	
10/11/2007	<300	<20	5.3	<0.50	<0.50	<0.50	<0.50	<0.50	
1/8/2008	<300	<20	8.9	<0.50	<0.50	0.84	<0.50	<0.50	a

Table 2. Summary of Fuel Additives Analytical Data

Station #2111, 1156 Davis St, San Leandro, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-3 Cont.									
4/8/2008	<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	
11/17/2008	<300	<10	3.6	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	**<300**	**<10**	**2.1**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-4									
4/7/2003	<100	<20	24	<0.50	<0.50	7.3	--	--	
7/9/2003	<100	<20	34	<0.50	<0.50	9.8	--	--	
02/05/2004	<100	<20	22	<0.50	<0.50	6.2	<0.50	<0.50	
04/05/2004	<100	<20	27	<0.50	<0.50	7.2	<0.50	<0.50	a
07/13/2004	<100	26	27	<0.50	<0.50	7.4	<0.50	<0.50	a
11/04/2004	<100	<20	19	<0.50	<0.50	5.1	<0.50	<0.50	
01/20/2005	<100	<20	18	<0.50	<0.50	5.2	<0.50	<0.50	
04/11/2005	<100	<20	14	<0.50	<0.50	4.0	<0.50	<0.50	
08/01/2005	<100	<20	18	<0.50	<0.50	3.9	<0.50	<0.50	
10/21/2005	<100	<20	15	<0.50	<0.50	4.6	<0.50	<0.50	
01/18/2006	<300	<20	8.9	<0.50	<0.50	2.5	<0.50	<0.50	
04/14/2006	<300	<20	4.2	<0.50	<0.50	1.3	<0.50	<0.50	
7/19/2006	<300	<20	3.4	<0.50	<0.50	0.69	<0.50	<0.50	r
10/24/2006	<300	<20	3.5	<0.50	<0.50	0.91	<0.50	<0.50	
1/15/2007	<300	<20	3.8	<0.50	<0.50	0.98	<0.50	<0.50	
4/18/2007	<300	<20	5.6	<0.50	<0.50	1.1	<0.50	<0.50	
7/17/2007	<300	<20	6.6	<0.50	<0.50	1.7	<0.50	<0.50	
10/11/2007	<300	<20	0.81	<0.50	<0.50	<0.50	<0.50	<0.50	
1/8/2008	<300	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	a
4/8/2008	<300	<10	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	<10	0.70	<0.50	<0.50	<0.50	<0.50	<0.50	
11/17/2008	<300	<10	0.73	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	**<300**	**<10**	**0.67**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-5									
4/7/2003	<20,000	<4,000	3,700	<100	<100	<100	--	--	

Table 2. Summary of Fuel Additives Analytical Data

Station #2111, 1156 Davis St, San Leandro, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-5 Cont.									
7/9/2003	<10,000	<2,000	6,500	<50	<50	<50	--	--	
02/05/2004	<10,000	<2,000	7,900	<50	<50	<50	<50	<50	a
04/05/2004	<5,000	<1,000	2,000	<25	<25	<25	<25	<25	a
07/13/2004	<10,000	3,200	4,000	<50	<50	<50	<50	<50	a
11/04/2004	<10,000	<2,000	6,300	<50	<50	<50	<50	<50	
01/20/2005	<10,000	<2,000	6,900	<50	<50	<50	<50	<50	a
04/11/2005	<10,000	3,600	2,600	<50	<50	<50	<50	<50	
08/01/2005	<200	1,600	130	<1.0	<1.0	<1.0	<1.0	<1.0	
10/21/2005	<500	1,400	86	<2.5	<2.5	<2.5	<2.5	<2.5	
01/18/2006	<1,500	2,200	100	<2.5	<2.5	<2.5	<2.5	<2.5	
04/14/2006	<1,500	2,100	240	<2.5	<2.5	<2.5	<2.5	<2.5	
7/19/2006	<1,500	2,800	84	<2.5	<2.5	<2.5	<2.5	<2.5	r
10/24/2006	<300	1,200	17	<0.50	<0.50	<0.50	<0.50	<0.50	a
1/15/2007	<300	990	36	<0.50	<0.50	<0.50	<0.50	<0.50	
4/18/2007	<1,500	2,000	16	<2.5	<2.5	<2.5	<2.5	<2.5	
7/17/2007	<1,500	1,100	6.6	<2.5	<2.5	<2.5	<2.5	<2.5	
10/11/2007	<300	750	4.8	<0.50	<0.50	<0.50	<0.50	<0.50	
1/8/2008	<300	220	5.6	<0.50	<0.50	<0.50	<0.50	<0.50	a
4/8/2008	<300	300	8.0	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<600	520	3.6	<1.0	<1.0	<1.0	<1.0	<1.0	
11/17/2008	<300	160	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	**<300**	**94**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-6									
4/7/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
7/9/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
07/13/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
08/01/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/19/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	r
7/17/2007	<300	<20	<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	

Table 2. Summary of Fuel Additives Analytical Data

Station #2111, 1156 Davis St, San Leandro, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-7									
4/7/2003	<5,000	<1,000	710	<25	<25	<25	--	--	
7/9/2003	<100,000	<20,000	36,000	<500	<500	<500	--	--	
02/05/2004	<50,000	<10,000	34,000	<250	<250	<250	<250	<250	
04/05/2004	<50,000	<10,000	37,000	<250	<250	<250	<250	<250	
07/13/2004	<200,000	<40,000	56,000	<1,000	<1,000	1,300	<1,000	<1,000	
11/04/2004	<100,000	<20,000	71,000	<500	<500	<500	<500	<500	
01/20/2005	<50,000	<10,000	36,000	<250	<250	<250	<250	<250	a
04/11/2005	<5,000	<1,000	1,200	<25	<25	<25	<25	<25	
08/01/2005	<50,000	<10,000	4,800	<250	<250	<250	<250	<250	
10/21/2005	<20,000	24,000	12,000	<100	<100	<100	<100	<100	
01/18/2006	<60,000	15,000	13,000	<100	<100	<100	<100	<100	
04/14/2006	<60,000	<4,000	4,700	<100	<100	<100	<100	<100	
7/19/2006	<6,000	720	1,600	<10	<10	<10	<10	<10	
10/24/2006	<3,000	10,000	14,000	<5.0	<5.0	31	<5.0	<5.0	a
1/15/2007	<60,000	9,300	3,900	<100	<100	<100	<100	<100	
4/18/2007	<30,000	<2,000	2,700	<50	<50	<50	<50	<50	
7/17/2007	<15,000	<1,000	890	<25	<25	<25	<25	<25	
10/11/2007	<1,500	150	370	<2.5	<2.5	<2.5	<2.5	<2.5	
1/8/2008	<15,000	1,400	6,100	<25	<25	32	<25	<25	
4/8/2008	<300	700	1,200	<0.50	<0.50	5.1	<0.50	<0.50	
8/20/2008	<300	34	39	<0.50	<0.50	<0.50	<0.50	<0.50	
11/17/2008	<300	44	28	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	**<300**	**66**	**18**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-8									
02/05/2004	<5,000	<1,000	1,900	<25	<25	<25	<25	<25	
04/05/2004	<2,000	<400	1,200	<10	<10	12	<10	<10	a
07/13/2004	<2,000	770	760	<10	<10	<10	<10	<10	a
11/04/2004	<1,000	<200	820	<5.0	<5.0	9.6	<5.0	<5.0	
01/20/2005	<5,000	<1,000	1,400	<25	<25	<25	<25	<25	a
04/11/2005	<1,000	<200	610	<5.0	<5.0	8.1	<5.0	<5.0	
08/01/2005	<2,000	<400	900	<10	<10	<10	<10	<10	

Table 2. Summary of Fuel Additives Analytical Data

Station #2111, 1156 Davis St, San Leandro, CA

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-8 Cont.									
10/21/2005	<1,000	<200	490	<5.0	<5.0	<5.0	<5.0	<5.0	
01/18/2006	<3,000	<200	500	<5.0	<5.0	5.2	<5.0	<5.0	
04/14/2006	<3,000	<200	300	<5.0	<5.0	<5.0	<5.0	<5.0	
7/19/2006	<15,000	<1,000	4,200	<25	<25	45	<25	<25	
1/15/2007	<300	52	67	<0.50	<0.50	0.88	<0.50	<0.50	
4/18/2007	<300	120	130	<0.50	<0.50	1.9	<0.50	<0.50	
7/17/2007	<300	110	96	<0.50	<0.50	1.2	<0.50	<0.50	
10/11/2007	<300	350	130	<0.50	<0.50	1.7	<0.50	<0.50	
1/8/2008	<300	59	49	<0.50	<0.50	0.80	<0.50	<0.50	
4/8/2008	<300	110	32	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	62	13	<0.50	<0.50	<0.50	<0.50	<0.50	
11/17/2008	<300	24	14	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	**<300**	**17**	**16**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = 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 = The continuing calibration verification for ethanol was outside of client contractual acceptance limits. However, it was within method acceptance limits. The data should still be considered useful for its intended purpose.

NOTES:
All volatile organic compounds 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 #2111, 1156 Davis St, San Leandro, CA

Date Sampled	Approximate Flow Direction	Approximate Hydraulic Gradient
7/20/2000	West-Northwest	0.006
9/19/2000	West-Northwest	0.004
12/21/2000	West-Northwest	0.004
3/13/2001	West-Northwest	0.005
5/30/2001	West-Northwest	0.004
9/18/2001	West-Northwest	0.003
12/28/2001	West-Northwest	0.003
3/14/2002	West	0.004
4/23/2002	West	0.006
7/17/2002	West	0.003
10/9/2002	West	0.002
1/13/2003	Southwest	0.0043
4/7/2003	West-Northwest	0.009 to 0.011
7/9/2003	West-Northwest	0.004
10/1/2003	West	0.002
2/5/2004	West	0.004
4/5/2004	West-Southwest	0.004
7/13/2004	West-Southwest	0.003
11/4/2004	West	0.003
1/20/2005	West	0.009
4/11/2005	North to West	0.009 to 0.01
8/1/2005	West to Northwest	0.006 to 0.004
10/21/2005	West	0.008
1/18/2006	North and West	0.01
4/14/2006	South	0.008
7/19/2006	Northwest to Southwest	0.004 to 0.008
10/24/2006	West	0.003
1/15/2007	Southwest	0.004
4/18/2007	West	0.009
7/17/2007	Southeast	0.05
10/11/2007	West	0.01
1/8/2008	West	0.008
4/8/2008	West	0.006
8/20/2008	West	0.006
11/17/2008	South-Southeast	0.05
2/3/2009	**South-Southeast**	**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.

Table 4. Approximate Cumulative Floating Product Recovered
Station #2111, 1156 Davis Street, San Leandro, CA

Well Designation	Product Recovery Field Date	Floating Product Thickness (feet)	Floating Product Recovered (gallons)
MW-2	06/28/99	0.45	0.30
MW-2	06/30/99	0.015	0.01
MW-2	07/07/99	0.06	0.04
MW-2	07/23/99	0.008	0.01
MW-2	08/25/99	0.02	0.01
MW-2	09/21/99	0.01	0.01
MW-2	11/10/99	ND	0.00
MW-2	02/09/00	ND	0.00
MW-2	04/23/02	ND	0.00
MW-2	07/17/02	Sheen	0.00
MW-2	10/9/2002 (1)	NA	0.00
MW-2	01/13/03	0.26	0.13
MW-2	02/14/03	ND	0.00
MW-2	03/24/03	ND	0.00
MW-2	04/07/03	0.05	0.00
MW-2	05/23/03	ND	0.00
MW-2	06/24/03	0.03	0.01
MW-2	07/09/03	0.07	0.03
MW-2	07/31/03	0.05	0.03
MW-2	09/04/03	0.02	0.01
MW-2	10/01/03	0.07	0.02
MW-2	11/12/03	0.59	0.36
MW-2	12/11/03	0.05	0.07
MW-2	02/05/04	0.13	0.02
MW-2	02/16/04	0.02	0.01
MW-2	03/11/04	ND	0.00
MW-2	03/30/04	ND	0.00
MW-2	04/05/04	ND	0.00
MW-2	07/13/04	ND	0.00
MW-2	08/31/04	ND	0.00
MW-2	09/07/04	ND	0.00
MW-2	11/04/04	0.22	0.14
MW-2	11/29/04	0.02	0.05
MW-2	12/15/04	0.24	0.16
MW-2	01/20/05	ND	0.00
MW-2	02/04/05	Sheen	0.00
MW-2	03/23/05	Sheen	0.00
MW-2	04/11/05	ND	0.00
MW-2	05/12/05	ND	0.00
MW-2	06/20/05	ND	0.00
MW-2	08/01/05	ND	0.00
MW-2	08/24/05	ND	0.00
MW-2	09/16/05	ND	0.00
MW-2	10/21/05	Sheen	0.00
MW-2	01/18/06	Sheen	0.00
MW-2	04/14/06	Sheen	0.00
MW-2	07/19/06	ND	0.00
MW-2	10/24/06 (1)	NA	0.00
MW-2	01/15/07	ND	0.00
MW-2	04/18/07	ND	0.00
MW-2	07/17/07	ND	0.00
MW-2	10/11/07	ND	0.00
MW-2	01/08/08	ND	0.00
MW-2	04/24/08	ND	0.00
MW-2	08/20/08	ND	0.00
MW-2	11/17/08	ND	0.00
MW-2	**02/03/09**	**ND**	**0.00**
Approximate Cumulative Floating Product Recovered (gallons):			**1.44**

FOOTNOTES:
(1) Free product encountered, but unable to gauge.
ND Non-detect
NA Not applicable

Table 5
Soil Vapor Extraction System and Ground-Water Extraction System
Monthly Discharge Analytical Results Summary
ARCO Service Station No. 2111
1156 Davis Street, San Leandro, California

Date Sampled	Sampling Port	Matrix	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	MtBE
	SVE-Influent	Air (mg/m^3)	77	<0.5	<0.5	<0.5	<0.5	---	---	9.4
	SVE A/S-Effluent	Air (mg/m^3)	<10	0.19	<0.10	0.10	<0.20	---	---	5.1
	SVE-Effluent	Air (mg/m^3)	<10	<0.10	<0.10	<0.10	<0.20	---	---	<0.50
1/29/2007										
	GWE-Influent	Water (µg/L)	2,000	35	<12	23	14	<12	1,800	1,300
	GWE A/S-Effluent	Water (µg/L)	92	<0.50	<0.50	<0.50	<0.50	<0.50	1,900	150
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	400	10[2]	<0.50	4.7	2.9[2]	---	---	21
	SVE A/S-Effluent	Air (mg/m^3)	<10	<0.10	<0.10	<0.10	<0.20	---	---	<0.50
	SVE-Effluent	Air (mg/m^3)	<10	<0.10	<0.10	<0.10	<0.20	---	---	<0.50
2/5/2007										
	GWE-Influent	Water (µg/L)	1,400[1]	25	<5.0	15	7.9	7.5	1,700	1,600
	GWE A/S-Effluent	Water (µg/L)	320[1]	<0.50	<0.50	<0.50	<0.50	0.65	1,600	170
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	100	2.3[2]	<0.50	1.2	1.6	---	---	26
	SVE A/S-Effluent	Air (mg/m^3)	11	0.10	<0.10	0.13	<0.20	---	---	10
	SVE-Effluent	Air (mg/m^3)	<10	0.17	<0.10	0.28	<0.20	---	---	<0.50
3/5/2007										
	GWE-Influent	Water (µg/L)	1,500[1]	20	<5.0	16	15	5.6	1,600	1,600
	GWE A/S-Effluent	Water (µg/L)	220[1]	<0.50	<0.50	<0.50	<0.50	<0.50	1,600	200
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	190	4.3[2]	<0.50	1.1	2.5	---	---	30
	SVE A/S-Effluent	Air (mg/m^3)	<10	<0.10	<0.10	<0.10	<0.20	---	---	5.2
	SVE-Effluent	Air (mg/m^3)	<10	<0.10	<0.10	<0.10	<0.20	---	---	<0.50
4/2/2007										
	GWE-Influent[4]	Water (µg/L)	850	<5.0	<5.0	<5.0	8.5	5.7	870	1,100
	GWE A/S-Effluent	Water (µg/L)	94[1]	<5.0	<5.0	<5.0	<5.0	<5.0	710	120
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	160	<0.50	<0.50	<0.50	0.97	---	---	18
	SVE A/S-Effluent	Air (mg/m^3)	<50	<0.50	<0.50	<0.50	<0.50	---	---	11
	SVE-Effluent	Air (mg/m^3)	<50	<0.50	<0.50	<0.50	<0.50	---	---	<0.50
5/1/2007										
	GWE-Influent[4]	Water (µg/L)	760	<5.0	<5.0	<5.0	<5.0	5.0	680	880
	GWE A/S-Effluent	Water (µg/L)	76[1]	<0.50	<0.50	<0.50	<0.50	<0.50	640	66
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	330	0.56	0.89	1.8	2.6	---	---	14
	SVE A/S-Effluent	Air (mg/m^3)	<50	<0.50	0.67	<0.50	1.3	---	---	3.7
	SVE-Effluent	Air (mg/m^3)	<50	<0.50	<0.50	<0.50	<0.50	---	---	<0.50
6/4/2007										
	GWE-Influent[4]	Water (µg/L)	430	<5.0	<5.0	8.5	6.7	<5.0	340	560
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	290	17
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	180	<0.50	<0.50	<0.50	<1.0	---	---	11
	SVE A/S-Effluent	Air (mg/m^3)	<10	<0.10	<0.10	<0.10	<0.20	---	---	0.87
	SVE-Effluent	Air (mg/m^3)	<10	<0.10	<0.10	<0.10	<0.20	---	---	<0.50
7/2/2007										
	GWE-Influent[4]	Water (µg/L)	320	<5.0	<5.0	<5.0	<5.0	<5.0	<200	430
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	84	35
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	660	<1.0	<1.0	1.2	2.2	---	---	11
	SVE A/S-Effluent	Air (mg/m^3)	11	0.25	<0.10	0.21	0.22	---	---	11
	SVE-Effluent	Air (mg/m^3)	<10	<0.10	<0.10	<0.10	<0.20	---	---	<0.50
8/1/2007										
	GWE-Influent[4]	Water (µg/L)	440	9.4	<5.0	<5.0	<5.0	<5.0	590	450
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	28	6.8
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	1,200	0.79	<0.50	1.5	3.8	---	---	14
	SVE A/S-Effluent	Air (mg/m^3)	<50	<0.50	<0.50	<0.50	<0.50	---	---	5.1
	SVE-Effluent	Air (mg/m^3)	<50	<0.50	<0.50	<0.50	<0.50	---	---	<0.50
9/5/2007										
	GWE-Influent[4]	Water (µg/L)	410	9.5	<5.0	6.3	9.9	<5.0	960	570
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	830	37
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	1,300	1.2	<0.50	2.6	5.2	---	---	14
	SVE A/S-Effluent	Air (mg/m^3)	<10	<0.50	<0.50	<0.50	<0.50	---	---	2.6
	SVE-Effluent	Air (mg/m^3)	<10	<0.50	<0.50	<0.50	<0.50	---	---	2.2
10/1/2007										
	GWE-Influent[4]	Water (µg/L)	500	6.9	<5.0	9.1	20	<5.0	940	540
	GWE A/S-Effluent	Water (µg/L)	60	<0.50	<0.50	<0.50	<0.50	<0.50	970	71
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50

Table 5
Soil Vapor Extraction System and Ground-Water Extraction System
Monthly Discharge Analytical Results Summary
ARCO Service Station No. 2111
1156 Davis Street, San Leandro, California

Date Sampled	Sampling Port	Matrix	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	MtBE
	SVE-Influent	Air (mg/m^3)	1,000	2.0	<0.50	4.0	5.3	---	---	23
	SVE A/S-Effluent	Air (mg/m^3)	13	<0.50	<0.50	<0.50	<0.50	---	---	15
	SVE-Effluent	Air (mg/m^3)	<10	<0.50	<0.50	<0.50	<0.50	---	---	<0.50
11/6/2007										
	GWE-Influent[a]	Water (µg/L)	1,100	20	<5.0	20	24	6.9	1,300	920
	GWE A/S-Effluent	Water (µg/L)	120	<0.50	<0.50	<0.50	<0.50	<0.50	1,100	93
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	830	<0.50	<0.50	1.0	1.2	---	---	2.5
	SVE A/S-Effluent	Air (mg/m^3)	<10	<0.50	<0.50	<0.50	<0.50	---	---	<0.50
	SVE-Effluent	Air (mg/m^3)	<10	<0.50	<0.50	<0.50	<0.50	---	---	<0.50
12/5/2007										
	GWE-Influent[a]	Water (µg/L)	80	0.69	<0.50	1.0	1.1	<0.50	21	74
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	0.61	<20	2.7
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	410	2.2	1.5	2.9	3.9	---	---	44
	SVE A/S-Effluent	Air (mg/m^3)	<50	<0.50	<0.50	<0.50	<0.50	---	---	14
	SVE-Effluent	Air (mg/m^3)	<50	<0.50	<0.50	<0.50	<0.50	---	---	<0.50
1/7/2008										
	GWE-Influent	Water (µg/L)	830[1]	12	3.2	7.8	8.5	6.8	1,900	1,300
	GWE A/S-Effluent	Water (µg/L)	83	<0.50	<0.50	<0.50	<0.50	0.60	590	110
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
	SVE-Influent	Air (mg/m^3)	<50	0.17	0.017	0.12	0.046	---	---	3.1
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.32	0.024	0.20	0.10	---	---	5.1
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0032	<0.0022	<0.0043	---	---	0.098
2/5/2008										
	GWE-Influent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	18	98
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	3.7
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	62	0.81	0.033	0.33	0.10	---	---	26
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.0024	0.024	0.0025	0.0055	---	---	0.27
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.026	<0.0022	<0.0043	---	---	0.13
3/5/2008										
	GWE-Influent	Water (µg/L)	860	40	<0.50	39	12	5.0	1,800	880
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1,500	19
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	620	1.6	0.037	1.3	0.61	---	---	21
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.098	0.021	0.13	0.10	---	---	9.7
	SVE-Effluent	Air (mg/m^3)	<50	0.0089	0.033	0.0052	0.024	---	---	0.014
4/1/2008										
	GWE-Influent	Water (µg/L)	410	16	<2.5	12	7.7	5.1	2,300	860
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1,700	38
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	920	0.99	1.7	2.1	0.82	---	---	27
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.0046	0.0072	0.0032	0.0054	---	---	5.1
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0023	<0.0022	<0.0043	---	---	16
5/6/2008										
	GWE-Influent	Water (µg/L)	500	<20	<20	<20	<20	<20	3,800	2,000
	GWE A/S-Effluent	Water (µg/L)	<50	<10	<10	<10	<10	<10	1,200	85
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	230	0.13	<0.019	0.13	0.11	---	---	10
	SVE A/S-Effluent	Air (mg/m^3)	<50	<0.0016	0.015	<0.0022	<0.0043	---	---	0.88
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	<0.0019	<0.0022	<0.0043	---	---	1.4
6/2/2008										
	GWE-Influent	Water (µg/L)	87	<5.0	<5.0	<5.0	<5.0	<5.0	310	340
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	250	19
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	1,200	1.5	20	5.8	36	---	---	9.3
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.0051	0.046	0.0081	0.081	---	---	0.86
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0047	<0.0022	<0.0043	---	---	0.39
7/1/2008										
	GWE-Influent	Water (µg/L)	660	9.2	85	14	210	<5.0	410	400
	GWE A/S-Effluent	Water (µg/L)	<50	<1.0	<1.0	<1.0	<1.0	<1.0	400	23
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	1100	0.62	0.40	1.9	3.5	---	---	10
	SVE A/S-Effluent	Air (mg/m^3)	<50	<0.0016	0.0096	<0.0022	<0.0043	---	---	0.40
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0071	<0.0022	<0.0043	---	---	<0.0072
8/5/2008										
	GWE-Influent	Water (µg/L)	80	<5.0	<5.0	<5.0	10	<5.0	930	370
	GWE A/S-Effluent	Water (µg/L)	<50	<1.0	<1.0	<1.0	<1.0	<1.0	550	12
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50

Table 5
Soil Vapor Extraction System and Ground-Water Extraction System
Monthly Discharge Analytical Results Summary
ARCO Service Station No. 2111
1156 Davis Street, San Leandro, California

Date Sampled	Sampling Port	Matrix	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	MtBE
	SVE-Influent	Air (mg/m^3)	1,300	0.67	0.31	1.9	4.0	---	---	13
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.0043	0.014	0.0042	0.015	---	---	1.1
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0065	<0.0022	<0.0087	---	---	<0.0072
9/2/2008										
	GWE-Influent	Water (µg/L)	77	<5.0	<5.0	<5.0	8.6	<5.0	1,100	380
	GWE A/S-Effluent	Water (µg/L)	<50	<1.0	<1.0	<1.0	<1.0	<1.0	450	16
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	---	---	---	---	---	---	---	---
	SVE A/S-Effluent	Air (mg/m^3)	---	---	---	---	---	---	---	---
	SVE-Effluent	Air (mg/m^3)	---	---	---	---	---	---	---	---
10/1/2008[5]										
	GWE-Influent	Water (µg/L)	---	---	---	---	---	---	---	---
	GWE A/S-Effluent	Water (µg/L)	---	---	---	---	---	---	---	---
	GWE-Effluent	Water (µg/L)	---	---	---	---	---	---	---	---
	SVE-Influent	Air (mg/m^3)	890	1.3	3.1	1.2	4.1	---	---	14
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.023	0.084	0.016	0.062	---	---	3.6
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.037	<0.0022	<0.0087	---	---	<0.0072
11/17/2008										
	GWE-Influent	Water (µg/L)	290	6.5	6.7	<5.0	13	<5.0	1,200	360
	GWE A/S-Effluent	Water (µg/L)	<50	<2.0	<2.0	<2.0	<2.0	<2.0	1,300	38
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	950	0.62	0.30	1.2	2.3	---	---	12
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.063	0.025	0.070	0.13	---	---	4.9
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0057	<0.0022	<0.0087	---	---	<0.0072
12/1/2008										
	GWE-Influent	Water (µg/L)	240	7.4	<5.0	10	17	<5.0	1,200	300
	GWE A/S-Effluent	Water (µg/L)	<50	<5.0	<5.0	<5.0	<5.0	<5.0	540	19
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	**170**	**0.065**	**0.013**	**0.094**	**0.16**	---	---	**4.3**
	SVE A/S-Effluent	Air (mg/m^3)	<50	**0.032**	**0.0087**	**0.024**	**0.010**	---	---	**1.3**
	SVE-Effluent	Air (mg/m^3)	<50	**0.0047**	**0.019**	<0.0022	**0.019**	---	---	<0.0072
1/7/2009										
	GWE-Influent	Water (µg/L)	<50	<2.5	<2.5	<2.5	<2.5	<2.5	**140**	**90**
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**94**	**8.9**
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	**120**	**0.023**	<0.015	**0.028**	<0.069	**---**	**---**	**1.0**
	SVE A/S-Effluent	Air (mg/m^3)	<50	**0.041**	**0.028**	**0.020**	**0.028**	---	---	**1.3**
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	<0.0019	<0.0022	<0.0087	---	---	**0.055**
2/3/2009										
	GWE-Influent	Water (µg/L)	**66**	<2.0	<2.0	<2.0	<2.0	<2.0	**200**	**65**
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**120**	**6.1**
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	<50	**0.054**	**0.0072**	**0.077**	**0.049**	**---**	**---**	**0.70**
	SVE A/S-Effluent	Air (mg/m^3)	<50	**0.041**	**0.0070**	**0.030**	**0.0090**	---	---	**0.56**
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	**0.0026**	<0.0022	<0.0087	**---**	**---**	**0.37**
3/3/2009										
	GWE-Influent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**57**	**27**
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**28**	**1.8**
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50

Notes:

SVE	= Soil Vapor Extration
GWE	= Groundwater Extration
mg/m3	= milligrams per meter cubed
mg/L	= milligrams per liter
GRO	= gasoline range organics
MtBE	= methyl teritary butyl ether
TBA	= tert-Butyl alcohol
--	= Not sampled.

