Atlantic Richfield Company
(a BP affiliated company)

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

30 July 2009

Re: Second Quarter 2009 Ground-Water Monitoring and Remediation System Status Report
Atlantic Richfield Company (a BP affiliated company) Station #2111
1156 Davis Street
San Leandro, California
ACEH Case #RO0000494

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

Paul Supple
Environmental Business Manger

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

Prepared for

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

Prepared by

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

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

Project No. 06-88-615

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

30 July 2009

Project No. 06-88-615

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

Attn.: Mr. Paul Supple

Re: Second Quarter 2009 Ground-Water Monitoring and Remediation System Status Report, Atlantic Richfield Company (a BP affiliated company) Station #2111, 1156 Davis Street, San Leandro, California; ACEH Case #RO0000494

Dear Mr. Supple:

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

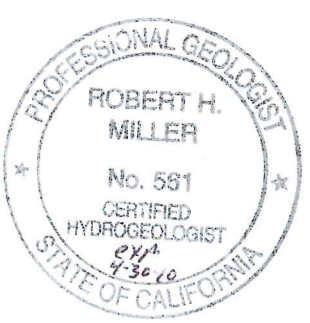
Should you have questions regarding the work performed or results obtained, please do not hesitate to contact us at (530) 566-1400.

Sincerely,

BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

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



Enclosures

cc: Mr. Paresh Khatri, Alameda County Environmental Health (Submitted via ACEH ftp site)
Mr. Karl Busche, City of San Leandro Environmental Services Division, 835 East 14th Street, San Leandro, California 94577
Electronic copy uploaded to GeoTracker

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

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

WORK PERFORMED THIS QUARTER (Second Quarter 2009):

1. Prepared and submitted *First Quarter 2009 Ground-Water Monitoring and Remediation System Status Report* (BAI, 04/30/2009).
2. Conducted ground-water monitoring/sampling for Second Quarter 2009. Work performed on 12 May 2009 by Stratus Environmental, Inc (Stratus).
3. Performed routine and special operations, maintenance and performance monitoring of the Dual-Phase Extraction (DPE) treatment system. Work performed by Stratus.
4. Submitted monthly discharge reports for April, May and June 2009 to the City of San Leandro. Work performed by Stratus.
5. Prepared and submitted *Response To Request For Site Conceptual Model and Soil & Ground-Water Investigation Work Plan* on 23 June 2009 as requested by Alameda County Environmental Health (ACEH) in their letter dated 24 April 2009.

WORK PROPOSED FOR NEXT QUARTER (Third Quarter 2009):

1. Prepared and submitted this *Second Quarter 2009 Ground-Water Monitoring and Remediation System Status Report* (contained herein).
2. Conduct quarterly ground-water monitoring/sampling for Third Quarter 2009.
3. Continue operation, maintenance and performance monitoring of the DPE treatment system until permission to shut down is granted from ACEH.
4. Prepare and submit monthly discharge reports for July, August and September 2009.
5. Prepare and submit soil and ground-water investigation work plan for offsite monitoring well installation as requested by ACEH in their letter dated 9 July 2009.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	**Ground-Water Monitoring/Sampling/DPE Remediation**
Frequency of ground-water monitoring:	**Semi-Annually (1Q/3Q): MW-1 through MW-8**
Frequency of ground-water sampling:	**Semi-Annually: 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):	**14.09 ft (MW-6) to 17.05 ft (MW-1)**
General ground-water flow direction:	**North to West**
Approximate hydraulic gradient:	**0.004 ft/ft**

QUARTERLY RESULTS SUMMARY (Continued):

Current remediation techniques:	**DPE treatment system**			
System startup:	**01/29/2007**			
Extraction wells:	**SVE: V-1, V-2, V-3, MW-1, MW-3, MW-7, MW-8** **GWE: MW-2 (temporarily discontinued since 2/18/2009)**			
Frequency of DPE system field monitoring:	**Weekly**			
Frequency of DPE system sampling:	**Monthly**			
Gallons of ground water treated and discharged:	**This Quarter** **110,454**		**Cumulative** **1,512,537**	
Total operating hours:	**52**		**3,667**	
Mass Removal (pounds)				
Gasoline range organics (GRO):	**0.094 (GWE)**	**34.99 (SVE)**	**5.914 (GWE)**	**904.12 (SVE)**
Benzene:	**0.000 (GWE)**		**0.093 (GWE)**	
Methyl-tert butyl ether (MTBE):	**0.021 (GWE)**		**8.441 (GWE)**	
Ground-water DPE system influent sample results (2111ASWINF):	**04/6/2009**	**05/04/2009**	**06/03/2009**	
GRO (µg/L):	**180**	**<50**	**110**	
Benzene (µg/L):	**0.51**	**<0.50**	**0.52**	
MTBE (µg/L):	**19**	**15**	**49**	
Ground-water DPE system effluent sample results (2111WEFF):				
GRO (µg/L):	**<50**	**<50**	**<50**	
Benzene (µg/L):	**<0.50**	**<0.50**	**<0.50**	
MTBE (µg/L):	**<0.50**	**<0.50**	**<0.50**	
Soil vapor DPE system influent sample results (2111ASYSINF):				
GRO (mg/M^3):	**120**	**120**	**180**	
Benzene (mg/M^3):	**0.16**	**0.17**	**0.18**	
MTBE (mg/M^3):	**0.84**	**1.7**	**2.1**	
Soil vapor DPE system effluent sample results (2111AEFF):				
GRO (mg/M^3):	**<50**	**<50**	**<38**	
Benzene (mg/M^3):	**<0.0016**	**<0.0016**	**<0.0016**	
MTBE (mg/M^3):	**<0.0072**	**<0.0072**	**<0.0072**	

DISCUSSION:

Second quarter 2009 ground-water monitoring and sampling was conducted at Station #2111 on 12 May 2009 by Stratus personnel. Monitoring/sampling was conducted prior to effecting the change from quarterly to first and third calendar quarters, as requested by ACEH. 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 14.09 ft at MW-6 to 17.05 ft at MW-1. Resulting ground-water surface elevations ranged from 23.18 ft above datum in well MW-7 to 22.44 ft in well MW-1. Water level elevations were between historic minimum and maximum ranges for each well, as summarized in Table 1. Water level elevations yielded a variable potentiometric ground-water flow direction and gradient to the north and west at approximately 0.004 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. A Site Location Map is provided as Drawing 1. Potentiometric ground-water elevation contours are presented in Drawing 2.

Consistent with the previous 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 390 micrograms per liter (µg/L) in well MW-2 and 110 µg/L in well MW-7. Benzene was detected above the laboratory reporting limit in two of the seven wells sampled at concentrations of 1.3 µg/L in well MW-2 and 2.0 µg/L in well MW-7. Total xylenes were detected above laboratory reporting limits in two of the seven wells sampled at concentrations of 0.82 µg/L in well MW-2 and 2.9 µg/L in well MW-7. TAME was detected above the laboratory reporting limit in one of the seven wells sampled at a concentration of 1.2 µg/L in well MW-7. TBA was detected above the laboratory reporting limit in four of the seven wells sampled at concentrations up to 590 µg/L in well MW-2. MTBE was detected above the laboratory reporting limit in each of the seven wells sampled at concentrations up to 390 µg/L in well MW-7. 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 (1.3 µg/L); TBA reached a historic minimum concentration in well MW-5 (29 µg/L); and MTBE reached historic minimum concentrations in wells MW-2 (25 µg/L) and MW-4 (0.62 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 2. 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 Second Quarter 2009 period from 1 April 2009 to 30 June 2009, the DPE system reportedly operated approximately two percent of the time. During this period, a total of 110,454 gallons of ground water was treated and discharged. During the Second Quarter of 2009, influent liquid concentrations (sample ID 2111ASWINF) ranged between 180 µg/L to non-detect for GRO, up to 0.52 µg/L for Benzene (which was close to the laboratory reporting limit), and between 15 µg/L to 49 µg/L for MTBE. During the Second Quarter of 2009, influent vapor concentrations (sample ID 2111ASYSINF) ranged between 120 mg/M^3 to 180 mg/M^3 for GRO, between 0.16 mg/M^3 to 0.18 mg/M^3 for Benzene, and between 0.84 mg/M^3 and 2.1 mg/M^3 for MTBE. During the Second Quarter 2009, approximately 0.094 pounds of GRO (0.015 gallons) and approximately 0.021 pounds of MTBE (0.003 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. A Process Flow Diagram with sample locations identified is provided as Drawing 3.

