Atlantic Richfield Company
(a BP affiliated company)

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

28 January 2009

Re: Fourth Quarter 2008 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

Fourth Quarter 2008 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
www.broadbentinc.com

28 January 2009

Project No. 06-08-615

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

BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL, WATER RESOURCES & ENGINEERING

28 January 2009

Project No. 06-08-615

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

Attn.: Mr. Paul Supple

Re: Fourth Quarter 2008 Ground-Water Monitoring 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 *Fourth Quarter 2008 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 Fourth Quarter 2008, 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.:	06-08-615
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 (Fourth Quarter 2008):

1. Prepared and submitted *Third Quarter 2008 Ground-Water Monitoring and Remediation System Status Report* (BAI, 10/30/2008).
2. Conducted ground-water monitoring/sampling for Fourth Quarter 2008. Work performed on 17 November 2008 by Stratus Environmental, Inc (Stratus).
3. Performed routine operation, maintenance and performance monitoring of the Dual-Phase Extraction (DPE) treatment system. Work performed by Stratus.
4. Submitted monthly discharge reports for October, November and December 2008 to the City of San Leandro. Work performed by Stratus.
5. Conducted carbon change-outs for the first and second liquid phase carbon vessels. Work performed on 2 October 2008 and 10 November 2008 by Stratus.

WORK PROPOSED FOR NEXT QUARTER (First Quarter 2009):

1. Prepared and submitted this *Fourth Quarter 2008 Ground-Water Monitoring and Remediation System Status Report* (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for First Quarter 2009.
3. Continue operation, maintenance and performance monitoring of the DPE treatment system.
4. Submit monthly discharge reports for January, February and March 2009.

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):	**15.61 ft (MW-6) to 22.91 ft (MW-7)**
General ground-water flow direction:	**South-southeast**
Approximate hydraulic gradient:	**0.05 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**			
Frequency of DPE system field monitoring:	**Weekly**			
Frequency of DPE system sampling:	**Monthly**			
Gallons of ground water treated and discharged:	**This Quarter** **85,638**		**Cumulative** **1,153,621**	
Total operating hours:	**177**		**2492**	
Mass Removal (pounds)				
Gasoline range organics (GRO):	**0.051 (GWE)**	**51.46 (SVE)**	**5.589 (GWE)**	**715.81 (SVE)**
Benzene:	**0.001 (GWE)**		**0.086 (GWE)**	
Methyl-tert butyl ether (MTBE):	**0.100 (GWE)**		**8.092 (GWE)**	
Ground-water DPE system influent sample results (µg/L):	**10/1/2008**	**11/17/2008**	**12/1/2008**	
GRO:	**---**	**290**	**240**	
Benzene:	**---**	**6.5**	**7.4**	
MTBE:	**---**	**360**	**300**	
Ground-water DPE system effluent sample results (µg/L):				
GRO:	**---**	**<50**	**<50**	
Benzene:	**---**	**<0.50**	**<0.50**	
MTBE:	**---**	**<0.50**	**<0.50**	
Soil vapor DPE system influent sample results (mg/M^3):				
GRO:	**---**	**890**	**950**	
Benzene:	**---**	**1.3**	**0.62**	
MTBE:	**---**	**14**	**12**	
Soil vapor DPE system effluent sample results (mg/M^3):				
GRO:	**---**	**<50**	**<50**	
Benzene:	**---**	**<0.0016**	**<0.0016**	
MTBE:	**---**	**<0.0072**	**<0.0072**	

DISCUSSION:

Fourth quarter 2008 ground-water monitoring and sampling was conducted at Station #2111 on 17 November 2008 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 15.61 ft at MW-6 to 22.91 ft at MW-7. Resulting ground-water surface elevations ranged from 21.50 ft above mean sea level in well MW-6 to 15.63 ft in well MW-7. Water level elevations were between historic minimum and maximum ranges for each well, as summarized in Table 1, with the following exceptions: water level elevations reached historic minimum values in wells MW-2, MW-4, MW-5, and MW-6. Water level elevations yielded a potentiometric ground-water flow direction and gradient to the south-southeast at approximately 0.05 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 two of the seven wells sampled at concentrations of 290 micrograms per liter (µg/L) in well MW-2 and 68 µg/L in well MW-7. Benzene was detected above the laboratory reporting limit in two of the seven wells sampled at concentrations of 9.3 µg/L in well MW-2 and 1.8 µg/L in well MW-7. Ethylbenzene, Toluene, and Total Xylenes were detected above the laboratory reporting limits in well MW-7 at concentrations of 0.54 µg/L, 1.9 µg/L, and 2.0 µg/L, respectively. TBA was detected above the laboratory reporting limit in four of the seven wells sampled at concentrations up to 740 µg/L in well MW-2. TAME was detected above the laboratory reporting limit in one of the seven wells sampled at a concentration of 0.52 µg/L in well MW-1. MTBE was detected above the laboratory reporting limit in each of the seven wells sampled at concentrations up to 89 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: Benzene reached a historic minimum concentration in well MW-2 (9.3 µg/L); TBA reached historic minimum concentrations in wells MW-5 (160 µg/L) and MW-8 (24 µg/L); and MTBE concentrations reached historic minimum concentrations in wells MW-2 (89 µg/L), MW-5 (89 µg/L), and MW-7 (28 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 Fourth Quarter 2008 period from 1 October 2008 to 30 December 2008, the DPE system reportedly operated approximately 8.02 percent of the time. During this period, a total of 85,638 gallons of ground water was treated and discharged. During the Fourth Quarter 2008, approximately 0.052 pounds of GRO (0.008 gallons), approximately 0.001 pounds of Benzene (0.0002 gallons), and approximately 0.099 pounds of MTBE (0.016 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 177 hours between 1 October and 30 December 2008 based on the hour meter reading. Stratus found the system non-operational upon arrival at the Site on 1 October 2008 due to a high-water level alarm. The system was not restarted due to the scheduled carbon change-out on 2 October 2008. Stratus oversaw EnviroSupply and Service, Inc. conduct a carbon change-out of the second liquid phase carbon vessel (lag vessel) on 2 October 2008. A carbon change-out could not be performed for the first carbon vessel (lead vessel) due to excessive cementation of the carbon. The system was left non-operational pending a successful carbon change-out of the lead vessel.

System samples were not collected during the month of October 2008 due to the non-operational status of the remediation system.

Stratus oversaw EnviroSupply and Service, Inc. conduct a carbon change-out of the lead carbon vessel on 10 November 2008. The lead vessel was allowed to soak in potable water for at least 24 hours prior to restarting the system. On 11 November 2008, Stratus restarted the system following the carbon change-out. The system was left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 17 November 2008 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted momentarily on 17 November 2008 to facilitate sample collection and then shut down pending receipt of the laboratory analytical results. The system was restarted on 24 November 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 1 December 2008 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted momentarily on 1 December 2008 to facilitate sample collection and then shut down pending receipt of the laboratory analytical results. The system was restarted on 8 December 2008 following receipt of the laboratory results and left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 17 December 2008 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 22 December 2008. The system was left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 30 December 2008 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted and left operational upon departure. Copies of Stratus' remediation system operation and maintenance data packages for Fourth Quarter 2008 are contained within Appendix C. Copies of Stratus' remediation system monthly discharge reports for Fourth Quarter 2008 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 – 17 November 2008

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

Table 2. Summary of Fuel Additives Analytical Data

Table 3. Historical Ground-Water Flow Direction and Gradient

Table 4. Approximate Cumulative Floating Product Recovered

Table 5. Soil Vapor Extraction System and Ground-Water Extraction System Monthly Discharge Analytical Results Summary

Table 6. Ground-Water Extraction System Performance Data

Table 7. Ground-Water Extraction System Effluent Data

Table 8. Operational Uptime Information of the Soil Vapor Extraction System

Table 9. Soil Vapor Extraction System Flow Rates and Air Sample Analytical Results

Table 10. Soil Vapor Extraction and Emission Rates

Figure 1. Cumulative GWE Mass Removal for GRO, Benzene, and MTBE

Figure 2. GWE Influent Concentrations for GRO, Benzene, and MTBE

Figure 3. SVE System Influent Concentration vs. Time

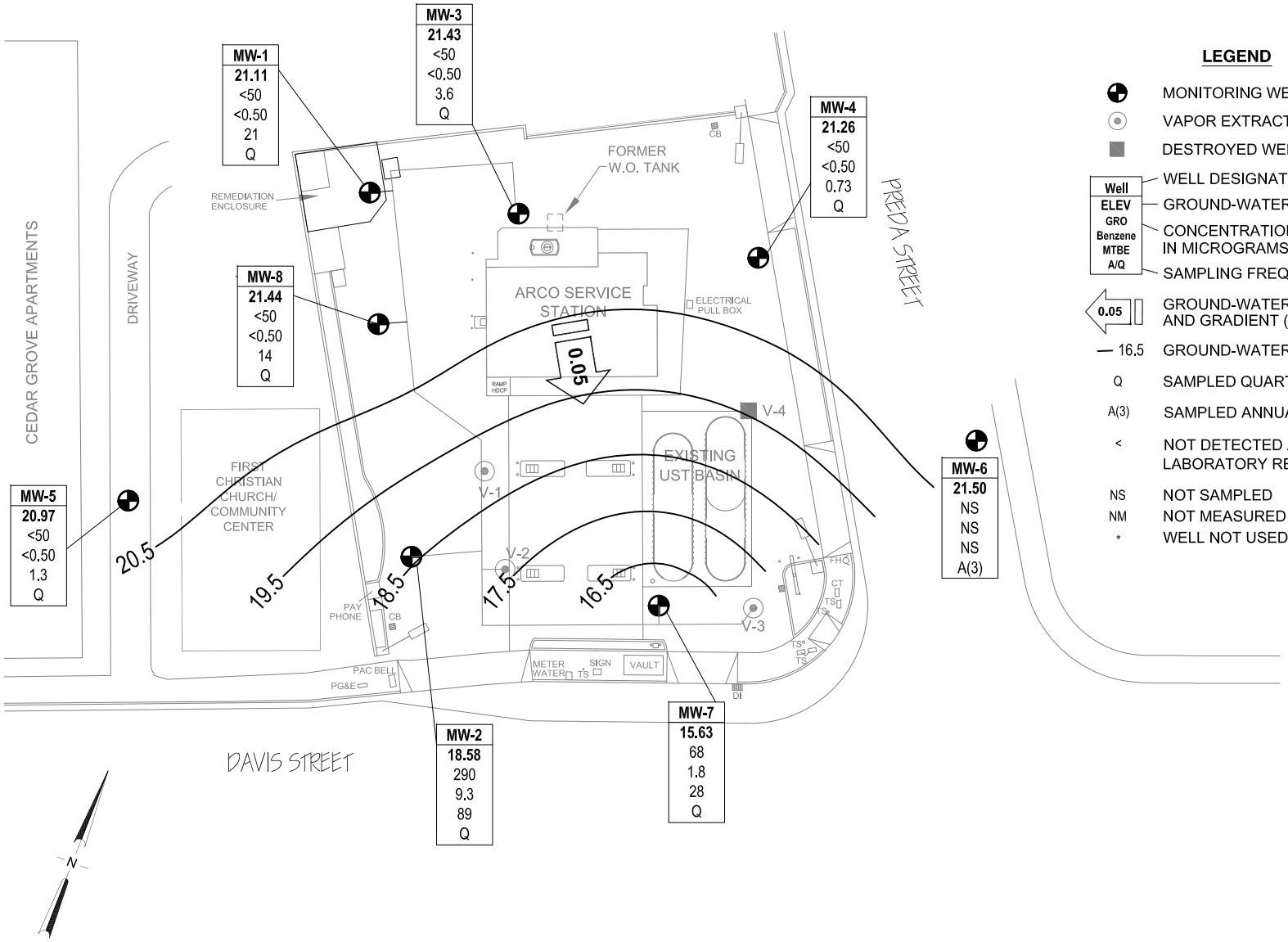
Figure 4. SVE System Cumulative GRO Mass Removed vs. Time

Appendix A. Stratus Ground-Water Sampling Data Package (Includes Field Data Sheets, Laboratory Analytical Report with Chain-of-Custody Documentation and Field Procedures)

Appendix B. GeoTracker Upload Confirmations

Appendix C. Stratus Remediation System Operation and Maintenance Data Packages (Includes Field Data Sheets, Laboratory Reports, and Chain-of-Custody Documentation)

Appendix D. Stratus Remediation System Monthly Discharge Reports (Includes Brief Statements Summarizing Operations and Discharge Summary Tables)



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
- 0.05 — GROUND-WATER FLOW DIRECTION AND GRADIENT (FT/FT)
- 16.5 — 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: 1/20/09

Station #2111
1156 Davis Street
San Leandro, California

Ground-Water Elevation Contours and Analytical Summary Map
17 November 2008

Drawing
1

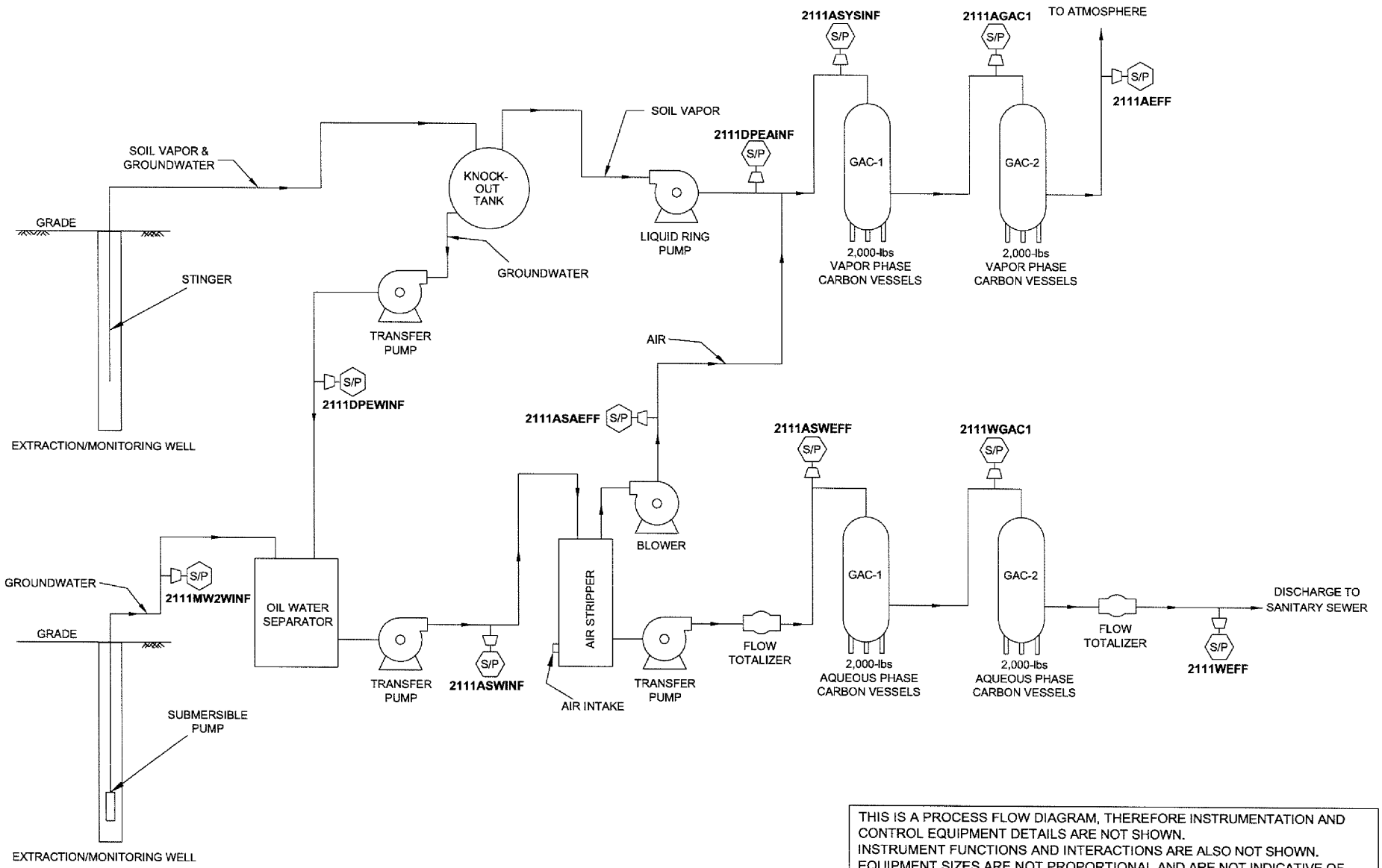


Diagram from Stratus Environmental Inc.