[1] = Hydrocarbon result partly due to individual peak(s) in quantitation rang
[2] = Primary and confirm results varied by > 40% RPI
[3] = Sample taken from VOA vial with air bubble > 6 millimeters in diamete
[4] = Incorrect GWE influent concentrations were recorded in previously submitted report
[5] = System did not operate during the month of October 2008. Therefore, system samples were not collected.

Table 6
Ground-Water Extraction System Performance Data
ARCO Service Station No.2111
1156 Davis Street, San Leandro, California

						GRO				Benzene				MTBE			
Sample ID	Date Sampled	Notes	Totalizer Value (gallons)	Monthly Volume (gallons)	Average Discharge Rate (gpm)	Influent Concen-tration (µg/L)	Removal Rate (lbs/day)	Net Removed (pounds)	Removed To Date (pounds)	Influent Concen-tration (µg/L)	Removal Rate (lbs/day)	Net Removed (pounds)	Removed To Date (pounds)	Influent Concen-tration (µg/L)	Removal Rate (lbs/day)	Net Removed (pounds)	Removed To Date (pounds)
INFL	01/29/07		3,000	NA	NA	2,000	0.00	0.000	0.000	35	0.0E+00	0.000	0.000	1,300	0.0E+00	0.000	0.000
INFL	02/05/07		33,400	30,400	3.02	1,400	0.06	0.431	0.431	25.0	1.1E-03	0.008	0.008	1,600.00	5.3E-02	0.368	0.368
INFL	03/05/07		130,565	97,165	2.41	1,500	0.04	1.175	1.606	20.0	6.5E-04	0.018	0.026	1,600.00	4.6E-02	1.297	1.664
INFL	04/02/07	a	170,596	40,031	0.99	850	0.01	0.392	1.998	<5.0	1.3E-04	0.004	0.030	1,100	1.6E-02	0.451	2.115
INFL	05/01/07	a	225,297	54,701	1.31	760	0.01	0.367	2.366	<5.0	2.0E-05	0.001	0.030	880	1.6E-02	0.452	2.567
INFL	06/04/07	a	429,450	204,153	4.17	430	0.03	1.013	3.379	<5.0	1.3E-04	0.004	0.034	560	3.6E-02	1.226	3.792
INFL	07/02/07	a	480,377	50,927	1.26	320	0.01	0.159	3.538	<5.0	3.8E-05	0.001	0.035	430	7.5E-03	0.210	4.003
INFL	08/01/07	a	580,301	99,924	2.31	440	0.01	0.317	3.855	9.4	1.7E-04	0.005	0.040	450	1.2E-02	0.367	4.369
INFL	09/05/07	a	589,944	9,643	0.19	410	0.00	0.034	3.889	9.5	2.2E-05	0.001	0.041	570	1.2E-03	0.041	4.410
INFL	10/01/07	a	592,403	2,459	0.07	500	0.00	0.009	3.898	6.9	6.5E-06	0.000	0.041	540	4.4E-04	0.011	4.422
INFL	11/06/07	a	615,161	22,758	0.44	1,100	0.00	0.152	4.050	20.0	7.1E-05	0.003	0.044	920	3.8E-03	0.139	4.560
INFL	12/05/07	a	633,121	17,960	0.43	80	0.00	0.088	4.138	0.69	5.3E-05	0.002	0.045	74	2.6E-03	0.074	4.635
INFL	01/07/08		635,200	2,079	0.04	830	0.00	0.008	4.146	12.0	3.3E-06	0.000	0.046	1,300	3.6E-04	0.012	4.647
INFL	02/05/08		642,841	7,641	0.18	<50	0.00	0.027	4.173	<0.50	1.3E-05	0.000	0.046	98	1.5E-03	0.045	4.691
INFL	03/05/08		646,123	3,282	0.08	860	0.00	0.012	4.186	40.0	1.9E-05	0.001	0.047	880	4.6E-04	0.013	4.705
INFL	04/01/08		719,174	73,051	1.88	410	0.01	0.387	4.572	16.0	6.3E-04	0.017	0.064	860	2.0E-02	0.530	5.235
INFL	05/06/08		806,356	87,182	1.73	500	0.01	0.331	4.903	<20	2.7E-04	0.009	0.073	2,000	3.0E-02	1.040	6.274
INFL	06/02/08		949,693	143,337	3.69	87	0.01	0.351	5.254	<5.0	2.8E-04	0.007	0.081	340	5.2E-02	1.399	7.673
INFL	07/01/08		1,028,841	79,148	1.90	660	0.01	0.247	5.501	9.2	1.3E-04	0.004	0.084	400	8.4E-03	0.244	7.917
INFL	08/05/08		1,037,580	8,739	0.17	80	0.00	0.027	5.528	<5.0	1.2E-05	0.000	0.085	370	8.0E-04	0.028	7.945
INFL	09/02/08		1,052,669	15,089	0.37	77	0.00	0.010	5.537	<5.0	1.1E-05	0.000	0.085	380	1.7E-03	0.047	7.993
INFL	10/01/08	b	1,067,983	15,314	0.37	---	0.00	0.010	5.547	---	1.1E-05	0.000	0.085	---	1.7E-03	0.049	8.041
INFL	11/17/08		1,077,116	9,133	0.13	290	0.00	0.022	5.569	6.5	1.1E-05	0.000	0.086	360	5.8E-04	0.027	8.068
INFL	12/01/08		1,085,806	8,690	0.43	240	0.00	0.019	5.589	7.4	3.6E-05	0.001	0.086	300	1.7E-03	0.024	8.092
INFL	**01/07/09**		**1,239,376**	**153,570**	**2.88**	**<50**	**0.00**	**0.170**	**5.758**	**<2.5**	**1.5E-04**	**0.006**	**0.092**	**90**	**6.8E-03**	**0.250**	**8.342**
INFL	**02/03/09**		**1,297,359**	**57,983**	**1.49**	**66**	**0.00**	**0.022**	**5.780**	**<2.0**	**2.0E-05**	**0.001**	**0.093**	**65**	**1.4E-03**	**0.037**	**8.380**
INFL	**03/03/09**		**1,402,083**	**104,724**	**2.60**	**<50**	**0.00**	**0.040**	**5.820**	**<0.50**	**1.9E-05**	**0.001**	**0.093**	**27**	**1.4E-03**	**0.040**	**8.420**
REPORTING PERIOD: FIRST QUARTER 2009																	
PERIOD WATER DISCHARGED (gal):				**316,277**	**as of 3/3/2009**												
AVERAGE DISCHARGE RATE (gpm)				**3.99**													
PERIOD POUNDS REMOVED:								**0.231**				**0.007**				**0.327**	
PERIOD GALLONS REMOVED:								**0.038**				**0.001**				**0.053**	
TOTAL POUNDS REMOVED:									**5.820**				**0.093**				**8.420**
TOTAL GALLONS REMOVED:				**1,402,083**					**0.954**				**0.013**				**1.362**
ESTIMATED PERCENT CARBON LOADING:					**22.9%**												

Explanations:

µg/L = Micrograms per liter
gpm = Gallons per minute
lbs/day = Pounds per day
GRO = Gasoline range organics
MtBE = Methyl tertiary butyl ether
NA = Not applicable

Density of gasoline = 6.1 pounds per gallon Density of benzene = 7.34 pounds per gallon Density of MtBE = 6.18 pounds per gallon

Notes:

a = Influent concentrations were recorded incorrectly in previously submitted reports.
b = System did not operate during the month of October 2008. Therefore, no system samples were collected. The previous influent concentrations were utilized to estimate contaminant removal.

Assumptions:

1) Primary carbon loading = 2,000 pounds of carbon (includes primary carbon unit only)
2) Percent carbon loading calculation assumes a loading isotherm of 3% by weight

Table 7
Ground-Water Extraction System Effluent Data
ARCO Service Station No. 2111
1156 Davis Street, San Leandro, California

Sample ID	Date Sampled	Notes	Totalizer Value (gallons)	Monthly Volume (gallons)	Average Discharge Rate (gpm)	Effluent Concentrations						
						GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	TBA (µg/L)	MtBE (µg/L)
EFFL	01/29/07		3,000	NA	NA	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	02/05/07		33,400	30,400	3.02	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	03/05/07		130,565	97,165	2.41	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	04/02/07		170,596	40,031	0.99	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	05/01/07		225,297	54,701	1.31	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	06/04/07		429,450	204,153	4.17	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	07/02/07		480,377	50,927	1.26	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	08/01/07		580,301	99,924	2.31	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	09/05/07		589,944	9,643	0.19	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	10/01/07		592,403	2,459	0.07	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	11/06/07		615,161	22,758	0.44	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	12/05/07		633,121	17,960	0.43	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	01/07/08		635,200	2,079	0.04	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	02/05/08		642,841	7,641	0.18	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	03/05/08		646,123	3,282	0.08	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	04/01/08		719,174	73,051	1.88	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	05/06/08		806,356	87,182	1.73	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	06/02/08		949,693	143,337	3.69	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	07/01/08		1,028,841	79,148	1.90	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	08/05/08		1,037,580	8,739	0.17	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	09/02/08		1,052,669	15,089	0.37	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	10/01/08		1,067,983	15,314	0.37	---	---	---	---	---	---	---
EFFL	11/17/08		1,077,116	9,133	0.13	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	12/01/08		1,085,806	8,690	0.43	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	**01/07/09**		1,239,376	153,570	2.88	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	**02/03/09**		1,297,359	57,983	1.49	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	**03/03/09**		1,402,083	104,724	2.60	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50

REPORTING PERIOD: FIRST QUARTER 2009
PERIOD WATER DISCHARGED (gal): 316,277 as of 3/03/2009
AVERAGE DISCHARGE RATE (gpm) 3.99

Explanations:
µg/L = Micrograms per liter
mg/L = Milligrams per liter
gpm = Gallons per minute
GRO = Gasoline Range Organics
MtBE = Methyl tertiary butyl ether
NA = Data not available

Table 8
OPERATIONAL UPTIME INFORMATION OF THE
SOIL VAPOR EXTRACTION SYSTEM
ARCO Service Station No. 2111
1156 Davis Street, San Leandro, California

Date	Hr. Meter	No. of Days Between Sampling Dates			Cumulative Days		Percent
	Reading	Total Days	Uptime	Days Down	Total Days	Uptime	Uptime
01/29/07	13.6	NA	NA	NA	NA	NA	NA
02/05/07	178.7	7	6.9	0.1	7	6.90	98%
03/05/07	437.6	28	10.8	17.2	35	17.7	39%
04/02/07	490.7	28	2.2	25.8	63	19.9	8%
05/01/07	594.2	29	4.3	24.7	92	24.2	15%
06/04/07	981.7	34	16.1	17.9	126	40.4	47%
07/02/07	1128.4	28	6.1	21.9	154	46.5	22%
08/01/07	1430.1	30	12.6	17.4	184	59.0	42%
09/05/07	1460.4	35	1.3	33.7	219	60.3	4%
10/01/07	1466.1	26	0.2	25.8	245	60.5	1%
11/06/07	1500.0	36	1.4	34.6	281	62.0	4%
12/05/07	1544.0	29	1.8	27.2	310	63.8	6%
01/07/08	1546.0	33	0.1	32.9	343	63.9	0%
02/05/08	1556.0	29	0.4	28.6	372	64.3	1%
03/05/08	1561.0	29	0.2	28.8	401	64.5	1%
04/01/08	1562.0	27	0.0	27.0	428	64.5	0%
05/06/08	1564.0	35	0.1	34.9	463	64.6	0%
06/02/08	1973.0	27	17.0	10.0	490	81.7	63%
07/01/08	2212.0	29	10.0	19.0	519	91.6	34%
08/05/08	2241.0	35	1.2	33.8	554	92.8	3%
09/02/08	2275.0	28	1.4	26.6	582	94.2	5%
10/01/08	2315.0	29	1.7	27.3	611	95.9	6%
11/17/08	2334.0	47	0.8	46.2	658	96.7	2%
12/01/08	2350.0	14	0.7	13.3	672	97.4	5%
01/07/09	**2685.0**	**37**	**14.0**	**23.0**	**709**	**111.3**	**38%**
02/03/09	**2832.0**	**27**	**6.1**	**20.9**	**736**	**117.5**	**23%**
03/03/09	**3204.0**	**28**	**15.5**	**12.5**	**764**	**133.0**	**55%**

NA = Not applicable

Table 9
SOIL VAPOR EXTRACTION SYSTEM FLOW RATES AND AIR SAMPLE ANALYTICAL RESULTS
ARCO Service Station No. 2111
1156 Davis Street, San Leandro, California

Date	Flow Rate (cfm)	Vacuum (in Hg)	Sampling Port	Analytes (mg/m^3)					
				GRO	Benzene	Toluene	Ethylbenzene	Xylenes	MtBE
01/29/07	198	21.0	Influent	77	<0.5	<0.5	<0.5	<1.0	9.4
			A/S-Effluent	<10	0.19	<0.10	0.10	<0.20	5.1
			Effluent	<10	<0.10	<0.10	<0.10	<0.20	<0.50
02/05/07	200	19.0	Influent	400	10	<0.5	4.7	2.9	21
			A/S-Effluent	<10	<0.10	<0.10	<0.10	<0.20	<0.50
			Effluent	<10	<0.10	<0.10	<0.10	<0.20	<0.50
03/05/07	180	24.0	Influent	100	2.3	<0.50	1.2	1.6	26
			A/S-Effluent	11	0.10	<0.10	0.13	<0.20	10
			Effluent	<10	0.17	<0.10	0.28	<0.20	<0.50
04/02/07	180	NR	Influent	190	4.3	<0.50	1.1	2.5	30
			A/S-Effluent	<10	<0.10	<0.10	<0.10	<0.20	5.2
			Effluent	<10	<0.10	<0.10	<0.10	<0.20	<0.50
05/01/07	180	NR	Influent	160	<0.50	<0.50	<0.50	0.97	18
			A/S-Effluent	<50	<0.50	<0.50	<0.50	<0.50	11
			Effluent	<50	<0.50	<0.50	<0.50	<0.50	<0.50
06/04/07	190	NR	Influent	330	0.56	0.89	1.8	2.6	14
			A/S-Effluent	<50	<0.50	0.67	<0.50	1.3	3.7
			Effluent	<50	<0.50	<0.50	<0.50	<0.50	<0.50
07/02/07	200	NR	Influent	180	<0.50	<0.50	<0.50	<1.0	11
			A/S-Effluent	<10	<0.10	<0.10	<0.10	<0.20	0.87
			Effluent	<10	<0.10	<0.10	<0.10	<0.20	<0.50
08/01/07	200	NR	Influent	660	<1.0	<1.0	1.2	2.2	11
			A/S-Effluent	11	0.25	<0.10	0.21	0.22	11
			Effluent	<10	<0.10	<0.10	<0.10	<0.20	<0.50
09/05/07	190	NR	Influent	1,200	0.79	<0.50	1.5	3.8	14
			A/S-Effluent	<50	<0.50	<0.50	<0.50	<0.50	5.1
			Effluent	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/01/07	190	NR	Influent	1,300	1.2	<0.50	2.6	5.2	14
			A/S-Effluent	<10	<0.50	<0.50	<0.50	<0.50	2.6
			Effluent	<10	<0.50	<0.50	<0.50	<0.50	2.2
11/06/07	190	NR	Influent	1,000	2.0	<0.50	4.0	5.3	23
			A/S-Effluent	13	<0.50	<0.50	<0.50	<0.50	15
			Effluent	<10	<0.50	<0.50	<0.50	<0.50	<0.50
12/05/07	190	NR	Influent	830	<0.50	<0.50	1.0	1.2	2.5
			A/S-Effluent	<10	<0.50	<0.50	<0.50	<0.50	<0.50
			Effluent	<10	<0.50	<0.50	<0.50	<0.50	<0.50
01/07/08	200	NR	Influent	410	2.2	1.5	2.9	3.9	44
			A/S-Effluent	<50	<0.50	<0.50	<0.50	<0.50	14
			Effluent	<50	<0.50	<0.50	<0.50	<0.50	<0.50
02/05/08	190	NR	Influent	<50	0.17	0.017	0.12	0.046	3.1
			A/S-Effluent	<50	0.32	0.024	0.20	0.10	5.1
			Effluent	<50	<0.0016	0.0032	<0.0022	<0.0043	0.098
03/05/08	190	NR	Influent	62	0.81	0.033	0.33	0.10	26
			A/S-Effluent	<50	0.0024	0.024	0.0025	0.0055	0.27
			Effluent	<50	<0.0016	0.026	<0.0022	<0.0043	0.13
04/01/08	180	NR	Influent	620	1.6	0.037	1.3	0.61	21
			A/S-Effluent	<50	0.098	0.021	0.13	0.10	9.7
			Effluent	<50	0.0089	0.033	0.0052	0.024	0.014
05/06/08	190	NR	Influent	920	0.99	1.7	2.1	0.82	27
			A/S-Effluent	<50	0.0046	0.0072	0.0032	0.0054	5.1
			Effluent	<50	<0.0016	0.0023	<0.0022	<0.0043	16
06/02/08	180	NR	Influent	230	0.13	<0.019	0.13	0.11	10
			A/S-Effluent	<50	<0.0016	0.015	<0.0022	<0.0043	0.88
			Effluent	<50	<0.0016	<0.0019	<0.0022	<0.0043	1.4
07/01/08	140	NR	Influent	1,200	1.5	20	5.8	36	9.3
			A/S-Effluent	<50	0.0051	0.046	0.0081	0.081	0.86
			Effluent	<50	<0.0016	0.0047	<0.0022	<0.0043	0.39

Table 9
SOIL VAPOR EXTRACTION SYSTEM FLOW RATES AND AIR SAMPLE ANALYTICAL RESULTS
ARCO Service Station No. 2111
1156 Davis Street, San Leandro, California

Date	Flow Rate (cfm)	Vacuum (in Hg)	Sampling Port	Analytes (mg/m^3)					
				GRO	Benzene	Toluene	Ethylbenzene	Xylenes	MtBE
08/05/08	180	NR	Influent	1,100	0.62	0.40	1.9	3.5	10
			A/S-Effluent	<50	<0.0016	0.0096	<0.0022	<0.0043	0.40
			Effluent	<50	<0.0016	0.0071	<0.0022	<0.0043	<0.0072
09/02/08	180	NR	Influent	1,300	0.67	0.31	1.9	4.0	13
			A/S-Effluent	<50	0.0043	0.014	0.0042	0.015	1.1
			Effluent	<50	<0.0016	0.0065	<0.0022	<0.0087	<0.0072
10/1/2008[1]	NR	NR	Influent	---	---	---	---	---	---
			A/S-Effluent	---	---	---	---	---	---
			Effluent	---	---	---	---	---	---
11/17/08	170	NR	Influent	890	1.3	3.1	1.2	4.1	14
			A/S-Effluent	<50	0.023	0.084	0.016	0.062	3.6
			Effluent	<50	<0.0016	0.037	<0.0022	<0.0087	<0.0072
12/01/08	175	NR	Influent	950	0.62	0.30	1.2	2.3	12
			A/S-Effluent	<50	0.063	0.025	0.070	0.13	4.9
			Effluent	<50	<0.0016	0.0057	<0.0022	<0.0087	<0.0072
01/07/09	175	NR	Influent	**170**	**0.065**	**0.013**	**0.094**	**0.16**	**4.3**
			A/S-Effluent	<50	**0.032**	**0.0087**	**0.024**	**0.010**	**1.3**
			Effluent	<50	**0.0047**	**0.019**	<0.0022	**0.019**	<0.0072
02/03/09	180	NR	Influent	**120**	**0.023**	<0.015	**0.028**	**<0.069**	**1.0**
			A/S-Effluent	<50	**0.041**	**0.028**	**0.020**	**0.028**	**1.3**
			Effluent	<50	<0.0016	<0.0019	<0.0022	<0.0087	**0.055**
03/03/09	175	NR	Influent	<50	**0.054**	**0.0072**	**0.077**	**0.049**	**0.70**
			A/S-Effluent	<50	**0.041**	**0.0070**	**0.030**	**0.0090**	**0.56**
			Effluent	<50	<0.0016	**0.0026**	<0.0022	<0.0087	**0.37**

Notes:

mg/m^3	= milligrams per cubic meter	NR	= not recorded
in Hg	= inches of mercury	[1]	= System did not operate during October 2008. Therefore, system samples were not collected.
cfm	= cubic feet per second		
GRO	= gasoline range organics		
MtBE	= methyl tertiary butyl ether		

Table 10
SOIL VAPOR EXTRACTION AND EMISSION RATES
ARCO Service Station No. 2111
1156 Davis Street, San Leandro, California

Date	Extraction Rate from Wells (lbs/day)		Emissions Rate to Atmosphere (lbs/day)		Destruction Removal Efficiency, %		Cumulative GRO Removal (lbs)	
	GRO	Benzene	GRO	Benzene	GRO	Benzene	Period	Total
1/29/2007	1.35	0.00	0.09	0.00	93.5%	80.0%	1.35	1.35
2/5/2007	7.10	0.18	0.09	0.00	98.8%	99.5%	29.18	30.53
3/5/2007	1.60	0.04	0.08	0.00	95.0%	92.6%	47.00	77.53
4/2/2007	3.04	0.07	0.08	0.00	97.4%	98.8%	5.10	82.63
5/1/2007*	2.56	0.00	0.40	0.00	84.4%	0.0%	12.03	94.66
6/4/2007*	5.28	0.01	0.42	0.00	92.0%	55.4%	63.06	157.72
7/2/2007	3.20	0.00	0.09	0.00	97.2%	80.0%	25.84	183.56
8/1/2007	11.72	0.01	0.09	0.00	99.2%	90.0%	94.00	277.56
9/5/2007*	20.25	0.01	0.42	0.00	97.9%	68.4%	20.78	298.34
10/1/2007	21.94	0.02	0.08	0.00	99.6%	79.2%	4.22	302.56
11/6/2007	16.87	0.03	0.08	0.00	99.5%	87.5%	27.17	329.72
12/5/2007*	14.01	0.00	0.08	0.00	99.4%	0.0%	27.79	357.51
1/7/2008	7.28	0.04	0.44	0.00	93.9%	88.6%	1.06	358.58
2/5/2008**	0.42	0.00	0.42	0.00	0.0%	99.5%	1.54	360.12
3/5/2008**	1.05	0.01	0.42	0.00	59.7%	99.9%	0.15	360.27
4/1/2008[1]	9.91	0.03	0.40	0.00	96.0%	99.4%	0.00	360.27
5/6/2008[1]	15.52	0.02	0.42	0.00	97.3%	99.9%	1.06	361.33
6/2/2008[1]	3.68	0.00	0.40	0.00	89.1%	99.4%	163.61	524.93
7/1/2008	14.92	0.02	0.31	0.00	97.9%	99.9%	92.60	617.53
8/5/2008	17.58	0.01	0.40	0.00	97.7%	99.9%	19.64	637.17
9/2/2008	20.78	0.01	0.40	0.00	98.1%	99.9%	27.18	664.34
10/1/2008[2]	---	---	---	---	---	---	---	---
11/17/2008	13.44	0.02	0.38	0.00	97.2%	99.9%	42.06	706.41
12/1/2008	14.76	0.01	0.39	0.00	97.4%	99.9%	9.40	715.81
1/7/2009	**2.64**	**0.00**	**0.39**	**0.00**	**85.3%**	**92.8%**	**121.49**	**837.29**
2/3/2009*	**1.92**	**0.00**	**0.40**	**0.00**	**79.2%**	**96.5%**	**13.97**	**851.26**
3/3/2009**	**0.39**	**0.00**	**0.39**	**0.00**	**0.0%**	**98.5%**	**17.88**	**869.14**

Air Permit Limits
DRE shall be at least 95%
Daily emmission rates will not exceed two lbs. VOC in any one day

Sample Calculations

$$\text{Ext. Rate from Wells (lbs/day)} = \frac{70 \text{ cuft}}{\text{min}} \times \frac{3100 \text{ mg}}{\text{cu meter}} \times \frac{0.028 \text{ cumeter}}{\text{cuft}} \times \frac{\text{lb}}{454{,}000 \text{ mg}} \times \frac{1{,}440 \text{ min}}{\text{day}}$$

$$= 19.27 \text{ lbs/day}$$

$$\text{Dest. Removal Efficiency, \%} = \frac{19.27 - (<0.12)}{19.27} \times 100 = 99.35\%$$

Notes
* = Benzene results negligible, DRE not a true representation
** = GRO results negligible, DRE not a true representation
[1] = Cumulative GRO removed was incorrectly tabulated in the Second Quarter 2008 report. The current values have been
[2] = System did not operate during October 2008. Therefore, system samples were not collected.