The DPE system operated for approximately 52 hours between 1 April and 30 June 2009 based on the hour meter reading. Stratus found the system non-operational upon arrival at the Site on 6 April 2009 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system and submersible pump within well MW-2 were momentarily restarted in order to collect samples. The system was shut down upon departure pending receipt of the laboratory analytical results. The system was restarted on 14 April 2009 following acceptable review of the laboratory results. The system was left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 21 April 2009 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted upon departure and left operational. Stratus found the system non-operational upon arrival at the Site on 29 April 2009 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted upon departure and left operational.

Stratus found the system non-operational upon arrival at the Site on 4 May 2009 due to a high-water level alarm either in the air stripper tank or oil-water separator. The system and submersible pump within well MW-2 were momentarily restarted in order to collect samples. The system was shut down upon departure pending receipt of the laboratory analytical results. Stratus attempted to restart the system on 12 May 2009 following acceptable review of the laboratory results but was unsuccessful due to the malfunction of the Process Logic Controls (PLC). The system was left non-operational upon departure pending further inspection of the PLC. Stratus conducted a site visit on 19 May 2009 in an attempt to troubleshoot the PLC problem but was unsuccessful. The system was left non-operational upon departure pending meeting with Electrical Installation Contractors, Inc. to reprogram/troubleshoot the PLC.

Stratus conducted a site visit on 3 June 2009 to meet with Electrical Installation Contractors, Inc. in order to troubleshoot the PLC malfunction. An electrical fuse was replaced during this visit and the replacement of the air pressure switch was also recommended. The system and submersible pump within well MW-2 were restarted and system samples were collected. The pump within well MW-2 was shut off following sample collection. The system was left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 9 June 2009 due to a high-water level alarm either in the air stripper tank or oil-water separator. The system was restarted and left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 15 June 2009 due to a high-water level alarm either in the air stripper or oil-water separator. The air pressure switch was replaced and the system was restarted. The system was left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 22 June 2009 due to a high-water level alarm either in the air stripper tank or oil-water separator. The air stripper was cleaned and the system restarted and left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 30 June 2009 due to a high-water level alarm either in the air stripper tank or oil-water separator. The level float in the oil-water separator was replaced and the other floats were checked to ensure proper function. The system was restarted and left operational upon departure. Copies of Stratus' remediation system operation and maintenance data packages for Second Quarter 2009 are contained within Appendix C. Copies of Stratus' remediation system monthly discharge reports for Second Quarter 2009 are contained within Appendix D.

CONCLUSIONS AND RECOMMENDATIONS:

Following the 18 February 2009 decision to turn off the ground-water extraction pump located in well MW-2, the system operating time increased to approximately 52 percent for the First Quarter 2009. However, as described above, the second quarter 2009 operating times associated with the remediation system at the Site returned to being problematic. Based on decreasing concentration trends observed in the wells associated with the Site, the asymptotic mass removal conditions associated with the remediation system, and the observed system influent concentrations, it was previously concluded that the remediation system is no longer cost effective and that concentrations observed onsite did not warrant

continued operation of the system. In the *Response To Request For Site Conceptual Model and Soil & Ground-Water Investigation Work Plan* submitted on 23 June 2009, BAI recommended shut down of the DPE remediation system, with continued semi-annual monitoring/sampling of the monitoring wells associated with the Site. BP is currently awaiting a response from ACEH to this request. In the meantime, BAI shall proceed with offsite access negotiation and preparation of a soil and ground-water investigation work plan for offsite monitoring well installation.

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. Site Location Map

Drawing 2. Ground-Water Elevation Contour and Analytical Summary Map – 12 May 2009

Drawing 3. 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

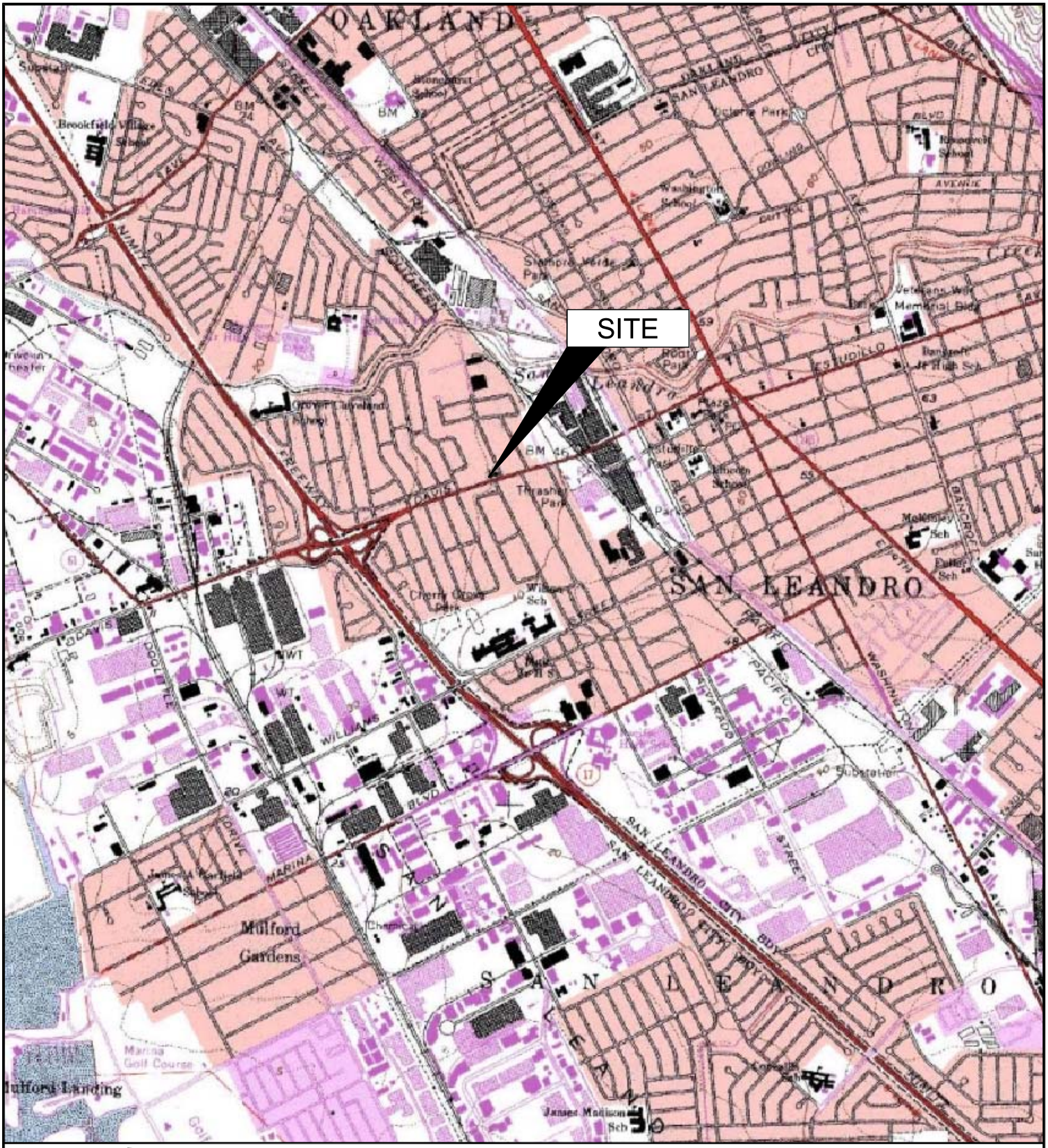
Table 7. Ground-Water Extraction System Effluent Data