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**
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	--	--
12/21/00	--	b	37.99	12.0	26.00	--	--	5,010	360	189	213	626	54,300/89,200	--	--
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	--	--
3/13/2001	--	b	37.99	12.0	26.00	--	--	<20,000	525	466	408	1,460	91,700/76,000	--	--
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	--	--
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	--	--	--	--	--	--	--	--
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

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.															
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**
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
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

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-3 Cont.															
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**
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
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

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-4 Cont.															
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**
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	--	--
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	--	--

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 Cont.															
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**
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	--	--

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.															
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
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**	--	--	--	--	--	--	--	--

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															
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
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

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.															
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**
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
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**

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**	
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	
04/14/2006	<30,000	<2,000	2,100	<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.									
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**	
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
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	

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.									
11/17/2008	**<300**	**<10**	**3.6**	**<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**	
MW-5									
4/7/2003	<20,000	<4,000	3,700	<100	<100	<100	--	--	
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

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.									
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**	
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	
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	

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 Cont.									
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**	
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	
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	

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.									
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**	

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**

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**
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[4]	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[4]	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

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 range
[2] = Primary and confirm results varied by > 40% RPD
[3] = Sample taken from VOA vial with air bubble > 6 millimeters in diameter
[4] = Incorrect GWE influent concentrations were recorded in previously submitted reports
[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**
REPORTING PERIOD: FOURTH QUARTER 2008																	
PERIOD WATER DISCHARGED (gal):				**33,137**	**as of 12/1/2008**												
AVERAGE DISCHARGE RATE (gpm)				**0.38**													
PERIOD POUNDS REMOVED:								**0.051**				**0.001**				**0.100**	
PERIOD GALLONS REMOVED:								**0.008**				**0.000**				**0.016**	
TOTAL POUNDS REMOVED:									**5.589**				**0.086**				**8.092**
TOTAL GALLONS REMOVED:				**1,085,806**					**0.916**				**0.012**				**1.309**
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
Density of gasoline = 6.1 pounds per gallon
Density of benzene = 7.34 pounds per gallon
Density of MtBE = 6.18 pounds per gallon
NA = Not applicable

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:

Table 6
Ground-Water Extraction System Performance Data

ARCO Service Station No.2111
1156 Davis Street, San Leandro, California

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

REPORTING PERIOD: FOURTH QUARTER 2008
PERIOD WATER DISCHARGED (gal): 33,137 as of 12/01/2008
AVERAGE DISCHARGE RATE (gpm) 0.38

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%**

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

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
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
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

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**

Air Permit Limits

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

Sample Calculations

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 lbs/day

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 corrected.
[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

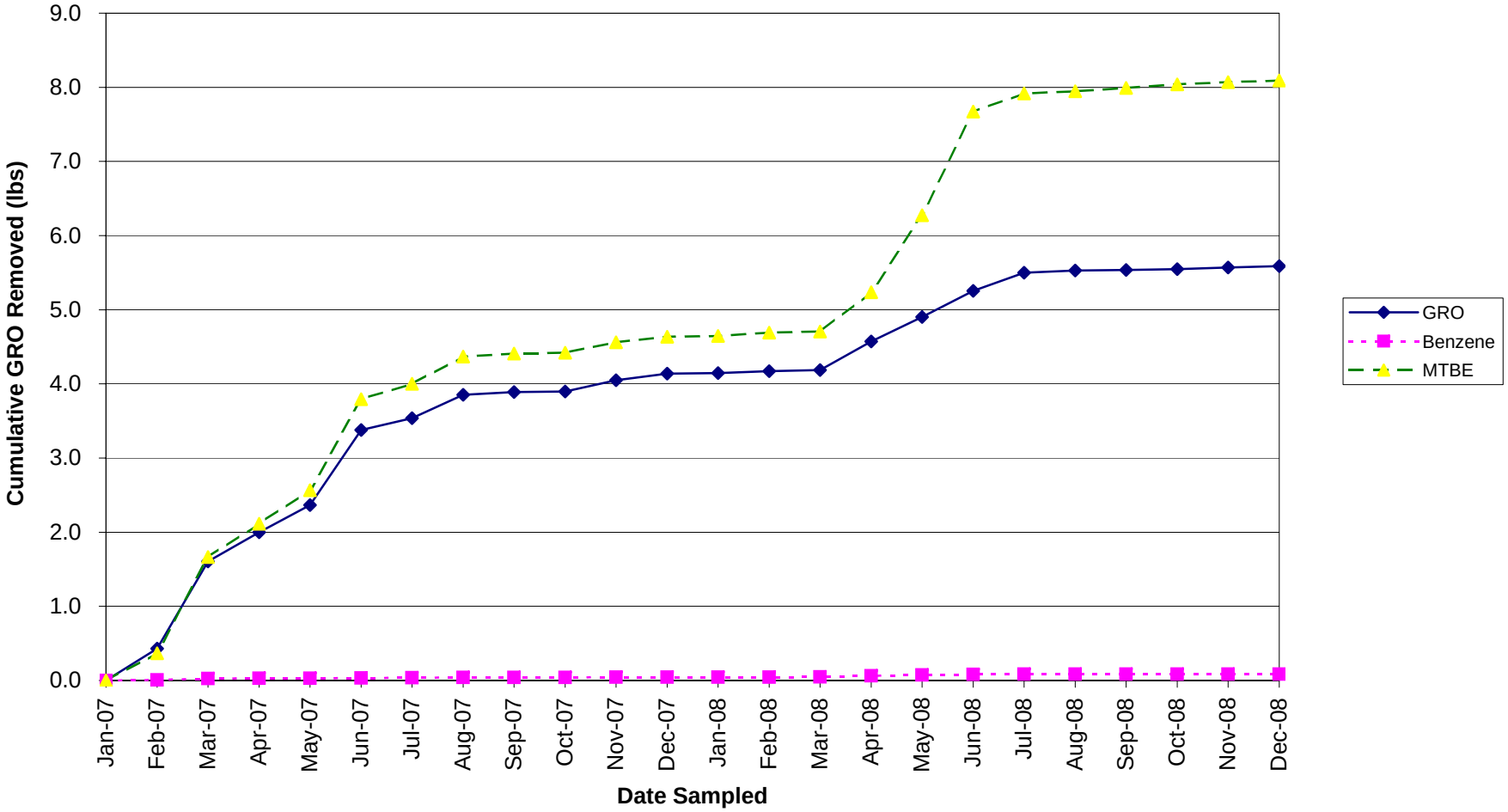


Figure 2
GWE Influent Concentrations for GRO, Benzene, and MTBE
Station #2111, 1156 Davis Street, San Leandro, California

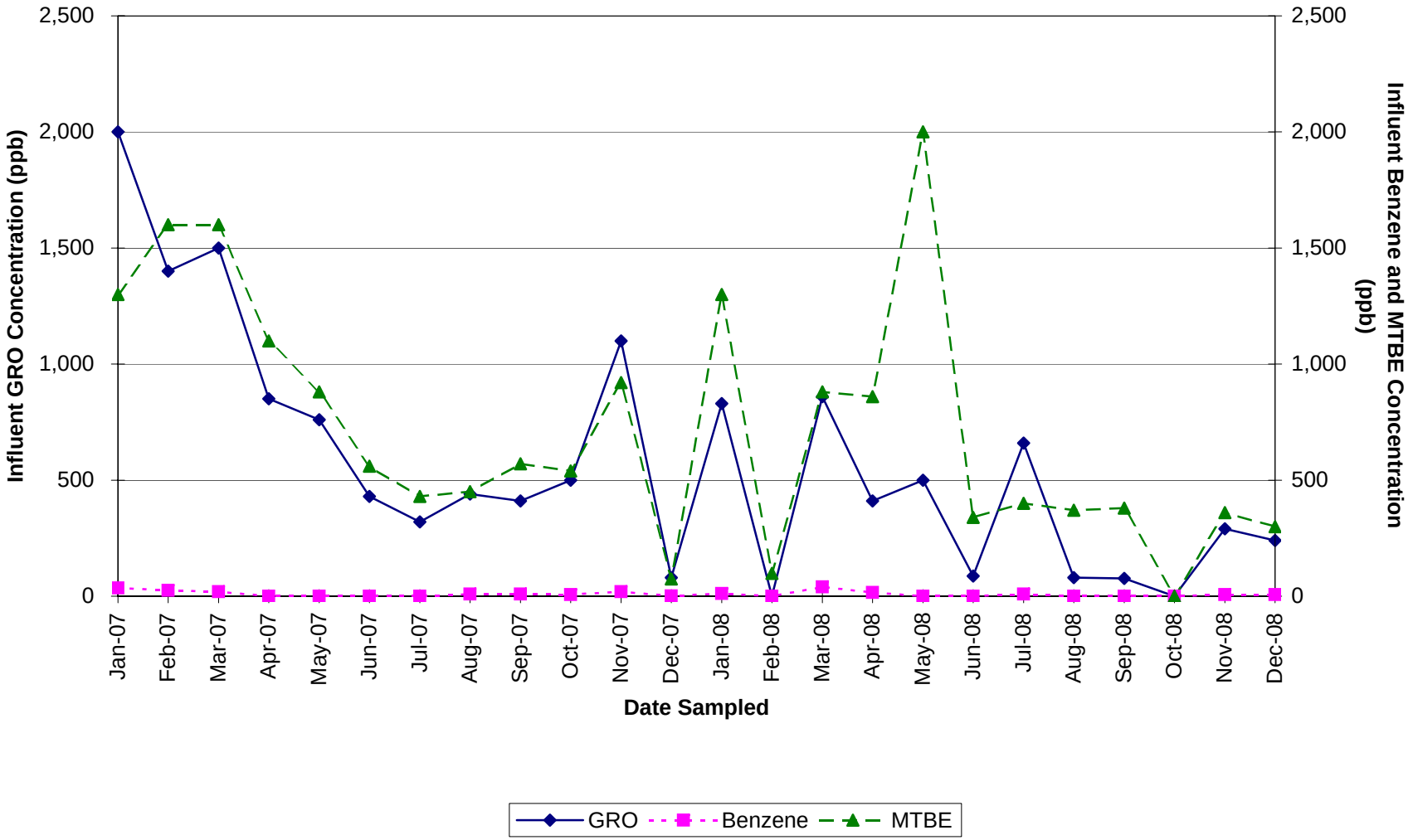


Figure 3
SVE System Influent Concentration vs.Time
Station #2111, 1156 Davis Street, San Leandro, California