Figure 1
Cumulative GWE Mass Removal for GRO, Benzene, and MTBE
Station #2111, 1156 Davis Street, San Leandro, California

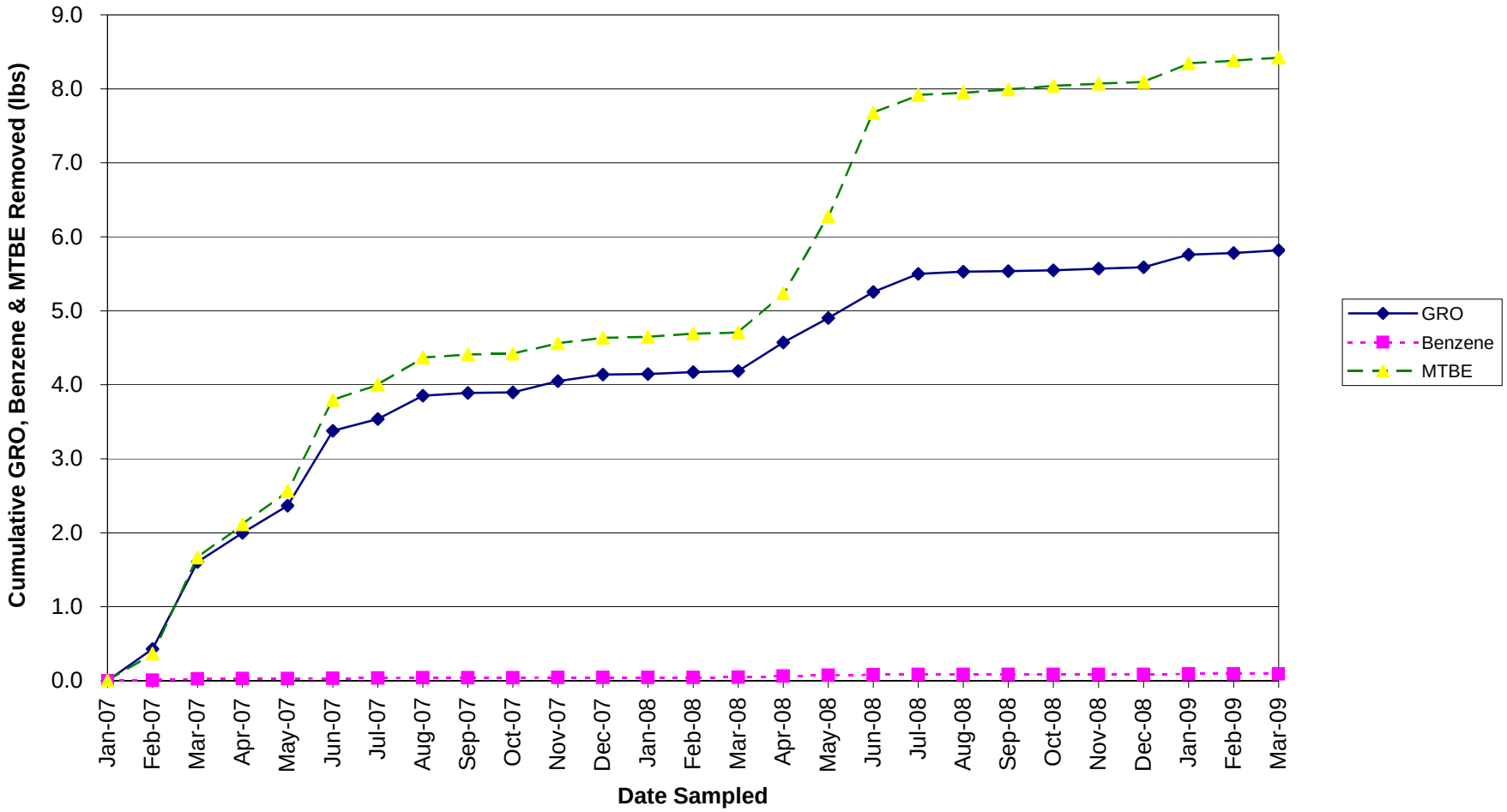


Figure 2
GWE Influent Concentrations for GRO, Benzene, and MTBE
Station #2111, 1156 Davis Street, San Leandro, California

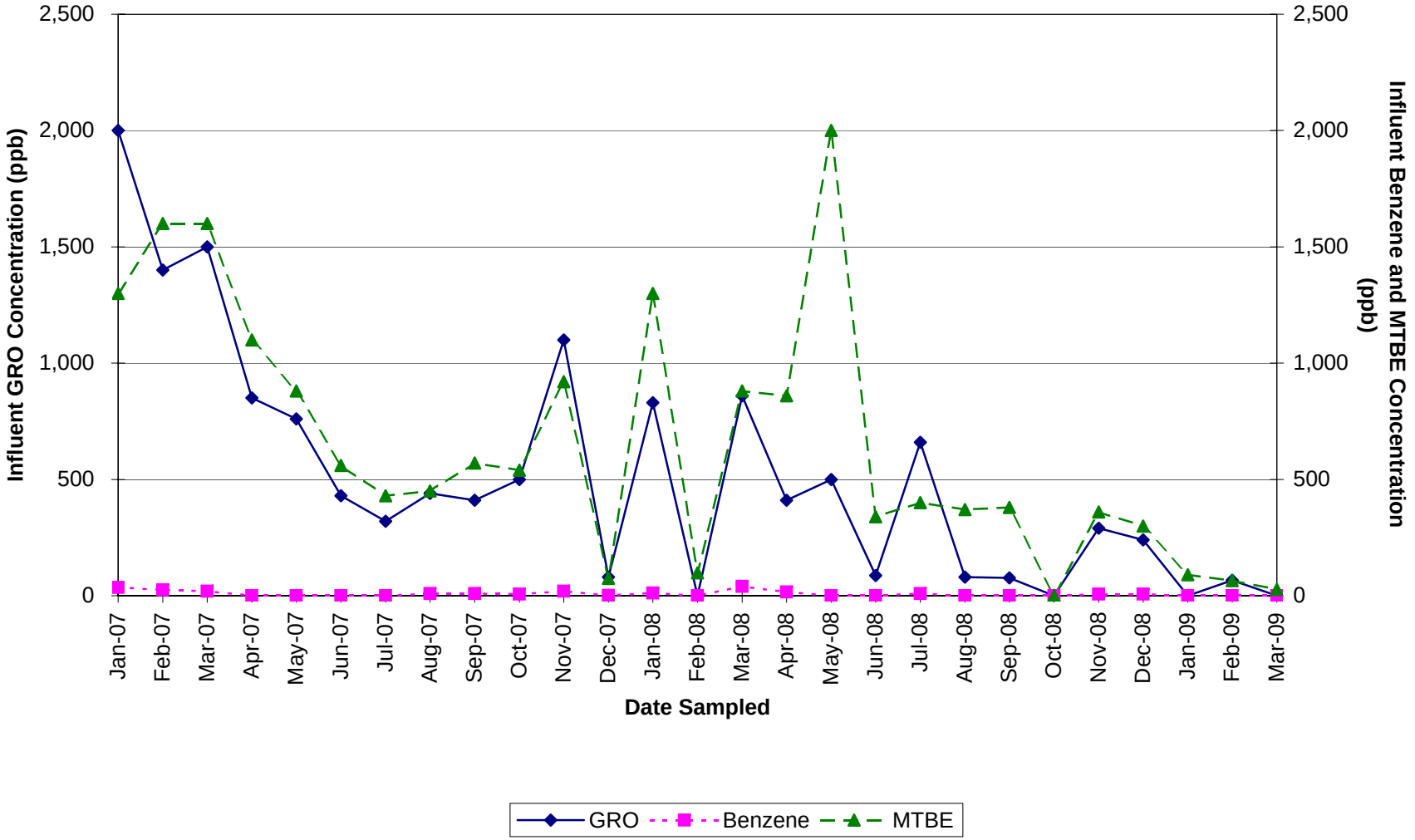


Figure 3
SVE System Influent Concentration vs.Time
Station #2111, 1156 Davis Street, San Leandro, California

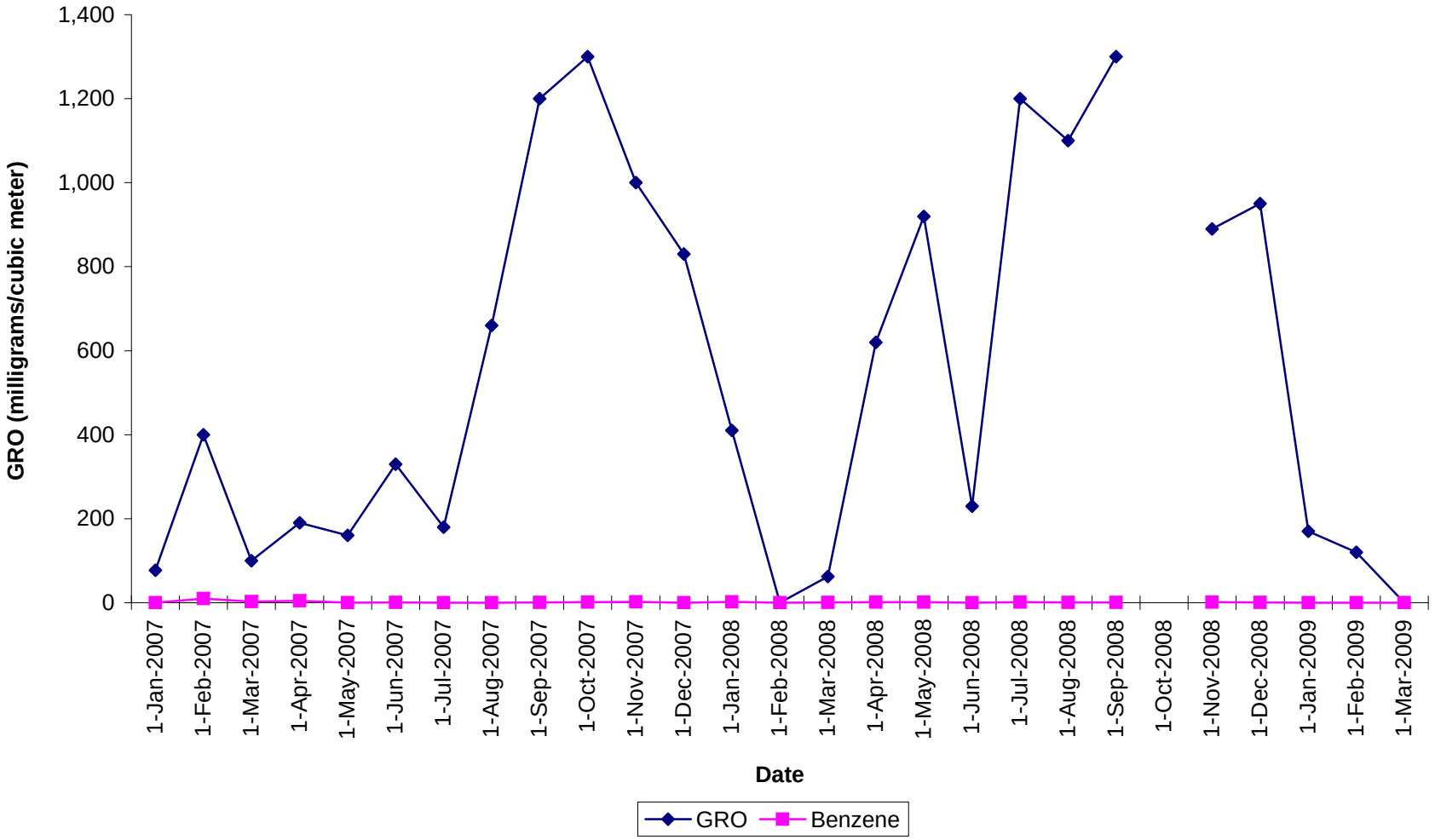
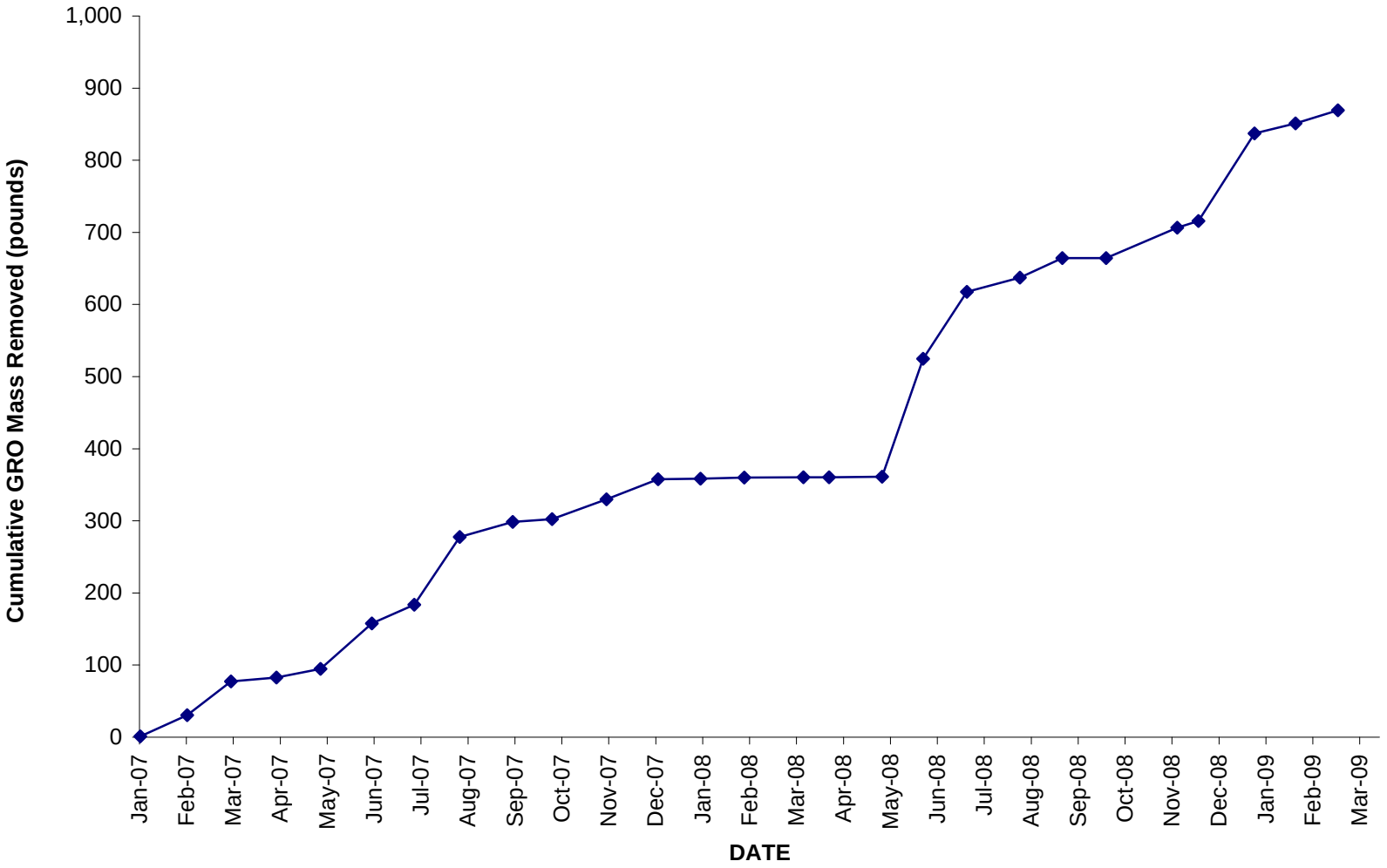


Figure 4
SVE System Cumulative GRO Mass Removed vs. Time
Station #2111, 1156 Davis Street, San Leandro, California



APPENDIX A

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

STRATUS
ENVIRONMENTAL, INC.

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

February 26, 2009

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

Re: Groundwater Sampling Data Package, BP Service Station No. 2111, located at 1156 Davis Street, San Leandro, California.

General Information

Data Submittal Prepared / Reviewed by: Carol Huff / Jay Johnson
Phone Number: (530) 676-6000
On-Site Supplier Representatives: Anthony Hill

Sampling Date: February 3, 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, 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.

February 26, 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

PROFESSIONAL GEOLOGIST
Jay R. Johnson
No. 5867
STATE OF CALIFORNIA

Attachments:

- Field Data Sheets
- Chain of Custody Documentation
- Certified Analytical Results
- Field Procedures for Groundwater sampling

CC: Mr. Paul Supple, BP/ARCO

STRATUS ENVIRONMENTAL, INC.

Site Address 1156 Davis St
City San Leandro
Sampled by: TA
Signature

Site Number Arco 2111
Project Number E-2111
Project PM Jay Johnson
DATE 2/3/09

Water Level Data					Purge Volume Calculations					Purge Method				Sample Record			Field Data
Well ID	Time	Depth to Product (feet)	Depth to Water (feet)	Total Depth (feet)	Water column (feet)	Diameter (inches)	Multiplier	3 casing volumes (gallons)	Actual water purged (gallons)	No Purge Sample	Bailer	Pump	other	DTW at sample time (feet)	Sample I.D	Sample Time	DO (mg/L)
MW-1			18.08	26.07	—	4	2	—	—	X				18.08	MW-1	1115	1.66
2			16.45	26.55	—	4	2	—	—	X				16.45	2	1200	2.71
3			17.36	26.23	—	4	2	—	—	X				17.36	3	1105	2.55
4			16.36	21.91	—	4	2	—	—	X				16.36	4	1055	3.92
5			15.83	21.6	—	2	2	—	—	X				15.83	5	1240	2.38
7			17.86	26.25	—	4	2	—	—	X				17.86	7	1215	2.58
MW-8			16.96	38.96	22	2	.5	11	11	X				16.98	MW-8	1145	.83
											X						
MW-6			15.23	20.48						X							

Multiplier
2" = 0.5 3" = 1.0 4" = 2.0 6" = 4.4

Please refer to groundwater sampling field procedures
pH/Conductivity/temperature Meter - Oakton Model PC-10
DO Meter - Oakton 300 Series (DO is always measured before purge)

CALIBRATION DATE
pH ATH 2/3
Conductivity
DO

T:\Forms

STRATUS ENVIRONMENTAL, INC.

Site Address 1156 Davis St. Site Number Alco 2111
City San Leandro Project No. E-2111
Site Sampled by TH Project PM Jay Johnson
Date Sampled 2/3/09

Well ID MW-4				1055
purge start time bailer				odor
	Temp C	pH	cond	gallons
time	21.9	7.34	489	Ø
time				
time				
time				
purge stop time				

Well ID MW-3				1105
purge start time bailer				odor
	Temp C	pH	cond	gallons
time	21.4	7.04	449	Ø
time				
time				
time				
pugre stop time				

Well ID MW-1				1115
purge start time bailer				No odor
	Temp C	pH	cond	gallons
time	21.5	6.95	444	Ø
time				
time				
time				
purge stop time				

Well ID MW-8				1145
purge start time Bailer				No odor
	Temp C	pH	cond	gallons
time	20.9	6.89	433	Ø
time	20.6	6.89	433	5.5
time	20.3	6.9	434	11
time				
purge stop time				

Well ID MW-2				1206
purge start time Bailer				No odor
	Temp C	pH	cond	gallons
time	19.6	6.96	441	Ø
time				
time				
time				
purge stop time				

Well ID MW-7				1215
purge start time bailer				No odor
	Temp C	pH	cond	gallons
time	21	6.97	443	Ø
time				
time				
time				
purge stop time				

Well ID MW-5				
purge start time Bailer				No odor
	Temp C	pH	cond	gallons
time	21.5	6.77	317	Ø
time				
time				
time				
purge stop time				

Well ID				
purge start time				
	Temp C	pH	cond	gallons
time				
time				
time				
time				
purge stop time				

NO. 673960

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

SITE:

EPA I.D. NO. NOT REQUIRED

NAME BP WEST COAST PRODUCTS LLC ARCO #

ADDRESS P.O. BOX 80249

RANCHO SANTA MARGARITA

CITY, STATE, ZIP CA 92688

PROFILE NO.

PHONE NO. ( )

CONTAINERS: No. VOLUME 11 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. BEST#		
4.			8.		

PROPERTIES: 7-10 pH ☐ 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 Meathart BEST for BP

TYPED OR PRINTED FULL NAME & SIGNATURE DATE

TRANSPORTER

Transporter #1 Transporter #2

NAME STRATUS ENVIRONMENTAL

EPA I.D. NO.

ADDRESS 3330 CAMERON PARK DR

SERVICE ORDER NO.

CITY, STATE, ZIP CAMERON PARK, CA 95682

PICK UP DATE

PHONE NO. 530-676-2031

TRUCK, UNIT, I.D. NO.

TYPED OR PRINTED FULL NAME & SIGNATURE DATE

TSD FACILITY

NAME INSTRAT, INC

EPA I.D. NO.

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

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

Page 1 of 1

BP/ARC Project Name: ARCO 2111 | Req Due Date (mm/dd/yy): STD - TAT | Rush TAT: Yes ___ No X

BP/ARC Facility No: 2111 ORIGINAL | Lab Work Order Number:

Lab Name: Cal Science	BP/ARC Facility Address: 1156 Davis Street	Consultant/Contractor: Stratus Environmental, Inc.	
Lab Address: 7440 Lincoln Way	City, State, ZIP Code: San Leandro, CA	Consultant/Contractor Project No: E2111-04	
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda County	Address: 3330 Cameron Park Drive, #550, Cameron Park, CA	
Lab Phone: 714-895-5494 / 714-895-7501 (fax)	California Global ID No.:	Consultant/Contractor PM: Jay Johnson	
Lab Shipping Accnt:	Enfos Proposal No:	Phone: 530-676-6000 / 530-676-6005	
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: chuff@stratusinc.net	
Other info.	Stage: Activity:	Invoice To: BP/ARC X Contractor ___	
BP/ARC EBM: Paul Supple			
EBM Phone: 925-275-3506			
EBM Email: Paul.Supple@bp.com			

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO by 8015 M	BTEX / 5 OXY's *	EDB / 1,2 DCA *	EtOH by 8260 *	Report Type & QC Level
		2009															Standard ___ Full Data Package ___
	MW-1	2/3	1115		X		6						X	X	X	X	
	2		1200														
	3		1105														
	4		1055														
	5		1240														
	7		1215														
	MW-9		1145														
	TB-2111-020309						2										

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

* All by 8260

ON Hold

Sampler's Name: A. Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus		2/3/09	1330	CEL	2-3-09	1330
Shipment Method: GSO Ship Date: 2/3						
Shipment Tracking No:						

Special Instructions:

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

Calscience Environmental Laboratories, Inc.