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



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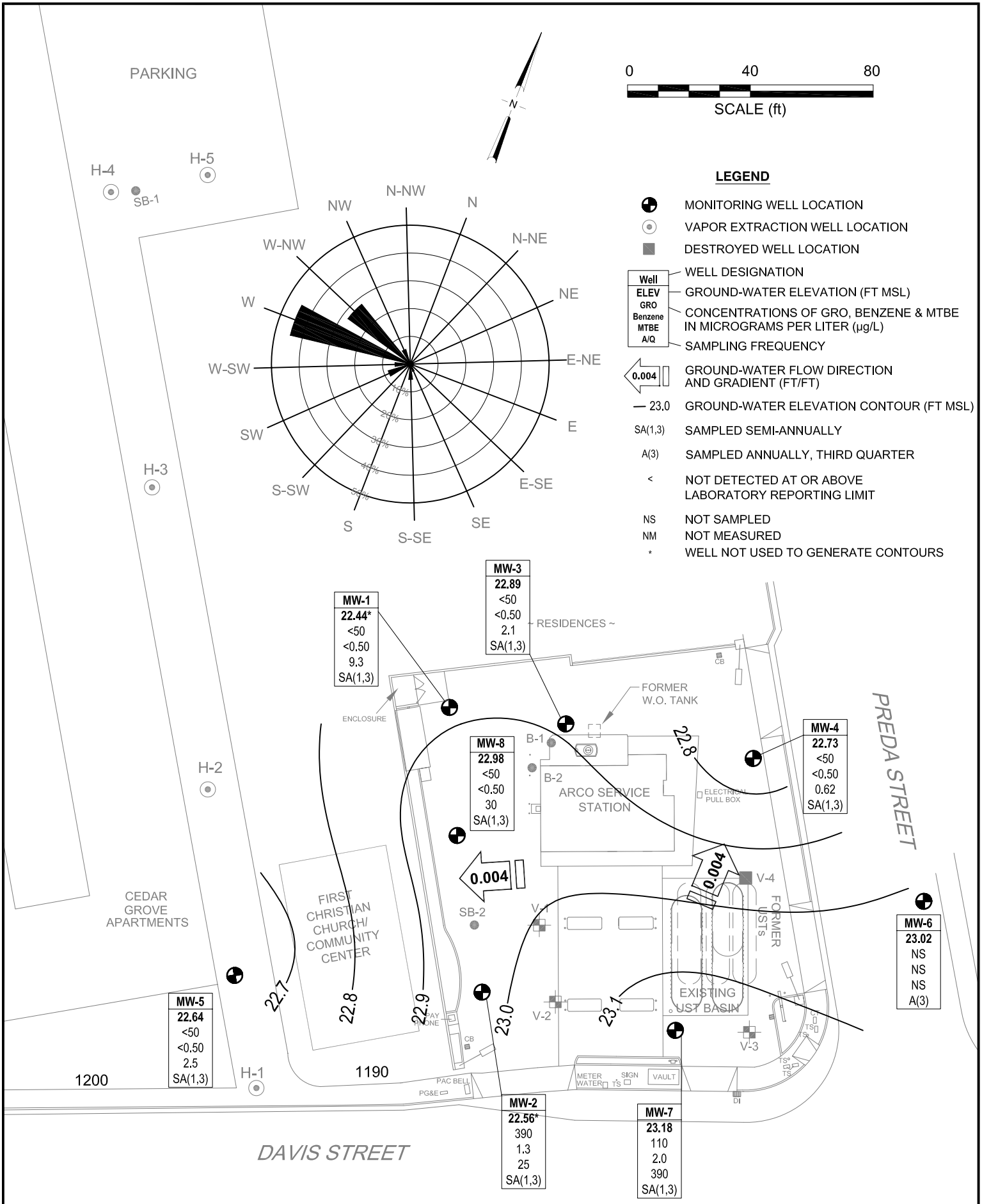
0 2000 4000

APPROXIMATE SCALE (ft)

IMAGE SOURCE: USGS

BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, CA 95926 Project No.: 06-88-615 Date: 07/23/09	Station #2111 1156 Davis Street San Leandro, California	Site Location Map	Drawing 1



BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California 95926 Project No. 06-88-615 Date: 7/27/09	Station #2111 1156 Davis Street San Leandro, California	Ground-Water Elevation Contour and Analytical Summary Map 12 May 2009

Drawing
2

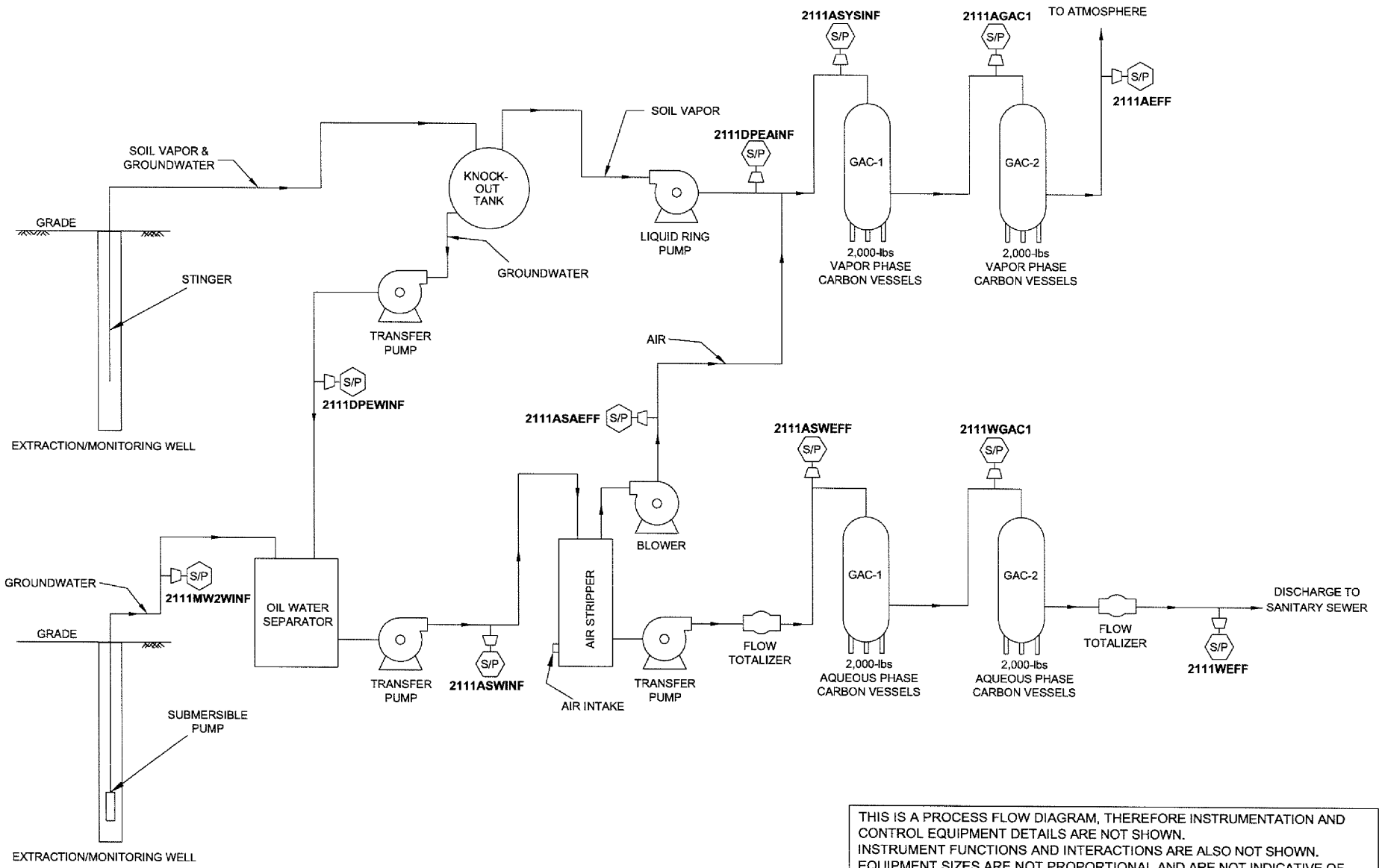


Diagram from Stratus Environmental Inc.