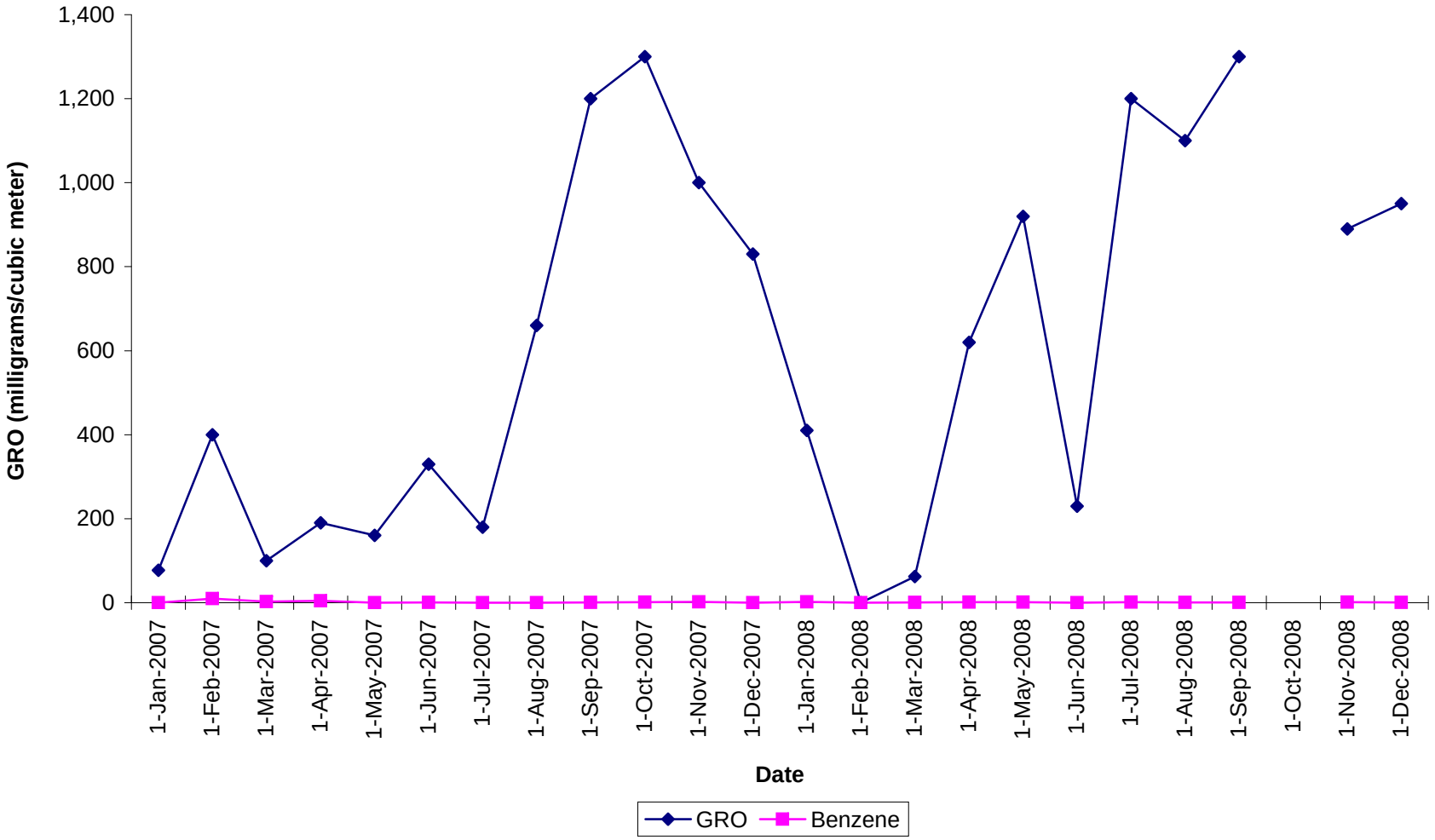
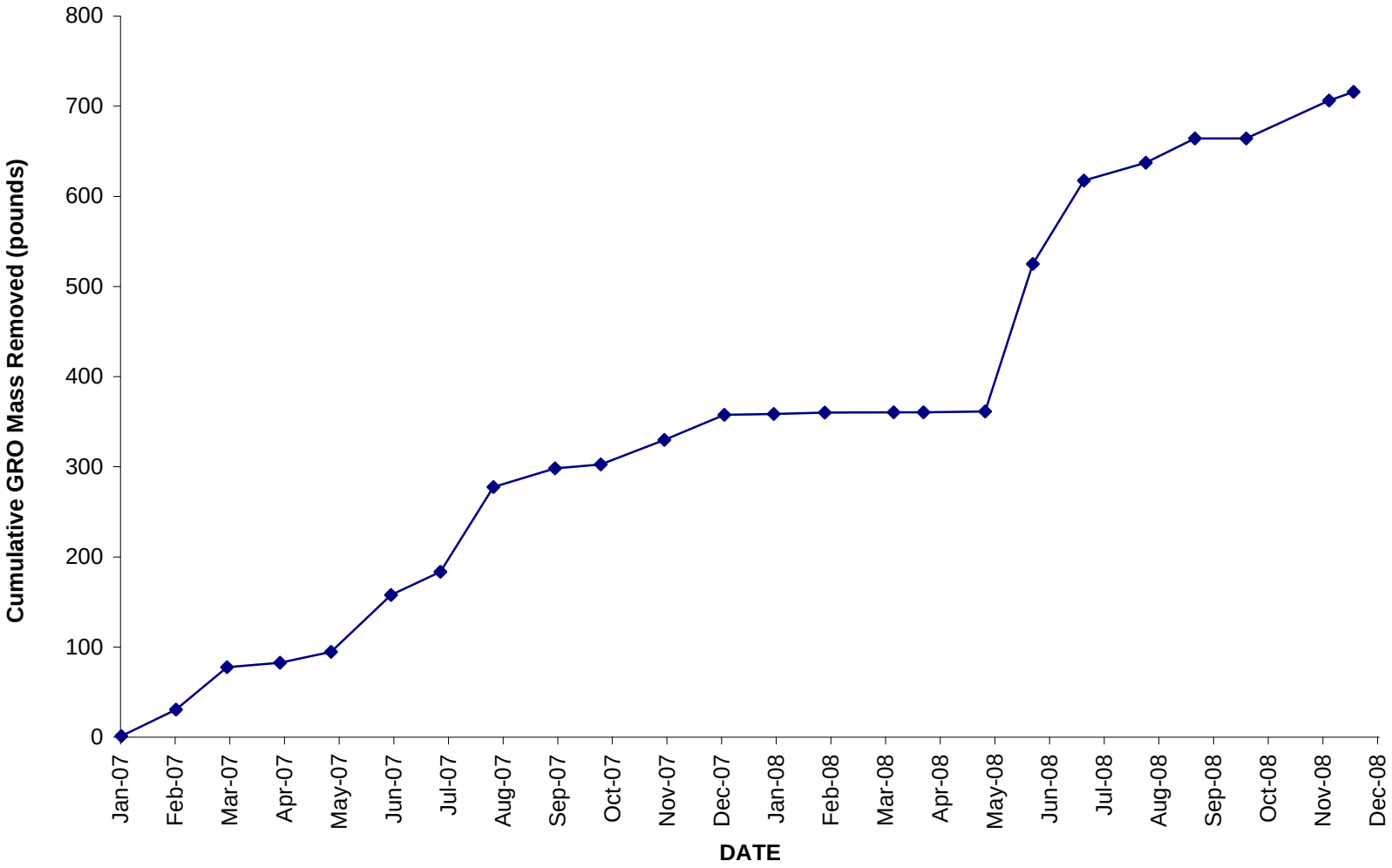


Figure 4
SVE System Cumulative GRO Mass Removed vs. Time
Station #2111, 1156 Davis Street, San Leandro, California



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

December 12, 2008

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

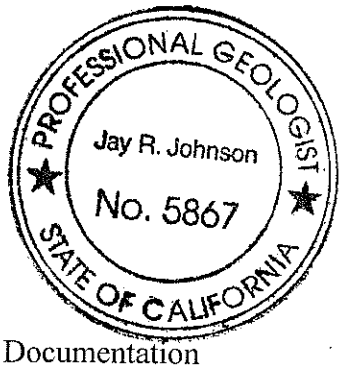
Data Submittal Prepared / Reviewed by: Becky Carroll / Jay Johnson
Phone Number: (530) 676-6000
On-Site Supplier Representatives: Chris Grant

Sampling Date: November 17, 2008
Arrival: 08:30 *Departure:* 10:45
Weather Conditions: Clear
Unusual Field Conditions: None noted.
Scope of Work Performed: Quarterly monitoring and sampling.
Variations from Work Scope: None noted.

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

Sincerely,

STRATUS ENVIRONMENTAL, INC.



Jay R. Johnson, P.G.
Project Manager

Attachments:

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

CC: Mr. Paul Supple, BP/ARCO

ENVIRONMENTAL, INC.

City: San Leandro, ca
Sampled by: CG
Signature:

Site Number: ARCO 2111
Project Number: E-2111
Project PM: JAY JOHNSON
DATE: 11/17/08

Water Level Data					Purge Volume Calculations					Purge Method				Sample Record			Field Data
Well ID	Time	Top of Screen	Depth to Water (feet)	Total Depth (feet)	Water column (feet)	Diameter (inches)	Multiplier	3 casing volumes (gallons)	Actual water purged (gallons)	No Purge	Bailer	Pump	other	DTW at sample time (feet)	Sample I.D	Sample Time	DO (mg/L)
MW-1	0955	12.50	18.38	—	—	4	2	—	—		X			18.38	MW-1	1001	0.94
MW-2	0838	12.00	19.28	—	—	4	2	—	—		Port Sample		X	19.28	MW-2	0840	0.71
MW-3	0857	12.00	17.76	—	—	4	2	—	—		X			17.76	MW-3	0907	1.36
MW-4	0917	10.00	16.73	21.52	—	4	2	—	—		X			16.73	MW-4	0925	1.07
MW-5	1017	9.50	16.15	23.61		2	.5	—	—		X			16.15	MW-5	1024	0.66
MW-6	1012	10.00	15.61	20.55	—	2	.5	—	—	X				—	—	—	—
MW-7	0937	12.00	22.91	—	—	4	2	—	—		X			22.91	MW-7	0944	1.14
* MW-8	0820	18.00	17.47	38.91	21.44	2	.5	42.88	43		X			17.47	MW-8	0845	3.74

* MW-8 purged through system

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)

MW-1, MW-2, MW-3, MW-7: (Pump in wells) TD Not measured

CALIBRATION DATE
pH: 11/14/08
Conductivity:
DO:

STRATUS ENVIRONMENTAL, INC.

Site Address 1156 Davis St.
City San Leandro, Ca
Site Sampled by CG

ORIGINAL

Site Number Arco 2111
Project No. E-2111
Project PM Jay Johnson
Date Sampled 11/17/08

Well ID MW-1				1001
purge start time Bailer (NP)				no odor
	Temp C	pH	cond	gallons
time	20.2	6.96	618	Ø
time				
time				
time				
purge stop time				

Well ID MW-2				0840
purge start time Port Sample				no odor
	Temp C	pH	cond	gallons
time	20.5	6.75	626	Ø
time				
time				
time				
pugre stop time				

Well ID MW-3				0907
purge start time Bailer (NP)				no odor
	Temp C	pH	cond	gallons
time	19.4	6.90	613	Ø
time				
time				
time				
purge stop time				

Well ID MW-4				0925
purge start time Bailer (NP)				no odor
	Temp C	pH	cond	gallons
time	20.5	6.83	621	Ø
time				
time				
time				
purge stop time				

Well ID MW-5				1024
purge start time Bailer (NP)				no odor
	Temp C	pH	cond	gallons
time	20.3	6.93	637	Ø
time				
time				
time				
purge stop time				

Well ID MW-6				
purge start time Not sampled in 4th quarter				
	Temp C	pH	cond	gallons
time	—	—	—	—
time	↓	↓	↓	↓
time				
time				
purge stop time				

Well ID MW-7				0944
purge start time Bailer (NP)				no odor
	Temp C	pH	cond	gallons
time	20.0	6.95	651	Ø
time				
time				
time				
purge stop time				

Well ID MW-8				0845
purge start time Purged through System				odor
	Temp C	pH	cond	gallons
time	19.5	6.63	650	43
time				
time				
time				
purge stop time				

ORIGINAL

WELLHEAD OBSERVATION FORM

STRATUS ENVIRONMENTAL, INC.

Site Name/Number: ARCO 2111 *Date:* 11/17/08 *Technican:* C. Grant

Well I.D.	Box in Good Condition? X = Yes Blank = No	Lock Missing? X = Yes (replaced) Blank = No	Water in Wellbox? X = Yes Blank = No	Water Level Relative to Cap? A = Above cap B = Below cap L = Level w/cap	Well Cap? I = Intact M = Missing or Compromised (replaced)	Bolts Missing? X = Yes Blank = No	Bolts Stripped? X = Yes Blank = No	Bolt Holes Stripped? X = Yes Blank = No	Cracked or Broken Lid? X = Yes Blank = No	Cracked or Broken Box? X = Yes Blank = No	Grout Level more than 1ft below TOC? X = Yes Blank = No	Additional Comments (such as missing lid, concrete needs replacement, or other - explain)
MW-1	X											
MW-2	X											
MW-3	X											
MW-4	X											
MW-5								X-(1)				
MW-6			X	B								
MW-7	X											
MW-8	X											

DRUM INVENTORY

Drums on site? Yes No (circle)

Type and # Steel: _____ Plastic: _____

Note whether drums are full or empty, solids or liquids:

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

(updated 3-28-08, SS)

GENERAL SITE CONDITIONS

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

Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

Project Name: ARCO 2111
BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda > 2111
State or Lead Regulatory Agency:
Requested Due Date (mm/dd/yy): STD TAT

On-site Time: 0830	Temp: 68°
Off-site Time: 1045	Temp: 72°
Sky Conditions: Clear	
Meteorological Events: —	
Wind Speed: —	Direction: —

Lab Name: Cal Science	
Address: 7440 Lincoln way	
Garden Grove Ca. 92841-1427	
Lab PM: Linda Sharpenberg	
Tele/Fax: 714-895-5494 714-895-7501 (fax)	
BP/AR PM Contact: Paul Supple	
Address: 2010 Crow Canyon Place, Suite 150	
San Ramon, CA	
Tele/Fax: 925-275-3506	

BP/AR Facility No.:	2111
BP/AR Facility Address:	1156 Davis Street, San Leandro
Site Lat/Long:	
California Global ID No.:	T0600101764
Enfos Project No.:	G0C28-0029
Provision or OOC (circle one)	Provision
Phase/WBS:	04-Monitoring
Sub Phase/Task:	03-Analytical
Cost Element:	01-Contractor labor

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:	bcarroll@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: * 5 Oxy + 1,2 DCA + Ethanol	Requested Analysis: * EDB	Requested Analysis: * 1,2 DCA	Requested Analysis: * Ethanol	Sample Point Lat/Long and Comments
1	MW-1	1001	11/17		X			6				X		X	X	X	V	X	X	* by 8260
2	MW-2	0840	↓		↓			↓				↓		↓	↓	↓	↓	↓	↓	
3	MW-3	0907																		
4	MW-4	0925																		
5	MW-5	1024																		
6	MW-7	0914																		
7	MW-8	0845	↓		↓			↓				↓		↓	↓	↓	↓	↓	↓	
8																				
9	TB-2111-11172008	0830	11/17		X			2												HOLD
10																				

Sampler's Name: C. Grant	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation
Sampler's Company: Stratus Environmental Inc.	[signature] / Stratus	11/17	0828	[signature] CEL 11-17-08
Shipment Date: 11/17/08				
Shipment Method:				
Shipment Tracking No:				

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

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

Calscience
Environmental
Laboratories, Inc.

December 02, 2008

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

Subject: **Calscience Work Order No.:** **08-11-1577**
Client Reference: **ARCO 2111**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 11/18/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Richard Villafania

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1577
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	**08-11-1577-1-C**	**11/17/08 10:01**	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08 01:09**	**081125B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**08-11-1577-2-C**	**11/17/08 08:40**	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08 01:42**	**081125B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	290	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	63	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**08-11-1577-3-C**	**11/17/08 09:07**	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08 02:15**	**081125B01**

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			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**08-11-1577-4-C**	**11/17/08 09:25**	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08 02:48**	**081125B01**

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			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1577
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-5	**08-11-1577-5-C**	**11/17/08 10:24**	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08 03:21**	**081125B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	72	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**08-11-1577-6-C**	**11/17/08 09:44**	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08 06:06**	**081125B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	68	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	80	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**08-11-1577-7-C**	**11/17/08 08:45**	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08 07:44**	**081125B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	74	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-346**	**N/A**	**Aqueous**	**GC 4**	**11/25/08**	**11/25/08 13:20**	**081125B01**

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:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1577
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
Method Blank	**099-12-695-347**	**N/A**	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08 04:27**	**081125B02**

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

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	72	38-134	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550	Work Order No:	08-11-1577
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-1	**08-11-1577-1-A**	**11/17/08 10:01**	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08 15:05**	**081120L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	21	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)	0.52	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	117	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	86	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**08-11-1577-2-A**	**11/17/08 08:40**	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08 16:59**	**081120L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	9.3	5.0	10		Methyl-t-Butyl Ether (MTBE)	89	5.0	10	
1,2-Dibromoethane	ND	5.0	10		Tert-Butyl Alcohol (TBA)	740	100	10	
1,2-Dichloroethane	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Ethylbenzene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Toluene	ND	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Xylenes (total)	ND	5.0	10		Ethanol	ND	3000	10	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	121	73-157			Dibromofluoromethane	102	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	98	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**08-11-1577-3-A**	**11/17/08 09:07**	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08 17:27**	**081120L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	3.6	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	119	73-157			Dibromofluoromethane	106	82-142		
Toluene-d8	103	82-112			1,4-Bromofluorobenzene	98	75-105		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550	Work Order No:	08-11-1577
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111		Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**08-11-1577-4-A**	**11/17/08 09:25**	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08 17:55**	**081120L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.73	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	119	73-157			Dibromofluoromethane	104	82-142		
Toluene-d8	97	82-112			1,4-Bromofluorobenzene	95	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	**08-11-1577-5-D**	**11/17/08 10:24**	**Aqueous**	**GC/MS BB**	**11/21/08**	**11/21/08 17:45**	**081121L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	1.3	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	160	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	118	73-157			Dibromofluoromethane	105	82-142		
Toluene-d8	101	82-112			1,4-Bromofluorobenzene	88	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**08-11-1577-6-A**	**11/17/08 09:44**	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08 18:52**	**081120L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.8	0.50	1		Methyl-t-Butyl Ether (MTBE)	28	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	44	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	0.54	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	1.9	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	2.0	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	115	73-157			Dibromofluoromethane	103	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	89	75-105		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1577
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	**08-11-1577-7-A**	**11/17/08 08:45**	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08 19:20**	**081120L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	14	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	24	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	122	73-157			Dibromofluoromethane	109	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	86	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-569**	**N/A**	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08 14:37**	**081120L01**