February 16, 2009

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

Subject: **Calscience Work Order No.: 09-02-0272**
Client Reference: ARCO 2111

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/4/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0272
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-02-0272-1-E**	**02/03/09 11:15**	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09 18:28**	**090211B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-02-0272-2-F**	**02/03/09 12:00**	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09 19:02**	**090211B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	86	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	101	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-02-0272-3-E**	**02/03/09 11:05**	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09 19:35**	**090211B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	97	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-02-0272-4-E**	**02/03/09 10:55**	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09 20:09**	**090211B01**

Parameter	Result	RL	DF	Qual	Units
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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 02/04/09
Work Order No: 09-02-0272
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	**09-02-0272-5-E**	**02/03/09 12:40**	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09 20:43**	**090211B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	100	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**09-02-0272-6-E**	**02/03/09 12:15**	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09 21:16**	**090211B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**09-02-0272-7-E**	**02/03/09 11:45**	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09 21:50**	**090211B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	92	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-428**	**N/A**	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09 13:27**	**090211B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	105	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0272
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-02-0272-1-A**	**02/03/09 11:15**	**Aqueous**	**GC/MS BB**	**02/13/09**	**02/13/09 16:58**	**090213L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	16	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	104	73-157			Dibromofluoromethane	104	82-142		
Toluene-d8	96	82-112			1,4-Bromofluorobenzene	83	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-02-0272-2-A**	**02/03/09 12:00**	**Aqueous**	**GC/MS BB**	**02/13/09**	**02/13/09 17:30**	**090213L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3.5	2.5	5		Methyl-t-Butyl Ether (MTBE)	31	2.5	5	
1,2-Dibromoethane	ND	2.5	5		Tert-Butyl Alcohol (TBA)	230	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	105	73-157			Dibromofluoromethane	108	82-142		
Toluene-d8	95	82-112			1,4-Bromofluorobenzene	83	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-02-0272-3-A**	**02/03/09 11:05**	**Aqueous**	**GC/MS BB**	**02/13/09**	**02/13/09 18:02**	**090213L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	2.1	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	102	73-157			Dibromofluoromethane	101	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	80	75-105		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0272
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L

Project: ARCO 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-02-0272-4-A**	**02/03/09 10:55**	**Aqueous**	**GC/MS BB**	**02/13/09**	**02/13/09 18:34**	**090213L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.67	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	94	82-112			1,4-Bromofluorobenzene	77	75-105		

MW-5	**09-02-0272-5-A**	**02/03/09 12:40**	**Aqueous**	**GC/MS BB**	**02/13/09**	**02/13/09 19:06**	**090213L01**

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)	94	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	102	73-157			Dibromofluoromethane	102	82-142		
Toluene-d8	98	82-112			1,4-Bromofluorobenzene	77	75-105		

MW-7	**09-02-0272-6-A**	**02/03/09 12:15**	**Aqueous**	**GC/MS BB**	**02/13/09**	**02/13/09 19:39**	**090213L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	18	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	66	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	103	73-157			Dibromofluoromethane	100	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	78	75-105		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0272
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**09-02-0272-7-A**	**02/03/09 11:45**	**Aqueous**	**GC/MS BB**	**02/13/09**	**02/13/09 20:11**	**090213L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	16	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	17	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	101	73-157			Dibromofluoromethane	103	82-142		
Toluene-d8	98	82-112			1,4-Bromofluorobenzene	75	75-105		

Method Blank	099-12-703-705	N/A	Aqueous	GC/MS BB	02/13/09	02/13/09 13:46	090213L01

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	100	73-157			Dibromofluoromethane	105	82-142		
Toluene-d8	98	82-112			1,4-Bromofluorobenzene	85	75-105		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0272
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-0280-7	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09**	**090211S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	97	96	38-134	1	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0272
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-0280-7	**Aqueous**	**GC/MS BB**	**02/13/09**	**02/13/09**	**090213S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	95	86-122	1	0-8	
Carbon Tetrachloride	84	82	78-138	3	0-9	
Chlorobenzene	96	92	90-120	5	0-9	
1,2-Dibromoethane	96	89	70-130	8	0-30	
1,2-Dichlorobenzene	97	94	89-119	2	0-10	
1,1-Dichloroethene	89	80	52-142	10	0-23	
Ethylbenzene	85	83	70-130	2	0-30	
Toluene	87	88	85-127	1	0-12	
Trichloroethene	89	87	78-126	2	0-10	
Vinyl Chloride	47	68	56-140	36	0-21	LN,BA,AY
Methyl-t-Butyl Ether (MTBE)	90	82	64-136	9	0-28	
Tert-Butyl Alcohol (TBA)	95	97	27-183	2	0-60	
Diisopropyl Ether (DIPE)	84	79	78-126	6	0-16	
Ethyl-t-Butyl Ether (ETBE)	85	79	67-133	7	0-21	
Tert-Amyl-Methyl Ether (TAME)	84	79	63-141	6	0-21	
Ethanol	84	108	11-167	24	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0272
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-428	**Aqueous**	**GC 30**	**02/11/09**	**02/11/09**	**090211B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	103	70	78-120	38	0-20	LR

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0272
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-705	Aqueous	GC/MS BB	02/13/09	02/13/09	090213L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	99	95	87-117	82-122	5	0-7	
Carbon Tetrachloride	86	83	78-132	69-141	4	0-8	
Chlorobenzene	97	96	88-118	83-123	1	0-8	
1,2-Dibromoethane	95	92	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	96	95	88-118	83-123	1	0-8	
1,1-Dichloroethene	90	86	71-131	61-141	4	0-14	
Ethylbenzene	87	86	80-120	73-127	1	0-20	
Toluene	93	89	85-127	78-134	5	0-7	
Trichloroethene	91	88	85-121	79-127	4	0-11	
Vinyl Chloride	74	70	64-136	52-148	6	0-10	
Methyl-t-Butyl Ether (MTBE)	85	85	67-133	56-144	0	0-16	
Tert-Butyl Alcohol (TBA)	94	93	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	83	80	80-122	73-129	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	81	79	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	83	80	69-135	58-146	3	0-12	
Ethanol	102	98	34-124	19-139	4	0-44	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-02-0272

Qualifier	Definition
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 abovelimit; 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 interfence suspected.
LN,AY	MS and/or MSD below acceptance limits. See Blank Spike (LCS). Matrix interfence suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.

Work Order Number: 09-02-0272

Qualifier	Definition
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.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

0272

Page 1 of 1

BP/ARC Project Name: ARCO 2111
BP/ARC Facility No: 2111
Req Due Date (mm/dd/yy): STD - TAT
Rush TAT: Yes ___ No X
Lab Work Order Number:

Lab Name:	Cal Science	BP/ARC Facility Address:	1156 Davis Street	Consultant/Contractor:	Stratus Environmental, Inc.
Lab Address:	7440 Lincoln Way	City, State, ZIP Code:	San Leandro, CA	Consultant/Contractor Project No:	E2111-04
Lab PM:	Richard Villafania	Lead Regulatory Agency:	Alameda County	Address:	3330 Cameron Park Drive, #550, Cameron Park, CA
Lab Phone:	714-895-5494 / 714-895-7501 (fax)	California Global ID No.:		Consultant/Contractor PM:	Jay Johnson
Lab Shipping Accnt:		Enfos Proposal No:		Phone:	530-676-6000 / 530-676-6005
Lab Bottle Order No:		Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___	Email EDD To:	chuff@stratusinc.net
Other Info:		Stage:	Activity:	Invoice To:	BP/ARC X Contractor ___
BP/ARC EBM:	Paul Supple				
EBM Phone:	925-275-3506				
EBM Email:	Paul.Supple@bp.com				

Lab No.	Sample Description	Date 2009	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO by 8015 M	BTEX / 5 OXY's *	EDB / 1,2 DCA *	Ethanol *
1	MW-1	2/3	1115		X		6						X	X	X	X
2	2		1200													
3	3		1105													
4	4		1055													
5	5		1240													
6	7		1215													
7	MW-8	″	1145		″		″						″	″	″	″
8	TB-2111-02032009						2									

Report Type & QC Level: Standard ___ Full Data Package ___

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

* All by 8260

On Hold

Sampler's Name:	A. Hill
Sampler's Company:	Stratus
Shipment Method:	GSO
Ship Date:	2/3
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
	2/3/09	1330	CEL	2-3-09	1330
Tai Kelly TO GSO	2/3/09	1730	Jpreng A-CEL	2/4/09	10:30

Special Instructions:

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

GSO #5112102B3

BP/ARC LaMP COC Rev. 6 01/01/2009

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-02-0272

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: STRATUS

DATE: 02/04/09

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

Temperature 1.7 °C - 0.2 °C (CF) = 1.5 °C ☑ Blank ☐ Sample

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

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

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

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

CUSTODY SEALS INTACT:

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

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: TN

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	☑	☐	☐
COC document(s) received complete.....	☑	☐	☐
Sampler's name indicated on COC.....	☑	☐	☐
Sample container label(s) consistent with COC.....	☑	☐	☐
Sample container(s) intact and good condition.....	☑	☐	☐
Correct containers and volume for analyses requested.....	☑	☐	☐
Analyses received within holding time.....	☑	☐	☐
Proper preservation noted on COC or sample container.....	☑	☐	☐
Volatile analysis container(s) free of headspace.....	☑	☐	☐
Tedlar bag(s) free of condensation.....	☐	☐	☑

CONTAINER TYPE:

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

Water: ☐VOA ☑VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____

Checked/Labeled by: TN

Reviewed by: DL

Scanned by: TN

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

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

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!

Submittal Type:	**GEO_WELL**
Submittal Title:	**1Q09 GEO_WELL 2111**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**GEO_WELL.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**4/24/2009 2:08:35 PM**
Confirmation Number:	**3588823616**

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!

Submittal Type:	**EDF - Monitoring Report - Quarterly**
Submittal Title:	**1Q09 GW Monitoring**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09020272.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**4/24/2009 2:10:34 PM**
Confirmation Number:	**8850424528**

VIEW QC REPORT

VIEW DETECTIONS REPORT

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!

Submittal Type:	**EDF - Soil and Water Investigation Report**
Submittal Title:	**Monthly System Sampling 0109**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09010435a.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**4/24/2009 2:14:40 PM**
Confirmation Number:	**3636888802**

VIEW QC REPORT

VIEW DETECTIONS REPORT

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!

Submittal Type:	**EDF - Soil and Water Investigation Report**
Submittal Title:	**Monthly System Sampling 0209**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09020279a.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**4/24/2009 2:17:30 PM**
Confirmation Number:	**4737359464**

VIEW QC REPORT

VIEW DETECTIONS REPORT

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!

Submittal Type:	**EDF - Soil and Water Investigation Report**
Submittal Title:	**Monthly System Sampling 0309**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09030236.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**4/24/2009 2:18:50 PM**
Confirmation Number:	**5249380826**

VIEW QC REPORT

VIEW DETECTIONS REPORT

APPENDIX C

STRATUS REMEDIATION SYSTEM OPERATION AND MAINTENANCE DATA PACKAGES (INCLUDES FIELD DATA SHEETS, LABORATORY REPORTS, AND CHAIN-OF-CUSTODY DOCUMENTATION)

STRATUS
ENVIRONMENTAL, INC.

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

February 5, 2009

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

Re: Remediation System Operation and Maintenance Data Package, ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California.

General Information

Data Submittal Prepared / Reviewed by: Sandy Hayes and Kiran Nagaraju / Jay Johnson

Phone Number: (530) 676-6007 / (530) 676-6000

On-Site Supplier Representatives: Chris Hill

Number of Site Visits: 4 (January 7, 15, 20, and 29, 2009)

System Overview: Dual Phase Extraction System, Air Stripper, and Groundwater Extraction and Treatment System (GETS).

Operational Status: Continuous operation

Scope of Work Performed: Conduct routine system operation and maintenance and record field measurements. Influent, mid-fluent, and effluent air and water samples were collected on January 7, 2009.

Variations from Scope of Work: The remediation systems were shutdown after sampling on January 7, 2009, pending receipt and verification of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on January 15, 2009.

The attachments include 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.

Kiran Nagaraju
Project Engineer

Jay R. Johnson, P.G.
Project Manager

PROFESSIONAL GEOLOGIST
Jay R. Johnson
No. 5867
STATE OF CALIFORNIA

Attachments:

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

CC: Paul Supple, BP/ARCO

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 1 7 0 9
Onsite Time: 0 7 15
Offsite Time: 0 845
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 45

System Information

System Status Upon Arrival:	Operational	☒	Non-Operational	☐
System Status Upon Departure:	Operational	☐	Non-Operational	☒ Unit LAB

Electric Meter Reading: NM
Hour Meter Reading: 2685
Totalizer Reading Prior to Air Stripper: 202425
PID Calibration Date: 1509
Totalizer Reading After Air Stripper: 1282770

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		26			
Air Velocity, FPM		1905			
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm			175		
Applied Vacuum, "wc	20 "Hg	.28	NA	NA	
Temperature, deg F		126	102		
PID Readings, ppmv	72	1	39	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	12					
V-2	50	10					
V-3	50	12					
MW-1	0						
MW-3	100	12					
MW-7	100	12					
pw 5	0						

Signature: [signature]
Date: 1708

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF	1709 0509	02111AGAC1	1707 0513
02111ASAEFF	〉 0517	02111AEFF	〉 0511
02111ASYSINF	0515		
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 1708

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 1709
Onsite Time: 0715
Offsite Time: 0845

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 45

System Status Upon Arrival: [X] Operational [ ] Non-operational
System Status At Departure: [ ] Operational [X] Non-operational Well LMT
Transfer Pump: [ ] Operational [X] Non-operational

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1239376

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 3

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.33
Temperature: 15.3 C

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		381088			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	1709 0757	02111MW2WINF	1709 0805
02111ASWINF	0751		
02111ASWEFF	0747		
02111WGAC1	0743		
02111WEFF	0738		
		TB2111709	1709 0807

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: _____ Date: 1709

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 11509
Onsite Time: 0600
Offsite Time: 0815
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 45

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒ Restart
System Status Upon Departure:	Operational	☒	Non-Operational	☐

Electric Meter Reading: NM
Hour Meter Reading: 2686
Totalizer Reading Prior to Air Stripper: 202767
PID Calibration Date: 11209
Totalizer Reading After Air Stripper: 1283120

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		23			
Air Velocity, FPM		1980			
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm			180		
Applied Vacuum, "wc	20"Hg	.26	NA	NA	
Temperature, deg F		117	90		
PID Readings, ppmv	104	1	35	0	PID for GAC-1 ~~0~~

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	15					
V-2	50	16					
V-3	50	15					
MW-1	0						
MW-3	100	17					
MW-7	100	16					
MW5	0						

Signature: Chad
Date: 11509

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes
Sweep compound Pickup Truck

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 1 15 09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 11509
Onsite Time: 0600
Offsite Time: 0815

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 49

System Status Upon Arrival: ☐ Operational ☒ Non-operational Restart
System Status At Departure: ☒ Operational ☐ Non-operational
Transfer Pump: ☒ Operational ☐ Non-operational

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1239672

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: _____
Temperature: _____

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		381239			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF			
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: _____ Date: 11509

ORIGINAL

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

Date: 1 2009
Onsite Time: 0630
Offsite Time: 0715
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 41

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒ Hr/G H2O
System Status Upon Departure:	Operational	☒	Non-Operational	☐
Electric Meter Reading:	—			
Hour Meter Reading:	26.98			
Totalizer Reading Prior to Air Stripper:	208960	PID Calibration Date:	11909	
Totalizer Reading After Air Stripper:	1288840			

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		25"			
Air Velocity, FPM		1994			
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm			175		
Applied Vacuum, "wc	19" Hg	.40	NA	NA	
Temperature, deg F		104	80	~~0~~	
PID Readings, ppmv	111	1	60	~~0~~	PID for GAC-1: ~~0~~

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	15					
V-2	50	13					
V-3	50	15					
MW-1	~~0~~						
MW-3	100	15					
MW-7	100	15					
MW-8	~~0~~						

Signature: Chris Hall
Date: 1 2009

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes
Station Fenced off - Closed
They are installing New Vapor Recovery System

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: Chris Neff

Date: 12004

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 1-20-09
Onsite Time: 0630
Offsite Time: 0715

Technician: CH/LC
Weather Conditions: Clear
Ambient Temperature 41

System Status Upon Arrival: ☐ Operational ☒ Non-operational High H2O
System Status At Departure: ☒ Operational ☐ Non-operational
Transfer Pump: ☒ Operational ☐ Non-operational

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1245970

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: _____
Temperature: _____

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		384140			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF			
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: _____ Date: 1/20/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

Date: 1 2909
Onsite Time: 1045
Offsite Time: 0540
Equipment Manufacturer/Model#

Technician: CHILC
Weather Conditions: Clear
Ambient Temperature: 45

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒ Hyd. H2O
System Status Upon Departure:	Operational	☒	Non-Operational	☐
Electric Meter Reading:	NM			
Hour Meter Reading:	2711			
Totalizer Reading Prior to Air Stripper:	214370	PID Calibration Date:	12609	
Totalizer Reading After Air Stripper:	1293910			

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		25			
Air Velocity, FPM		2180			
Pipe Diameter, inches		4		3	
Air Flow Rate, cfm			175		
Applied Vacuum, "wc	20"Hg	.38	NA	NA	
Temperature, deg F		101	90		
PID Readings, ppmv	140	1	42	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	16					
V-2	50	17					
V-3	50	16					
MW-1	0						
MW-3	100	17					
MW-7	100	17					
MW5	0						

Signature: [signature]
Date: 12909

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 12909

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

Date: 1 29 09
Onsite Time: 0445
Offsite Time: 0544

Technician: CHILL
Weather Conditions: clear
Ambient Temperature 45

System Status Upon Arrival: ☐ Operational ☒ Non-operational High water Tank
System Status At Departure: ☒ Operational ☐ Non-operational
Transfer Pump: ☒ Operational ☐ Non-operational

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1249865

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: _____
Temperature: _____

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		386273			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF			
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: _____ Date: 1 29 09

Atlantic Richfield Company

bp A BP affiliated company

Chain of Custody Record

RUSH

Page 1 of 1

Project Name: ARCO Facility No. 2111
BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): 24 hours for Effluent & STD for others

On-site Time:	0715	Temp:	45
Off-site Time:	0945	Temp:	46
Sky Conditions:	Clear		
Meteorological Events:			
Wind Speed:		Direction:	

Lab Name:	Calscience Environmental Laboratories, Inc.
Address:	7440 Lincoln Way
	Garden Grove, CA 92841
Lab PM:	Linda Scharpenberg
Tele/Fax:	714-895-5494/ 714-895-7501
BP/AR PM Contact:	Paul Supple
Address:	2010 Crow Canyon Place, Suite 150
	San Ramon, CA
Tele/Fax:	925-275-3506/925-275-3815

BP/AR Facility No.:	2111
BP/AR Facility Address:	1156 Davis St., San Leandro
Site Lat/Long:	
California Global ID No.:	T0600101764
Enfos Project No.:	TBA
Provision or OOC (circle one)	Provision
Phase/WBS:	03-O&M
Sub Phase/Task:	03-Analytical
Cost Element:	Subcontractor Cost

Consultant/Contractor:	Stratus Environmental, Inc.
Address:	3330 Cameron Park Drive, Suite 550
	Cameron Park, CA 95682
Consultant/Contractor Project No.:	E2111-03
Consultant/Contractor PM:	Jay Johnson
Tele/Fax:	(530) 676-6000 / (530) 676-6005
Report Type & QC Level:	Level 1 with EDF
E-mail EDD To:	shayes@stratusinc.net
Invoice to:	Atlantic Richfield Co.

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO	Requested Analysis: BTEX	Requested Analysis: MTBE	Requested Analysis: 5-oxygenates	Turnaround Time: 24-hours	Turnaround Time: Standard	Sample Point Lat/Long and Comments
1	02111DPEAINF	0819	1/09			X		2	X					X	X	X			X	5-oxygenates requested are MTBE, DIPE, ETBE, TAME, and TBA.
2	02111ASAEFF	0917				X		2	X					X	X	X			X	
3	02111ASYSINF	0814				X		2	X					X	X	X			X	
4	02111AGAC1	0813				X		2	X					X	X	X			X	
5	02111AEFF	0811				X		2	X					X	X	X			X	
6	02111DPEWINF	0757			X			6				X		X	X		X		X	
7	02111ASWINF	0751			X			6				X		X	X		X		X	
8	02111ASWEFF	0747			X			6				X		X	X		X		X	
9	02111WGAC1	0743			X			6				X		X	X		X		X	
10	02111WEFF	0755			X			6				X		X	X		X		X	
11	02111MW2WINF	0805			X			6				X		X	X		X	X		
														X	X		X		X	
	TB2111709	0807	1/09		X			2												

Sampler's Name:	Chris Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Stratus Environmental, Inc.	Chris Hill Stratus	1/09	0921	CEC	1-9-09	0921
Shipment Date:	1/09						
Shipment Method:	GSO						
Shipment Tracking No:							

Special Instructions: Please cc results to bpedf@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

Calscience
Environmental
Laboratories, Inc.

January 15, 2009

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

Subject: **Calscience Work Order No.: 09-01-0435**
Client Reference: ARCO Facility No. 2111

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/8/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppm (v/v)
Project: ARCO Facility No. 2111			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-01-0435-1-B**	**01/07/09 08:19**	**Air**	**GC/MS AA**	**N/A**	**01/08/09 18:21**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.037	0.010	20		Xylenes (total)	0.055	0.040	20	
Toluene	ND	0.010	20		Methyl-t-Butyl Ether (MTBE)	2.0	0.20	100	
Ethylbenzene	0.036	0.010	20						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	90	57-129			1,2-Dichloroethane-d4	90	47-137		
Toluene-d8	114	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-01-0435-2-A**	**01/07/09 08:17**	**Air**	**GC/MS AA**	**N/A**	**01/08/09 17:35**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.010	0.00050	1		Xylenes (total)	0.0023	0.0020	1	
Toluene	0.0023	0.00050	1		Methyl-t-Butyl Ether (MTBE)	0.37	0.040	20	
Ethylbenzene	0.0055	0.00050	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	96	57-129			1,2-Dichloroethane-d4	99	47-137		
Toluene-d8	102	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-01-0435-3-B**	**01/07/09 08:15**	**Air**	**GC/MS AA**	**N/A**	**01/08/09 23:40**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.020	0.0025	5		Xylenes (total)	0.038	0.010	5	
Toluene	0.0033	0.0025	5		Methyl-t-Butyl Ether (MTBE)	1.2	0.080	40	
Ethylbenzene	0.022	0.0025	5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	90	57-129			1,2-Dichloroethane-d4	86	47-137		
Toluene-d8	105	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-01-0435-4-B**	**01/07/09 08:13**	**Air**	**GC/MS AA**	**N/A**	**01/08/09 19:54**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.00050	1		Xylenes (total)	ND	0.0020	1	
Toluene	0.0021	0.00050	1		Methyl-t-Butyl Ether (MTBE)	0.36	0.040	20	
Ethylbenzene	ND	0.00050	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	87	57-129			1,2-Dichloroethane-d4	80	47-137		
Toluene-d8	102	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15
		Units:	ppm (v/v)
Project: ARCO Facility No. 2111			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-01-0435-5-A**	**01/07/09 08:11**	**Air**	**GC/MS AA**	**N/A**	**01/08/09 16:45**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.0015	0.00050	1		Xylenes (total)	0.0044	0.0020	1	
Toluene	0.0051	0.00050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1	
Ethylbenzene	ND	0.00050	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	98	57-129			1,2-Dichloroethane-d4	101	47-137		
Toluene-d8	97	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-09-002-8,053**	**N/A**	**Air**	**GC/MS AA**	**N/A**	**01/08/09 15:53**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.00050	1		Xylenes (total)	ND	0.0020	1	
Toluene	ND	0.00050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1	
Ethylbenzene	ND	0.00050	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	97	57-129			1,2-Dichloroethane-d4	98	47-137		
Toluene-d8	97	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-09-002-8,055**	**N/A**	**Air**	**GC/MS K**	**N/A**	**01/09/09 09:26**	**090109L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.00050	1		Xylenes (total)	ND	0.0020	1	
Toluene	ND	0.00050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0020	1	
Ethylbenzene	ND	0.00050	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	96	57-129			1,2-Dichloroethane-d4	94	47-137		
Toluene-d8	97	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-01-0435
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-3M

Project: ARCO Facility No. 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-01-0435-1-A**	**01/07/09 08:19**	**Air**	**GC 19**	**N/A**	**01/08/09 15:42**	**090108L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	93	13	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-01-0435-2-A**	**01/07/09 08:17**	**Air**	**GC 19**	**N/A**	**01/08/09 13:27**	**090108L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	13	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-01-0435-3-A**	**01/07/09 08:15**	**Air**	**GC 19**	**N/A**	**01/08/09 16:50**	**090108L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	46	13	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-01-0435-4-A**	**01/07/09 08:13**	**Air**	**GC 19**	**N/A**	**01/08/09 17:20**	**090108L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	13	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-01-0435-5-A**	**01/07/09 08:11**	**Air**	**GC 19**	**N/A**	**01/08/09 14:01**	**090108L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	13	1		ppm (v/v)

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-693-105**	**N/A**	**Air**	**GC 19**	**N/A**	**01/08/09 08:40**	**090108L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	13	1		ppm (v/v)

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 01/08/09
Work Order No: 09-01-0435
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO Facility No. 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-01-0435-6-E**	**01/07/09 07:57**	**Aqueous**	**GC 4**	**01/08/09**	**01/09/09 01:30**	**090108B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-01-0435-7-E**	**01/07/09 07:51**	**Aqueous**	**GC 4**	**01/08/09**	**01/09/09 00:57**	**090108B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	75	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-01-0435-8-E**	**01/07/09 07:47**	**Aqueous**	**GC 4**	**01/08/09**	**01/08/09 23:18**	**090108B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-01-0435-9-E**	**01/07/09 07:43**	**Aqueous**	**GC 4**	**01/08/09**	**01/08/09 23:50**	**090108B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	71	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-01-0435
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO Facility No. 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-01-0435-10-E**	**01/07/09 07:38**	**Aqueous**	**GC 4**	**01/08/09**	**01/08/09 17:48**	**090108B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	68	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-01-0435-11-E**	**01/07/09 08:05**	**Aqueous**	**GC 4**	**01/08/09**	**01/09/09 00:24**	**090108B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	160	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	83	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-392**	**N/A**	**Aqueous**	**GC 4**	**01/08/09**	**01/08/09 12:52**	**090108B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	73	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-01-0435
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO Facility No. 2111		Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-01-0435-6-A**	**01/07/09 07:57**	**Aqueous**	**GC/MS L**	**01/08/09**	**01/08/09 19:29**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	10	20		Tert-Butyl Alcohol (TBA)	210	200	20	
Ethylbenzene	ND	10	20		Diisopropyl Ether (DIPE)	ND	10	20	
Toluene	ND	10	20		Ethyl-t-Butyl Ether (ETBE)	ND	10	20	
Xylenes (total)	ND	10	20		Tert-Amyl-Methyl Ether (TAME)	ND	10	20	
Methyl-t-Butyl Ether (MTBE)	160	10	20						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	110	73-157			Dibromofluoromethane	105	82-142		
Toluene-d8	106	82-112			1,4-Bromofluorobenzene	81	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-01-0435-7-C**	**01/07/09 07:51**	**Aqueous**	**GC/MS BB**	**01/12/09**	**01/12/09 17:51**	**090112L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.5	5		Tert-Butyl Alcohol (TBA)	140	50	5	
Ethylbenzene	ND	2.5	5		Diisopropyl Ether (DIPE)	ND	2.5	5	
Toluene	ND	2.5	5		Ethyl-t-Butyl Ether (ETBE)	ND	2.5	5	
Xylenes (total)	ND	2.5	5		Tert-Amyl-Methyl Ether (TAME)	ND	2.5	5	
Methyl-t-Butyl Ether (MTBE)	90	2.5	5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	102	73-157			Dibromofluoromethane	107	82-142		
Toluene-d8	94	82-112			1,4-Bromofluorobenzene	95	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-01-0435-8-C**	**01/07/09 07:47**	**Aqueous**	**GC/MS BB**	**01/12/09**	**01/12/09 18:22**	**090112L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	94	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	8.9	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	98	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	94	82-112			1,4-Bromofluorobenzene	100	75-105		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO Facility No. 2111			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-01-0435-9-A**	**01/07/09 07:43**	**Aqueous**	**GC/MS L**	**01/08/09**	**01/08/09 20:52**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	112	73-157		Dibromofluoromethane	103	82-142	
Toluene-d8	92	82-112		1,4-Bromofluorobenzene	87	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-01-0435-10-A**	**01/07/09 07:38**	**Aqueous**	**GC/MS L**	**01/08/09**	**01/08/09 15:46**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	102	73-157		Dibromofluoromethane	108	82-142	
Toluene-d8	113	82-112		LH,AY 1,4-Bromofluorobenzene	96	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-01-0435-11-C**	**01/07/09 08:05**	**Aqueous**	**GC/MS BB**	**01/12/09**	**01/12/09 18:52**	**090112L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	5.2	1.0	2		Tert-Butyl Alcohol (TBA)	260	20	2	
Ethylbenzene	4.6	1.0	2		Diisopropyl Ether (DIPE)	ND	1.0	2	
Toluene	ND	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	1.0	2	
Xylenes (total)	1.1	1.0	2		Tert-Amyl-Methyl Ether (TAME)	ND	1.0	2	
Methyl-t-Butyl Ether (MTBE)	45	1.0	2						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	105	73-157		Dibromofluoromethane	110	82-142	
Toluene-d8	95	82-112		1,4-Bromofluorobenzene	99	75-105	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-01-0435
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO Facility No. 2111		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-638**	**N/A**	**Aqueous**	**GC/MS L**	**01/08/09**	**01/08/09 13:54**	**090108L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	107	73-157			Dibromofluoromethane	112	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	96	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-646**	**N/A**	**Aqueous**	**GC/MS BB**	**01/12/09**	**01/12/09 12:19**	**090112L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	92	73-157			Dibromofluoromethane	99	82-142		
Toluene-d8	96	82-112			1,4-Bromofluorobenzene	93	75-105		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.		Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-3M