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
3

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)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	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)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-1 Cont.															
4/8/2008	NP		39.49	12.50	26.00	16.53	22.96	88	<0.50	<0.50	<0.50	<0.50	110	1.73	6.89
8/20/2008	NP		39.49	12.50	26.00	18.32	21.17	<50	<0.50	<0.50	<0.50	<0.50	3.3	2.37	6.95
11/17/2008	NP		39.49	12.50	26.00	18.38	21.11	<50	<0.50	<0.50	<0.50	<0.50	21	0.94	6.96
2/3/2009	NP		39.49	12.50	26.00	18.08	21.41	<50	<0.50	<0.50	<0.50	<0.50	16	1.66	6.95
5/12/2009	**NP**		**39.49**	**12.50**	**26.00**	**17.05**	**22.44**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**9.3**	**0.88**	**6.88**
MW-2															
6/26/2000	--	a	37.99	12.0	26.00	14.60	23.39	--	--	--	--	--	--	--	--
7/20/2000	--		37.99	12.0	26.00	15.14	22.85	95,000	2,300	18,000	2,500	19,000	13,000	--	--
9/19/2000	--		37.99	12.0	26.00	15.95	22.04	63,000	1,200	6,300	2,000	14,000	19,000	--	--
12/21/2000	--		37.99	12.0	26.00	15.60	22.39	45,900	--	2,130	1,160	9,460	22,400/24,700	--	--
12/21/00	--	b	37.99	12.0	26.00	--	--	5,010	360	189	213	626	54,300/89,200	--	--
3/13/2001	--		37.99	12.0	26.00	13.77	24.22	3,650	98.1	<5.0	<5.0	6.42	3,590/3,260	--	--
3/13/2001	--	b	37.99	12.0	26.00	--	--	<20,000	525	466	408	1,460	91,700/76,000	--	--
9/18/2001	--	a	37.99	12.0	26.00	16.86	21.13	--	--	--	--	--	--	--	--
12/28/2001	--		37.99	12.0	26.00	14.28	23.71	31,000	1,500	3,800	1,300	4,800	9,300/8,800	--	--
3/14/2002	--		37.99	12.0	26.00	14.15	23.84	1,800	25	43	43	270	990/960	--	--
4/23/2002	--		37.99	12.0	26.00	13.60	24.39	9,000	220	110	470	2,500	8,500	--	--
7/17/2002	NP	a, c	37.99	12.0	26.00	15.75	22.24	74,000	280	290	820	10,000	19,000/0.4	6.8	6.8
10/9/02	NP	g	37.99	12.0	26.00	16.69	21.30	--	--	--	--	--	--	--	--
1/13/03	--	g, h	37.99	12.0	26.00	13.59	24.40	--	--	--	--	--	--	--	--
04/07/03	--	g, h	37.99	12.0	26.00	14.70	23.29	--	--	--	--	--	--	--	--
07/09/03	--	g, h	37.99	12.0	26.00	15.48	22.51	--	--	--	--	--	--	--	--
02/05/2004	NP	g,m	37.86	12.0	26.00	14.43	23.43	--	--	--	--	--	--	--	--
04/05/2004	NP		37.86	12.0	26.00	14.35	23.51	2,300	33	<5.0	<5.0	200	750	0.6	--
07/13/2004	NP		37.86	12.0	26.00	15.79	22.07	59,000	380	<50	2,100	7,900	5,800	0.3	6.4
08/31/2004	--		37.86	12.0	26.00	15.89	21.97	--	--	--	--	--	--	--	--
11/04/2004	--	g, h	37.86	12.0	26.00	15.92	21.94	--	--	--	--	--	--	--	--
01/20/2005	NP	o	37.86	12.0	26.00	13.71	24.15	30,000	450	<50	1,300	3,300	7,000	0.7	6.2
04/11/2005	NP		37.86	12.0	26.00	12.70	25.16	11,000	170	<50	580	630	2,700	0.9	6.8
08/01/2005	NP		37.86	12.0	26.00	14.89	22.97	24,000	170	<50	1,100	2,700	2,700	0.64	6.9

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)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-2 Cont.															
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
04/14/2006	NP	a	37.86	12.0	26.00	12.24	25.62	7,800	78	<50	94	130	2,100	0.81	6.7
7/19/2006	NP	q	37.86	12.0	26.00	14.00	23.86	4,900	31	<10	98	75	930	1.1	6.5
10/24/2006	--	g	37.86	12.0	26.00	15.38	22.48	--	--	--	--	--	--	--	6.45
1/15/2007	P		37.86	12.0	26.00	15.00	22.86	5,000	51	<10	49	34	1,400	1.85	7.13
4/18/2007	NP		37.86	12.0	26.00	14.82	23.04	3,000	39	<10	32	22	1,100	1.95	7.10
7/17/2007	NP	n	37.86	12.0	26.00	18.00	19.86	1,100	53	<10	28	<10	1,300	4.84	7.09
10/11/2007	NP		37.86	12.0	26.00	16.38	21.48	1,800	17	<10	<10	11	1,000	1.52	7.05
1/8/2008	NP	n	37.86	12.0	26.00	14.10	23.76	1,900	65	<10	37	28	1,300	1.06	4.22
4/8/2008	NP		37.86	12.0	26.00	14.70	23.16	200	34	<0.50	<0.50	<0.50	690	3.24	6.95
8/20/2008	NP		37.86	12.0	26.00	16.66	21.20	990	21	<10	<10	<10	190	1.54	6.91
11/17/2008	NP		37.86	12.0	26.00	19.28	18.58	290	9.3	<5.0	<5.0	<5.0	89	0.71	6.75
2/3/2009	NP		37.86	12.0	26.00	16.45	21.41	86	3.5	<2.5	<2.5	<2.5	31	2.71	6.96
5/12/2009	**NP**		**37.86**	**12.0**	**26.00**	**15.30**	**22.56**	**390**	**1.3**	**<0.50**	**<0.50**	**0.82**	**25**	**0.82**	**6.96**
MW-3															
6/26/2000	--		39.32	12.00	**26.00**	15.96	23.36	--	--	--	--	--	--	--	--
7/20/2000	--		39.32	12.00	**26.00**	16.42	22.90	<50	<0.5	<0.5	<0.5	<1.0	130	--	--
9/19/2000	--		39.32	12.00	**26.00**	17.18	22.14	190	17	<0.5	1.4	2.4	160	--	--
12/21/2000	--		39.32	12.00	**26.00**	16.97	22.35	187	17.8	<0.5	2.47	2.5	143/125	--	--
3/13/2001	--		39.32	12.00	**26.00**	15.17	24.15	72.4	2.83	<0.5	<0.5	<0.5	126/122	--	--
9/18/2001	--		39.32	12.00	**26.00**	17.81	21.51	140	6.4	<0.5	3.5	1.6	110/75	--	--
12/28/2001	--		39.32	12.00	**26.00**	15.44	23.88	130	5.9	<0.5	0.99	0.55	90/63	--	--
3/14/2002	--		39.32	12.00	**26.00**	15.50	23.82	<50	<0.5	<0.5	<0.5	<0.5	100/88	--	--
4/23/2002	--		39.32	12.00	**26.00**	14.96	24.36	<50	<0.5	<0.5	<0.5	<0.5	77	--	--
7/17/2002	NP		39.32	12.00	**26.00**	17.09	22.23	<50	<0.50	<0.50	<0.50	<0.50	47	7.2	7.2
10/9/2002	NP		39.32	12.00	**26.00**	17.87	21.45	<50	<0.50	<0.50	<0.50	<0.50	26/29	7.2	7.2
1/13/2003	NP	l	39.32	12.00	**26.00**	14.78	24.54	<50	<0.50	<0.50	<0.50	<0.50	59	6.8	6.8
04/07/03	NP		39.32	12.00	**26.00**	16.15	23.17	88	<0.50	<0.50	<0.50	<0.50	75	7.0	7.0
7/9/2003	--		39.32	12.00	**26.00**	16.79	22.53	100	<0.50	<0.50	<0.50	<0.50	52	6.5	6.5