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	114	73-157			Dibromofluoromethane	102	82-142		
Toluene-d8	101	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
Method Blank	**099-12-703-571**	**N/A**	**Aqueous**	**GC/MS BB**	**11/21/08**	**11/21/08 14:54**	**081121L01**

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	115	73-157			Dibromofluoromethane	103	82-142		
Toluene-d8	102	82-112			1,4-Bromofluorobenzene	84	75-105		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 11/18/08
3330 Cameron Park Drive, Suite 550	Work Order No: 08-11-1577
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
08-11-1960-11	**Aqueous**	**GC 4**	**11/25/08**	**11/25/08**	**081125S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	97	98	38-134	0	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1577
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
MW-7	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08**	**081125S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	101	92	38-134	9	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1577
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
MW-1	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08**	**081120S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	94	86-122	3	0-8	
Carbon Tetrachloride	112	114	78-138	1	0-9	
Chlorobenzene	102	100	90-120	3	0-9	
1,2-Dibromoethane	92	86	70-130	7	0-30	
1,2-Dichlorobenzene	94	94	89-119	1	0-10	
1,1-Dichloroethene	96	92	52-142	4	0-23	
Ethylbenzene	97	95	70-130	2	0-30	
Toluene	95	93	85-127	2	0-12	
Trichloroethene	93	92	78-126	1	0-10	
Vinyl Chloride	76	78	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	93	78	64-136	5	0-28	
Tert-Butyl Alcohol (TBA)	112	114	27-183	2	0-60	
Diisopropyl Ether (DIPE)	89	85	78-126	5	0-16	
Ethyl-t-Butyl Ether (ETBE)	89	88	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	90	89	63-141	1	0-21	
Ethanol	105	87	11-167	19	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550	Work Order No:	08-11-1577
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
08-11-1709-5	**Aqueous**	**GC/MS BB**	**11/21/08**	**11/21/08**	**081121S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	99	86-122	2	0-8	
Carbon Tetrachloride	117	120	78-138	3	0-9	
Chlorobenzene	101	97	90-120	4	0-9	
1,2-Dibromoethane	93	91	70-130	3	0-30	
1,2-Dichlorobenzene	94	96	89-119	1	0-10	
1,1-Dichloroethene	93	95	52-142	1	0-23	
Ethylbenzene	97	92	70-130	5	0-30	
Toluene	98	96	85-127	2	0-12	
Trichloroethene	95	95	78-126	0	0-10	
Vinyl Chloride	73	78	56-140	7	0-21	
Methyl-t-Butyl Ether (MTBE)	92	98	64-136	7	0-28	
Tert-Butyl Alcohol (TBA)	119	100	27-183	18	0-60	
Diisopropyl Ether (DIPE)	85	92	78-126	7	0-16	
Ethyl-t-Butyl Ether (ETBE)	87	95	67-133	9	0-21	
Tert-Amyl-Methyl Ether (TAME)	92	95	63-141	3	0-21	
Ethanol	119	79	11-167	40	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:	08-11-1577
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
099-12-695-346	**Aqueous**	**GC 4**	**11/25/08**	**11/25/08**	**081125B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	95	95	78-120	0	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:	08-11-1577
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
099-12-695-347	**Aqueous**	**GC 4**	**11/25/08**	**11/26/08**	**081125B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	107	109	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:	08-11-1577
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
099-12-703-569	**Aqueous**	**GC/MS BB**	**11/20/08**	**11/20/08**	**081120L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	96	97	87-117	82-122	1	0-7	
Carbon Tetrachloride	113	114	78-132	69-141	1	0-8	
Chlorobenzene	101	100	88-118	83-123	1	0-8	
1,2-Dibromoethane	90	91	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	97	97	88-118	83-123	1	0-8	
1,1-Dichloroethene	95	99	71-131	61-141	4	0-14	
Ethylbenzene	99	96	80-120	73-127	3	0-20	
Toluene	97	97	85-127	78-134	0	0-7	
Trichloroethene	97	98	85-121	79-127	1	0-11	
Vinyl Chloride	81	86	64-136	52-148	6	0-10	
Methyl-t-Butyl Ether (MTBE)	90	94	67-133	56-144	4	0-16	
Tert-Butyl Alcohol (TBA)	105	91	34-154	14-174	15	0-19	
Diisopropyl Ether (DIPE)	85	89	80-122	73-129	5	0-8	
Ethyl-t-Butyl Ether (ETBE)	86	95	73-127	64-136	10	0-11	
Tert-Amyl-Methyl Ether (TAME)	92	96	69-135	58-146	4	0-12	
Ethanol	88	78	34-124	19-139	12	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: 08-11-1577
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
099-12-703-571	Aqueous	GC/MS BB	11/21/08	11/21/08	081121L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	96	102	87-117	82-122	6	0-7	
Carbon Tetrachloride	120	123	78-132	69-141	3	0-8	
Chlorobenzene	100	100	88-118	83-123	0	0-8	
1,2-Dibromoethane	86	93	80-120	73-127	8	0-20	
1,2-Dichlorobenzene	95	98	88-118	83-123	3	0-8	
1,1-Dichloroethene	99	101	71-131	61-141	2	0-14	
Ethylbenzene	96	96	80-120	73-127	0	0-20	
Toluene	95	100	85-127	78-134	5	0-7	
Trichloroethene	96	101	85-121	79-127	4	0-11	
Vinyl Chloride	79	81	64-136	52-148	3	0-10	
Methyl-t-Butyl Ether (MTBE)	92	103	67-133	56-144	11	0-16	
Tert-Butyl Alcohol (TBA)	103	101	34-154	14-174	2	0-19	
Diisopropyl Ether (DIPE)	89	97	80-122	73-129	8	0-8	
Ethyl-t-Butyl Ether (ETBE)	89	99	73-127	64-136	10	0-11	
Tert-Amyl-Methyl Ether (TAME)	89	100	69-135	58-146	11	0-12	
Ethanol	95	91	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: 08-11-1577

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: 08-11-1577

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

Chain of Custody Record

(1577)

Project Name: ARCO 2111

BP BU/AR Region/Enfos Segment: BP > Americas > West > Retail > Alameda > 2111

State or Lead Regulatory Agency:

Requested Due Date (mm/dd/yy): STD TAT

On-site Time: 0830	Temp: 68°
Off-site Time: 1045	Temp: 72°
Sky Conditions: Clear	
Meteorological Events: —	
Wind Speed: —	Direction: —

Lab Name: Cal Science	
Address: 7440 Lincoln way	
Garden Grove Ca. 92841-1427	
Lab PM: Linda Sharpenberg	
Tele/Fax: 714-895-5494 714-895-7501 (fax)	
BP/AR PM Contact: Paul Supple	
Address: 2010 Crow Canyon Place, Suite 150	
San Ramon, CA	
Tele/Fax: 925-275-3506	

BP/AR Facility No.:	2111
BP/AR Facility Address:	1156 Davis Street, San Leandro
Site Lat/Long:	
California Global ID No.:	T0600101764
Enfos Project No.:	G0C28-0029
Provision or OOC (circle one)	Provision
Phase/WBS:	04-Monitoring
Sub Phase/Task:	03-Analytical
Cost Element:	01-Contractor labor

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:	bcarroll@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	* BTEX	* 5 oxy's *	* EDB	* 1,2 DCA	* Ethanol	Sample Point Lat/Long and Comments
1	MW-1	1001	11/17		X			6				X		X	X	X	V	X	X	* by 8260
2	MW-2	0840																		
3	MW-3	0907																		
4	MW-4	0925																		
5	MW-5	1024																		
6	MW-7	0944																		
7	MW-8	0815	↓		↓			1				↓		↓	↓	↓	↓	↓	↓	
8																				
9	TB-2111-11172008	0830	11/17		X			2												HOLD
10																				

Sampler's Name: C. Grant	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus Environmental Inc.		11/17	1128			
Shipment Date: 11/17/08		11/17/08	1230			
Shipment Method:						
Shipment Tracking No: 510755647		11/18/08	105		11/18/08	105

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

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08-11-1577

SAMPLE RECEIPT FORM

Cooler 1 **of** 1

CLIENT: STRATUS ENV'L.

DATE: 11 / 18 / 08

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

Temperature 3.6 °C - 0.2 °C (CF) = 3.4 °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:** WS

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	☑	☐	☐
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 sample label(s)	☑	☐	☐
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: AO

Reviewed by: WS

Scanned by: AO

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.

Equipment Calibration

Standard groundwater sampling equipment – pH/Conductivity/Temperature meter, and dissolved oxygen (DO) meters are calibrated prior to all field work. All calibration is conducted in accordance with equipment manufacturer's recommended procedure and buffer solutions. MSDS for all buffer solutions are maintained in Stratus vehicles. Calibration is completed everyday prior to field work and also once a week. The pH probe is calibrated for a pH of 7.0 daily and for 4.0, 7.0 and 10.0 weekly. The conductivity probe is calibrated for 1413 µs daily and 1413 µs and 447 µs weekly. The temperature probe is calibrated weekly with a NIST-traceable thermometer. The DO probe is calibrated for 100% oxygen daily and 0% and 100% oxygen weekly. All calibration logs are maintained in the Stratus office.

Groundwater and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

Prior to measuring the depth to liquid in the well, the well caps are removed and the liquid level allowed to stabilize. A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the groundwater depth in monitoring wells that do not contain LPH. Depth to groundwater or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typically a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Groundwater

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Sampling

In many cases, determining whether to purge or not to purge wells prior to sample collection is made in the field and is often based on depth to water relative to the screen interval of the well. Site-specific field data sheets present details associated with the purge method and equipment used.

Monitoring wells, when purged, use a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water has been removed. Field measuring equipment is calibrated and maintained according to the manufacturer's instructions. If three well volumes cannot be removed in one half hour's time the well is allowed to recharge to 80% of original level. After recharging, a groundwater sample is then collected from each of the wells using disposable bailers.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These bottles will be filled completely to prevent air accumulation in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Groundwater Sample Labeling and Preservation

Samples are collected in appropriate containers supplied by the laboratory. All required chemical preservation is added to the bottles prior to delivery to Stratus. Sample label information includes a unique sample identification number, job identification number, date, and time. After labeling, all groundwater samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip and temperature blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and

contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

Equipment Cleaning

All reusable sampling equipments are cleaned using phosphate-free detergents and rinsed with de-ionized water.

APPENDIX B

GEOTRACKER UPLOAD CONFIRMATIONS

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_WELL FILE

SUCCESS

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

Submittal Type:	**GEO_WELL**
Submittal Title:	**4Q08 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:	**1/16/2009 10:28:41 AM**
Confirmation Number:	**4962838292**

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:	**4Q08 GW Monitoring**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**08111577.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**1/16/2009 10:32:08 AM**
Confirmation Number:	**5694685995**

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 1108**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**08111599a.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**1/20/2009 9:45:13 AM**
Confirmation Number:	**5708160877**

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 1208**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**08120089a.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**1/20/2009 9:46:02 AM**
Confirmation Number:	**5048931300**

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

November 6, 2008

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 and Greg Wilkins

Number of Site Visits: 2 (October 1 and 2, 2008)

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

Operational Status: Systems shutdown since October 1, 2008

Scope of Work Performed: Conduct routine system operation and maintenance and record field measurements.

Variations from Scope of Work: The remediation systems were found non-functioning on October 1, 2008, due to high-water level alarm. The remediation systems were not re-started pending change-out of aqueous phase carbon.

Stratus oversaw EnviroSupply & Service Inc., conduct the carbon change-out of the second liquid phase carbon vessel (lag vessel) on October 2, 2008. Carbon change-out could not be completed on the first carbon vessel (lead vessel) due to excessive cementing of the carbon. Stratus is currently scheduled for November 10, 2008, to remove the lead carbon vessel from the remediation compound area and set it in an area onsite where the carbon vessel man-way can be easily accessed to loosen the cemented carbon. Upon removal of spent carbon in the lead vessel,

it will be re-filled with fresh liquid phase virgin coconut shell carbon and re-installed inside the compound on the same day. Following these activities and allowing the fresh carbon to soak in potable water for approximately 24 hours, the remediation systems will be re-started.

The attachments include field data sheets. 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

CC: Paul Supple, BP/ARCO

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

ORIGINAL

Date: 10-1-05
Onsite Time: 0657
Offsite Time: 0831
Technician: CHM
Weather Conditions: Clear
Ambient Temperature: 57
Equipment Manufacturer/Model#

System Information

System Status Upon Arrival: Operational ☐ Non-Operational ☒ High H2O
System Status Upon Departure: Operational ☐ Non-Operational ☒
Electric Meter Reading: NM
Hour Meter Reading: 2315
Totalizer Reading Prior to Air Stripper: 1784
PID Calibration Date: NM
Totalizer Reading After Air Stripper: 1103780

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:

Drain Condensate H2O For Next Event

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: [signature]
Date: 10108

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: 10/05

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

ORIGINAL

Date: 10105
Onsite Time: 1057
Offsite Time: 0830

Technician: CHILL
Weather Conditions:
Ambient Temperature

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

Transfer Pump Hour Meter Reading:

Effluent Flow Totalizer Reading: 1067983

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): -

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		295260			

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: [signature]

Date: 10108

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

ORIGINAL

Date: 10-02-08
Onsite Time: 0750
Offsite Time: 1348

Technician: G. Wilkins
Weather Conditions: overcast
Ambient Temperature: 60's

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

Transfer Pump Hour Meter Reading: -0-

Effluent Flow Totalizer Reading: -0-

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): N/A

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

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

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: Unable to change out of Carbon in filters (water) (lead vessel)
Changed carbon for second vessel.

Signature: [signature] Date: 10-02-08

STRATUS
ENVIRONMENTAL, INC.

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

December 4, 2008

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: Jason Bowman and Chris Hill

Number of Site Visits: 4 (November 10, 11, 17, and 24, 2008)

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 November 17, 2008 in the presence of City of San Leandro personnel.