Project: ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
02111DPEAINF	**Air**	**GC 19**	**N/A**	**01/08/09**	**090108D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	93	100	7	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-0446-4	**Aqueous**	**GC 4**	**01/08/09**	**01/08/09**	**090108S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	100	103	38-134	3	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-0434-8	**Aqueous**	**GC/MS L**	**01/08/09**	**01/08/09**	**090108S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	111	100	86-122	10	0-8	BA,AY
Carbon Tetrachloride	112	109	78-138	2	0-9	
Chlorobenzene	104	104	90-120	0	0-9	
1,2-Dibromoethane	113	107	70-130	5	0-30	
1,2-Dichlorobenzene	98	97	89-119	1	0-10	
1,1-Dichloroethene	106	106	52-142	1	0-23	
Ethylbenzene	114	111	70-130	2	0-30	
Toluene	108	107	85-127	1	0-12	
Trichloroethene	98	104	78-126	5	0-10	
Vinyl Chloride	94	94	56-140	1	0-21	
Methyl-t-Butyl Ether (MTBE)	99	106	64-136	7	0-28	
Tert-Butyl Alcohol (TBA)	98	94	27-183	4	0-60	
Diisopropyl Ether (DIPE)	93	105	78-126	12	0-16	
Ethyl-t-Butyl Ether (ETBE)	100	103	67-133	2	0-21	
Tert-Amyl-Methyl Ether (TAME)	112	102	63-141	9	0-21	
Ethanol	83	83	11-167	1	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	01/08/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-0452-1	**Aqueous**	**GC/MS BB**	**01/12/09**	**01/12/09**	**090112S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	93	86-122	1	0-8	
Carbon Tetrachloride	87	87	78-138	0	0-9	
Chlorobenzene	97	97	90-120	0	0-9	
1,2-Dibromoethane	74	85	70-130	13	0-30	
1,2-Dichlorobenzene	98	100	89-119	2	0-10	
1,1-Dichloroethene	94	91	52-142	4	0-23	
Ethylbenzene	84	84	70-130	0	0-30	
Toluene	93	91	85-127	2	0-12	
Trichloroethene	91	89	78-126	2	0-10	
Vinyl Chloride	84	85	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	89	96	64-136	7	0-28	
Tert-Butyl Alcohol (TBA)	109	109	27-183	0	0-60	
Diisopropyl Ether (DIPE)	92	95	78-126	4	0-16	
Ethyl-t-Butyl Ether (ETBE)	88	93	67-133	5	0-21	
Tert-Amyl-Methyl Ether (TAME)	88	92	63-141	4	0-21	
Ethanol	120	108	11-167	10	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,053	**Air**	**GC/MS AA**	**N/A**	**01/08/09**	**090108L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	124	121	60-156	2	0-40	
Toluene	118	112	56-146	5	0-43	
Ethylbenzene	125	118	52-154	5	0-38	
p/m-Xylene	115	110	42-156	5	0-41	
o-Xylene	118	111	52-148	5	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,055	Air	GC/MS K	N/A	01/09/09	090109L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	110	108	60-156	2	0-40	
Toluene	111	108	56-146	3	0-43	
Ethylbenzene	114	112	52-154	2	0-38	
p/m-Xylene	112	109	42-156	2	0-41	
o-Xylene	113	110	52-148	3	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-392	**Aqueous**	**GC 4**	**01/08/09**	**01/08/09**	**090108B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	97	98	78-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received:	N/A
3330 Cameron Park Drive, Suite 550	Work Order No:	09-01-0435
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-638	Aqueous	GC/MS L	01/08/09	01/08/09	090108L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	99	102	87-117	82-122	3	0-7	
Carbon Tetrachloride	110	112	78-132	69-141	2	0-8	
Chlorobenzene	102	103	88-118	83-123	1	0-8	
1,2-Dibromoethane	110	112	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	94	99	88-118	83-123	5	0-8	
1,1-Dichloroethene	107	108	71-131	61-141	2	0-14	
Ethylbenzene	109	111	80-120	73-127	2	0-20	
Toluene	95	101	85-127	78-134	7	0-7	
Trichloroethene	104	106	85-121	79-127	2	0-11	
Vinyl Chloride	93	95	64-136	52-148	2	0-10	
Methyl-t-Butyl Ether (MTBE)	100	102	67-133	56-144	2	0-16	
Tert-Butyl Alcohol (TBA)	101	94	34-154	14-174	8	0-19	
Diisopropyl Ether (DIPE)	107	104	80-122	73-129	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	105	104	73-127	64-136	1	0-11	
Tert-Amyl-Methyl Ether (TAME)	103	106	69-135	58-146	3	0-12	
Ethanol	89	87	34-124	19-139	2	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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-01-0435
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO Facility No. 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-646	Aqueous	GC/MS BB	01/12/09	01/12/09	090112L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	92	96	87-117	82-122	4	0-7	
Carbon Tetrachloride	86	91	78-132	69-141	6	0-8	
Chlorobenzene	95	99	88-118	83-123	4	0-8	
1,2-Dibromoethane	73	76	80-120	73-127	4	0-20	LR
1,2-Dichlorobenzene	96	101	88-118	83-123	5	0-8	
1,1-Dichloroethene	92	97	71-131	61-141	5	0-14	
Ethylbenzene	84	87	80-120	73-127	3	0-20	
Toluene	90	94	85-127	78-134	4	0-7	
Trichloroethene	88	93	85-121	79-127	5	0-11	
Vinyl Chloride	83	88	64-136	52-148	5	0-10	
Methyl-t-Butyl Ether (MTBE)	84	91	67-133	56-144	8	0-16	
Tert-Butyl Alcohol (TBA)	101	102	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	88	94	80-122	73-129	7	0-8	
Ethyl-t-Butyl Ether (ETBE)	86	92	73-127	64-136	6	0-11	
Tert-Amyl-Methyl Ether (TAME)	84	89	69-135	58-146	5	0-12	
Ethanol	87	93	34-124	19-139	7	0-44	

Total number of LCS compounds : 16
Total number of ME compounds : 1
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-01-0435

Qualifier	Definition
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 abovelimit; 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 interfence suspected.
LN,AY	MS and/or MSD below acceptance limits. See Blank Spike (LCS). Matrix interfence suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.

Qualifier	Definition
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.

Atlantic Richfield Company

bp
A BP affiliated company

Chain of Custody Record

RUSH (0435)

Project Name: ARCO Facility No. 2111
BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda
State or Lead Regulatory Agency: Alameda County Environmental Health
Requested Due Date (mm/dd/yy): 24 hours for Effluent & STD for others

On-site Time:	0715	Temp:	45
Off-site Time:	0845	Temp:	46
Sky Conditions:	Clear		
Meteorological Events:			
Wind Speed:		Direction:	

Lab Name: Calscience Environmental Laboratories, Inc.	BP/AR Facility No.: 2111	Consultant/Contractor: Stratus Environmental, Inc.
Address: 7440 Lincoln Way	BP/AR Facility Address: 1156 Davis St., San Leandro	Address: 3330 Cameron Park Drive, Suite 550
Garden Grove, CA 92841	Site Lat/Long:	Cameron Park, CA 95682
Lab PM: Linda Scharpenberg	California Global ID No.: T0600101764	Consultant/Contractor Project No.: E2111-03
Tele/Fax: 714-895-5494/ 714-895-7501	Enfos Project No.: TBA	Consultant/Contractor PM: Jay Johnson
BP/AR PM Contact: Paul Supple	Provision or OOC (circle one) Provision	Tele/Fax: (530) 676-6000 / (530) 676-6005
Address: 2010 Crow Canyon Place, Suite 150	Phase/WBS: 03-O&M	Report Type & QC Level: Level 1 with EDF
San Ramon, CA	Sub Phase/Task: 03-Analytical	E-mail EDD To: shayes@stratusinc.net
Tele/Fax: 925-275-3506/925-275-3815	Cost Element: Subcontractor Cost	Invoice to: Atlantic Richfield Co.

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO	Requested Analysis: BTEX	Requested Analysis: MTBE	Requested Analysis: 5-oxygenates	Turnaround Time: 24-hours	Turnaround Time: Standard	Sample Point Lat/Long and Comments
1	02111DPEAINF	0819	1/7/09			x		2	x					x	x	x			x	5-oxygenates requested are MTBE, DIPE, ETBE, TAME, and TBA.
2	02111ASAEFF	0817				x		2	x					x	x	x			x	
3	02111ASYSINF	0814				x		2	x					x	x	x			x	
4	02111AGAC1	0813				x		2	x					x	x	x			x	
5	02111AEFF	0811				x		2	x					x	x	x		x		
6	02111DPEWINF	0757			x			6				x		x	x		x		x	
7	02111ASWINF	0751			x			6				x		x	x		x		x	
8	02111ASWEFF	0747			x			6				x		x	x		x		x	
9	02111WGAC1	0743			x			6				x		x	x		x		x	
10	02111WEFF	0735			x			6				x		x	x		x	x		
11	02111MW2WINF	0805			x			6				x		x	x		x		x	
12	TB2111 1709	0807	1/7/09		X			2										Hold		

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Chris Hill						
Sampler's Company: Stratus Environmental, Inc.						
Shipment Date: 1/7/09						
Shipment Method: GSO	GSO	1/7/09	1731			
Shipment Tracking No: 5110 39982					1/8/09	1030

Special Instructions: Please cc results to bpedf@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

BP COC Rev. 5 10/11/2006

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-01-0435

SAMPLE RECEIPT FORM

Cooler 1 of 2

CLIENT: Stratus

DATE: 01/08/09

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

Temperature 1.8 °C - 0.2 °C (CF) = 1.6 °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:** JP

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** JP

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** BF

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☑	☐	☐
Volatile analysis container(s) free of headspace	☐	☑	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

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

Water: ☐VOA ☑6 VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____

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

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

Checked/Labeled by: BF

Reviewed by: W.S.C

Scanned by: BF

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-01-0435

SAMPLE RECEIPT FORM

Box ~~Cooler~~ 1 of 1

CLIENT: Stratus DATE: 01/08/09

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

Temperature ____.____ °C - 0.2 °C (CF) = ____.____ °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:** BP

CUSTODY SEALS INTACT:

☑ ~~Cooler~~ ☑ Box ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** BP

☐ Sample ☐_____ ☐ No (Not Intact) ☒ Not Present **Initial:** BP

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☑	☐	☐

CONTAINER TYPE:

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

Water: ☐VOA ☐VOAh ☐$VOAna_2$ ☐125AGB ☐125AGBh ☐$125AGBpo_4$ ☐1AGB ☐$1AGBna_2$ ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐$100PBna_2$ ☐_____ ☐_____ ☐_____

Air: ☑Tedlar® ☐Summa® ☐_____ **Checked/Labeled by:** BP

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

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH **Scanned by:** BP

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-01-0435

SAMPLE ANOMALY FORM

CHAIN OF CUSTODY (COC):

Comments:

- ☐ **Not relinquished by client – no signature**
- ☐ **No date/time relinquished**
- ☐ **COC not received with samples** – notify PM
- ☐ **Incomplete information regarding samples, tests, etc.**

SAMPLES - CONTAINERS & LABELS:

Comments:

- ☐ **Samples NOT RECEIVED but listed on COC**
- ☐ **Samples received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s) used** – list test
- ☐ **No preservative noted on label** – list test and notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☐ **Sample labels do not match COC** – Note in comments
  - ☐ **Sample ID**
  - ☐ **Date and Time Collected**
  - ☐ **Project Information**
  - ☐ **# of containers**
- ☐ **Sample containers compromised** – Note in comments
  - ☐ **Leaking**
  - ☐ **Broken**
  - ☐ **Without Labels**
- ☐ **Other:** _____

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of RSK or CO_2 or DO or Organic Lead Received
7,11	F	6						

Comments: _____

Initial / Date BF 1/8/09

STRATUS
ENVIRONMENTAL, INC.

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

March 5, 2009

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

Re: Remediation System Operation and Maintenance Data Package, ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California.

General Information

Data Submittal Prepared / Reviewed by: Sonia Nandi and Kiran Nagaraju / Jay Johnson

Phone Number: (530) 676-6007 / (530) 676-6000

On-Site Supplier Representatives: Chris Hill and Marty Morgan

Number of Site Visits: 5 (February 3, 10, 12, 18, and 24, 2009)

System Overview: Dual Phase Extraction System, Air Stripper, and Groundwater Extraction and Treatment System (GETS).

Operational Status: Continuous operation

Scope of Work Performed: Conduct routine system operation and maintenance and record field measurements. Influent, mid-fluent, and effluent air and water samples were collected on February 3, 2009.

Variations from Scope of Work: The remediation systems were shutdown after sampling on February 3, 2009, pending receipt and verification of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on February 10, 2009.

Per Broadbent's request, groundwater extraction using well MW-2 was temporarily discontinued on February 18, 2009.

The cover on the effluent flow totalizer had an algae build-up and hence the reading could not be recorded on February 24, 2009. During the next site visit in March 2009, the effluent flow totalizer and the cover will be cleaned.

The attachments include 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.

Kiran Nagaraju
Project Engineer

Jay R. Johnson, P.G.
Project Manager

Attachments:

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

cc: Paul Supple, BP/ARCO

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

Date: 2309
Onsite Time: 0500
Offsite Time: 0645
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 40

System Information

System Status Upon Arrival:	Operational	☒	Non-Operational	☐
System Status Upon Departure:	Operational	☐	Non-Operational	☒ Wm.4 LM13

Electric Meter Reading: NM
Hour Meter Reading: 2832
Totalizer Reading Prior to Air Stripper: 267989
PID Calibration Date: 2.2.09
Totalizer Reading After Air Stripper: 1344010

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		27			
Air Velocity, FPM		1880			
Pipe Diameter, inches	3	4	4	3	
Air Flow Rate, cfm			180		
Applied Vacuum, "wc	20"Hg	30	NA	NA	
Temperature, deg F		130	110		
PID Readings, ppmv	30	1	15	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	12					
V-2	50	12					
V-3	50	12					
MW-1	0						
MW-3	100	12					
MW-7	100	12					
MW5	0						

Signature:
Date: 2309

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF	2309 0610	02111AGAC1	2309 0603
02111ASAEFF	" 0605	02111AEFF	" 0600
02111ASYSINF	" 0602		
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 2309

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

Date: 2 3 0 9
Onsite Time: 0500
Offsite Time: 0645

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 40

System Status Upon Arrival: [X] Operational [ ] Non-operational
System Status At Departure: [ ] Operational [X] Non-operational Went LAB
Transfer Pump: [ ] Operational [X] Non-operational

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1297359

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.7
Temperature: 15.3°C

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		406988			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	2309 0545	02111MW2WINF	2309 0550
02111ASWINF	0541	TB2112309	0558
02111ASWEFF	0538		
02111WGAC1	0535		
02111WEFF	0532		

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: _____ Date: 2 3 0 9

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 21009
Onsite Time: 0900
Offsite Time: 1001
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: clear
Ambient Temperature: 36

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒ Fixed
System Status Upon Departure:	Operational	☒	Non-Operational	☐
Electric Meter Reading:	2111			
Hour Meter Reading:	2934			
Totalizer Reading Prior to Air Stripper:	268484	PID Calibration Date:	2-909	
Totalizer Reading After Air Stripper:	134460			

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		26			
Air Velocity, FPM		1594			
Pipe Diameter, inches	3	4	4	3	
Air Flow Rate, cfm			175		
Applied Vacuum, "wc	20" Hg	.30" H_2O	NA	NA	
Temperature, deg F		112	90		
PID Readings, ppmv	15	1	9	8	PID for GAC-1: 8

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	11					
V-2	50	10					
V-3	50	10					
MW-1	0						
MW-3	100	12					
MW-7	100	12					
MW5	0						

Signature: Chill
Date: 21009

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 2 10 09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

Date: 2 10 09
Onsite Time: 0900
Offsite Time: 0901

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 36

System Status Upon Arrival: ☐ Operational ☒ Non-operational Restart
System Status At Departure: ☒ Operational ☐ Non-operational
Transfer Pump: ☒ Operational ☐ Non-operational

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1297652

No. of Carbon Vessels: 3

Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: _____
Temperature: _____

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		407057			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF			
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: _____ Date: 2 10 09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 21209
Onsite Time: 0755
Offsite Time: 0817
Equipment Manufacturer/Model#

Technician: CHILC
Weather Conditions: Rain
Ambient Temperature: 45

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒ High H2O
System Status Upon Departure:	Operational	☒	Non-Operational	☐

Electric Meter Reading:
Hour Meter Reading:
Totalizer Reading Prior to Air Stripper: 271566
PID Calibration Date:
Totalizer Reading After Air Stripper: 1347300

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc					
Air Velocity, FPM					
Pipe Diameter, inches					
Air Flow Rate, cfm					
Applied Vacuum, "wc			NA	NA	
Temperature, deg F					
PID Readings, ppmv					PID for GAC-1:

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1							
V-2							
V-3							
MW-1							
MW-3							
MW-7							

Signature:
Date: 21209

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 2 12 09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 21809
Onsite Time: 0530
Offsite Time: 0650
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clouds - Rain
Ambient Temperature: 45

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒ Power outage
System Status Upon Departure:	Operational	☒	Non-Operational	☐

Electric Meter Reading: NM
Hour Meter Reading: 2893
Totalizer Reading Prior to Air Stripper: 286575
PID Calibration Date: 21609
Totalizer Reading After Air Stripper: 136430

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		32"			
Air Velocity, FPM		2169			
Pipe Diameter, inches		4			
Air Flow Rate, cfm			179		
Applied Vacuum, "wc	20" Hg	40" H_2O	NA	NA	
Temperature, deg F		113	82		
PID Readings, ppmv	10	1	3	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	17					
V-2	50	12					
V-3	50	17					
MW-1	0						
MW-3	100	17					
MW-7	100	17					

Signature: [signature]
Date: 21809

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: [signature]

Date: 2/8/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 21809
Onsite Time: 0530
Offsite Time: 0650

Technician: CHILL
Weather Conditions: Cloudy - Rain
Ambient Temperature 45

System Status Upon Arrival: ☐ Operational ☒ Non-operational Powerdge
System Status At Departure: ☒ Operational ☐ Non-operational
Transfer Pump: ☒ Operational ☐ Non-operational

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1313764

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 10

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: _____
Temperature: _____

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		405396			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF			
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes: Pump @ MW-2 was shutdown per Broadbent's request.

Signature: _____ Date: 21809

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 2/24/09
Onsite Time: 0600
Offsite Time: 0700
Equipment Manufacturer/Model#

Technician: MW Morgan
Weather Conditions: Overcast
Ambient Temperature: 47

System Information

System Status Upon Arrival:	Operational	☒	Non-Operational	☐
System Status Upon Departure:	Operational	☒	Non-Operational	☐

Electric Meter Reading:
Hour Meter Reading: 3060.9
Totalizer Reading Prior to Air Stripper: 345513
PID Calibration Date: 2/25/09
Totalizer Reading After Air Stripper: 1415840

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		30"			
Air Velocity, FPM		1995			
Pipe Diameter, inches					
Air Flow Rate, cfm			180		
Applied Vacuum, "wc	26	34	NA	NA	
Temperature, deg F			105		
PID Readings, ppmv	7	.6	4.1	0	PID for GAC-1: 6

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	15					
V-2	50	12					
V-3	50	14					
MW-1	0	5					
MW-3	100	17					
MW-7	100	16					

Signature: [signature]
Date: 2/24/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 2/24/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 2/24/09
Onsite Time: 0600
Offsite Time: 0700

Technician: MW Morgan
Weather Conditions: Overcast
Ambient Temperature 47

System Status Upon Arrival: [x] Operational [ ] Non-operational
System Status At Departure: [x] Operational [ ] Non-operational
Transfer Pump: [x] Operational [ ] Non-operational

Transfer Pump Hour Meter Reading: N/A
Effluent Flow Totalizer Reading: Can't read
No. of Carbon Vessels: 2
Lead Carbon Vessel Pressure (psi): 11

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH:
Temperature:

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		NM			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF			
02111ASWEFF	NC		
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes: Effluent totalizer had algae build-up on screen, so could not be read.

Signature: [signature] Date: 2/24/09

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

Page 1 of 1

BP/ARC Project Name: ARCO 2111- O&M
BP/ARC Facility No: 2111
Req Due Date (mm/dd/yy): Eff 24hrs&othersSTD Rush TAT: Yes x No
Lab Work Order Number: 0279

Lab Name: Calscience Environmental Laboratories, Inc.	BP/ARC Facility Address: 1156 Davis Street	Consultant/Contractor: Stratus Environmental, Inc.
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: San Leandro, California	Consultant/Contractor Project No: E2111-03
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda County Environmental Health	Address: 3330 Cameron Park Dr., Suite 550, Cameron Park, CA 95682
Lab Phone: 714-895-5494	California Global ID No.: T0600101764	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt: 9255	Enfos Proposal No:	Phone: 530-676-6000
Lab Bottle Order No:	Accounting Mode: Provision x OOC-BU ___ OOC-RM ___	Email EDD To: shayes@stratusinc.net
Other Info:	Stage: Operate Activity: O&M	Invoice To: BP/ARC x Contractor ___
BP/ARC EBM: Paul Supple		
EBM Phone: 925-275-3801		
EBM Email: paul.supple@bp.com		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO	BTEX	MTBE	5-oxys			Turnaround Time: 24-hours	Standard			Report Type & QC Level
1	02111DPEAINF	2309	0600			x		2	x						x	x	x					x			Standard x
2	02111ASAEFF		0608			x		2	x						x	x	x					x			Full Data Package ___
3	02111ASYSINF		0606			x		2	x						x	x	x					x			
4	02111AGAC1		0603			x		2	x						x	x	x					x			Comments
5	02111AEFF		0600			x		2	x						x	x	x					x			Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.
6	02111DPEWINF		0545		x			6				x			x	x		x			x				5-oxys include MTBE, TBA, TAME,
7	02111ASWINF		0541		x			6				x			x	x		x				x			DIPE, & ETBE. 24-hr TAT only for
8	02111ASWEFF		0538		x			6				x			x	x		x				x			GRO, BTEX, & 5-oxys.
9	02111WGAC1		0535		x			6				x			x	x		x				x			
10	02111WEFF		0532		x			6				x			x	x		x				x			
11	02111MW2WINF		0550		x			6				x			x	x		x			x				
12	TB2111 2309		0558					2				x										x			HOLD

Sampler's Name: Chris Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus Environmental, Inc.	Chris Hill Stratus	2309	1600	Stacy A. CEL	2/4/09	10:30
Shipment Method: GSO Ship Date: 2309						
Shipment Tracking No: 106193554 / 106193546						
Special Instructions:						

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

Calscience
Environmental
Laboratories, Inc.