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)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-3 Cont.															
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
01/20/2005	NP		39.19	12.00	26.00	15.07	24.12	160	<0.50	<0.50	<0.50	<0.50	27	0.6	6.1
04/11/2005	NP		39.19	12.00	26.00	14.24	24.95	<50	<0.50	<0.50	<0.50	<0.50	21	0.6	6.1
08/01/2005	NP		39.19	12.00	26.00	16.29	22.90	<50	<0.50	<0.50	<0.50	<0.50	23	1.04	7.2
10/21/2005	NP		39.19	12.00	26.00	17.41	21.78	88	<0.50	<0.50	<0.50	<0.50	19	1.9	6.6
01/18/2006	NP		39.19	12.00	26.00	13.80	25.39	73	<0.50	<0.50	<0.50	<0.50	13	1.13	6.6
04/14/2006	NP		39.19	12.00	26.00	12.55	26.64	<50	<0.50	<0.50	<0.50	<0.50	6.7	0.71	6.6
7/19/2006	NP	q	39.19	12.00	26.00	15.04	24.15	<50	<0.50	<0.50	<0.50	<0.50	11	2.0	6.6
10/24/2006	P		39.19	12.00	26.00	16.45	22.74	<50	<0.50	<0.50	<0.50	<0.50	33	--	6.77
1/15/2007	P		39.19	12.00	26.00	16.00	23.19	<50	<0.50	<0.50	0.61	<0.50	29	1.11	7.03
4/18/2007	NP		39.19	12.00	26.00	15.87	23.32	<50	<0.50	<0.50	<0.50	<0.50	9.5	1.67	7.07
7/17/2007	NP		39.19	12.00	26.00	19.40	19.79	<50	<0.50	<0.50	<0.50	<0.50	19	4.25	7.27
10/11/2007	NP		39.19	12.00	26.00	17.43	21.76	<50	<0.50	<0.50	<0.50	<0.50	5.3	1.62	7.10
1/8/2008	NP		39.19	12.00	26.00	15.16	24.03	<50	<0.50	<0.50	<0.50	<0.50	8.9	2.02	6.94
4/8/2008	NP		39.19	12.00	26.00	15.75	23.44	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.98	6.80
8/20/2008	NP		39.19	12.00	26.00	17.65	21.54	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.85	7.62
11/17/2008	NP		39.19	12.00	26.00	17.76	21.43	<50	<0.50	<0.50	<0.50	<0.50	3.6	1.36	6.90
2/3/2009	NP		39.19	12.00	26.00	17.36	21.83	<50	<0.50	<0.50	<0.50	<0.50	2.1	2.55	7.04
5/12/2009	**NP**		**39.19**	**12.00**	**26.00**	**16.30**	**22.89**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**2.1**	**1.68**	**6.98**
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	--	--

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)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-4 Cont.															
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
7/9/2003	--		38.10	10.0	**24.00**	15.44	22.66	120	<0.50	<0.50	<0.50	<0.50	34	6.6	6.6
02/05/2004	NP	m	37.99	10.0	24.00	14.39	23.60	120	<0.50	<0.50	<0.50	<0.50	22	0.5	6.6
04/05/2004	NP		37.99	10.0	24.00	14.37	23.62	110	<0.50	<0.50	<0.50	<0.50	27	1.1	6.5
07/13/2004	NP		37.99	10.0	24.00	15.96	22.03	77	<0.50	<0.50	<0.50	<0.50	27	0.6	6.6
11/04/2004	NP		37.99	10.0	24.00	16.02	21.97	<50	<0.50	<0.50	<0.50	<0.50	19	1.2	6.7
01/20/2005	NP		37.99	10.0	24.00	13.72	24.27	65	<0.50	<0.50	<0.50	<0.50	18	0.6	6.1
04/11/2005	NP		37.99	10.0	24.00	12.80	25.19	51	<0.50	<0.50	<0.50	<0.50	14	0.7	6.2
08/01/2005	NP		37.99	10.0	24.00	14.88	23.11	<50	<0.50	<0.50	<0.50	<0.50	18	1.46	7.3
10/21/2005	NP		37.99	10.0	24.00	15.01	22.98	<50	<0.50	<0.50	<0.50	<0.50	15	1.24	7.6
01/18/2006	NP		37.99	10.0	24.00	12.92	25.07	<50	<0.50	<0.50	<0.50	<0.50	8.9	0.77	6.5
04/14/2006	NP		37.99	10.0	24.00	11.41	26.58	<50	<0.50	<0.50	<0.50	<0.50	4.2	0.84	6.6
7/19/2006	NP		37.99	10.0	24.00	13.86	24.13	<50	<0.50	<0.50	<0.50	<0.50	3.4	1.0	6.7
10/24/2006	P		37.99	10.0	24.00	15.35	22.64	<50	<0.50	<0.50	2.0	<0.50	3.5	--	6.90
1/15/2007	P		37.99	10.0	24.00	14.96	23.03	<50	<0.50	<0.50	0.96	<0.50	3.8	--	7.04
4/18/2007	NP		37.99	10.0	24.00	14.80	23.19	<50	<0.50	<0.50	<0.50	<0.50	5.6	5.33	6.93
7/17/2007	NP		37.99	10.0	24.00	16.10	21.89	<50	<0.50	<0.50	<0.50	<0.50	6.6	3.73	6.87
10/11/2007	NP		37.99	10.0	24.00	16.45	21.54	<50	<0.50	<0.50	<0.50	<0.50	0.81	2.68	7.07
1/8/2008	NP		37.99	10.0	24.00	14.10	23.89	<50	<0.50	<0.50	<0.50	<0.50	1.2	3.50	6.74
4/8/2008	NP		37.99	10.0	24.00	14.68	23.31	<50	<0.50	<0.50	<0.50	<0.50	1.7	2.54	6.80
8/20/2008	NP		37.99	10.0	24.00	16.65	21.34	<50	<0.50	<0.50	<0.50	<0.50	0.70	2.36	6.90
11/17/2008	NP		37.99	10.0	24.00	16.73	21.26	<50	<0.50	<0.50	<0.50	<0.50	0.73	1.07	6.83
2/3/2009	NP		37.99	10.0	24.00	16.36	21.63	<50	<0.50	<0.50	<0.50	<0.50	0.67	3.92	7.34
5/12/2009	**NP**		**37.99**	**10.0**	**24.00**	**15.26**	**22.73**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.62**	**0.81**	**6.98**
MW-5															

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

Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-5 Cont.															
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	--	--
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

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)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-5 Cont.															
4/8/2008	NP		37.12	9.50	23.50	14.38	22.74	<50	<0.50	<0.50	<0.50	<0.50	8.0	1.14	6.76
8/20/2008	NP		37.12	9.50	23.50	16.11	21.01	<50	<1.0	<1.0	<1.0	<1.0	3.6	1.65	6.86
11/17/2008	NP		37.12	9.50	23.50	16.15	20.97	<50	<0.50	<0.50	<0.50	<0.50	1.3	0.66	6.93
2/3/2009	NP		37.12	9.50	23.50	15.83	21.29	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.38	6.77
5/12/2009	**NP**		**37.12**	**9.50**	**23.50**	**14.48**	**22.64**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**2.5**	**0.41**	**6.83**
MW-6															
6/26/2000	--		37.11	10.00	25.00	13.46	23.65	--	--	--	--	--	--	--	--
7/20/2000	--		37.11	10.00	25.00	13.94	23.17	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
9/19/2000	--		37.11	10.00	25.00	14.41	22.70	<50	<0.5	<0.5	<0.5	<1.0	<3.0	--	--
12/21/2000	--		37.11	10.00	25.00	14.53	22.58	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
3/13/2001	--		37.11	10.00	25.00	12.67	24.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
9/18/2001	--		37.11	10.00	25.00	15.42	21.69	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0	--	--
12/28/2001	--		37.11	10.00	25.00	12.96	24.15	<50	<0.5	<0.5	<0.5	<0.5	12/<0.5	--	--
3/14/2002	--		37.11	10.00	25.00	12.98	24.13	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
4/23/2002	--		37.11	10.00	25.00	12.44	24.67	<50	<0.5	<0.5	<0.5	<0.5	3.1	--	--
7/17/2002	NP		37.11	10.00	25.00	14.65	22.46	<50	<0.50	<0.50	<0.50	<0.50	<2.5	7.3	7.3
10/9/2002	NP		37.11	10.00	25.00	15.51	21.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	7.1	7.1
1/13/2003	NP		37.11	10.00	25.00	12.27	24.84	<50	<0.50	<0.50	<0.50	<0.50	<2.5	6.8	6.8
04/07/03	NP		37.11	10.00	25.00	13.61	23.50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	6.6	6.6
7/9/2003	--		37.11	10.00	25.00	14.34	22.77	<50	<0.50	<0.50	<0.50	<0.50	<0.50	7	7.0
02/05/2004	--	m	37.11	10.00	25.00	13.38	23.73	--	--	--	--	--	--	--	--
04/05/2004	--		37.11	10.00	25.00	13.31	23.80	--	--	--	--	--	--	--	--
07/13/2004	NP		37.11	10.00	25.00	14.65	22.46	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.7	6.8
11/04/2004	--		37.11	10.00	25.00	14.95	22.16	--	--	--	--	--	--	--	--
01/20/2005	--		37.11	10.00	25.00	12.57	24.54	--	--	--	--	--	--	--	--
04/11/2005	--		37.11	10.00	25.00	12.05	25.06	--	--	--	--	--	--	--	--
08/01/2005	NP		37.11	10.00	25.00	13.79	23.32	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.15	7.6
10/21/2005	--		37.11	10.00	25.00	14.60	22.51	--	--	--	--	--	--	--	--
01/18/2006	--		37.11	10.00	25.00	11.80	25.31	--	--	--	--	--	--	--	--
04/14/2006	--		37.11	10.00	25.00	10.92	26.19	--	--	--	--	--	--	--	--