Variations from Scope of Work: Stratus oversaw EnviroSupply & Service Inc., conduct the carbon change-out of the lead liquid phase carbon vessel (with excessive cementation) on November 10, 2008. The lead carbon vessel was removed from the remediation compound and placed outside to facilitate carbon removal. Upon removal of spent carbon and refill of fresh carbon, the carbon vessel was re-installed inside the remediation compound. The remediation systems were re-started on November 11, 2008, after allowing the carbon to soak for at least 24 hours.

The remediation systems were found non-functioning on November 17, 2008, due to high-water level alarm either in the air stripper tank or in the oil-water separator. The remediation systems were re-started momentarily on November 17, 2008 and shutdown after sampling, pending receipt of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on November 24, 2008.

Based on the effluent flow totalized readings for November 17 and 24, 2008 and December 1, 2008, the readings for November 17, 2008 appear to be erroneous.

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

for Jay R. Johnson, P.G.
Project Manager

PROFESSIONAL GEOLOGIST
Stephen J. Carter
No. 5577
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
Groundwater Treatment System

ORIGINAL

Date: 11/10/05
Onsite Time: 0830
Offsite Time: 1045

Technician: CHILL
Weather Conditions: Cloudy
Ambient Temperature: 50

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: _____

No. of Carbon Vessels: _____

Lead Carbon Vessel Pressure (psi): _____

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

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

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: Carbon change out - Loaded with Hand Carbon

Signature: _____ Date: 11/10/05

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

Date: 11/1/08
Onsite Time: 0630
Offsite Time: 0730
Equipment Manufacturer/Model#

Technician: Jason Cris
Weather Conditions: cloudy
Ambient Temperature:

System Information

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

Electric Meter Reading: NM
Hour Meter Reading: 2315 (2315)
Totalizer Reading Prior to Air Stripper: 12047.8
PID Calibration Date: 11/1/04
Totalizer Reading After Air Stripper: 110[illegible]4000

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		2270			
Pipe Diameter, inches		4			
Air Flow Rate, cfm		~~2270~~	160		
Applied Vacuum, "wc	22hg	.42	NA	NA	
Temperature, deg F	[illegible]	~~[illegible]~~ 121	82		
PID Readings, ppmv	141	0	76 [illegible]	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	[illegible]50	18					
V-2	50	14					
V-3	50	18					
MW-1	0	3					
MW-3	100	18					
MW-7	100	18					
NW8	0						

Signature: [signature]
Date: 11/1/08

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: 1/11/08

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

Date: 111108
Onsite Time: 0630
Offsite Time: 0730

Technician: Jason Cris
Weather Conditions: cloudy
Ambient Temperature 60

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

ORIGINAL

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1068053

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 1

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		295658			

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: 111108

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

Date: 11 17 08
Onsite Time: 0500
Offsite Time: 0900
Equipment Manufacturer/Model#

Technician: CM/KK ORIGINAL
Weather Conditions: Clear
Ambient Temperature: 45

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒	H_2O High Tank
System Status Upon Departure:	Operational	☐	Non-Operational	☑	Knock Out Tank

Electric Meter Reading: N/A
Hour Meter Reading: 2334
Totalizer Reading Prior to Air Stripper: 241101
PID Calibration Date: 111708
Totalizer Reading After Air Stripper: 1115260

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		2190			
Pipe Diameter, inches	3	4	4		
Air Flow Rate, cfm		~~3~~	170		
Applied Vacuum, "wc	20"Hg	.28	NA	NA	
Temperature, deg F		131	108		
PID Readings, ppmv	123	1	65	~~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-8	~~0~~						

Signature: [signature]
Date: 111708

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	111708 0725	02111AGAC1	111708 0712
02111ASAEFF	0720	02111AEFF	0710
02111ASYSINF	0715		
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes

Met Sewer Department

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: 111708

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

ORIGINAL

Date: 111708
Onsite Time: 0500
Offsite Time: 0900

Technician: Mike C
Weather Conditions: Clear
Ambient Temperature 45

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

Transfer Pump Hour Meter Reading: —

Effluent Flow Totalizer Reading: 1077116

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 2

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.4
Temperature: 16°C

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		301118			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	111708 0637	02111MW2WINF	111708 0646
02111ASWINF	0633		
02111ASWEFF	0628		
02111WGAC1	0624		
02111WEFF	0620	TB2111117,08	0650

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

Notes:

Signature: [signature] Date: 111708

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

ORIGINAL

Date: 112408
Onsite Time: 0430
Offsite Time: 0515
Equipment Manufacturer/Model#

Technician: CHLC
Weather Conditions: clear
Ambient Temperature: 45

System Information

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

Electric Meter Reading: —
Hour Meter Reading: 2336
Totalizer Reading Prior to Air Stripper: 1116420
PID Calibration Date: 112408
Totalizer Reading After Air Stripper: 25294

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		1963			
Pipe Diameter, inches	3	4	4	3	
Air Flow Rate, cfm			175		
Applied Vacuum, "wc	20"Hg	.38	NA	NA	
Temperature, deg F	~~80~~	111	90		
PID Readings, ppmv	233	~~0~~	108	~~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	15					
V-3	50	13					
MW-1	~~0~~	-					
MW-3	100	16					
MW-7	100	15					
MW-8	~~0~~						

Signature: [signature]
Date: 112408

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: 11/24/05

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

ORIGINAL

Date: 112408
Onsite Time: 0430
Offsite Time: 0515

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 48

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1075351

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 4

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		301642			

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: 112408

Calscience Environmental Laboratories, Inc.

Supplemental Report 1

January 19, 2009

The original report has been revised/corrected.

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

Subject: **Calscience Work Order No.: 08-11-1599**
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 11/18/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 11/18/08
Work Order No: 08-11-1599
Preparation: N/A
Method: EPA TO-15
Units: mg/m3

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	**08-11-1599-1-A**	**11/17/08 07:25**	**Air**	**GC/MS K**	**N/A**	**11/18/08 18:59**	**081118L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	2.5	0.40	250		Xylenes (total)	9.9	2.2	250	
Toluene	5.7	0.47	250		Methyl-t-Butyl Ether (MTBE)	26	1.8	250	
Ethylbenzene	2.8	0.54	250						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	107	57-129		1,2-Dichloroethane-d4	109	47-137	
Toluene-d8	79	78-156					

02111ASAEFF	08-11-1599-2-A	11/17/08 07:20	Air	GC/MS K	N/A	11/18/08 15:10	081118L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.023	0.0016	1		Xylenes (total)	0.062	0.0087	1	
Toluene	0.084	0.0019	1		Methyl-t-Butyl Ether (MTBE)	3.6	0.14	20	
Ethylbenzene	0.016	0.0022	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	103	57-129		1,2-Dichloroethane-d4	108	47-137	
Toluene-d8	102	78-156					

02111ASYSINF	08-11-1599-3-A	11/17/08 07:15	Air	GC/MS K	N/A	11/18/08 19:45	081118L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.3	0.21	130		Xylenes (total)	4.1	1.1	130	
Toluene	3.1	0.24	130		Methyl-t-Butyl Ether (MTBE)	14	0.94	130	
Ethylbenzene	1.2	0.28	130						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	57-129		1,2-Dichloroethane-d4	105	47-137	
Toluene-d8	79	78-156					

02111AGAC1	08-11-1599-4-A	11/17/08 07:12	Air	GC/MS K	N/A	11/18/08 17:29	081118L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.040	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	104	57-129		1,2-Dichloroethane-d4	105	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:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15
		Units:	mg/m3
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	**08-11-1599-5-A**	**11/17/08 07:10**	**Air**	**GC/MS K**	**N/A**	**11/18/08 14:25**	**081118L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.037	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	103	57-129			1,2-Dichloroethane-d4	108	47-137		
Toluene-d8	103	78-156							

Method Blank	**097-09-002-7,865**	**N/A**	**Air**	**GC/MS K**	**N/A**	**11/18/08 13:33**	**081118L01**

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	101	57-129			1,2-Dichloroethane-d4	105	47-137		
Toluene-d8	98	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: 11/18/08
Work Order No: 08-11-1599
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	**08-11-1599-1-B**	**11/17/08 07:25**	**Air**	**GC 19**	**N/A**	**11/18/08 15:59**	**081118L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	1700	500	10		mg/m3

02111ASAEFF	**08-11-1599-2-A**	**11/17/08 07:20**	**Air**	**GC 19**	**N/A**	**11/18/08 12:50**	**081118L01**

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

02111ASYSINF	**08-11-1599-3-A**	**11/17/08 07:15**	**Air**	**GC 19**	**N/A**	**11/18/08 13:59**	**081118L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	890	50	1		mg/m3

02111AGAC1	**08-11-1599-4-A**	**11/17/08 07:12**	**Air**	**GC 19**	**N/A**	**11/18/08 15:21**	**081118L01**

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

02111AEFF	**08-11-1599-5-A**	**11/17/08 07:10**	**Air**	**GC 19**	**N/A**	**11/18/08 13:24**	**081118L01**

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

Method Blank	**099-12-693-96**	**N/A**	**Air**	**GC 19**	**N/A**	**11/18/08 08:41**	**081118L01**

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:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
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
02111DPEWINF	**08-11-1599-6-D**	**11/17/08 06:37**	**Aqueous**	**GC 30**	**11/24/08**	**11/25/08 00:35**	**081124B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	380	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	107	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**08-11-1599-7-D**	**11/17/08 06:33**	**Aqueous**	**GC 30**	**11/24/08**	**11/25/08 01:09**	**081124B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	290	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
02111ASWEFF	**08-11-1599-8-D**	**11/17/08 06:28**	**Aqueous**	**GC 30**	**11/24/08**	**11/25/08 01:42**	**081124B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	98	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**08-11-1599-9-D**	**11/17/08 06:25**	**Aqueous**	**GC 30**	**11/24/08**	**11/25/08 02:16**	**081124B01**

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			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
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	**08-11-1599-10-E**	**11/17/08 06:20**	**Aqueous**	**GC 4**	**11/19/08**	**11/20/08 13:03**	**081119B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	74	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**08-11-1599-11-D**	**11/17/08 06:46**	**Aqueous**	**GC 30**	**12/01/08**	**12/01/08 16:53**	**081201B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	270	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
Method Blank	**099-12-695-338**	**N/A**	**Aqueous**	**GC 4**	**11/19/08**	**11/20/08 11:24**	**081119B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	72	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-342**	**N/A**	**Aqueous**	**GC 30**	**11/24/08**	**11/24/08 11:44**	**081124B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	98	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
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
Method Blank	**099-12-695-348**	**N/A**	**Aqueous**	**GC 30**	**12/01/08**	**12/01/08 11:41**	**081201B01**

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	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
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	08-11-1599-6-A	11/17/08 06:37	Aqueous	GC/MS BB	11/18/08	11/19/08 02:42	081118L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	10	20		Tert-Butyl Alcohol (TBA)	1500	200	20	
Ethylbenzene	ND	10	20		Diisopropyl Ether (DIPE)	ND	10	20	
Toluene	15	10	20		Ethyl-t-Butyl Ether (ETBE)	ND	10	20	
Xylenes (total)	23	10	20		Tert-Amyl-Methyl Ether (TAME)	ND	10	20	
Methyl-t-Butyl Ether (MTBE)	490	10	20						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	116	73-157			Dibromofluoromethane	111	82-142		
Toluene-d8	103	82-112			1,4-Bromofluorobenzene	89	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	08-11-1599-7-A	11/17/08 06:33	Aqueous	GC/MS BB	11/18/08	11/19/08 03:10	081118L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	6.5	5.0	10		Tert-Butyl Alcohol (TBA)	1200	100	10	
Ethylbenzene	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Toluene	6.7	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Xylenes (total)	13	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Methyl-t-Butyl Ether (MTBE)	360	5.0	10						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	129	73-157			Dibromofluoromethane	116	82-142		
Toluene-d8	103	82-112			1,4-Bromofluorobenzene	98	75-105		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	08-11-1599-8-A	11/17/08 06:28	Aqueous	GC/MS BB	11/18/08	11/19/08 03:38	081118L02

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.0	4		Tert-Butyl Alcohol (TBA)	1300	200	20	
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)	38	2.0	4						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	135	73-157			Dibromofluoromethane	118	82-142		
Toluene-d8	100	82-112			1,4-Bromofluorobenzene	98	75-105		

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: 11/18/08
Work Order No: 08-11-1599
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO Facility No. 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**08-11-1599-9-A**	**11/17/08 06:25**	**Aqueous**	**GC/MS BB**	**11/18/08**	**11/19/08 02:14**	**081118L02**

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	113	73-157		Dibromofluoromethane	105	82-142	
Toluene-d8	97	82-112		1,4-Bromofluorobenzene	93	75-105	

02111WEFF	**08-11-1599-10-A**	**11/17/08 06:20**	**Aqueous**	**GC/MS BB**	**11/18/08**	**11/18/08 16:22**	**081118L01**

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	115	73-157		Dibromofluoromethane	104	82-142	
Toluene-d8	101	82-112		1,4-Bromofluorobenzene	93	75-105	

02111MW2WINF	**08-11-1599-11-A**	**11/17/08 06:46**	**Aqueous**	**GC/MS BB**	**11/18/08**	**11/19/08 04:06**	**081118L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	10	5.0	10		Tert-Butyl Alcohol (TBA)	940	100	10	
Ethylbenzene	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Toluene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Xylenes (total)	ND	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Methyl-t-Butyl Ether (MTBE)	96	5.0	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	120	73-157		Dibromofluoromethane	110	82-142	
Toluene-d8	103	82-112		1,4-Bromofluorobenzene	90	75-105	

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: 11/18/08
Work Order No: 08-11-1599
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO Facility No. 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-565**	**N/A**	**Aqueous**	**GC/MS BB**	**11/18/08**	**11/18/08 13:03**	**081118L01**

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	113	73-157		Dibromofluoromethane	103	82-142	
Toluene-d8	104	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	**099-12-703-566**	**N/A**	**Aqueous**	**GC/MS BB**	**11/18/08**	**11/19/08 01:46**	**081118L02**

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	114	73-157		Dibromofluoromethane	105	82-142	
Toluene-d8	101	82-112		1,4-Bromofluorobenzene	98	75-105	