February 17, 2009

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

Subject: **Calscience Work Order No.:** **09-02-0279**
Client Reference: **ARCO 2111 - O&M**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/4/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3
Project: ARCO 2111 - O&M		Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-02-0279-1-A**	**02/03/09 06:10**	**Air**	**GC/MS DD**	**N/A**	**02/05/09 12:51**	**090205L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.12	0.064	40		Xylenes (total)	ND	0.35	40	
Toluene	ND	0.075	40		Methyl-t-Butyl Ether (MTBE)	5.9	0.29	40	
Ethylbenzene	0.14	0.087	40						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	88	57-129			1,2-Dichloroethane-d4	92	47-137		
Toluene-d8	92	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-02-0279-2-A**	**02/03/09 06:08**	**Air**	**GC/MS DD**	**N/A**	**02/04/09 18:45**	**090204L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.041	0.0016	1		Xylenes (total)	0.028	0.0087	1	
Toluene	0.028	0.0019	1		Methyl-t-Butyl Ether (MTBE)	1.3	0.14	20	
Ethylbenzene	0.020	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	90	57-129			1,2-Dichloroethane-d4	84	47-137		
Toluene-d8	99	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-02-0279-3-A**	**02/03/09 06:06**	**Air**	**GC/MS DD**	**N/A**	**02/04/09 19:32**	**090204L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.023	0.013	8		Xylenes (total)	ND	0.069	8	
Toluene	ND	0.015	8		Methyl-t-Butyl Ether (MTBE)	1.0	0.058	8	
Ethylbenzene	0.028	0.017	8						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	95	57-129			1,2-Dichloroethane-d4	85	47-137		
Toluene-d8	85	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-02-0279-4-A**	**02/03/09 06:03**	**Air**	**GC/MS DD**	**N/A**	**02/04/09 20:18**	**090204L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0023	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.80	0.072	10	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	91	57-129			1,2-Dichloroethane-d4	82	47-137		
Toluene-d8	97	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3
Project: ARCO 2111 - O&M		Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-02-0279-5-A**	**02/03/09 06:00**	**Air**	**GC/MS DD**	**N/A**	**02/04/09 16:56**	**090204L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	ND	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.055	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	87	57-129			1,2-Dichloroethane-d4	85	47-137		
Toluene-d8	97	78-156							

Method Blank	**097-09-002-8,159**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**02/04/09 13:48**	**090204L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	ND	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	87	57-129			1,2-Dichloroethane-d4	84	47-137		
Toluene-d8	97	78-156							

Method Blank	**097-09-002-8,165**	**N/A**	**Air**	**GC/MS DD**	**N/A**	**02/05/09 11:58**	**090205L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	ND	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	82	57-129			1,2-Dichloroethane-d4	88	47-137		
Toluene-d8	96	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-3M

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-02-0279-1-A**	**02/03/09 06:10**	**Air**	**GC 19**	**N/A**	**02/04/09 14:47**	**090204L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	220	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-02-0279-2-A**	**02/03/09 06:08**	**Air**	**GC 19**	**N/A**	**02/04/09 14:14**	**090204L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-02-0279-3-A**	**02/03/09 06:06**	**Air**	**GC 19**	**N/A**	**02/04/09 15:24**	**090204L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	120	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-02-0279-4-A**	**02/03/09 06:03**	**Air**	**GC 19**	**N/A**	**02/04/09 16:01**	**090204L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-02-0279-5-A**	**02/03/09 06:00**	**Air**	**GC 19**	**N/A**	**02/04/09 13:41**	**090204L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-693-116**	**N/A**	**Air**	**GC 19**	**N/A**	**02/04/09 09:28**	**090204L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-02-0279-6-E**	**02/03/09 05:45**	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09 21:26**	**090204B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	59	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	103	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-02-0279-7-E**	**02/03/09 05:41**	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09 21:59**	**090204B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	66	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	92	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-02-0279-8-E**	**02/03/09 05:38**	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09 20:53**	**090204B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	77	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-02-0279-9-E**	**02/03/09 05:35**	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09 20:20**	**090204B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	90	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-02-0279-10-E**	**02/03/09 05:32**	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09 18:08**	**090204B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	82	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-02-0279-11-E**	**02/03/09 05:50**	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09 22:31**	**090204B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	160	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	99	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-420**	**N/A**	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09 16:29**	**090204B01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-02-0279-6-A**	**02/03/09 05:45**	**Aqueous**	**GC/MS L**	**02/13/09**	**02/13/09 21:28**	**090213L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.5	5		Tert-Butyl Alcohol (TBA)	260	50	5	
Ethylbenzene	ND	2.5	5		Diisopropyl Ether (DIPE)	ND	2.5	5	
Toluene	ND	2.5	5		Ethyl-t-Butyl Ether (ETBE)	ND	2.5	5	
Xylenes (total)	ND	2.5	5		Tert-Amyl-Methyl Ether (TAME)	ND	2.5	5	
Methyl-t-Butyl Ether (MTBE)	110	2.5	5						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	103	73-157		Dibromofluoromethane	107	82-142	
Toluene-d8	106	82-112		1,4-Bromofluorobenzene	92	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-02-0279-7-B**	**02/03/09 05:41**	**Aqueous**	**GC/MS L**	**02/14/09**	**02/14/09 17:06**	**090214L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.0	4		Tert-Butyl Alcohol (TBA)	200	40	4	
Ethylbenzene	ND	2.0	4		Diisopropyl Ether (DIPE)	ND	2.0	4	
Toluene	ND	2.0	4		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	4	
Xylenes (total)	ND	2.0	4		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	4	
Methyl-t-Butyl Ether (MTBE)	65	2.0	4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	98	73-157		Dibromofluoromethane	102	82-142	
Toluene-d8	103	82-112		1,4-Bromofluorobenzene	94	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-02-0279-8-C**	**02/03/09 05:38**	**Aqueous**	**GC/MS L**	**02/14/09**	**02/14/09 17:35**	**090214L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	120	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	6.1	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	98	73-157		Dibromofluoromethane	102	82-142	
Toluene-d8	96	82-112		1,4-Bromofluorobenzene	92	75-105	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111 - O&M			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-02-0279-9-B**	**02/03/09 05:35**	**Aqueous**	**GC/MS L**	**02/14/09**	**02/14/09 18:04**	**090214L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	101	73-157		Dibromofluoromethane	103	82-142	
Toluene-d8	96	82-112		1,4-Bromofluorobenzene	92	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-02-0279-10-A**	**02/03/09 05:32**	**Aqueous**	**GC/MS Z**	**02/04/09**	**02/04/09 18:33**	**090204L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	108	73-157		Dibromofluoromethane	105	82-142	
Toluene-d8	103	82-112		1,4-Bromofluorobenzene	93	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-02-0279-11-B**	**02/03/09 05:50**	**Aqueous**	**GC/MS L**	**02/14/09**	**02/14/09 18:33**	**090214L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	4.4	1.0	2		Tert-Butyl Alcohol (TBA)	290	20	2	
Ethylbenzene	3.1	1.0	2		Diisopropyl Ether (DIPE)	ND	1.0	2	
Toluene	ND	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	1.0	2	
Xylenes (total)	ND	1.0	2		Tert-Amyl-Methyl Ether (TAME)	ND	1.0	2	
Methyl-t-Butyl Ether (MTBE)	33	1.0	2						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	102	73-157		Dibromofluoromethane	104	82-142	
Toluene-d8	105	82-112		1,4-Bromofluorobenzene	95	75-105	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-682**	**N/A**	**Aqueous**	**GC/MS Z**	**02/04/09**	**02/04/09 12:15**	**090204L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	107	73-157		Dibromofluoromethane	107	82-142	
Toluene-d8	101	82-112		1,4-Bromofluorobenzene	93	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-706**	**N/A**	**Aqueous**	**GC/MS L**	**02/13/09**	**02/13/09 13:39**	**090213L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	97	73-157		Dibromofluoromethane	101	82-142	
Toluene-d8	101	82-112		1,4-Bromofluorobenzene	93	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-708**	**N/A**	**Aqueous**	**GC/MS L**	**02/14/09**	**02/14/09 14:10**	**090214L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	101	73-157		Dibromofluoromethane	102	82-142	
Toluene-d8	98	82-112		1,4-Bromofluorobenzene	94	75-105	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.		Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-3M

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
09-02-0282-1	**Air**	**GC 19**	**N/A**	**02/04/09**	**090204D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	3000	3000	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02111WEFF	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09**	**090204S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	104	98	38-134	6	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-01-2318-1	**Aqueous**	**GC/MS Z**	**02/04/09**	**02/04/09**	**090204S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	97	86-122	2	0-8	
Carbon Tetrachloride	108	107	78-138	1	0-9	
Chlorobenzene	95	94	90-120	1	0-9	
1,2-Dibromoethane	95	93	70-130	2	0-30	
1,2-Dichlorobenzene	97	96	89-119	1	0-10	
1,1-Dichloroethene	94	95	52-142	1	0-23	
Ethylbenzene	94	95	70-130	0	0-30	
Toluene	98	96	85-127	2	0-12	
Trichloroethene	96	96	78-126	0	0-10	
Vinyl Chloride	98	102	56-140	4	0-21	
Methyl-t-Butyl Ether (MTBE)	95	92	64-136	2	0-28	
Tert-Butyl Alcohol (TBA)	93	95	27-183	2	0-60	
Diisopropyl Ether (DIPE)	92	88	78-126	4	0-16	
Ethyl-t-Butyl Ether (ETBE)	87	85	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	91	88	63-141	3	0-21	
Ethanol	98	90	11-167	9	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-02-0279
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-1358-4	**Aqueous**	**GC/MS L**	**02/13/09**	**02/13/09**	**090213S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	104	86-122	2	0-8	
Carbon Tetrachloride	112	111	78-138	1	0-9	
Chlorobenzene	104	102	90-120	2	0-9	
1,2-Dibromoethane	96	101	70-130	6	0-30	
1,2-Dichlorobenzene	103	100	89-119	2	0-10	
1,1-Dichloroethene	139	123	52-142	12	0-23	
Ethylbenzene	103	102	70-130	1	0-30	
Toluene	104	117	85-127	12	0-12	
Trichloroethene	106	105	78-126	0	0-10	
Vinyl Chloride	94	94	56-140	0	0-21	
Methyl-t-Butyl Ether (MTBE)	98	94	64-136	4	0-28	
Tert-Butyl Alcohol (TBA)	92	99	27-183	6	0-60	
Diisopropyl Ether (DIPE)	108	104	78-126	4	0-16	
Ethyl-t-Butyl Ether (ETBE)	96	97	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	84	86	63-141	3	0-21	
Ethanol	137	121	11-167	13	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	02/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-02-0268-5	**Aqueous**	**GC/MS L**	**02/14/09**	**02/14/09**	**090214S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	106	86-122	0	0-8	
Carbon Tetrachloride	110	113	78-138	3	0-9	
Chlorobenzene	106	107	90-120	1	0-9	
1,2-Dibromoethane	104	110	70-130	5	0-30	
1,2-Dichlorobenzene	103	104	89-119	1	0-10	
1,1-Dichloroethene	117	120	52-142	2	0-23	
Ethylbenzene	106	106	70-130	0	0-30	
Toluene	114	114	85-127	0	0-12	
Trichloroethene	105	107	78-126	2	0-10	
Vinyl Chloride	108	112	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	85	91	64-136	7	0-28	
Tert-Butyl Alcohol (TBA)	100	117	27-183	16	0-60	
Diisopropyl Ether (DIPE)	52	54	78-126	1	0-16	LN,AY
Ethyl-t-Butyl Ether (ETBE)	95	100	67-133	5	0-21	
Tert-Amyl-Methyl Ether (TAME)	86	89	63-141	3	0-21	
Ethanol	121	151	11-167	22	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,159	**Air**	**GC/MS DD**	**N/A**	**02/04/09**	**090204L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	92	110	60-156	18	0-40	
Toluene	87	102	56-146	15	0-43	
Ethylbenzene	90	105	52-154	16	0-38	
p/m-Xylene	81	95	42-156	16	0-41	
o-Xylene	83	97	52-148	16	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,165	**Air**	**GC/MS DD**	**N/A**	**02/05/09**	**090205L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	109	117	60-156	7	0-40	
Toluene	101	110	56-146	9	0-43	
Ethylbenzene	105	115	52-154	9	0-38	
p/m-Xylene	95	104	42-156	9	0-41	
o-Xylene	98	108	52-148	10	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-420	**Aqueous**	**GC 4**	**02/04/09**	**02/04/09**	**090204B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	108	109	78-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-682	**Aqueous**	**GC/MS Z**	**02/04/09**	**02/04/09**	**090204L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	89	97	87-117	82-122	9	0-7	RB
Carbon Tetrachloride	105	104	78-132	69-141	1	0-8	
Chlorobenzene	95	95	88-118	83-123	0	0-8	
1,2-Dibromoethane	90	96	80-120	73-127	6	0-20	
1,2-Dichlorobenzene	93	95	88-118	83-123	1	0-8	
1,1-Dichloroethene	96	94	71-131	61-141	1	0-14	
Ethylbenzene	95	96	80-120	73-127	1	0-20	
Toluene	93	97	85-127	78-134	5	0-7	
Trichloroethene	93	97	85-121	79-127	4	0-11	
Vinyl Chloride	109	103	64-136	52-148	5	0-10	
Methyl-t-Butyl Ether (MTBE)	91	89	67-133	56-144	2	0-16	
Tert-Butyl Alcohol (TBA)	91	93	34-154	14-174	2	0-19	
Diisopropyl Ether (DIPE)	91	87	80-122	73-129	5	0-8	
Ethyl-t-Butyl Ether (ETBE)	90	84	73-127	64-136	6	0-11	
Tert-Amyl-Methyl Ether (TAME)	83	88	69-135	58-146	6	0-12	
Ethanol	95	94	34-124	19-139	1	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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-706	Aqueous	GC/MS L	02/13/09	02/13/09	090213L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	105	105	87-117	82-122	0	0-7	
Carbon Tetrachloride	108	109	78-132	69-141	1	0-8	
Chlorobenzene	104	103	88-118	83-123	1	0-8	
1,2-Dibromoethane	109	106	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	102	102	88-118	83-123	0	0-8	
1,1-Dichloroethene	116	119	71-131	61-141	3	0-14	
Ethylbenzene	101	101	80-120	73-127	0	0-20	
Toluene	108	106	85-127	78-134	3	0-7	
Trichloroethene	104	102	85-121	79-127	1	0-11	
Vinyl Chloride	87	88	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	96	98	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	97	97	34-154	14-174	0	0-19	
Diisopropyl Ether (DIPE)	89	91	80-122	73-129	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	95	90	73-127	64-136	6	0-11	
Tert-Amyl-Methyl Ether (TAME)	93	94	69-135	58-146	1	0-12	
Ethanol	124	132	34-124	19-139	7	0-44	LQ

Total number of LCS compounds : 16
Total number of ME compounds : 1
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-02-0279
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-708	Aqueous	GC/MS L	02/14/09	02/14/09	090214L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	106	107	87-117	82-122	0	0-7	
Carbon Tetrachloride	101	110	78-132	69-141	8	0-8	
Chlorobenzene	105	105	88-118	83-123	0	0-8	
1,2-Dibromoethane	107	107	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	105	105	88-118	83-123	0	0-8	
1,1-Dichloroethene	108	118	71-131	61-141	9	0-14	
Ethylbenzene	104	104	80-120	73-127	0	0-20	
Toluene	104	107	85-127	78-134	2	0-7	
Trichloroethene	106	106	85-121	79-127	1	0-11	
Vinyl Chloride	98	109	64-136	52-148	10	0-10	
Methyl-t-Butyl Ether (MTBE)	83	92	67-133	56-144	10	0-16	
Tert-Butyl Alcohol (TBA)	105	98	34-154	14-174	8	0-19	
Diisopropyl Ether (DIPE)	87	91	80-122	73-129	4	0-8	
Ethyl-t-Butyl Ether (ETBE)	78	102	73-127	64-136	27	0-11	RB
Tert-Amyl-Methyl Ether (TAME)	89	93	69-135	58-146	4	0-12	
Ethanol	137	118	34-124	19-139	15	0-44	LQ

Total number of LCS compounds : 16

Total number of ME compounds : 1

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

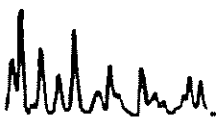
Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-02-0279

Qualifier	Definition
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 abovelimit; 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 interfence suspected.
LN,AY	MS and/or MSD below acceptance limits. See Blank Spike (LCS). Matrix interfence suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.

Qualifier	Definition
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.



Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: ARCO 2111- O&M
BP/ARC Facility No: 2111
Req Due Date (mm/dd/yy): Eff 24hrs&othersSTD Rush TAT: Yes x No
Lab Work Order Number: 0279

Lab Name:	Calscience Environmental Laboratories, Inc.	BP/ARC Facility Address:	1156 Davis Street	Consultant/Contractor:	Stratus Environmental, Inc.
Lab Address:	7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code:	San Leandro, California	Consultant/Contractor Project No:	E2111-03
Lab PM:	Richard Villafania	Lead Regulatory Agency:	Alameda County Environmental Health	Address:	3330 Cameron Park Dr., Suite 550, Cameron Park, CA 95682
Lab Phone:	714-895-5494	California Global ID No.:	T0600101764	Consultant/Contractor PM:	Jay Johnson
Lab Shipping Accnt:	9255	Enfos Proposal No:		Phone:	530-676-6000
Lab Bottle Order No:		Accounting Mode:	Provision x OOC-BU ___ OOC-RM ___	Email EDD To:	shayes@stratusinc.net
Other Info:		Stage:	Operate Activity: O&M	Invoice To:	BP/ARC x Contractor ___
BP/ARC EBM:	Paul Supple				
EBM Phone:	925-275-3801				
EBM Email:	paul.supple@bp.com				

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO	BTEX	MTBE	5-oxys			Turnaround Time: 24-hours	Standard			Report Type & QC Level
1	02111DPEAINF	2309	0610			x		2	x						x	x	x					x			Standard x Full Data Package ___
2	02111ASAEFF		0608			x		2	x						x	x	x					x			5-oxys include MTBE, TBA, TAME,
3	02111ASYSINF		0606			x		2	x						x	x	x					x			DIPE, & ETBE. 24-hr TAT only for
4	02111AGAC1		0603			x		2	x						x	x	x					x			GRO, BTEX, & 5-oxys.
5	02111AEFF		0600			x		2	x						x	x	x				x				
6	02111DPEWINF		0545		x			6				x			x	x		x				x			
7	02111ASWINF		0541		x			6				x			x	x		x				x			
8	02111ASWEFF		0538		x			6				x			x	x		x				x			
9	02111WGAC1		0535		x			6				x			x	x		x				x			
10	02111WEFF		0532		x			6				x			x	x		x			x				
11	02111MW2WINF		0550		x			6				x			x	x		x				x			
12	TB2111 2309		0555					2				x													HCl

Sampler's Name:	Chris Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Stratus Environmental, Inc.	Chris Hill Stratus	2309	1600	Precy A. CEL	2/4/09	10:30
Shipment Method:	GSO	Ship Date: 2309					
Shipment Tracking No:	106193554 / 106193546						
Special Instructions:							

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

BP/ARC LaMP COC Rev. 6 01/01/2009

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-02-0279

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: STRATUS

DATE: 02/04/09

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

Temperature 1.8 °C - 0.2 °C (CF) = 1.6 °C ☑ Blank ☐ Sample

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

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

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

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

CUSTODY SEALS INTACT:

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

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** DL

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	☑	☐	☐
COC document(s) received complete.....	☑	☐	☐
Sampler's name indicated on COC.....	☑	☐	☐
Sample container label(s) consistent with COC.....	☑	☐	☐
Sample container(s) intact and good condition.....	☑	☐	☐
Correct containers and volume for analyses requested.....	☑	☐	☐
Analyses received within holding time.....	☑	☐	☐
Proper preservation noted on COC or sample container.....	☑	☐	☐
Volatile analysis container(s) free of headspace.....	☑	☐	☐
Tedlar bag(s) free of condensation.....	☐	☐	☑

CONTAINER TYPE:

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

Water: ☐VOA ☑VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____

Checked/Labeled by: DL

Reviewed by: WB

Scanned by: DL

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

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-02-0279

SAMPLE RECEIPT FORM

BOX ~~Cooler~~ 1 of 1

CLIENT: STRATUS DATE: 02/04/09

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

Temperature ____•____ °C - 0.2 °C (CF) = ____•____ °C ☐ Blank ☐ Sample

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

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

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

Ambient Temperature: ☑ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** PS

CUSTODY SEALS INTACT:

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

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** WB

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	☑	☐	☐
COC document(s) received complete.....	☑	☐	☐
Sampler's name indicated on COC.....	☑	☐	☐
Sample container label(s) consistent with COC.....	☑	☐	☐
Sample container(s) intact and good condition.....	☑	☐	☐
Correct containers and volume for analyses requested.....	☑	☐	☐
Analyses received within holding time.....	☑	☐	☐
Proper preservation noted on COC or sample container.....	☐	☐	☑
Volatile analysis container(s) free of headspace.....	☐	☐	☑
Tedlar bag(s) free of condensation.....	☑	☐	☐

CONTAINER TYPE:

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

Water: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☑Tedlar® ☐Summa® ☐_____

Checked/Labeled by: WB

Reviewed by: YL

Scanned by: WB

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

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

STRATUS
ENVIRONMENTAL, INC.

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

April 7, 2009

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

Re: Remediation System Operation and Maintenance Data Package, ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California.

General Information

Data Submittal Prepared / Reviewed by: Sonia Nandi and Kiran Nagaraju / Jay Johnson

Phone Number: (530) 676-6007 / (530) 676-6000

On-Site Supplier Representatives: Chris Hill and Marty Morgan

Number of Site Visits: 5 (March 3, 11, 16, 23, and 31, 2009)

System Overview: Dual Phase Extraction System, Air Stripper, and Groundwater Extraction and Treatment System (GETS).

Operational Status: Continuous operation

Scope of Work Performed: Conduct routine system operation and maintenance and record field measurements. Influent, mid-fluent, and effluent air and water samples were collected on March 3, 2009.

Variations from Scope of Work: The remediation systems were shutdown after sampling on March 3, 2009, pending receipt and verification of analytical results. The submersible pump at well MW-2 was momentarily re-started on March 3, 2009 and shutdown after collecting influent water samples from well MW-2. Additionally, the effluent flow totalizer cover was cleaned during the site visit conducted on March 3, 2009. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on March 11, 2009.

MTBE was consistently reported at very low concentrations in the range of 0.055 to 0.37 ppmv (Bay Area Air Quality Management District [BAAQMD] does not have any emission requirement for MTBE) in the effluent air samples collected in January,

February, and March 2009. Hence, Stratus scheduled and oversaw EnviroSupply & Service Inc., conduct carbon change-out of the vapor phase carbon vessels on March 31, 2009.

The attachments include 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.

Kiran Nagaraju
Project Engineer

Jay R. Johnson, P.G.
Project Manager

Attachments:

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

cc: Paul Supple, BP/ARCO

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 3309
Onsite Time: 0500
Offsite Time: 0645
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Rain
Ambient Temperature: 49

System Information

System Status Upon Arrival:	Operational	☒	Non-Operational	☐	
System Status Upon Departure:	Operational	☐	Non-Operational	☒	w.t. LHS
Electric Meter Reading:	NM				
Hour Meter Reading:	3204				
Totalizer Reading Prior to Air Stripper:	387075	PID Calibration Date:	3209		
Totalizer Reading After Air Stripper:	1454160				

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc					
Air Velocity, FPM		2020			
Pipe Diameter, inches		4	4	3	
Air Flow Rate, cfm			175		
Applied Vacuum, "wc	20"Hg		NA	NA	
Temperature, deg F		131	102		
PID Readings, ppmv	3	1	1	8	PID for GAC-1: 8

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	15					
V-2	50	11					
V-3	50	14					
MW-1	—						
MW-3	100	17					
MW-7	100	15					
MW-5	☒						

Signature: [signature]
Date: 3309

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF	3309 0600	02111AGAC1	3309 0600
02111ASAEFF	" 0604	02111AEFF	" 0558
02111ASYSINF	" 0602		"
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 3309

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 3309
Onsite Time: 0500
Offsite Time: 0645

Technician: CHRIS
Weather Conditions: RAIN
Ambient Temperature 49°

System Status Upon Arrival: [X] Operational [ ] Non-operational
System Status At Departure: [ ] Operational [X] Non-operational WAIT LAB
Transfer Pump: [ ] Operational [X] Non-operational

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1402083

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 2

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.8
Temperature: 15.3 C

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		408573			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	3309 0540	02111MW2WINF	3309 0545
02111ASWINF	0537		
02111ASWEFF	0533		
02111WGAC1	0530		
02111WEFF	0527		
		TB2111309	3309 0550

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes: Clean Totalizer / MW 2 IS OFF

Signature: [signature] Date: 3309

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 3/11/09
Onsite Time: 0730
Offsite Time:
Equipment Manufacturer/Model#

Technician: MWMorgan
Weather Conditions:
Ambient Temperature:

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒	Lab results
System Status Upon Departure:	Operational	☒	Non-Operational	☐	

Electric Meter Reading:
Hour Meter Reading: 3205.0
Totalizer Reading Prior to Air Stripper: 347,249 ~~0647,23~~
PID Calibration Date: 3/11/09
Totalizer Reading After Air Stripper: 1454270

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc					
Air Velocity, FPM		1945			
Pipe Diameter, inches		4	4	3	
Air Flow Rate, cfm			200		
Applied Vacuum, "wc	21		NA	NA	
Temperature, deg F			72		
PID Readings, ppmv	3.3	1.2	2.1	0	PID for GAC-1:

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	15					
V-2	50	11					
V-3	50	14					
MW-1	0	–					
MW-3	100	16					
MW-7	100	14					
MW-8	0	–					

Signature:
Date: 3/11/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 3/11/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 3/11/09
Onsite Time: 0730
Offsite Time: 0830

Technician: MW Morgan
Weather Conditions: Clear
Ambient Temperature 42

System Status Upon Arrival: ☐ Operational ☒ Non-operational
System Status At Departure: ☒ Operational ☐ Non-operational
Transfer Pump: ☒ Operational ☐ Non-operational

Transfer Pump Hour Meter Reading: N/A

Effluent Flow Totalizer Reading: 1402,123

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 6

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: NM
Temperature: NM

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		408620			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF	NC		
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: [signature] Date: 3/11/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 31609
Onsite Time: 0630
Offsite Time: 0735
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Rain
Ambient Temperature: 48

System Information

System Status Upon Arrival:	Operational	☒	Non-Operational	☐
System Status Upon Departure:	Operational	☒	Non-Operational	☐

Electric Meter Reading: NM
Hour Meter Reading: 3324
Totalizer Reading Prior to Air Stripper: 425250
PID Calibration Date: 31609
Totalizer Reading After Air Stripper: 1489300

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		~26			
Air Velocity, FPM		1893			
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm			185		
Applied Vacuum, "wc	19"46	~20	NA	NA	
Temperature, deg F	~	130	110		
PID Readings, ppmv	5	0	4	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	12					
V-2	50	13					
V-3	50	15					
MW-1	0						
MW-3	100	15					
MW-7	100	15					
MW-5	0						

Signature: [signature]
Date: 31609

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			

Analyses Required: GRO, BTEX, and MTBE

Operation & Maintenance Notes

Need To order SYS INF Flow Gauge Ruby To Die

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 5/6/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 31609
Onsite Time: 0630
Offsite Time: 0735

Technician: CHILC
Weather Conditions: Rain
Ambient Temperature 48

System Status Upon Arrival: [X] Operational [ ] Non-operational
System Status At Departure: [X] Operational [ ] Non-operational
Transfer Pump: [X] Operational [ ] Non-operational

MW2 out

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 14356886

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 6

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: _____
Temperature: _____

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		4086220			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF			
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: _____ Date: 31609

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 3/23/09
Onsite Time: 0700
Offsite Time:
Equipment Manufacturer/Model#

Technician: MW Manager
Weather Conditions: Clear
Ambient Temperature: 48

System Information

System Status Upon Arrival: Operational [X] Non-Operational [ ]
System Status Upon Departure: Operational [X] Non-Operational [ ]
Electric Meter Reading: NM
Hour Meter Reading: 3423.2
Totalizer Reading Prior to Air Stripper: 453969
PID Calibration Date: 3/23/09
Totalizer Reading After Air Stripper: 1515700