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)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-6 Cont.															
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	--	--	--	--	--	--	--	--
2/3/2009	--		37.11	10.00	25.00	15.23	21.88	--	--	--	--	--	--	--	--
5/12/2009	--		**37.11**	**10.00**	**25.00**	**14.09**	**23.02**	--	--	--	--	--	--	--	--
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

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Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-7 Cont.															
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
10/11/2007	NP	t (GRO)	38.54	12.0	27.00	16.18	22.36	210	<2.5	<2.5	<2.5	<2.5	370	2.99	7.33
1/8/2008	NP	n	38.54	12.0	27.00	13.90	24.64	5,100	45	<25	<25	<25	6,100	2.50	7.23
4/8/2008	NP		38.54	12.0	27.00	14.22	24.32	270	0.50	<0.50	1.2	0.66	1,200	1.67	7.17
8/20/2008	NP		38.54	12.0	27.00	16.57	21.97	<50	<0.50	<0.50	<0.50	<0.50	39	2.12	7.04
11/17/2008	NP		38.54	12.0	27.00	22.91	15.63	68	1.8	1.9	0.54	2.0	28	1.14	6.95
2/3/2009	NP		38.54	12.0	27.00	17.86	20.68	<50	<0.50	<0.50	<0.50	<0.50	18	2.58	6.97
5/12/2009	**NP**		**38.54**	**12.0**	**27.00**	**15.36**	**23.18**	**110**	**2.0**	**<0.50**	**<0.50**	**2.9**	**390**	**0.72**	**7.14**
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

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Well and Sample Date	P/NP	Comments	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet bgs)	Water Level Elevation (feet)	Concentrations in (µg/L)						DO (mg/L)	pH
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-8 Cont.															
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
2/3/2009	P		38.91	--	--	16.96	21.95	<50	<0.50	<0.50	<0.50	<0.50	16	0.83	6.9
5/12/2009	**P**		**38.91**	--	--	**15.93**	**22.98**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**30**	**0.31**	**6.90**

ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
ft bgs = feet below ground surface
ft MSL = feet above mean sea level
GRO = Gasoline range organics
GWE = Groundwater elevation in ft MSL
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether
NP = Well not purged prior to sampling
P = Well purged prior to sampling
TOC = Top of casing elevation in ft MSL
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter

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

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

Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g was changed to GRO. The resulting data may be impacted by the potential of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported.

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

Values for DO and pH were obtained through field measurements.

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

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

Table 2. Summary of Fuel Additives Analytical Data

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

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

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.									
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	
7/19/2006	<6,000	<400	930	<10	<10	<10	<10	<10	
1/15/2007	<6,000	1,900	1,400	<10	<10	<10	<10	<10	
4/18/2007	<6,000	1,200	1,100	<10	<10	<10	<10	<10	
7/17/2007	<6,000	1,000	1,300	<10	<10	<10	<10	<10	
10/11/2007	<6,000	1,300	1,000	<10	<10	<10	<10	<10	
1/8/2008	<6,000	2,600	1,300	<10	<10	<10	<10	<10	a
4/8/2008	<300	970	690	<0.50	<0.50	3.3	<0.50	<0.50	
8/20/2008	<6,000	470	190	<10	<10	<10	<10	<10	
11/17/2008	<3,000	740	89	<5.0	<5.0	<5.0	<5.0	<5.0	
2/3/2009	<1,500	230	31	<2.5	<2.5	<2.5	<2.5	<2.5	
5/12/2009	**<300**	**590**	**25**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
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	

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.									
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	
11/17/2008	<300	<10	3.6	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	<300	<10	2.1	<0.50	<0.50	<0.50	<0.50	<0.50	
5/12/2009	**<300**	**<10**	**2.1**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-4									
4/7/2003	<100	<20	24	<0.50	<0.50	7.3	--	--	
7/9/2003	<100	<20	34	<0.50	<0.50	9.8	--	--	
02/05/2004	<100	<20	22	<0.50	<0.50	6.2	<0.50	<0.50	
04/05/2004	<100	<20	27	<0.50	<0.50	7.2	<0.50	<0.50	a
07/13/2004	<100	26	27	<0.50	<0.50	7.4	<0.50	<0.50	a
11/04/2004	<100	<20	19	<0.50	<0.50	5.1	<0.50	<0.50	
01/20/2005	<100	<20	18	<0.50	<0.50	5.2	<0.50	<0.50	
04/11/2005	<100	<20	14	<0.50	<0.50	4.0	<0.50	<0.50	
08/01/2005	<100	<20	18	<0.50	<0.50	3.9	<0.50	<0.50	
10/21/2005	<100	<20	15	<0.50	<0.50	4.6	<0.50	<0.50	
01/18/2006	<300	<20	8.9	<0.50	<0.50	2.5	<0.50	<0.50	
04/14/2006	<300	<20	4.2	<0.50	<0.50	1.3	<0.50	<0.50	
7/19/2006	<300	<20	3.4	<0.50	<0.50	0.69	<0.50	<0.50	r
10/24/2006	<300	<20	3.5	<0.50	<0.50	0.91	<0.50	<0.50	
1/15/2007	<300	<20	3.8	<0.50	<0.50	0.98	<0.50	<0.50	
4/18/2007	<300	<20	5.6	<0.50	<0.50	1.1	<0.50	<0.50	
7/17/2007	<300	<20	6.6	<0.50	<0.50	1.7	<0.50	<0.50	
10/11/2007	<300	<20	0.81	<0.50	<0.50	<0.50	<0.50	<0.50	
1/8/2008	<300	<20	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	a
4/8/2008	<300	<10	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	<10	0.70	<0.50	<0.50	<0.50	<0.50	<0.50	
11/17/2008	<300	<10	0.73	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	<300	<10	0.67	<0.50	<0.50	<0.50	<0.50	<0.50	