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

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		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	114	73-157		Dibromofluoromethane	101	82-142	
Toluene-d8	105	82-112		1,4-Bromofluorobenzene	91	75-105	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.	Date Received: 11/18/08
3330 Cameron Park Drive, Suite 550	Work Order No: 08-11-1599
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
02111ASYSINF	**Air**	**GC 19**	**N/A**	**11/18/08**	**081118D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	230	230	1	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: 11/18/08
Work Order No: 08-11-1599
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
02111WEFF	**Aqueous**	**GC 4**	**11/19/08**	**11/20/08**	**081119S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	116	115	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:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
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
08-11-1836-4	**Aqueous**	**GC 30**	**11/24/08**	**11/24/08**	**081124S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	99	100	38-134	2	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
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
08-11-2389-1	**Aqueous**	**GC 30**	**12/01/08**	**12/01/08**	**081201S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	95	114	38-134	18	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 11/18/08
3330 Cameron Park Drive, Suite 550	Work Order No: 08-11-1599
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
02111MW2WINF	**Aqueous**	**GC 4**	**12/02/08**	**12/02/08**	**081202S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	119	96	38-134	19	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 11/18/08
3330 Cameron Park Drive, Suite 550	Work Order No: 08-11-1599
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
08-11-1329-1	**Aqueous**	**GC/MS BB**	**11/18/08**	**11/18/08**	**081118S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	100	86-122	1	0-8	
Carbon Tetrachloride	117	109	78-138	7	0-9	
Chlorobenzene	105	103	90-120	1	0-9	
1,2-Dibromoethane	93	91	70-130	2	0-30	
1,2-Dichlorobenzene	99	98	89-119	1	0-10	
1,1-Dichloroethene	95	94	52-142	1	0-23	
Ethylbenzene	103	100	70-130	2	0-30	
Toluene	101	99	85-127	3	0-12	
Trichloroethene	99	97	78-126	2	0-10	
Vinyl Chloride	102	104	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	96	92	64-136	4	0-28	
Tert-Butyl Alcohol (TBA)	114	116	27-183	2	0-60	
Diisopropyl Ether (DIPE)	96	98	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	98	95	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	99	94	63-141	5	0-21	
Ethanol	112	96	11-167	16	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	11/18/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
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
02111WGAC1	**Aqueous**	**GC/MS BB**	**11/18/08**	**11/19/08**	**081118S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	104	86-122	0	0-8	
Carbon Tetrachloride	120	121	78-138	1	0-9	
Chlorobenzene	104	103	90-120	1	0-9	
1,2-Dibromoethane	94	92	70-130	2	0-30	
1,2-Dichlorobenzene	101	99	89-119	2	0-10	
1,1-Dichloroethene	95	95	52-142	0	0-23	
Ethylbenzene	98	96	70-130	2	0-30	
Toluene	102	101	85-127	1	0-12	
Trichloroethene	100	102	78-126	2	0-10	
Vinyl Chloride	107	104	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	97	96	64-136	1	0-28	
Tert-Butyl Alcohol (TBA)	128	110	27-183	15	0-60	
Diisopropyl Ether (DIPE)	97	99	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	96	98	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	96	97	63-141	0	0-21	
Ethanol	122	95	11-167	25	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: 11/18/08
Work Order No: 08-11-1599
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
08-11-1330-1	**Aqueous**	**GC/MS BB**	**11/19/08**	**11/19/08**	**081119S01**

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

RPD - Relative Percent Difference , CL - Control Limit

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:	08-11-1599
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
097-09-002-7,865	Air	GC/MS K	N/A	11/18/08	081118L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	101	60-156	3	0-40	
Toluene	110	105	56-146	4	0-43	
Ethylbenzene	116	110	52-154	6	0-38	
p/m-Xylene	108	102	42-156	5	0-41	
o-Xylene	116	110	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:	08-11-1599
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
099-12-695-338	Aqueous	GC 4	11/19/08	11/20/08	081119B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	111	107	78-120	4	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:	08-11-1599
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
099-12-695-342	Aqueous	GC 30	11/24/08	11/24/08	081124B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	109	110	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:	08-11-1599
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
099-12-695-348	Aqueous	GC 30	12/01/08	12/01/08	081201B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	103	104	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:	08-11-1599
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
099-12-695-349	Aqueous	GC 4	12/02/08	12/02/08	081202B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	107	105	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:	08-11-1599
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
099-12-703-565	Aqueous	GC/MS BB	11/18/08	11/18/08	081118L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	105	102	87-117	82-122	3	0-7	
Carbon Tetrachloride	118	114	78-132	69-141	3	0-8	
Chlorobenzene	109	107	88-118	83-123	1	0-8	
1,2-Dibromoethane	91	96	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	103	102	88-118	83-123	1	0-8	
1,1-Dichloroethene	101	100	71-131	61-141	1	0-14	
Ethylbenzene	106	105	80-120	73-127	1	0-20	
Toluene	106	103	85-127	78-134	2	0-7	
Trichloroethene	103	104	85-121	79-127	1	0-11	
Vinyl Chloride	113	108	64-136	52-148	5	0-10	
Methyl-t-Butyl Ether (MTBE)	95	99	67-133	56-144	4	0-16	
Tert-Butyl Alcohol (TBA)	103	111	34-154	14-174	8	0-19	
Diisopropyl Ether (DIPE)	101	102	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	101	103	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	96	102	69-135	58-146	5	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.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	08-11-1599
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
099-12-703-566	Aqueous	GC/MS BB	11/18/08	11/19/08	081118L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	101	99	87-117	82-122	1	0-7	
Carbon Tetrachloride	116	117	78-132	69-141	1	0-8	
Chlorobenzene	101	106	88-118	83-123	5	0-8	
1,2-Dibromoethane	97	96	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	103	102	88-118	83-123	1	0-8	
1,1-Dichloroethene	98	100	71-131	61-141	2	0-14	
Ethylbenzene	98	102	80-120	73-127	4	0-20	
Toluene	101	99	85-127	78-134	2	0-7	
Trichloroethene	107	107	85-121	79-127	0	0-11	
Vinyl Chloride	107	103	64-136	52-148	4	0-10	
Methyl-t-Butyl Ether (MTBE)	103	96	67-133	56-144	7	0-16	
Tert-Butyl Alcohol (TBA)	106	110	34-154	14-174	3	0-19	
Diisopropyl Ether (DIPE)	102	98	80-122	73-129	4	0-8	
Ethyl-t-Butyl Ether (ETBE)	102	99	73-127	64-136	3	0-11	
Tert-Amyl-Methyl Ether (TAME)	102	97	69-135	58-146	5	0-12	
Ethanol	89	85	34-124	19-139	5	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: 08-11-1599
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
099-12-703-567	Aqueous	GC/MS BB	11/19/08	11/19/08	081119L01

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

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

RPD - Relative Percent Difference ; CL - Control Limit

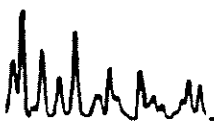
Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-11-1599

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

Chain of Custody Record

RUSH

T599

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: 0500	Temp: 45
Off-site Time:	Temp:
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.:	G0C28-0029
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	0725	11/17/05			x		2	x					x	x	x			x	5-oxygenates requested are MTBE, DIPE, ETBE, TAME, and TBA.
2	02111ASAEFF	0720				x		2	x					x	x	x			x	
3	02111ASYSINF	0715				x		2	x					x	x	x			x	
4	02111AGAC1	0712				x		2	x					x	x	x			x	
5	02111AEFF	0710				x		2	x					x	x	x		x		
6	02111DPEWINF	0637			x			6				x		x	x		x		x	
7	02111ASWINF	0633			x			6				x		x	x		x		x	
8	02111ASWEFF	0628			x			6				x		x	x		x		x	
9	02111WGAC1	0625			x			6				x		x	x		x		x	
10	02111WEFF	0620			x			6				x		x	x		x		x	
11	02111MW2WINF	0646			x			6				x		x	x		x	x		
																			x	
12	TB2111111705	0650	11/17/05		x			2												Hold

Sampler's Name:	Chris Hill
Sampler's Company:	Stratus Environmental, Inc.
Shipment Date:	
Shipment Method:	
Shipment Tracking No:	650 9255471936

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Chris Hill Stratus	111705				
			Mary A. UCL	11/18/05	10:15

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 #: 08-11-1599

SAMPLE RECEIPT FORM

Cooler ___ of ___

CLIENT: STRATUS

DATE: ___/___/___

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

Temperature 2.5 °C - 0.2 °C (CF) = 2.3 °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: AD

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	☑	☐	☐
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 sample label(s)	☑	☐	☐
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: AD

Reviewed by: PS

Scanned by: AD

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

January 9, 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: 5 (December 1, 8, 17, 22, and 30, 2008)

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 December 1, 2008.

Variations from Scope of Work: The remediation systems were found non-functioning on December 1, 2008, due to high-water level alarm either in the air stripper tank or in the oil-water separator. The remediation systems were re-started momentarily on December 1, 2008 and shutdown after sampling, pending receipt of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on December 8, 2008.

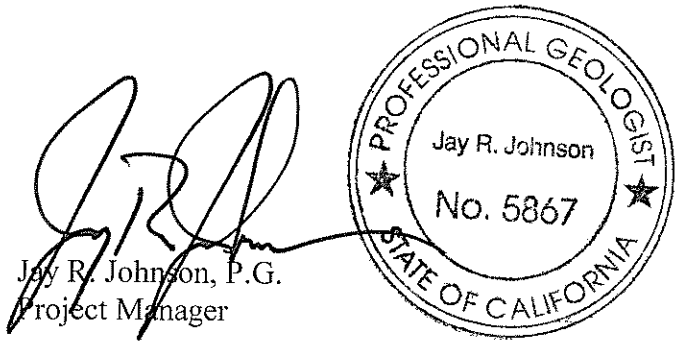
Based on the flow totalizer data for MW-2 for December 1, 8, 17, 22, and 30, 2008, the readings for December 17 and 22, 2008, appear to be erroneous.

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: 12108
Onsite Time: 0750
Offsite Time: 0915
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: FOG
Ambient Temperature: 50

System Information

System Status Upon Arrival: Operational ☐ Non-Operational ☑ High N2O
System Status Upon Departure: Operational ☐ Non-Operational ☒ Unit Fou Leaks
Electric Meter Reading: NM
Hour Meter Reading: 2350
Totalizer Reading Prior to Air Stripper: 32957
PID Calibration Date: 12108
Totalizer Reading After Air Stripper: 1123650

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		1698			
Pipe Diameter, inches	3	4	4	3	
Air Flow Rate, cfm			175		
Applied Vacuum, "wc	20"Hg	.30	NA	NA	
Temperature, deg F		120	92		
PID Readings, ppmv	233	2	101	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	17					
MW-7	100	17					
MW6	0						

Signature: [signature]
Date: 12108

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	12.08 0851	02111AGAC1	12.08 0845
02111ASAEFF	) 0849	02111AEFF	) 0842
02111ASYSINF	) 0849		
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: 12/08

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

ARCO

Date: 12108
Onsite Time: 0750
Offsite Time: 0915

Technician: CHILL
Weather Conditions: Foggy
Ambient Temperature 50

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

Transfer Pump Hour Meter Reading: —

Effluent Flow Totalizer Reading: 1085806

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): —

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 8.1
Temperature: 12.4

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		304770			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	12108 0837	02111MW2WINF	12108 0836
02111ASWINF	0830		
02111ASWEFF	0825		
02111WGAC1	0820		
02111WEFF	0815		
TB2111 12108	0840		

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

Notes:

Signature: [signature] Date: 12108

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

ORIGINAL

Date: 12808
Onsite Time: 0600
Offsite Time: 0700
Equipment Manufacturer/Model#:

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 48

System Information

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

Electric Meter Reading: NM

Hour Meter Reading: 2350

Totalizer Reading Prior to Air Stripper: 33240

PID Calibration Date: 12808

Totalizer Reading After Air Stripper: 1123890

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		2020			
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm			175		
Applied Vacuum, "wc		.30	NA	NA	
Temperature, deg F		113	80		
PID Readings, ppmv	274	2	150	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	17					
V-3	50	17					
MW-1	0						
MW-3	100	18					
MW-7	100	17					
MW-8	0						

Signature: [signature]

Date: 12808

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: 12806

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

Date: 12808
Onsite Time: 0600
Offsite Time: 0700

Technician: CHILL
Weather Conditions: Clouds
Ambient Temperature 48

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1086147

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 2

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		304869			

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: 12808

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

ORIGINAL

Date: 12/7/08
Onsite Time: 0800
Offsite Time: 0845
Equipment Manufacturer/Model#

Technician: CHILC
Weather Conditions: Clear
Ambient Temperature: 37

System Information

System Status Upon Arrival:	Operational	☐	Non-Operational	☒	High #20
System Status Upon Departure:	Operational	☒	Non-Operational	☐	

Electric Meter Reading: NM
Hour Meter Reading: 2364
Totalizer Reading Prior to Air Stripper: 40899
PID Calibration Date: 12/5/08
Totalizer Reading After Air Stripper: 113120

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		2450			
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm			170		
Applied Vacuum, "wc	20 Hg	40	NA	NA	
Temperature, deg F		95	60		
PID Readings, ppmv	674	8	265	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	16					
V-2	50	16					
V-3	50	16					
MW-1	8						
MW-3	100	18					
MW-7	100	17					
MW-8	8						

Signature: [signature]
Date: 12/7/08

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: 12/7/05

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

ORIGINAL

Date: 121708
Onsite Time: 0800
Offsite Time: 0845

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 37

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: 1093162
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	9	907841			

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: Chilcutt Date: 121708

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

ORIGINAL

Date: 12 22 08
Onsite Time: 0600
Offsite Time: 0705
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clouds
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:	2482			
Totalizer Reading Prior to Air Stripper:	102400	PID Calibration Date:	122208	
Totalizer Reading After Air Stripper:	1189150			

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		2030			
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm			175		
Applied Vacuum, "wc	19"Hg	.30	NA	NA	
Temperature, deg F		128	100		
PID Readings, ppmv	140	1	71	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	12					
V-2	50	12					
V-3	50	12					
MW-1	~~100~~ 8						
MW-3	100	13					
MW-7	100	13					
MW-5	8						

Signature: [signature]
Date: 122208

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: 12-22-08

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

ORIGINAL

Date: 12 22 08
Onsite Time: 0900
Offsite Time: 0915

Technician: CHICL
Weather Conditions: Cloudy
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: _____

Effluent Flow Totalizer Reading: 1148631

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		534829			

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: 12 22 08

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

ORIGINAL

Date: 12 30 08
Onsite Time: 0700
Offsite Time: 0750
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: FOG
Ambient Temperature: 45

System Information

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

Electric Meter Reading: NM
Hour Meter Reading: 2492
Totalizer Reading Prior to Air Stripper: 107356
PID Calibration Date: 12 29 08
Totalizer Reading After Air Stripper: 1193780

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		2280			
Pipe Diameter, inches					
Air Flow Rate, cfm			175		
Applied Vacuum, "wc		.44	NA	NA	
Temperature, deg F		105	85		
PID Readings, ppmv	185	1	68	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	16					
MW-7	100	16					
VMW5	0						

Signature: [signature]
Date: 123008

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: 12/30/05

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

ORIGINAL

Date: 12 30 08
Onsite Time: 0700
Offsite Time: 0750

Technician: CHILL
Weather Conditions: FOG
Ambient Temperature 45

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1153621

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 3

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2	[illegible]	33710			
[illegible]	[illegible]				

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: [signature] Date: 12 30 08

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

RUSH

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:	0750 Temp: 50
Off-site Time:	0915 Temp: 51
Sky Conditions:	FOG
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.:	G0C28-0029
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	0851	12/05			X		2	X					X	X	X			X	5-oxygenates requested are MTBE, DIPE, ETBE, TAME, and TBA.
2	02111ASAEFF	0849				X		2	X					X	X	X			X	
3	02111ASYSINF	0847				X		2	X					X	X	X			X	
4	02111AGAC1	0845				X		2	X					X	X	X			X	
5	02111AEFF	0842				X		2	X					X	X	X			X	
6	02111DPEWINF	0833			X			6				X		X	X	X		X		
7	02111ASWINF	0830			X			6				X		X	X		X		X	
8	02111ASWEFF	0825			X			6				X		X	X		X		X	
9	02111WGAC1	0820			X			6				X		X	X		X		X	
10	02111WEFF	0815			X			6				X		X	X		X		X	
11	02111MW2WINF	0836			X			6				X		X	X		X	X		
								6				X		X	X		X		X	
	TB2111121108	0840	12/05		X			2												Hold

Sampler's Name:	Chris Hill	Relinquished By / Affiliation	Date	Time
Sampler's Company:	Stratus Environmental, Inc.	[signature] Stratus	12/08	1600
Shipment Date:	12/08			
Shipment Method:	GSO			
Shipment Tracking No:				

Accepted By / Affiliation	Date	Time

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.