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		.28			
Air Velocity, FPM		1911			
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm			180		
Applied Vacuum, "wc	19"Hg	24	NA	NA	
Temperature, deg F		124	102		
PID Readings, ppmv	7.3	0	6.7	0	PID for GAC-1:

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	14					
V-2	50	13					
V-3	50	13					
MW-1	0	0					
MW-3	100	14					
MW-7	100	14					

Signature: [signature]
Date: 3/23/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF	NC	02111AEFF	NC
02111ASYSINF			
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 3/23/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

ORIGINAL

Date: 3/23/09
Onsite Time: 0700
Offsite Time: 0800

Technician: MW Mongo
Weather Conditions: Clear
Ambient Temperature: 45

System Status Upon Arrival: [X] Operational [ ] Non-operational
System Status At Departure: [X] Operational [ ] Non-operational
Transfer Pump: [X] Operational [ ] Non-operational

Transfer Pump Hour Meter Reading: N/A
Effluent Flow Totalizer Reading: 1460272
No. of Carbon Vessels: 2
Lead Carbon Vessel Pressure (psi): 7

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: NC
Temperature: NC

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2	←	405620			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF	NC		
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes:

Signature: [signature] Date: 3/23/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

ORIGINAL

Date: 33109
Onsite Time: 0630
Offsite Time: 1000
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 45

System Information

System Status Upon Arrival: Operational [X] Non-Operational [ ]
System Status Upon Departure: Operational [X] Non-Operational [ ]
Electric Meter Reading: NM
Hour Meter Reading: 3615
Totalizer Reading Prior to Air Stripper: 503280
PID Calibration Date: 33109
Totalizer Reading After Air Stripper: 560810

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		28			
Air Velocity, FPM		1305	3082		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	15" Hg	20	NA	NA	
Temperature, deg F		117	111		
PID Readings, ppmv	10	1	5	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	15					
V-2	50	15					
V-3	50	15					
MW-1	0						
MW-3	100	15					
MW-7	100	15					
MW-5	0						

Signature: [signature]
Date: 33109

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Dual Phase Extraction and Air Stripper System

Sampling Information (monthly)			
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			

Analyses Required: GRO, BTEX, and MTBE

Operation & Maintenance Notes

Vapor Carbon Change out

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
BTEX	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature: _____ Date: 3/10/09

ARCO FACILITY NO. 2111
1156 Davis Street
San Leandro, California
Groundwater Treatment System

Date: 3/31/09
Onsite Time: 0630
Offsite Time: 1000

Technician: CHILL
Weather Conditions: clear
Ambient Temperature 45°

System Status Upon Arrival: [X] Operational [ ] Non-operational MW-2 off
System Status At Departure: [X] Operational [ ] Non-operational
Transfer Pump: [X] Operational [ ] Non-operational

Transfer Pump Hour Meter Reading: —

Effluent Flow Totalizer Reading: 1502911

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 6

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH:
Temperature:

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		408657			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF		02111MW2WINF	
02111ASWINF			
02111ASWEFF			
02111WGAC1			
02111WEFF			

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO, BTEX, & 5-Oxys	Monthly	INF& EFF	EPA Method 8260B

Notes: Vapor Carbon change out

Signature: [signature] Date: 3/31/09

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

ORIGINAL

Page 1 of 1

BP/ARC Project Name: ARCO 2111- O&M
BP/ARC Facility No: 2111
Req Due Date (mm/dd/yy): Eff 24hrs&othersSTD **Rush TAT:** Yes x No
Lab Work Order Number:

Lab Name:	Calscience Environmental Laboratories, Inc.
Lab Address:	7440 Lincoln Way, Garden Grove, CA 92841
Lab PM:	Richard Villafania
Lab Phone:	714-895-5494
Lab Shipping Accnt:	9255
Lab Bottle Order No:	
Other Info:	
BP/ARC EBM:	Paul Supple
EBM Phone:	925-275-3801
EBM Email:	paul.supple@bp.com

BP/ARC Facility Address:	1156 Davis Street
City, State, ZIP Code:	San Leandro, California
Lead Regulatory Agency:	Alameda County Environmental Health
California Global ID No.:	T0600101764
Enfos Proposal No:	000TV-0002
Accounting Mode:	Provision x OOC-BU ___ OOC-RM ___
Stage: Operate	Activity: O&M

Consultant/Contractor:	Stratus Environmental, Inc.
Consultant/Contractor Project No:	E2111-03
Address:	3330 Cameron Park Dr., Suite 550, Cameron Park, CA 95682
Consultant/Contractor PM:	Jay Johnson
Phone:	530-676-6000
Email EDD To:	shayes@stratusinc.net
Invoice To:	BP/ARC x Contractor ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Containers: Total Number of Containers	Containers: Unpreserved	Containers: H_2SO_4	Containers: HNO_3	Containers: HCl	Containers: Methanol	Requested Analyses: GRO	Requested Analyses: BTEX	Requested Analyses: MTBE	Requested Analyses: 5-oxys	Turnaround Time: 24-hours	Turnaround Time: Standard
1	02111DPEAINF	3309	0926			x		x					x	x	x			x
2	02111ASAEFF		0604			x		x					x	x	x			x
3	02111ASYSINF		0602			x		x					x	x	x			x
4	02111AGAC1		0600			x		x					x	x	x			x
5	02111AEFF		0558			x		x					x	x	x			x
6	02111DPEWINF		0540		x						x		x	x	x		x	
7	02111ASWINF		0537		x						x		x	x		x		x
8	02111ASWEFF		0533		x						x		x	x		x		x
9	02111WGAC1		0530		x						x		x	x		x		x
10	02111WEFF		0527		x						x		x	x		x		x
11	02111MW2WINF		0544		x						x		x	x		x	x	
12	TB21113309	3309	0550								x		x	x		x		x

Comments
Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Turnaround Time: Hold

Report Type & QC Level: Standard x; Full Data Package ___

5-oxys include MTBE, TBA, TAME, DIPE, & ETBE. 24-hr TAT only for GRO, BTEX, & 5-oxys.

Sampler's Name: Chris Hill
Sampler's Company: Stratus Environmental, Inc.
Shipment Method: GSO Ship Date: 3309
Shipment Tracking No:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Chris Hill Stratus	3309	1600			

Special Instructions: Please cc results to bpedf@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

Calscience
Environmental
Laboratories, Inc.

March 16, 2009

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

Subject: **Calscience Work Order No.:** **09-03-0236**
Client Reference: **ARCO 2111 - O&M**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 3/4/2009 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,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	03/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-03-0236
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15
		Units:	mg/m3
Project: ARCO 2111 - O&M			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-03-0236-1-A**	**03/03/09 06:06**	**Air**	**GC/MS V**	**N/A**	**03/04/09 14:40**	**090304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.080	0.0040	2.5		Xylenes (total)	0.089	0.022	2.5	
Toluene	0.0098	0.0047	2.5		Methyl-t-Butyl Ether (MTBE)	2.0	0.14	20	
Ethylbenzene	0.13	0.0054	2.5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	98	57-129			1,2-Dichloroethane-d4	100	47-137		
Toluene-d8	104	78-156							

02111ASAEFF	**09-03-0236-2-A**	**03/03/09 06:04**	**Air**	**GC/MS V**	**N/A**	**03/04/09 15:26**	**090304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.041	0.0016	1		Xylenes (total)	0.0090	0.0087	1	
Toluene	0.0070	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.56	0.036	5	
Ethylbenzene	0.030	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	97	57-129			1,2-Dichloroethane-d4	98	47-137		
Toluene-d8	102	78-156							

02111ASYSINF	**09-03-0236-3-A**	**03/03/09 06:02**	**Air**	**GC/MS V**	**N/A**	**03/04/09 17:00**	**090304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.054	0.0016	1		Xylenes (total)	0.049	0.0087	1	
Toluene	0.0072	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.70	0.072	10	
Ethylbenzene	0.077	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	99	57-129			1,2-Dichloroethane-d4	101	47-137		
Toluene-d8	105	78-156							

02111AGAC1	**09-03-0236-4-A**	**03/03/09 06:00**	**Air**	**GC/MS V**	**N/A**	**03/04/09 17:46**	**090304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0043	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.57	0.072	10	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	93	57-129			1,2-Dichloroethane-d4	99	47-137		
Toluene-d8	101	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	03/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-03-0236
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-03-0236-5-A**	**03/03/09 05:58**	**Air**	**GC/MS V**	**N/A**	**03/04/09 16:13**	**090304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0026	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.37	0.029	4	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	94	57-129			1,2-Dichloroethane-d4	98	47-137		
Toluene-d8	97	78-156							

Method Blank	097-09-002-8,275	N/A	Air	GC/MS V	N/A	03/04/09 13:08	090304L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	ND	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	95	57-129			1,2-Dichloroethane-d4	101	47-137		
Toluene-d8	98	78-156							

Method Blank	097-09-002-8,276	N/A	Air	GC/MS K	N/A	03/04/09 12:59	090304L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	ND	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	99	57-129			1,2-Dichloroethane-d4	100	47-137		
Toluene-d8	100	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: N/A
Method: EPA TO-3M

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-03-0236-1-B**	**03/03/09 06:06**	**Air**	**GC 38**	**N/A**	**03/04/09 16:48**	**090304L02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-03-0236-2-B**	**03/03/09 06:04**	**Air**	**GC 38**	**N/A**	**03/04/09 15:34**	**090304L02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-03-0236-3-B**	**03/03/09 06:02**	**Air**	**GC 38**	**N/A**	**03/04/09 20:25**	**090304L02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-03-0236-4-B**	**03/03/09 06:00**	**Air**	**GC 38**	**N/A**	**03/04/09 21:05**	**090304L02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-03-0236-5-B**	**03/03/09 05:58**	**Air**	**GC 38**	**N/A**	**03/04/09 16:12**	**090304L02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-693-135**	**N/A**	**Air**	**GC 38**	**N/A**	**03/04/09 14:55**	**090304L02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		mg/m3

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-03-0236-6-E**	**03/03/09 05:40**	**Aqueous**	**GC 4**	**03/04/09**	**03/04/09 23:08**	**090304B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	92	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-03-0236-7-E**	**03/03/09 05:37**	**Aqueous**	**GC 4**	**03/04/09**	**03/04/09 23:41**	**090304B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-03-0236-8-E**	**03/03/09 05:33**	**Aqueous**	**GC 4**	**03/04/09**	**03/05/09 00:14**	**090304B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	86	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-03-0236-9-E**	**03/03/09 05:30**	**Aqueous**	**GC 4**	**03/04/09**	**03/05/09 01:20**	**090304B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	86	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-03-0236-10-E**	**03/03/09 05:27**	**Aqueous**	**GC 4**	**03/04/09**	**03/05/09 01:53**	**090304B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-03-0236-11-E**	**03/03/09 05:45**	**Aqueous**	**GC 4**	**03/04/09**	**03/05/09 02:26**	**090304B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	310	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	88	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-455**	**N/A**	**Aqueous**	**GC 4**	**03/04/09**	**03/04/09 16:01**	**090304B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	70	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	03/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-03-0236
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111 - O&M			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-03-0236-6-B**	**03/03/09 05:40**	**Aqueous**	**GC/MS Z**	**03/14/09**	**03/14/09 15:48**	**090314L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	81	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	32	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	105	73-145			Dibromofluoromethane	110	81-135		
Toluene-d8	101	83-119			1,4-Bromofluorobenzene	87	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-03-0236-7-B**	**03/03/09 05:37**	**Aqueous**	**GC/MS Z**	**03/14/09**	**03/14/09 14:16**	**090314L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	57	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	27	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	102	73-145			Dibromofluoromethane	94	81-135		
Toluene-d8	101	83-119			1,4-Bromofluorobenzene	86	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-03-0236-8-A**	**03/03/09 05:33**	**Aqueous**	**GC/MS Z**	**03/13/09**	**03/13/09 20:42**	**090313L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	28	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	1.8	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	105	73-145			Dibromofluoromethane	103	81-135		
Toluene-d8	104	83-119			1,4-Bromofluorobenzene	86	74-110		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	03/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-03-0236
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111 - O&M			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-03-0236-9-A**	**03/03/09 05:30**	**Aqueous**	**GC/MS Z**	**03/13/09**	**03/13/09 21:13**	**090313L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	111	73-145		Dibromofluoromethane	109	81-135	
Toluene-d8	103	83-119		1,4-Bromofluorobenzene	87	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-03-0236-10-A**	**03/03/09 05:27**	**Aqueous**	**GC/MS BB**	**03/04/09**	**03/04/09 16:24**	**090304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	101	73-145		Dibromofluoromethane	106	81-135	
Toluene-d8	100	83-119		1,4-Bromofluorobenzene	103	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-03-0236-11-A**	**03/03/09 05:45**	**Aqueous**	**GC/MS Z**	**03/13/09**	**03/13/09 21:44**	**090313L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.0	2		Tert-Butyl Alcohol (TBA)	330	20	2	
Ethylbenzene	ND	1.0	2		Diisopropyl Ether (DIPE)	ND	1.0	2	
Toluene	ND	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	1.0	2	
Xylenes (total)	ND	1.0	2		Tert-Amyl-Methyl Ether (TAME)	ND	1.0	2	
Methyl-t-Butyl Ether (MTBE)	48	1.0	2						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	101	73-145		Dibromofluoromethane	86	81-135	
Toluene-d8	104	83-119		1,4-Bromofluorobenzene	86	74-110	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-748**	**N/A**	**Aqueous**	**GC/MS BB**	**03/04/09**	**03/04/09 14:47**	**090304L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	97	73-145			Dibromofluoromethane	101	81-135		
Toluene-d8	102	83-119			1,4-Bromofluorobenzene	102	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-771**	**N/A**	**Aqueous**	**GC/MS Z**	**03/13/09**	**03/13/09 13:29**	**090313L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	73-145			Dibromofluoromethane	93	81-135		
Toluene-d8	104	83-119			1,4-Bromofluorobenzene	88	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-774**	**N/A**	**Aqueous**	**GC/MS Z**	**03/14/09**	**03/14/09 13:45**	**090314L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	73-145			Dibromofluoromethane	111	81-135		
Toluene-d8	102	83-119			1,4-Bromofluorobenzene	85	74-110		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: N/A
Method: EPA TO-3M

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
02111DPEAINF	**Air**	**GC 38**	**N/A**	**03/04/09**	**090304D02**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	ND	ND	NA	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-03-0234-5	**Aqueous**	**GC 4**	**03/04/09**	**03/04/09**	**090304S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	110	104	38-134	5	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-03-0234-5	**Aqueous**	**GC/MS BB**	**03/04/09**	**03/04/09**	**090304S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	105	86-122	0	0-8	
Carbon Tetrachloride	104	105	78-138	1	0-9	
Chlorobenzene	104	103	90-120	1	0-9	
1,2-Dibromoethane	100	97	70-130	3	0-30	
1,2-Dichlorobenzene	103	105	89-119	2	0-10	
1,1-Dichloroethene	105	99	52-142	5	0-23	
Ethylbenzene	96	93	70-130	3	0-30	
Toluene	100	99	85-127	1	0-12	
Trichloroethene	100	100	78-126	0	0-10	
Vinyl Chloride	95	98	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	92	94	64-136	3	0-28	
Tert-Butyl Alcohol (TBA)	110	110	27-183	1	0-60	
Diisopropyl Ether (DIPE)	96	96	78-126	0	0-16	
Ethyl-t-Butyl Ether (ETBE)	93	94	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	89	90	63-141	2	0-21	
Ethanol	111	112	11-167	1	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-03-0072-8	**Aqueous**	**GC/MS Z**	**03/13/09**	**03/13/09**	**090313S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	108	111	86-122	3	0-8	
Carbon Tetrachloride	115	121	78-138	5	0-9	
Chlorobenzene	106	109	90-120	2	0-9	
1,2-Dibromoethane	103	99	70-130	4	0-30	
1,2-Dichlorobenzene	99	98	89-119	1	0-10	
1,1-Dichloroethene	107	111	52-142	4	0-23	
Ethylbenzene	104	107	70-130	3	0-30	
Toluene	106	110	85-127	3	0-12	
Trichloroethene	96	99	78-126	3	0-10	
Vinyl Chloride	115	115	56-140	0	0-21	
Methyl-t-Butyl Ether (MTBE)	100	97	64-136	4	0-28	
Tert-Butyl Alcohol (TBA)	93	98	27-183	5	0-60	
Diisopropyl Ether (DIPE)	108	106	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	93	93	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	88	86	63-141	2	0-21	
Ethanol	140	127	11-167	10	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

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

Date Received: 03/04/09
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02111ASWINF	**Aqueous**	**GC/MS Z**	**03/14/09**	**03/14/09**	**090314S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	109	109	86-122	0	0-8	
Carbon Tetrachloride	117	121	78-138	3	0-9	
Chlorobenzene	108	107	90-120	1	0-9	
1,2-Dibromoethane	103	102	70-130	2	0-30	
1,2-Dichlorobenzene	98	100	89-119	3	0-10	
1,1-Dichloroethene	108	111	52-142	3	0-23	
Ethylbenzene	105	105	70-130	0	0-30	
Toluene	107	107	85-127	1	0-12	
Trichloroethene	97	98	78-126	1	0-10	
Vinyl Chloride	112	117	56-140	4	0-21	
Methyl-t-Butyl Ether (MTBE)	64	69	64-136	2	0-28	
Tert-Butyl Alcohol (TBA)	89	83	27-183	3	0-60	
Diisopropyl Ether (DIPE)	102	104	78-126	3	0-16	
Ethyl-t-Butyl Ether (ETBE)	89	90	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	88	86	63-141	3	0-21	
Ethanol	118	107	11-167	9	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 09-03-0236
Preparation: N/A
Method: EPA TO-15

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,276	**Air**	**GC/MS K**	**N/A**	**03/04/09**	**090304L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	108	109	60-156	1	0-40	
Toluene	106	112	56-146	6	0-43	
Ethylbenzene	109	116	52-154	6	0-38	
p/m-Xylene	108	114	42-156	5	0-41	
o-Xylene	110	115	52-148	5	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-03-0236
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,275	**Air**	**GC/MS V**	**N/A**	**03/04/09**	**090304L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	116	124	60-156	7	0-40	
Toluene	112	117	56-146	5	0-43	
Ethylbenzene	125	133	52-154	6	0-38	
p/m-Xylene	119	126	42-156	6	0-41	
o-Xylene	120	127	52-148	6	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-03-0236
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-455	**Aqueous**	**GC 4**	**03/04/09**	**03/04/09**	**090304B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	102	107	78-120	5	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-748	**Aqueous**	**GC/MS BB**	**03/04/09**	**03/04/09**	**090304L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	101	102	87-117	82-122	1	0-7	
Carbon Tetrachloride	106	104	78-132	69-141	3	0-8	
Chlorobenzene	100	101	88-118	83-123	1	0-8	
1,2-Dibromoethane	99	97	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	103	102	88-118	83-123	1	0-8	
1,1-Dichloroethene	106	107	71-131	61-141	1	0-14	
Ethylbenzene	95	98	80-120	73-127	4	0-20	
Toluene	98	99	85-127	78-134	2	0-7	
Trichloroethene	102	101	85-121	79-127	1	0-11	
Vinyl Chloride	94	103	64-136	52-148	9	0-10	
Methyl-t-Butyl Ether (MTBE)	92	90	67-133	56-144	3	0-16	
Tert-Butyl Alcohol (TBA)	99	96	34-154	14-174	4	0-19	
Diisopropyl Ether (DIPE)	95	90	80-122	73-129	6	0-8	
Ethyl-t-Butyl Ether (ETBE)	95	89	73-127	64-136	6	0-11	
Tert-Amyl-Methyl Ether (TAME)	88	87	69-135	58-146	2	0-12	
Ethanol	92	112	34-124	19-139	19	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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-771	**Aqueous**	**GC/MS Z**	**03/13/09**	**03/13/09**	**090313L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	108	110	87-117	82-122	2	0-7	
Carbon Tetrachloride	117	119	78-132	69-141	1	0-8	
Chlorobenzene	108	109	88-118	83-123	1	0-8	
1,2-Dibromoethane	104	106	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	99	100	88-118	83-123	1	0-8	
1,1-Dichloroethene	111	112	71-131	61-141	2	0-14	
Ethylbenzene	106	109	80-120	73-127	2	0-20	
Toluene	108	107	85-127	78-134	1	0-7	
Trichloroethene	96	100	85-121	79-127	4	0-11	
Vinyl Chloride	116	114	64-136	52-148	2	0-10	
Methyl-t-Butyl Ether (MTBE)	97	99	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	91	89	34-154	14-174	2	0-19	
Diisopropyl Ether (DIPE)	103	105	80-122	73-129	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	90	92	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	87	88	69-135	58-146	1	0-12	
Ethanol	114	122	34-124	19-139	7	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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 09-03-0236
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-774	**Aqueous**	**GC/MS Z**	**03/14/09**	**03/14/09**	**090314L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	109	107	87-117	82-122	2	0-7	
Carbon Tetrachloride	116	120	78-132	69-141	4	0-8	
Chlorobenzene	109	108	88-118	83-123	1	0-8	
1,2-Dibromoethane	101	105	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	98	99	88-118	83-123	1	0-8	
1,1-Dichloroethene	106	111	71-131	61-141	5	0-14	
Ethylbenzene	106	104	80-120	73-127	2	0-20	
Toluene	107	105	85-127	78-134	3	0-7	
Trichloroethene	99	98	85-121	79-127	1	0-11	
Vinyl Chloride	112	116	64-136	52-148	4	0-10	
Methyl-t-Butyl Ether (MTBE)	89	97	67-133	56-144	8	0-16	
Tert-Butyl Alcohol (TBA)	91	93	34-154	14-174	2	0-19	
Diisopropyl Ether (DIPE)	98	104	80-122	73-129	6	0-8	
Ethyl-t-Butyl Ether (ETBE)	86	92	73-127	64-136	7	0-11	
Tert-Amyl-Methyl Ether (TAME)	82	84	69-135	58-146	3	0-12	
Ethanol	109	112	34-124	19-139	2	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

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-03-0236

Qualifier	Definition
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 abovelimit; 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 interfence suspected.
LN,AY	MS and/or MSD below acceptance limits. See Blank Spike (LCS). Matrix interfence suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.

Work Order Number: 09-03-0236

Qualifier	Definition
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.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

ORIGINAL (0236) Page 1 of 1

BP/ARC Project Name: ARCO 2111- O&M
BP/ARC Facility No: 2111
Req Due Date (mm/dd/yy): Eff 24hrs&othersSTD Rush TAT: Yes x No
Lab Work Order Number:

Lab Name:	Calscience Environmental Laboratories, Inc.	BP/ARC Facility Address:	1156 Davis Street	Consultant/Contractor:	Stratus Environmental, Inc.
Lab Address:	7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code:	San Leandro, California	Consultant/Contractor Project No:	E2111-03
Lab PM:	Richard Villafania	Lead Regulatory Agency:	Alameda County Environmental Health	Address:	3330 Cameron Park Dr., Suite 550, Cameron Park, CA 95682
Lab Phone:	714-895-5494	California Global ID No.:	T0600101764	Consultant/Contractor PM:	Jay Johnson
Lab Shipping Accnt:	9255	Enfos Proposal No:	000TV-0002	Phone:	530-676-6000
Lab Bottle Order No:		Accounting Mode:	Provision x OOC-BU ___ OOC-RM ___	Email EDD To:	shayes@stratusinc.net
Other Info:		Stage:	Operate Activity: O&M	Invoice To:	BP/ARC x Contractor ___
BP/ARC EBM:	Paul Supple				
EBM Phone:	925-275-3801				
EBM Email:	paul.supple@bp.com				

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO	BTEX	MTBE	5-oxys	Turnaround Time: 24-hours	Standard
1	02111DPEAINF	3309	0926			x		x					x	x	x			x
2	02111ASAEFF		0604			x		x					x	x	x			x
3	02111ASYSINF		0602			x		x					x	x	x			x
4	02111AGAC1		0600			x		x					x	x	x			x
5	02111AEFF		0556			x		x					x	x	x		x	
6	02111DPEWINF		0540		x						x		x	x		x		x
7	02111ASWINF		0537		x						x		x	x		x		x
8	02111ASWEFF		0535		x						x		x	x		x		x
9	02111WGAC1		0530		x						x		x	x		x		x
10	02111WEFF		0527		x						x		x	x		x	x	
11	02111MW2WINF		0549		x						x		x	x		x		x
12	TB21113309	3309	0550															Hold

Comments
Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Report Type & QC Level: Standard x; Full Data Package ___

5-oxys include MTBE, TBA, TAME, DIPE, & ETBE. 24-hr TAT only for GRO, BTEX, & 5-oxys.