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-4 Cont.									
5/12/2009	**<300**	**<10**	**0.62**	**<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
11/04/2004	<10,000	<2,000	6,300	<50	<50	<50	<50	<50	
01/20/2005	<10,000	<2,000	6,900	<50	<50	<50	<50	<50	a
04/11/2005	<10,000	3,600	2,600	<50	<50	<50	<50	<50	
08/01/2005	<200	1,600	130	<1.0	<1.0	<1.0	<1.0	<1.0	
10/21/2005	<500	1,400	86	<2.5	<2.5	<2.5	<2.5	<2.5	
01/18/2006	<1,500	2,200	100	<2.5	<2.5	<2.5	<2.5	<2.5	
04/14/2006	<1,500	2,100	240	<2.5	<2.5	<2.5	<2.5	<2.5	
7/19/2006	<1,500	2,800	84	<2.5	<2.5	<2.5	<2.5	<2.5	r
10/24/2006	<300	1,200	17	<0.50	<0.50	<0.50	<0.50	<0.50	a
1/15/2007	<300	990	36	<0.50	<0.50	<0.50	<0.50	<0.50	
4/18/2007	<1,500	2,000	16	<2.5	<2.5	<2.5	<2.5	<2.5	
7/17/2007	<1,500	1,100	6.6	<2.5	<2.5	<2.5	<2.5	<2.5	
10/11/2007	<300	750	4.8	<0.50	<0.50	<0.50	<0.50	<0.50	
1/8/2008	<300	220	5.6	<0.50	<0.50	<0.50	<0.50	<0.50	a
4/8/2008	<300	300	8.0	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<600	520	3.6	<1.0	<1.0	<1.0	<1.0	<1.0	
11/17/2008	<300	160	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	<300	94	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
5/12/2009	**<300**	**29**	**2.5**	**<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

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-6 Cont.									
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	
07/13/2004	<200,000	<40,000	56,000	<1,000	<1,000	1,300	<1,000	<1,000	
11/04/2004	<100,000	<20,000	71,000	<500	<500	<500	<500	<500	
01/20/2005	<50,000	<10,000	36,000	<250	<250	<250	<250	<250	a
04/11/2005	<5,000	<1,000	1,200	<25	<25	<25	<25	<25	
08/01/2005	<50,000	<10,000	4,800	<250	<250	<250	<250	<250	
10/21/2005	<20,000	24,000	12,000	<100	<100	<100	<100	<100	
01/18/2006	<60,000	15,000	13,000	<100	<100	<100	<100	<100	
04/14/2006	<60,000	<4,000	4,700	<100	<100	<100	<100	<100	
7/19/2006	<6,000	720	1,600	<10	<10	<10	<10	<10	
10/24/2006	<3,000	10,000	14,000	<5.0	<5.0	31	<5.0	<5.0	a
1/15/2007	<60,000	9,300	3,900	<100	<100	<100	<100	<100	
4/18/2007	<30,000	<2,000	2,700	<50	<50	<50	<50	<50	
7/17/2007	<15,000	<1,000	890	<25	<25	<25	<25	<25	
10/11/2007	<1,500	150	370	<2.5	<2.5	<2.5	<2.5	<2.5	
1/8/2008	<15,000	1,400	6,100	<25	<25	32	<25	<25	
4/8/2008	<300	700	1,200	<0.50	<0.50	5.1	<0.50	<0.50	
8/20/2008	<300	34	39	<0.50	<0.50	<0.50	<0.50	<0.50	
11/17/2008	<300	44	28	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	<300	66	18	<0.50	<0.50	<0.50	<0.50	<0.50	
5/12/2009	**<300**	**75**	**390**	**<0.50**	**<0.50**	**1.2**	**<0.50**	**<0.50**	
MW-8									

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.									
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	
4/18/2007	<300	120	130	<0.50	<0.50	1.9	<0.50	<0.50	
7/17/2007	<300	110	96	<0.50	<0.50	1.2	<0.50	<0.50	
10/11/2007	<300	350	130	<0.50	<0.50	1.7	<0.50	<0.50	
1/8/2008	<300	59	49	<0.50	<0.50	0.80	<0.50	<0.50	
4/8/2008	<300	110	32	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	62	13	<0.50	<0.50	<0.50	<0.50	<0.50	
11/17/2008	<300	24	14	<0.50	<0.50	<0.50	<0.50	<0.50	
2/3/2009	<300	17	16	<0.50	<0.50	<0.50	<0.50	<0.50	
5/12/2009	**<300**	**18**	**30**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

ABBREVIATIONS:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
1,2-DCA = 1,2-Dichloroethane
DIPE = Di-isopropyl ether
EDB = 1,2-Dibromoethane
ETBE = Ethyl tert-butyl ether
MTBE = Methyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol
µg/L = Micrograms per Liter

FOOTNOTES:
a = The continuing calibration verification for ethanol was outside of client contractual acceptance limits. However, it was within method acceptance limits. The data should still be considered useful for its intended purpose.

NOTES:
All volatile organic compounds analyzed using EPA Method 8260B.

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

Table 3. Historical Ground-Water Flow Direction and Gradient

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

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

Note: The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information.

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

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

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

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

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

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

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

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

Date Sampled	Sampling Port	Matrix	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	TAME	TBA	MtBE
	SVE-Influent	Air (mg/m^3)	1,300	0.67	0.31	1.9	4.0	---	---	13
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.0043	0.014	0.0042	0.015	---	---	1.1
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0065	<0.0022	<0.0087	---	---	<0.0072
9/2/2008										
	GWE-Influent	Water (µg/L)	77	<5.0	<5.0	<5.0	8.6	<5.0	1,100	380
	GWE A/S-Effluent	Water (µg/L)	<50	<1.0	<1.0	<1.0	<1.0	<1.0	450	16
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	---	---	---	---	---	---	---	---
	SVE A/S-Effluent	Air (mg/m^3)	---	---	---	---	---	---	---	---
	SVE-Effluent	Air (mg/m^3)	---	---	---	---	---	---	---	---
10/1/2008[5]										
	GWE-Influent	Water (µg/L)	---	---	---	---	---	---	---	---
	GWE A/S-Effluent	Water (µg/L)	---	---	---	---	---	---	---	---
	GWE-Effluent	Water (µg/L)	---	---	---	---	---	---	---	---
	SVE-Influent	Air (mg/m^3)	890	1.3	3.1	1.2	4.1	---	---	14
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.023	0.084	0.016	0.062	---	---	3.6
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.037	<0.0022	<0.0087	---	---	<0.0072
11/17/2008										
	GWE-Influent	Water (µg/L)	290	6.5	6.7	<5.0	13	<5.0	1,200	360
	GWE A/S-Effluent	Water (µg/L)	<50	<2.0	<2.0	<2.0	<2.0	<2.0	1,300	38
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	950	0.62	0.30	1.2	2.3	---	---	12
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.063	0.025	0.070	0.13	---	---	4.9
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0057	<0.0022	<0.0087	---	---	<0.0072
12/1/2008										
	GWE-Influent	Water (µg/L)	240	7.4	<5.0	10	17	<5.0	1,200	300
	GWE A/S-Effluent	Water (µg/L)	<50	<5.0	<5.0	<5.0	<5.0	<5.0	540	19
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	170	0.065	0.013	0.094	0.16	---	---	4.3
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.032	0.0087	0.024	0.010	---	---	1.3
	SVE-Effluent	Air (mg/m^3)	<50	0.0047	0.019	<0.0022	0.019	---	---	<0.0072
1/7/2009										
	GWE-Influent	Water (µg/L)	<50	<2.5	<2.5	<2.5	<2.5	<2.5	140	90
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	94	8.9
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	120	0.023	<0.015	0.028	<0.069	---	---	1.0
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.041	0.028	0.020	0.028	---	---	1.3
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	<0.0019	<0.0022	<0.0087	---	---	0.055
2/3/2009										
	GWE-Influent	Water (µg/L)	66	<2.0	<2.0	<2.0	<2.0	<2.0	200	65
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	120	6.1
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	<50	0.054	0.0072	0.077	0.049	---	---	0.70
	SVE A/S-Effluent	Air (mg/m^3)	<50	0.041	0.0070	0.030	0.0090	---	---	0.56
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	0.0026	<0.0022	<0.0087	---	---	0.37
3/3/2009										
	GWE-Influent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	57	27
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	28	1.8
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	**120**	**0.16**	**3.6**	**1.0**	**5.4**	---	---	**0.84**
	SVE A/S-Effluent	Air (mg/m^3)	<50	**0.0096**	**0.041**	**0.014**	**0.062**	---	---	**0.11**
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	<0.0019	<0.0022	<0.0087	---	---	<0.0072
4/6/2009										
	GWE-Influent	Water (µg/L)	**180**	**0.51**	**11**	**2.3**	**13**	<0.50	**170**	**19**
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**23**	**1.9**
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
	SVE-Influent	Air (mg/m^3)	**120**	**0.17**	**0.18**	**0.28**	**0.26**	---	---	**1.7**
	SVE A/S-Effluent	Air (mg/m^3)	<50	**0.0023**	**0.014**	**0.0033**	**0.013**	---	---	**0.099**
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	**0.0076**	<0.0022	<0.0087	---	---	<0.0072
5/4/2009										
	GWE-Influent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	**15**
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	**0.69**
	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)	**180**	**0.18**	**0.16**	**0.36**	**0.24**	---	---	**2.1**
	SVE A/S-Effluent	Air (mg/m^3)	<38	**0.038**	**0.13**	**0.028**	**0.032**	---	---	**0.73**
	SVE-Effluent	Air (mg/m^3)	<38	<0.0016	**0.11**	<0.0022	<0.0087	---	---	<0.0072
6/3/2009										
	GWE-Influent	Water (µg/L)	**110**	**0.52**	<0.50	**0.65**	<0.50	<0.50	**860**	**49**
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**660**	**3.3**
	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