Supplemental Report 1

January 19, 2009

The original report has been revised/corrected.

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

Subject: **Calscience Work Order No.: 08-12-0089**
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 12/2/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

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

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-12-0089
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15
		Units:	mg/m3
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	**08-12-0089-1-A**	**12/01/08 08:51**	**Air**	**GC/MS V**	**N/A**	**12/02/08 17:41**	**081202L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.8	0.24	150		Xylenes (total)	9.4	1.3	150	
Toluene	1.0	0.28	150		Methyl-t-Butyl Ether (MTBE)	26	2.2	300	
Ethylbenzene	4.7	0.33	150						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	96	57-129			1,2-Dichloroethane-d4	91	47-137		
Toluene-d8	105	78-156							

02111ASAEFF	08-12-0089-2-A	12/01/08 08:49	Air	GC/MS V	N/A	12/02/08 16:54	081202L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.063	0.0016	1		Xylenes (total)	0.13	0.0087	1	
Toluene	0.025	0.0019	1		Methyl-t-Butyl Ether (MTBE)	4.9	0.58	80	
Ethylbenzene	0.070	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	99	57-129			1,2-Dichloroethane-d4	94	47-137		
Toluene-d8	101	78-156							

02111ASYINF	08-12-0089-3-A	12/01/08 08:47	Air	GC/MS V	N/A	12/02/08 18:28	081202L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.62	0.096	60		Xylenes (total)	2.3	0.52	60	
Toluene	0.30	0.11	60		Methyl-t-Butyl Ether (MTBE)	12	0.87	120	
Ethylbenzene	1.2	0.13	60						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	96	57-129			1,2-Dichloroethane-d4	91	47-137		
Toluene-d8	104	78-156							

02111AGAC1	08-12-0089-4-A	12/01/08 08:45	Air	GC/MS V	N/A	12/02/08 16:07	081202L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.030	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	101	57-129			1,2-Dichloroethane-d4	98	47-137		
Toluene-d8	99	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-12-0089
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15
		Units:	mg/m3
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	**08-12-0089-5-A**	**12/01/08 08:42**	**Air**	**GC/MS V**	**N/A**	**12/02/08 15:19**	**081202L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0057	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	100	57-129			1,2-Dichloroethane-d4	96	47-137		
Toluene-d8	99	78-156							

Method Blank	**097-09-002-7,930**	**N/A**	**Air**	**GC/MS V**	**N/A**	**12/02/08 14:32**	**081202L01**

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	98	57-129			1,2-Dichloroethane-d4	96	47-137		
Toluene-d8	98	78-156							

Method Blank	**097-09-002-7,936**	**N/A**	**Air**	**GC/MS V**	**N/A**	**12/03/08 12:40**	**081203L01**

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	97	57-129			1,2-Dichloroethane-d4	95	47-137		
Toluene-d8	98	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: 12/02/08
Work Order No: 08-12-0089
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	**08-12-0089-1-B**	**12/01/08 08:51**	**Air**	**GC 38**	**N/A**	**12/02/08 17:32**	**081202L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	2300	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**08-12-0089-2-B**	**12/01/08 08:49**	**Air**	**GC 38**	**N/A**	**12/02/08 15:42**	**081202L01**

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
02111ASYINF	**08-12-0089-3-B**	**12/01/08 08:47**	**Air**	**GC 38**	**N/A**	**12/02/08 15:08**	**081202L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	950	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**08-12-0089-4-B**	**12/01/08 08:45**	**Air**	**GC 38**	**N/A**	**12/02/08 16:55**	**081202L01**

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	**08-12-0089-5-B**	**12/01/08 08:42**	**Air**	**GC 38**	**N/A**	**12/02/08 16:19**	**081202L01**

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	**099-12-693-97**	**N/A**	**Air**	**GC 38**	**N/A**	**12/02/08 08:40**	**081202L01**

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:	12/02/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-12-0089
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
02111DPEWINF	**08-12-0089-6-E**	**12/01/08 08:33**	**Aqueous**	**GC 4**	**12/02/08**	**12/03/08 01:11**	**081202B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	290	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	**08-12-0089-7-E**	**12/01/08 08:30**	**Aqueous**	**GC 4**	**12/02/08**	**12/03/08 01:45**	**081202B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	240	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
02111ASWEFF	**08-12-0089-8-E**	**12/01/08 08:25**	**Aqueous**	**GC 4**	**12/02/08**	**12/03/08 02:17**	**081202B01**

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
02111WGAC1	**08-12-0089-9-E**	**12/01/08 08:20**	**Aqueous**	**GC 4**	**12/02/08**	**12/03/08 02:50**	**081202B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	78	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550	Work Order No:	08-12-0089
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	08-12-0089-10-E	12/01/08 08:15	Aqueous	GC 4	12/02/08	12/03/08 06:07	081202B02

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			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	08-12-0089-11-E	12/01/08 08:36	Aqueous	GC 4	12/02/08	12/03/08 03:23	081202B01

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	300	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	80	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-349	N/A	Aqueous	GC 4	12/02/08	12/02/08 12:57	081202B01

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			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-695-353	N/A	Aqueous	GC 4	12/02/08	12/03/08 04:29	081202B02

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			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550	Work Order No:	08-12-0089
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	**08-12-0089-6-C**	**12/01/08 08:33**	**Aqueous**	**GC/MS Z**	**12/09/08**	**12/10/08 05:02**	**081209L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	10	20		Tert-Butyl Alcohol (TBA)	1700	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)	19	10	20		Tert-Amyl-Methyl Ether (TAME)	ND	10	20	
Methyl-t-Butyl Ether (MTBE)	500	10	20						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	109	73-157		Dibromofluoromethane	108	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
02111ASWINF	**08-12-0089-7-C**	**12/01/08 08:30**	**Aqueous**	**GC/MS Z**	**12/09/08**	**12/10/08 05:32**	**081209L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	7.4	5.0	10		Tert-Butyl Alcohol (TBA)	1200	500	50	
Ethylbenzene	10	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Toluene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Xylenes (total)	17	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Methyl-t-Butyl Ether (MTBE)	300	25	50						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	106	73-157		Dibromofluoromethane	106	82-142	
Toluene-d8	100	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
02111ASWEFF	**08-12-0089-8-C**	**12/01/08 08:25**	**Aqueous**	**GC/MS Z**	**12/09/08**	**12/10/08 06:02**	**081209L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	5.0	10		Tert-Butyl Alcohol (TBA)	540	100	10	
Ethylbenzene	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Toluene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Xylenes (total)	ND	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Methyl-t-Butyl Ether (MTBE)	19	5.0	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	109	73-157		Dibromofluoromethane	107	82-142	
Toluene-d8	99	82-112		1,4-Bromofluorobenzene	93	75-105	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-12-0089
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	**08-12-0089-9-C**	**12/01/08 08:20**	**Aqueous**	**GC/MS Z**	**12/09/08**	**12/10/08 06:32**	**081209L02**

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	109	73-157		Dibromofluoromethane	104	82-142	
Toluene-d8	100	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	**08-12-0089-10-A**	**12/01/08 08:15**	**Aqueous**	**GC/MS BB**	**12/02/08**	**12/03/08 05:43**	**081202L02**

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	100	73-157		Dibromofluoromethane	103	82-142	
Toluene-d8	99	82-112		1,4-Bromofluorobenzene	97	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**08-12-0089-11-C**	**12/01/08 08:36**	**Aqueous**	**GC/MS Z**	**12/09/08**	**12/10/08 07:33**	**081209L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	5.7	5.0	10		Tert-Butyl Alcohol (TBA)	700	100	10	
Ethylbenzene	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Toluene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Xylenes (total)	ND	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Methyl-t-Butyl Ether (MTBE)	49	5.0	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	112	73-157		Dibromofluoromethane	107	82-142	
Toluene-d8	100	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:	12/02/08
3330 Cameron Park Drive, Suite 550	Work Order No:	08-12-0089
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	**099-12-703-581**	**N/A**	**Aqueous**	**GC/MS BB**	**12/02/08**	**12/03/08 05:15**	**081202L02**

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	100	73-157		Dibromofluoromethane	98	82-142	
Toluene-d8	99	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	**099-12-703-596**	**N/A**	**Aqueous**	**GC/MS Z**	**12/09/08**	**12/10/08 02:01**	**081209L02**

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	103	73-157		Dibromofluoromethane	101	82-142	
Toluene-d8	99	82-112		1,4-Bromofluorobenzene	91	75-105	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-598**	**N/A**	**Aqueous**	**GC/MS Z**	**12/10/08**	**12/10/08 11:56**	**081210L01**

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	110	73-157		Dibromofluoromethane	105	82-142	
Toluene-d8	99	82-112		1,4-Bromofluorobenzene	92	75-105	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.		Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-12-0089
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 38	N/A	12/02/08	081202D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	610	590	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-12-0089
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
08-11-1599-11	**Aqueous**	**GC 4**	**12/02/08**	**12/02/08**	**081202S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	119	96	38-134	19	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-12-0089
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
02111WEFF	Aqueous	GC 4	12/02/08	12/03/08	081202S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	96	98	38-134	2	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: 12/02/08
Work Order No: 08-12-0089
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
02111WEFF	Aqueous	GC/MS BB	12/02/08	12/03/08	081202S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	92	86-122	5	0-8	
Carbon Tetrachloride	95	96	78-138	1	0-9	
Chlorobenzene	98	96	90-120	1	0-9	
1,2-Dibromoethane	78	84	70-130	8	0-30	
1,2-Dichlorobenzene	95	96	89-119	1	0-10	
1,1-Dichloroethene	92	89	52-142	3	0-23	
Ethylbenzene	102	95	70-130	7	0-30	
Toluene	92	95	85-127	3	0-12	
Trichloroethene	101	95	78-126	6	0-10	
Vinyl Chloride	101	101	56-140	0	0-21	
Methyl-t-Butyl Ether (MTBE)	66	77	64-136	16	0-28	
Tert-Butyl Alcohol (TBA)	88	104	27-183	16	0-60	
Diisopropyl Ether (DIPE)	78	89	78-126	13	0-16	
Ethyl-t-Butyl Ether (ETBE)	69	82	67-133	17	0-21	
Tert-Amyl-Methyl Ether (TAME)	72	76	63-141	6	0-21	
Ethanol	90	111	11-167	21	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	12/02/08
3330 Cameron Park Drive, Suite 550		Work Order No:	08-12-0089
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
08-12-0437-2	**Aqueous**	**GC/MS Z**	**12/09/08**	**12/09/08**	**081209S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	97	86-122	3	0-8	
Carbon Tetrachloride	92	89	78-138	3	0-9	
Chlorobenzene	100	97	90-120	3	0-9	
1,2-Dibromoethane	104	101	70-130	3	0-30	
1,2-Dichlorobenzene	103	99	89-119	4	0-10	
1,1-Dichloroethene	86	86	52-142	0	0-23	
Ethylbenzene	100	98	70-130	2	0-30	
Toluene	100	97	85-127	3	0-12	
Trichloroethene	95	94	78-126	1	0-10	
Vinyl Chloride	88	87	56-140	1	0-21	
Methyl-t-Butyl Ether (MTBE)	101	95	64-136	6	0-28	
Tert-Butyl Alcohol (TBA)	92	94	27-183	2	0-60	
Diisopropyl Ether (DIPE)	85	81	78-126	5	0-16	
Ethyl-t-Butyl Ether (ETBE)	93	91	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	106	101	63-141	4	0-21	
Ethanol	90	80	11-167	12	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 12/02/08
3330 Cameron Park Drive, Suite 550	Work Order No: 08-12-0089
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
08-12-0869-5	**Aqueous**	**GC/MS Z**	**12/10/08**	**12/10/08**	**081210S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	109	86-122	2	0-8	
Carbon Tetrachloride	101	99	78-138	2	0-9	
Chlorobenzene	98	97	90-120	1	0-9	
1,2-Dibromoethane	109	105	70-130	4	0-30	
1,2-Dichlorobenzene	99	100	89-119	1	0-10	
1,1-Dichloroethene	98	98	52-142	1	0-23	
Ethylbenzene	107	113	70-130	3	0-30	
Toluene	97	98	85-127	1	0-12	
Trichloroethene	101	99	78-126	2	0-10	
Vinyl Chloride	96	92	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	108	106	64-136	2	0-28	
Tert-Butyl Alcohol (TBA)	75	77	27-183	3	0-60	
Diisopropyl Ether (DIPE)	96	94	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	99	96	67-133	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	104	103	63-141	1	0-21	
Ethanol	61	63	11-167	4	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:	08-12-0089
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
097-09-002-7,930	Air	GC/MS V	N/A	12/02/08	081202L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	91	94	60-156	4	0-40	
Toluene	87	90	56-146	4	0-43	
Ethylbenzene	91	94	52-154	4	0-38	
p/m-Xylene	90	93	42-156	3	0-41	
o-Xylene	90	93	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:	08-12-0089
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
097-09-002-7,936	Air	GC/MS V	N/A	12/03/08	081203L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	108	60-156	1	0-40	
Toluene	102	101	56-146	1	0-43	
Ethylbenzene	105	106	52-154	0	0-38	
p/m-Xylene	104	105	42-156	0	0-41	
o-Xylene	104	103	52-148	0	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:	08-12-0089
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
099-12-695-349	Aqueous	GC 4	12/02/08	12/02/08	081202B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	107	105	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:	08-12-0089
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
099-12-695-353	Aqueous	GC 4	12/02/08	12/03/08	081202B02