Sampler's Name:	Chris Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Stratus Environmental, Inc.	[signature] Stratus	3309	1602	Wdeath CE	3/4/09	1000
Shipment Method:	GSO Ship Date: 3309						
Shipment Tracking No:	925504210 / 925502407						

Special Instructions: Please cc results to bpedf@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

BP/ARC LaMP COC Rev. 6 01/01/2009

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-03-0236

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: STRATUS DATE: 3/4/09

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

Temperature 1.8 °C - 0.2 °C (CF) = 1.6 °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: WB

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: WB

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: WB

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	☑	☐	☐
COC document(s) received complete.....	☑	☐	☐
Sampler's name indicated on COC.....	☑	☐	☐
Sample container label(s) consistent with COC.....	☑	☐	☐
Sample container(s) intact and good condition.....	☑	☐	☐
Correct containers and volume for analyses requested.....	☑	☐	☐
Analyses received within holding time.....	☑	☐	☐
Proper preservation noted on COC or sample container.....	☑	☐	☐
Volatile analysis container(s) free of headspace.....	☑	☐	☐
Tedlar bag(s) free of condensation.....	☐	☐	☑

CONTAINER TYPE:

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

Water: ☐VOA ☑(6)VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____

Checked/Labeled by: WB

Reviewed by: MC

Scanned by: WB

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

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-03-0236

SAMPLE RECEIPT FORM

BOX Cooler 1 of 1

CLIENT: STRATUS DATE: 3/4/09

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

Temperature ____.____ °C - 0.2 °C (CF) = ____.____ °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:** WB

CUSTODY SEALS INTACT:

☑ Cooler ☑ BOX ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** WB 3/4/09

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** WB

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	☑	☐	☐
COC document(s) received complete.....	☑	☐	☐
Sampler's name indicated on COC.....	☑	☐	☐
Sample container label(s) consistent with COC.....	☑	☐	☐
Sample container(s) intact and good condition.....	☑	☐	☐
Correct containers and volume for analyses requested.....	☑	☐	☐
Analyses received within holding time.....	☑	☐	☐
Proper preservation noted on COC or sample container.....	☐	☐	☑
Volatile analysis container(s) free of headspace.....	☐	☐	☑
Tedlar bag(s) free of condensation.....	☑	☐	☐

CONTAINER TYPE:

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

Water: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBpo_4 ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGBs ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PBsterile ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☑Tedlar® ☐Summa® ☐_____

Checked/Labeled by: WB

Reviewed by: JP

Scanned by: WB

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

Preservative: h:HCL n:HNO_3 na_2:$Na_2S_2O_3$ na:NaOH po_4:H_3PO_4 s:H_2SO_4 znna:$ZnAc_2$+NaOH

APPENDIX D

STRATUS REMEDIATION SYSTEM MONTHLY DISCHARGE REPORTS
(INCLUDES BRIEF STATEMENTS SUMMARIZING OPERATIONS AND SEWER DISCHARGE SUMMARY TABLES)

STRATUS
ENVIRONMENTAL, INC.

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

TRANSMITTAL

Date February 4, 2009

Project E2111-03

To:

Ms. Tiffany Treece

City of San Leandro

Civic Center, 835 E. 14th Street

San Leandro, CA 94577

Re: Permit # SD-036, ARCO Service Station No. 2111, 1156 Davis Street, San Leandro

Item	Description
1	Monthly Discharge Report for January 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for January 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 96,244 gallons of treated groundwater were discharged to the sanitary sewer between December 30, 2008 and January 29, 2009.

If you have any questions or need any additional information, please call either Kiran Nagaraju at (530) 676-6007 or myself at (530) 676-6000.

Sincerely,

Jay R. Johnson, P.G.
Project Manager

cc: Mr. Rob Miller, Broadbent & Associates, Inc.

MONTHLY DISCHARGE REPORT
ARCO SERVICE STATION #2111, 1156 DAVIS STREET

This form and enclosed documents serve as the remediation activities monthly discharge report to the City of San Leandro for the reporting period of: December 30, 2008 to January 29, 2009. This report is submitted in compliance with 40 CFR 403.12 and Part III (A) of Special Discharge Permit **SD-036**. The information contained in this report is accurate and complete. For any questions or comments regarding this report, contact Kiran Nagaraju at (530) 676 6007.

Number of days discharged: 30

Total monthly discharge: 96,244 U. S. Gallons

Signature of Certifying Official: _____

Printed Name of Official: Jay R. Johnson, P.G.

Title: Project Manager

Date: February 2, 2009

Include a brief statement summarizing the month's operations:

The operation of the dual phase extraction (DPE) system, air stripper (AS), and the groundwater extraction and treatment system (GETS) was initiated on January 29, 2007. Soil vapors and groundwater were concurrently extracted from wells V-1, V-2, V-3, MW-1, MW-3, MW-7, and MW-8 using the liquid ring pump of the DPE system. In addition, groundwater was also extracted from well MW-2 using the electrical submersible pump. The groundwater extracted by both the DPE and the submersible pump is treated using the air stripper and two 2,000-pound carbon vessels in series prior to discharge to the sewer. The remediation systems were shutdown after sampling on January 7, 2009, pending receipt and verification of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on January 15, 2009. The remediation systems were found non-functioning on January 20, 2009 and January 29, 2009, due to a high-water level alarm either in the air stripper tank or in the oil-water separator and were re-started on the same respective days after re-setting the high level alarms.

Submit reports to: City of San Leandro – Environmental Services Division
835 East 14th Street, San Leandro CA 94577

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
January-07	1/29/07 8:00 1/29/07 8:00 1/29/07[1] 12:00 01/30/07 01/31/07	System Start-up 3,000 5,000 6,200 8,560	5,560
February-07	2/1/07 5:15 2/2/07 5:00 2/5/07 5:00 2/20/07 6:30	16,860 25,480 33,400 122,790	114,230
March-07	3/5/07[2] 5:00 3/8/07[3] 4:50 3/14/07[4] 7:00 3/29/07[5] 10:00	130,565 132,951 NM 133,262	10,472
April-07	4/2/07[6] 5:30 4/10/07[7] 5:00 4/23/07[8] 7:00 4/26/07 6:00	170,596 NM 172,210 200,143	66,881
May-07	5/1/2007[9] 4:50 5/15/2007[10] 5:00 5/29/07 8:30	220,892 225,297 410,246	210,103
June-07	6/4/2007[11] 5:00 6/12/2007[12] 5:00 6/26/2007[13] 4:30	429,450 430,092 430,222	19,976

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
July-07	7/2/07 5:30 7/10/2007 [14] 5:45 7/17/2007 [15] 5:00	480,377 523,553 546,094	115,872
August-07	8/1/2007 [15] 5:00 8/7/07 5:00 8/20/2007 [15] 5:00	580,301 580,662 582,706	36,612
September-07	9/5/2007 [11] 5:00 9/11/2007 [16] 9:00 9/17/2007 [17] 5:30	589,944 589,950 591,443	8,737
October-07	10/1/07 [18] 5:00 10/11/07 [19] 8:15 10/23/07 [16] 5:00 10/30/07 [15] 7:10	592,403 NM NM 593,647	2,204
November-07	11/6/07 [11] 4:30 11/14/07 [16] 6:00 11/20/07 [15] 6:50	612,552 612,552 613,537	19,890
December-07	12/5/07 [11] 5:00 12/17/07 [16] 4:30	633,121 633,123	19,586
January-08	1/7/08 [11] 5:00 1/15/08 [16] 7:00	635,200 636,041	2,918
February-08	2/5/08 [20] 8:15 2/26/08 [8] 6:00	642,841 643,443	7,402

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
March-08	3/5/08 [11] 4:00 3/17/08 [21] 4:30	646,123 646,221	2,778
April-08	4/1/08 [22] 5:00 4/14/08 [23] 5:00 4/22/08 5:00	719,174 719,881 757,683	111,462
May-08	5/6/08 [24] 5:15 5/12/08 4:45 5/20/08 7:00 5/27/08 6:15	806,356 822,743 844,640 914,563	156,880
June-08	6/2/08 [15] 5:00 6/9/08 [15] 7:15 6/16/08 [15] 7:16 6/23/08 [15] 7:24	949,693 984,702 1,001,527 1,017,867	103,304
July-08	7/1/08 [11] 7:27 7/7/08 [25] 6:54 7/23/08 [26] 7:30 7/29/08 [15] 4:30	1,028,841 1,029,035 1,029,035 1,029,743	11,876
August-08	8/5/08 [15] 4:30 8/12/08 [15] 5:00 8/27/08 [15] 9:15	1,037,580 1,040,731 1,050,359	20,616

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
September-08	9/2/08 [11] 8:30 9/10/08 [27] 12:30 9/17/08 [15] 7:00 9/24/08 [15] 7:15	1,052,669 1,052,851 1,056,514 1,056,950	6,591
October-08	10/1/08 [28] 6:57 10/2/08 [29] 7:50	1,067,983 NM	11,033
November-08	11/10/08 [30] 6:30 11/11/08 [26] 6:30 11/17/08 [11] 5:00 11/24/08 [16] 4:30	NM 1,068,053 1,077,116 1,075,351	7,368
December-08	12/1/08 [11] 7:50 12/8/08 [16] 6:00 12/17/08 [15] 8:00 12/22/08 6:00 12/30/08 [15] 7:00	1,085,806 1,086,147 1,093,162 1,148,631 1,153,621	78,270
January-09	1/7/09 [31] 7:15 1/15/09 [16] 6:00 1/20/09 [15] 6:30 1/29/09 [15] 4:45	1,239,376 1,239,672 1,245,970 1,249,865	96,244

Notes:
NM = Not measured

[1] Submersible pump at well MW-2 was shutdown. This pump will be re-started after troubleshooting the level floats/controller malfunction.

[2] System observed non-functioning upon arrival. Re-started by re-setting power supply.

[3] System shutdown to verify effluent air results.

[4] System shutdown due to float malfunction.

[5] System re-started after replacing the floats.

[6] System shutdown due to high-level in oil-water separator. System restarted after replacing a capacitor on the transfer pump.

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)

[7] System shutdown due to transfer pump malfunction. System could not be restarted pending replacement of transfer pump.

[8] System restarted after replacing transfer pump.

[9] System observed non-functioning upon arrival due to DPE liquid ring pump malfunction. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[10] System re-started upon compliance verification and after conducting maintenance on the liquid ring pump.

[11] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[12] System re-started momentarily upon compliance verification and to collect carbon sample for profiling and change-out.

[13] System re-started upon receipt of analytical results for carbon profile.

[14] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started after replacing particulate filters on the system.

[15] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System re-started after re-setting high level alarms.

[16] System re-started upon receipt of analytical results and compliance verification.

[17] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started momentarily after conducting maintenance, but shutdown pending further troubleshooting.

[18] System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[19] System re-started briefly but shutdown to verify effluent air results.

[20] System observed non-functioning upon arrival due to high water level alarm on air stripper and transfer pump malfunction. System re-started, but shutdown after sampling pending receipt and verification of analytical results and replacement of transfer pump.

[21] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to float malfunction.

[22] System observed non-functioning upon arrival due to power failure. System re-started, but shutdown after sampling pending receipt and verification of analytical results. Floats were replaced on DPE system.

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to transfer pump contactor malfunction. Currently only GETS operational.			
[24] DPE system re-started after replacing transfer pump contactor.			
[25] System remained shutdown. Collected carbon sample (vapor phase) for profiling and change-out.			
[26] System re-started after completion of carbon change-out.			
[27] System re-started upon receipt of analytical results and compliance verification. Collected carbon sample (liquid phase) for profiling and change-out.			
[28] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System not re-started, pending carbon change-out for liquid phase carbon vessels.			
[29] Unable to complete carbon change-out due to excessive cementing of carbon. System remained shutdown.			
[30] Carbon change-out for liquid phase carbon vessels completed.			
[31] System shutdown after sampling pending receipt and verification of analytical results.			

STRATUS
ENVIRONMENTAL, INC.

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

TRANSMITTAL

Date March 4, 2009

Project E2111-03

To:

Ms. Tiffany Treece

City of San Leandro

Civic Center, 835 E. 14th Street

San Leandro, CA 94577

Re: Permit # SD-036, ARCO Service Station No. 2111, 1156 Davis Street, San Leandro

Item	Description
1	Monthly Discharge Report for February 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for February 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 63,899 gallons of treated groundwater were discharged to the sanitary sewer between January 29, 2009 and February 25, 2009.

If you have any questions or need any additional information, please call either Kiran Nagaraju at (530) 676-6007 or myself at (530) 676-6000.

Sincerely,

Jay R. Johnson, P.G.
Project Manager

cc: Mr. Rob Miller, Broadbent & Associates, Inc.

MONTHLY DISCHARGE REPORT
ARCO SERVICE STATION #2111, 1156 DAVIS STREET

This form and enclosed documents serve as the remediation activities monthly discharge report to the City of San Leandro for the reporting period of: January 29, 2009 to February 25, 2009. This report is submitted in compliance with 40 CFR 403.12 and Part III (A) of Special Discharge Permit **SD-036**. The information contained in this report is accurate and complete. For any questions or comments regarding this report, contact Kiran Nagaraju at (530) 676 6007.

Number of days discharged: 27

Total monthly discharge: 63,899 U. S. Gallons

Signature of Certifying Official: _____

Printed Name of Official: Jay R. Johnson, P.G.

Title: Project Manager

Date: March 2, 2009

Include a brief statement summarizing the month's operations:

The operation of the dual phase extraction (DPE) system, air stripper (AS), and the groundwater extraction and treatment system (GETS) was initiated on January 29, 2007. Soil vapors and groundwater were concurrently extracted from wells V-1, V-2, V-3, MW-1, MW-3, MW-7, and MW-8 using the liquid ring pump of the DPE system. In addition, groundwater was also extracted from well MW-2 using the electrical submersible pump. The groundwater extracted by both the DPE and the submersible pump is treated using the air stripper and two 2,000-pound carbon vessels in series prior to discharge to the sewer. The remediation systems were shutdown after sampling on February 3, 2009, pending receipt and verification of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on February 10, 2009. The remediation systems were found non-functioning on February 12, 2009, due to a high-water level alarm either in the air stripper tank or in the oil-water separator and were re-started on the same day after re-setting the high level alarms. The remediation systems were again found non-functioning on February 18, 2009, due to a power failure and were re-started on the same day after re-setting the power supply. The effluent totalizer reading could not be recorded on February 25, 2009, due to an algae build on the display cover. The effluent flow totalizer and the cover will be cleaned during the next site visit in March 2009.

Submit reports to: City of San Leandro – Environmental Services Division
835 East 14th Street, San Leandro CA 94577

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
January-07	1/29/07 8:00	System Start-up	5,560
	1/29/07 8:00	3,000	
	1/29/07[1] 12:00	5,000	
	01/30/07	6,200	
	01/31/07	8,560	
February-07	2/1/07 5:15	16,860	114,230
	2/2/07 5:00	25,480	
	2/5/07 5:00	33,400	
	2/20/07 6:30	122,790	
March-07	3/5/07[2] 5:00	130,565	10,472
	3/8/07[3] 4:50	132,951	
	3/14/07[4] 7:00	NM	
	3/29/07[5] 10:00	133,262	
April-07	4/2/07[6] 5:30	170,596	66,881
	4/10/07[7] 5:00	NM	
	4/23/07[8] 7:00	172,210	
	4/26/07 6:00	200,143	
May-07	5/1/2007[9] 4:50	220,892	210,103
	5/15/2007[10] 5:00	225,297	
	5/29/07 8:30	410,246	
June-07	6/4/2007[11] 5:00	429,450	19,976
	6/12/2007[12] 5:00	430,092	
	6/26/2007[13] 4:30	430,222	

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
July-07	7/2/07 5:30 7/10/2007 [14] 5:45 7/17/2007 [15] 5:00	480,377 523,553 546,094	115,872
August-07	8/1/2007 [15] 5:00 8/7/07 5:00 8/20/2007 [15] 5:00	580,301 580,662 582,706	36,612
September-07	9/5/2007 [11] 5:00 9/11/2007 [16] 9:00 9/17/2007 [17] 5:30	589,944 589,950 591,443	8,737
October-07	10/1/07 [18] 5:00 10/11/07 [19] 8:15 10/23/07 [16] 5:00 10/30/07 [15] 7:10	592,403 NM NM 593,647	2,204
November-07	11/6/07 [11] 4:30 11/14/07 [16] 6:00 11/20/07 [15] 6:50	612,552 612,552 613,537	19,890
December-07	12/5/07 [11] 5:00 12/17/07 [16] 4:30	633,121 633,123	19,586
January-08	1/7/08 [11] 5:00 1/15/08 [16] 7:00	635,200 636,041	2,918
February-08	2/5/08 [20] 8:15 2/26/08 [8] 6:00	642,841 643,443	7,402

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
March-08	3/5/08 [11] 4:00 3/17/08 [21] 4:30	646,123 646,221	2,778
April-08	4/1/08 [22] 5:00 4/14/08 [23] 5:00 4/22/08 5:00	719,174 719,881 757,683	111,462
May-08	5/6/08 [24] 5:15 5/12/08 4:45 5/20/08 7:00 5/27/08 6:15	806,356 822,743 844,640 914,563	156,880
June-08	6/2/08 [15] 5:00 6/9/08 [15] 7:15 6/16/08 [15] 7:16 6/23/08 [15] 7:24	949,693 984,702 1,001,527 1,017,867	103,304
July-08	7/1/08 [11] 7:27 7/7/08 [25] 6:54 7/23/08 [26] 7:30 7/29/08 [15] 4:30	1,028,841 1,029,035 1,029,035 1,029,743	11,876
August-08	8/5/08 [15] 4:30 8/12/08 [15] 5:00 8/27/08 [15] 9:15	1,037,580 1,040,731 1,050,359	20,616

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
September-08	9/2/08 [11] 8:30 9/10/08 [27] 12:30 9/17/08 [15] 7:00 9/24/08 [15] 7:15	1,052,669 1,052,851 1,056,514 1,056,950	6,591
October-08	10/1/08 [28] 6:57 10/2/08 [29] 7:50	1,067,983 NM	11,033
November-08	11/10/08 [30] 6:30 11/11/08 [26] 6:30 11/17/08 [11] 5:00 11/24/08 [16] 4:30	NM 1,068,053 1,077,116 1,075,351	7,368
December-08	12/1/08 [11] 7:50 12/8/08 [16] 6:00 12/17/08 [15] 8:00 12/22/08 6:00 12/30/08 [15] 7:00	1,085,806 1,086,147 1,093,162 1,148,631 1,153,621	78,270
January-09	1/7/09 [3] 7:15 1/15/09 [16] 6:00 1/20/09 [15] 6:30 1/29/09 [15] 4:45	1,239,376 1,239,672 1,245,970 1,249,865	96,244
February-09	2/3/09 [3] 5:00 2/10/09 [16] 5:00 2/12/09 [15] 7:58 2/18/09 [2] 5:30 2/25/09 6:00	1,297,359 1,297,652 NM 1,313,764 NM	63,899

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)

Notes:
NM = Not measured

[1] Submersible pump at well MW-2 was shutdown. This pump will be re-started after troubleshooting the level floats/controller malfunction.

[2] System observed non-functioning upon arrival. Re-started by re-setting power supply.

[3] System shutdown to verify effluent air results.

[4] System shutdown due to float malfunction.

[5] System re-started after replacing the floats.

[6] System shutdown due to high-level in oil-water separator. System restarted after replacing a capacitor on the transfer pump.

[7] System shutdown due to transfer pump malfunction. System could not be restarted pending replacement of transfer pump.

[8] System restarted after replacing transfer pump.

[9] System observed non-functioning upon arrival due to DPE liquid ring pump malfunction. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[10] System re-started upon compliance verification and after conducting maintenance on the liquid ring pump.

[11] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[12] System re-started momentarily upon compliance verification and to collect carbon sample for profiling and change-out.

[13] System re-started upon receipt of analytical results for carbon profile.

[14] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started after replacing particulate filters on the system.

[15] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System re-started after re-setting high level alarms.

[16] System re-started upon receipt of analytical results and compliance verification.

[17] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started momentarily after conducting maintenance, but shutdown pending further troubleshooting.

[18] System re-started, but shutdown after sampling pending receipt and verification of analytical results.

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)

[19] System re-started briefly but shutdown to verify effluent air results.

[20] System observed non-functioning upon arrival due to high water level alarm on air stripper and transfer pump malfunction. System re-started, but shutdown after sampling pending receipt and verification of analytical results and replacement of transfer pump.

[21] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to float malfunction.

[22] System observed non-functioning upon arrival due to power failure. System re-started, but shutdown after sampling pending receipt and verification of analytical results. Floats were replaced on DPE system.

[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to transfer pump contactor malfunction. Currently only GETS operational.

[24] DPE system re-started after replacing transfer pump contactor.

[25] System remained shutdown. Collected carbon sample (vapor phase) for profiling and change-out.

[26] System re-started after completion of carbon change-out.

[27] System re-started upon receipt of analytical results and compliance verification. Collected carbon sample (liquid phase) for profiling and change-out.

[28] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System not re-started, pending carbon change-out for liquid phase carbon vessels.

[29] Unable to complete carbon change-out due to excessive cementing of carbon. System remained shutdown.

[30] Carbon change-out for liquid phase carbon vessels completed.

STRATUS
ENVIRONMENTAL, INC.

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

TRANSMITTAL

Date April 3, 2009

Project E2111-03

To:

Ms. Tiffany Treece

City of San Leandro

Civic Center, 835 E. 14th Street

San Leandro, CA 94577

Re: Permit # SD-036, ARCO Service Station No. 2111, 1156 Davis Street, San Leandro

Item	Description
1	Monthly Discharge Report for March 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for March 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 189,047 gallons of treated groundwater were discharged to the sanitary sewer between February 25, 2009 and March 31, 2009.

If you have any questions or need any additional information, please call either Kiran Nagaraju at (530) 676-6007 or myself at (530) 676-6000.

Sincerely,

Jay R. Johnson, P.G.
Project Manager

cc: Mr. Rob Miller, Broadbent & Associates, Inc.

MONTHLY DISCHARGE REPORT
ARCO SERVICE STATION #2111, 1156 DAVIS STREET

This form and enclosed documents serve as the remediation activities monthly discharge report to the City of San Leandro for the reporting period of: February 25, 2009 to March 31, 2009. This report is submitted in compliance with 40 CFR 403.12 and Part III (A) of Special Discharge Permit **SD-036**. The information contained in this report is accurate and complete. For any questions or comments regarding this report, contact Kiran Nagaraju at (530) 676 6007.

Number of days discharged: 34

Total monthly discharge: 189,047 U. S. Gallons

Signature of Certifying Official: _____

Printed Name of Official: Jay R. Johnson, P.G.

Title: Project Manager

Date: March 31, 2009

Include a brief statement summarizing the month's operations:

The operation of the dual phase extraction (DPE) system, air stripper (AS), and the groundwater extraction and treatment system (GETS) was initiated on January 29, 2007. Soil vapors and groundwater were concurrently extracted from wells V-1, V-2, V-3, MW-1, MW-3, MW-7, and MW-8 using the liquid ring pump of the DPE system. In addition, groundwater was also extracted from well MW-2 using the electrical submersible pump. The groundwater extracted by both the DPE and the submersible pump is treated using the air stripper and two 2,000-pound carbon vessels in series prior to discharge to the sewer. Groundwater extraction using well MW-2 was temporarily discontinued on February 18, 2009. The remediation systems were shutdown after sampling on March 3, 2009, pending receipt and verification of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on March 11, 2009.

Submit reports to: City of San Leandro – Environmental Services Division
835 East 14th Street, San Leandro CA 94577

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
January-07	1/29/07 8:00 1/29/07 8:00 1/29/07[1] 12:00 01/30/07 01/31/07	System Start-up 3,000 5,000 6,200 8,560	5,560
February-07	2/1/07 5:15 2/2/07 5:00 2/5/07 5:00 2/20/07 6:30	16,860 25,480 33,400 122,790	114,230
March-07	3/5/07[2] 5:00 3/8/07[3] 4:50 3/14/07[4] 7:00 3/29/07[5] 10:00	130,565 132,951 NM 133,262	10,472
April-07	4/2/07[6] 5:30 4/10/07[7] 5:00 4/23/07[8] 7:00 4/26/07 6:00	170,596 NM 172,210 200,143	66,881
May-07	5/1/2007[9] 4:50 5/15/2007[10] 5:00 5/29/07 8:30	220,892 225,297 410,246	210,103
June-07	6/4/2007[11] 5:00 6/12/2007[12] 5:00 6/26/2007[13] 4:30	429,450 430,092 430,222	19,976
July-07	7/2/07 5:30 7/10/2007 [14] 5:45 7/17/2007 [15] 5:00	480,377 523,553 546,094	115,872
August-07	8/1/2007 [15] 5:00 8/7/07 5:00 8/20/2007 [15] 5:00	580,301 580,662 582,706	36,612

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October-07	10/1/07 [18] 5:00 10/11/07 [19] 8:15 10/23/07 [16] 5:00 10/30/07 [15] 7:10	592,403 NM NM 593,647	2,204
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April-08	4/1/08 [22] 5:00 4/14/08 [23] 5:00 4/22/08 5:00	719,174 719,881 757,683	111,462
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July-08	7/1/08 [11] 7:27 7/7/08 [25] 6:54 7/23/08 [26] 7:30 7/29/08 [15] 4:30	1,028,841 1,029,035 1,029,035 1,029,743	11,876
August-08	8/5/08 [15] 4:30 8/12/08 [15] 5:00 8/27/08 [15] 9:15	1,037,580 1,040,731 1,050,359	20,616
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ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
January-09	1/7/09 [3] 7:15	1,239,376	96,244
	1/15/09 [16] 6:00	1,239,672	
	1/20/09 [15] 6:30	1,245,970	
	1/29/09 [15] 4:45	1,249,865	
February-09	2/3/09 [3] 5:00	1,297,359	63,899
	2/10/09 [16] 5:00	1,297,652	
	2/12/09 [15] 7:58	NM	
	2/18/09 [31] 5:30	1,313,764	
	2/25/09 6:00	NM	
March-09	3/3/09 [3] 5:00	1,402,083	189,047
	3/11/09 [16] 7:30	1,402,123	
	3/16/09 6:30	1,435,688	
	3/23/09 7:00	1,460,272	
	3/31/09 6:30	1,502,811	

Notes:
NM = Not measured

[1] Submersible pump at well MW-2 was shutdown. This pump will be re-started after troubleshooting the level floats/controller malfunction.

[2] System observed non-functioning upon arrival. Re-started by re-setting power supply.

[3] System shutdown to verify effluent air results.

[4] System shutdown due to float malfunction.

[5] System re-started after replacing the floats.

[6] System shutdown due to high-level in oil-water separator. System restarted after replacing a capacitor on the transfer pump.

[7] System shutdown due to transfer pump malfunction. System could not be restarted pending replacement of transfer pump.

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[10] System re-started upon compliance verification and after conducting maintenance on the liquid ring pump.

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ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

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[11] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[12] System re-started momentarily upon compliance verification and to collect carbon sample for profiling and change-out.

[13] System re-started upon receipt of analytical results for carbon profile.

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[19] System re-started briefly but shutdown to verify effluent air results.

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[29] Unable to complete carbon change-out due to excessive cementing of carbon. System remained shutdown.

[30] Carbon change-out for liquid phase carbon vessels completed.

[31] System observed non-functioning upon arrival. Re-started by re-setting power supply.

Groundwater extraction discontinued from well MW-2.