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	103	102	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:	08-12-0089
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
099-12-703-581	Aqueous	GC/MS BB	12/02/08	12/03/08	081202L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	96	99	87-117	82-122	3	0-7	
Carbon Tetrachloride	96	95	78-132	69-141	1	0-8	
Chlorobenzene	98	99	88-118	83-123	1	0-8	
1,2-Dibromoethane	102	104	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	103	102	88-118	83-123	0	0-8	
1,1-Dichloroethene	100	101	71-131	61-141	2	0-14	
Ethylbenzene	94	94	80-120	73-127	0	0-20	
Toluene	95	97	85-127	78-134	2	0-7	
Trichloroethene	109	114	85-121	79-127	5	0-11	
Vinyl Chloride	102	103	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	101	107	67-133	56-144	6	0-16	
Tert-Butyl Alcohol (TBA)	99	98	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	102	107	80-122	73-129	6	0-8	
Ethyl-t-Butyl Ether (ETBE)	101	107	73-127	64-136	5	0-11	
Tert-Amyl-Methyl Ether (TAME)	96	101	69-135	58-146	5	0-12	
Ethanol	101	98	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: 08-12-0089
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
099-12-703-596	Aqueous	GC/MS Z	12/09/08	12/10/08	081209L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	99	100	87-117	82-122	1	0-7	
Carbon Tetrachloride	94	96	78-132	69-141	2	0-8	
Chlorobenzene	98	99	88-118	83-123	0	0-8	
1,2-Dibromoethane	102	108	80-120	73-127	6	0-20	
1,2-Dichlorobenzene	99	100	88-118	83-123	1	0-8	
1,1-Dichloroethene	91	93	71-131	61-141	2	0-14	
Ethylbenzene	100	100	80-120	73-127	0	0-20	
Toluene	98	100	85-127	78-134	2	0-7	
Trichloroethene	105	107	85-121	79-127	2	0-11	
Vinyl Chloride	95	99	64-136	52-148	4	0-10	
Methyl-t-Butyl Ether (MTBE)	95	100	67-133	56-144	5	0-16	
Tert-Butyl Alcohol (TBA)	92	98	34-154	14-174	7	0-19	
Diisopropyl Ether (DIPE)	87	90	80-122	73-129	4	0-8	
Ethyl-t-Butyl Ether (ETBE)	92	97	73-127	64-136	6	0-11	
Tert-Amyl-Methyl Ether (TAME)	100	104	69-135	58-146	4	0-12	
Ethanol	88	81	34-124	19-139	9	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:	08-12-0089
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
099-12-703-598	Aqueous	GC/MS Z	12/10/08	12/10/08	081210L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	100	100	87-117	82-122	0	0-7	
Carbon Tetrachloride	99	100	78-132	69-141	1	0-8	
Chlorobenzene	98	100	88-118	83-123	1	0-8	
1,2-Dibromoethane	102	104	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	99	98	88-118	83-123	1	0-8	
1,1-Dichloroethene	99	100	71-131	61-141	2	0-14	
Ethylbenzene	102	103	80-120	73-127	1	0-20	
Toluene	100	100	85-127	78-134	0	0-7	
Trichloroethene	100	100	85-121	79-127	0	0-11	
Vinyl Chloride	100	99	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	96	96	67-133	56-144	0	0-16	
Tert-Butyl Alcohol (TBA)	93	94	34-154	14-174	0	0-19	
Diisopropyl Ether (DIPE)	91	93	80-122	73-129	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	94	97	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	99	98	69-135	58-146	1	0-12	
Ethanol	82	83	34-124	19-139	0	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: 08-12-0089

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: 08-12-0089

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

Chain of Custody Record

RUSH 0089

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: 0750	Temp: 50
Off-site Time: 0915	Temp: 51
Sky Conditions: FOG	
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	
Lab Bottle Order No:	

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.: G0C28-0029	
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.	

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	0851	12/6/08			X		2	X					X	X	X			X	5-oxygenates requested are MTBE, DIPE, ETBE, TAME, and TBA.
2	02111ASAEFF	0849				X		2	X					X	X	X			X	
3	02111ASYSINF	0847				X		2	X					X	X	X			X	
4	02111AGAC1	0845				X		2	X					X	X	X			X	
5	02111AEFF	0842				X		2	X					X	X	X		X		
6	02111DPEWINF	0833			X			6				X		X	X		X		X	
7	02111ASWINF	0830			X			6				X		X	X		X		X	
8	02111ASWEFF	0825			X			6				X		X	X		X		X	
9	02111WGAC1	0820			X			6				X		X	X		X		X	
10	02111WEFF	0815			X			6				X		X	X		X	X		
11	02111MW2WINF	0836			X			6				X		X	X		X		X	
12	TB2111121008	0540	12/6/08		X			2												Hold

Sampler's Name: Chris Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus Environmental, Inc.						
Shipment Date: 12/10/08						
Shipment Method: GSO						
Shipment Tracking No: 925556194 6/925503194 8						

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 #: 08-12-0089

SAMPLE RECEIPT FORM

Cooler 1 of 2

CLIENT: Stratus Env. DATE: 12/02/08

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

Temperature 5.1 °C - 0.2 °C (CF) = 4.9 °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:**

CUSTODY SEALS INTACT:

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

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

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 sample label(s).....	☑	☐	☐
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: YL

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

Reviewed by: WSC

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: YL

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08-12-0019

SAMPLE RECEIPT FORM

Cooler 2 of 2

CLIENT: Stratus Env. DATE: 12/02/08

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:** CL

CUSTODY SEALS INTACT:

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

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

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 sample label(s).....	☐	☐	☑
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: SA

Reviewed by: YL

Scanned by: YL

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 November 4, 2008

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 October 2008
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for October 2008, for the remediation system at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 11,033 gallons of treated groundwater were discharged to the sanitary sewer between September 24, 2008 and October 31, 2008. The remediation system is currently shutdown pending completion of a carbon change-out.

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: September 24, 2008 to October 31, 2008. 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: 7

Total monthly discharge: 11,033 U. S. Gallons

Signature of Certifying Official: _____

Printed Name of Official: Jay R. Johnson, P.G.

Title: Project Manager

Date: November 4, 2008

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 found non-functioning on October 1, due to a high-water level alarm either in the air stripper tank or in the oil-water separator. The remediation systems were not re-started on October 1, 2008, pending a carbon change-out for the liquid phase carbon vessels on October 2, 2008. Due to excessive hardening (cementing) of the lead carbon vessel, the carbon change-out could not be completed on October 2, 2008. Carbon change-out in the lead carbon vessel is currently scheduled for November 10, 2008.

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 [16] 5:00 9/11/2007 [17] 9:00 9/17/2007 [18] 5:30	589,944 589,950 591,443	8,737
October-07	10/1/07 [19] 5:00 10/11/07 [20] 8:15 10/23/07 [17] 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 [17] 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 [17] 4:30	633,121 633,123	19,586
January-08	1/7/08 [11] 5:00 1/15/08 [17] 7:00	635,200 636,041	2,918
February-08	2/5/08 [21] 8:15 2/26/08 [22] 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 [23] 4:30	646,123 646,221	2,778
April-08	4/1/08 [24] 5:00 4/14/08 [25] 5:00 4/22/08 5:00	719,174 719,881 757,683	111,462
May-08	5/6/08 [26] 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 [27] 7:27 7/7/08 [28] 6:54 7/23/08 [29] 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 [30] 4:30 8/12/08 [30] 5:00 8/27/08 [30] 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 [31] 8:30 9/10/08 [32] 12:30 9/17/08 [30] 7:00 9/24/08 [30] 7:15	1,052,669 1,052,851 1,056,514 1,056,950	6,591
October-08	10/1/08 [33] 6:57 10/2/08 [34] 7:50	1,067,983 NM	11,033

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. 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.

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)

[15] System observed non-functioning upon arrival due to high water level alarm on air stripper. System re-started after re-setting air stripper.

[16] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[17] System re-started upon receipt of analytical results and compliance verification.

[18] 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.

[19] System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[20] System re-started briefly but shutdown to verify effluent air results.

[21] 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.

[22] System re-started upon receipt of analytical results and compliance verification and replacement of transfer pump.

[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to float malfunction.

[24] 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.

[25] 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.

[26] DPE system re-started after replacing transfer pump contactor.

[27] System observed non-functioning upon arrival due to high water level alarm on air stripper. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[28] System remained shutdown. Collected carbon sample (vapor phase) for profiling and change-out.

[29] System re-started after completion of carbon change-out.

[30] 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 alarm.

[31] 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.

[32] System re-started upon receipt of analytical results and compliance verification. Collected carbon sample (liquid phase) for profiling and change-out.

[33] 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.

[34] Unable to complete carbon change-out due to excessive cementing of carbon. System remained shutdown.

STRATUS
ENVIRONMENTAL, INC.

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

TRANSMITTAL

Date November 24, 2008

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 November 2008
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for November 2008, for the remediation system at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 7,368 gallons of treated groundwater were discharged to the sanitary sewer between October 31, 2008 and November 24, 2008.

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

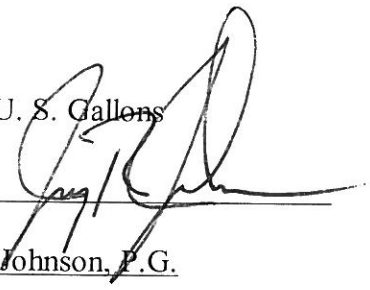
cc: Mr. Rob Miller, Broadbent & Associates, Inc.

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: October 31, 2008 to November 24, 2008. 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: 13

Total monthly discharge: 7,368 U. S. Gallons

Signature of Certifying Official: 

Printed Name of Official: Jay R. Johnson, P.G.

Title: Project Manager

Date: November 24, 2008

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. Carbon change-out in the lead carbon vessel (with excessive cementation) was completed on November 10, 2008 and the remediation systems were re-started on November 11, 2008. The remediation systems were found non-functioning on November 17, 2008, due to a high-water level alarm either in the air stripper tank or in the oil-water separator. The remediation systems were re-started momentarily on November 17, 2008 and shutdown after sampling, pending receipt and verification of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on November 24, 2008.

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 [16] 5:00 9/11/2007 [17] 9:00 9/17/2007 [18] 5:30	589,944 589,950 591,443	8,737
October-07	10/1/07 [19] 5:00 10/11/07 [20] 8:15 10/23/07 [17] 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 [17] 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 [17] 4:30	633,121 633,123	19,586
January-08	1/7/08 [11] 5:00 1/15/08 [17] 7:00	635,200 636,041	2,918
February-08	2/5/08 [21] 8:15 2/26/08 [22] 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 [23] 4:30	646,123 646,221	2,778
April-08	4/1/08 [24] 5:00 4/14/08 [25] 5:00 4/22/08 5:00	719,174 719,881 757,683	111,462
May-08	5/6/08 [26] 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 [27] 7:27 7/7/08 [28] 6:54 7/23/08 [29] 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 [30] 4:30 8/12/08 [30] 5:00 8/27/08 [30] 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 [31] 8:30 9/10/08 [32] 12:30 9/17/08 [30] 7:00 9/24/08 [30] 7:15	1,052,669 1,052,851 1,056,514 1,056,950	6,591
October-08	10/1/08 [33] 6:57 10/2/08 [34] 7:50	1,067,983 NM	11,033
November-08	11/10/08 [35] 6:30 11/11/08 [29] 6:30 11/17/08 [31] 5:00 11/24/08 [17] 4:30	NM 1,068,053 1,077,116 1,075,351	7,368

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. 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)

[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. System re-started after re-setting air stripper.

[16] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[17] System re-started upon receipt of analytical results and compliance verification.

[18] 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.

[19] System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[20] System re-started briefly but shutdown to verify effluent air results.

[21] 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.

[22] System re-started upon receipt of analytical results and compliance verification and replacement of transfer pump.

[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to float malfunction.

[24] 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.

[25] 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.

[26] DPE system re-started after replacing transfer pump contactor.

[27] System observed non-functioning upon arrival due to high water level alarm on air stripper. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[28] System remained shutdown. Collected carbon sample (vapor phase) for profiling and change-out.

[29] System re-started after completion of carbon change-out.

[30] 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 alarm.

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)
[31] 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. [32] System re-started upon receipt of analytical results and compliance verification. Collected carbon sample (liquid phase) for profiling and change-out. [33] 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. [34] Unable to complete carbon change-out due to excessive cementing of carbon. System remained shutdown. [35] 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 January 5, 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 December 2008
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for December 2008, for the remediation system at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 78,270 gallons of treated groundwater were discharged to the sanitary sewer between November 24, 2008 and December 30, 2008.

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: November 24, 2008 to December 30, 2008. 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: 36

Total monthly discharge: 78,270 U. S. Gallons

Signature of Certifying Official: _____

Printed Name of Official: Jay R. Johnson, P.G.

Title: Project Manager

Date: January 5, 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 found non-functioning on December 1, 2008, due to a high-water level alarm either in the air stripper tank or in the oil-water separator. The remediation systems were re-started momentarily on December 1, 2008 and shutdown after sampling, pending receipt and verification of analytical results. Upon receipt of analytical results and compliance verification, the remediation systems were re-started on December 8, 2008. The remediation systems were again found non-functioning on December 17, 2008 and December 30, 2008, 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	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 [16] 5:00 9/11/2007 [17] 9:00 9/17/2007 [18] 5:30	589,944 589,950 591,443	8,737
October-07	10/1/07 [19] 5:00 10/11/07 [20] 8:15 10/23/07 [17] 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 [17] 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 [17] 4:30	633,121 633,123	19,586
January-08	1/7/08 [11] 5:00 1/15/08 [17] 7:00	635,200 636,041	2,918
February-08	2/5/08 [21] 8:15 2/26/08 [22] 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 [23] 4:30	646,123 646,221	2,778
April-08	4/1/08 [24] 5:00 4/14/08 [25] 5:00 4/22/08 5:00	719,174 719,881 757,683	111,462
May-08	5/6/08 [26] 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 [27] 7:27 7/7/08 [28] 6:54 7/23/08 [29] 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 [30] 4:30 8/12/08 [30] 5:00 8/27/08 [30] 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 [31] 8:30 9/10/08 [32] 12:30 9/17/08 [30] 7:00 9/24/08 [30] 7:15	1,052,669 1,052,851 1,056,514 1,056,950	6,591
October-08	10/1/08 [33] 6:57 10/2/08 [34] 7:50	1,067,983 NM	11,033
November-08	11/10/08 [35] 6:30 11/11/08 [29] 6:30 11/17/08 [31] 5:00 11/24/08 [17] 4:30	NM 1,068,053 1,077,116 1,075,351	7,368
December-08	12/1/08 [31] 7:50 12/8/08 [17] 6:00 12/17/08 [36] 8:00 12/22/08 6:00 12/30/08 [36] 7:00	1,085,806 1,086,147 1,093,162 1,148,631 1,153,621	78,270

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. 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. System re-started after re-setting air stripper.

[16] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[17] System re-started upon receipt of analytical results and compliance verification.

[18] 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.

[19] System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[20] System re-started briefly but shutdown to verify effluent air results.

[21] 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.

[22] System re-started upon receipt of analytical results and compliance verification and replacement of transfer pump.

[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to float malfunction.

[24] 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)

[25] 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.

[26] DPE system re-started after replacing transfer pump contactor.

[27] System observed non-functioning upon arrival due to high water level alarm on air stripper. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[28] System remained shutdown. Collected carbon sample (vapor phase) for profiling and change-out.

[29] System re-started after completion of carbon change-out.

[30] 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 alarm.

[31] 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.

[32] System re-started upon receipt of analytical results and compliance verification. Collected carbon sample (liquid phase) for profiling and change-out.

[33] 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.

[34] Unable to complete carbon change-out due to excessive cementing of carbon. System remained shutdown.

[35] Carbon change-out for liquid phase carbon vessels completed.

[36] 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.