Notes:

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

[1] = Hydrocarbon result partly due to individual peak(s) in quantitation rang
[2] = Primary and confirm results varied by > 40% RPI
[3] = Sample taken from VOA vial with air bubble > 6 millimeters in diamete
[4] = Incorrect GWE influent concentrations were recorded in previously submitted 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
INFL	01/07/09		1,239,376	153,570	2.88	<50	0.00	0.170	5.758	<2.5	1.5E-04	0.006	0.092	90	6.8E-03	0.250	8.342
INFL	02/03/09		1,297,359	57,983	1.49	66	0.00	0.022	5.780	<2.0	2.0E-05	0.001	0.093	65	1.4E-03	0.037	8.380
INFL	03/03/09		1,402,083	104,724	2.60	<50	0.00	0.040	5.820	<0.50	1.9E-05	0.001	0.093	27	1.4E-03	0.040	8.420
INFL	**04/06/09**		**1,503,553**	**101,470**	**2.07**	**180**	**0.00**	**0.087**	**5.907**	**0.51**	**9.5E-06**	**0.000**	**0.093**	**19**	**5.7E-04**	**0.019**	**8.439**
INFL	**05/04/09**		**1,511,815**	**8,262**	**0.20**	**<50**	**0.00**	**0.007**	**5.914**	**<0.50**	**9.4E-07**	**0.000**	**0.093**	**15**	**4.2E-05**	**0.001**	**8.440**
INFL	**06/03/09**		**1,512,537**	**722**	**0.02**	**110**	**0.00**	**0.000**	**5.914**	**0.52**	**7.7E-08**	**0.000**	**0.093**	**49**	**6.4E-06**	**0.000**	**8.441**
REPORTING PERIOD: SECOND QUARTER 2009																	
PERIOD WATER DISCHARGED (gal):				**110,454**	**as of 6/3/2009**												
AVERAGE DISCHARGE RATE (gpm)				**1.32**													
PERIOD POUNDS REMOVED:								**0.094**				**0.000**				**0.021**	
PERIOD GALLONS REMOVED:								**0.015**				**0.000**				**0.003**	
TOTAL POUNDS REMOVED:									**5.914**				**0.093**				**8.441**
TOTAL GALLONS REMOVED:				**1,512,537**					**0.970**				**0.013**				**1.366**
ESTIMATED PERCENT CARBON LOADING:					**22.9%**												

Table 6

Ground-Water Extraction System Performance Data

ARCO Service Station No.2111

1156 Davis Street, San Leandro, California

Explanations:			**Notes:**
µg/L	= Micrograms per liter		a = Influent concentrations were recorded incorrectly in previously submitted reports.
gpm	= Gallons per minute		b = System did not operate during the month of October 2008. Therefore, no system samples were collected.
lbs/day	= Pounds per day		The previous influent concentrations were utilized to estimate contaminant removal.
GRO	= Gasoline range organics		
MtBE	= Methyl tertiary butyl ether		
NA	= Not applicable		
Density of gasoline = 6.1 pounds per gallon		Density of benzene = 7.34 pounds per gallon	Density of MtBE = 6.18 pounds per gallon

Assumptions:

1) Primary carbon loading = 2,000 pounds of carbon (includes primary carbon unit only)

2) Percent carbon loading calculation assumes a loading isotherm of 3% by weight

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

Sample ID	Date Sampled	Notes	Totalizer Value (gallons)	Monthly Volume (gallons)	Average Discharge Rate (gpm)	Effluent Concentrations						
						GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	TBA (µg/L)	MtBE (µg/L)
EFFL	01/29/07		3,000	NA	NA	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	02/05/07		33,400	30,400	3.02	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	03/05/07		130,565	97,165	2.41	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	04/02/07		170,596	40,031	0.99	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	05/01/07		225,297	54,701	1.31	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	06/04/07		429,450	204,153	4.17	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	07/02/07		480,377	50,927	1.26	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	08/01/07		580,301	99,924	2.31	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	09/05/07		589,944	9,643	0.19	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	10/01/07		592,403	2,459	0.07	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	11/06/07		615,161	22,758	0.44	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	12/05/07		633,121	17,960	0.43	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	01/07/08		635,200	2,079	0.04	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	02/05/08		642,841	7,641	0.18	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	03/05/08		646,123	3,282	0.08	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	04/01/08		719,174	73,051	1.88	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	05/06/08		806,356	87,182	1.73	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	06/02/08		949,693	143,337	3.69	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	07/01/08		1,028,841	79,148	1.90	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	08/05/08		1,037,580	8,739	0.17	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	09/02/08		1,052,669	15,089	0.37	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	10/01/08		1,067,983	15,314	0.37	---	---	---	---	---	---	---
EFFL	11/17/08		1,077,116	9,133	0.13	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	12/01/08		1,085,806	8,690	0.43	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	01/07/09		1,239,376	153,570	2.88	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	02/03/09		1,297,359	57,983	1.49	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	03/03/09		1,402,083	104,724	2.60	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	**04/06/09**		1,503,553	101,470	2.07	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	**05/04/09**		1,511,815	8,262	0.20	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	**06/03/09**		1,512,537	722	0.02	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50

REPORTING PERIOD: SECOND QUARTER 2009
PERIOD WATER DISCHARGED (gal): 110,454 as of 6/03/2009
AVERAGE DISCHARGE RATE (gpm) 1.32

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

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

Date	Hr. Meter	No. of Days Between Sampling Dates			Cumulative Days		Percent
	Reading	Total Days	Uptime	Days Down	Total Days	Uptime	Uptime
01/29/07	13.6	NA	NA	NA	NA	NA	NA
02/05/07	178.7	7	6.9	0.1	7	6.90	98%
03/05/07	437.6	28	10.8	17.2	35	17.7	39%
04/02/07	490.7	28	2.2	25.8	63	19.9	8%
05/01/07	594.2	29	4.3	24.7	92	24.2	15%
06/04/07	981.7	34	16.1	17.9	126	40.4	47%
07/02/07	1128.4	28	6.1	21.9	154	46.5	22%
08/01/07	1430.1	30	12.6	17.4	184	59.0	42%
09/05/07	1460.4	35	1.3	33.7	219	60.3	4%
10/01/07	1466.1	26	0.2	25.8	245	60.5	1%
11/06/07	1500.0	36	1.4	34.6	281	62.0	4%
12/05/07	1544.0	29	1.8	27.2	310	63.8	6%
01/07/08	1546.0	33	0.1	32.9	343	63.9	0%
02/05/08	1556.0	29	0.4	28.6	372	64.3	1%
03/05/08	1561.0	29	0.2	28.8	401	64.5	1%
04/01/08	1562.0	27	0.0	27.0	428	64.5	0%
05/06/08	1564.0	35	0.1	34.9	463	64.6	0%
06/02/08	1973.0	27	17.0	10.0	490	81.7	63%
07/01/08	2212.0	29	10.0	19.0	519	91.6	34%
08/05/08	2241.0	35	1.2	33.8	554	92.8	3%
09/02/08	2275.0	28	1.4	26.6	582	94.2	5%
10/01/08	2315.0	29	1.7	27.3	611	95.9	6%
11/17/08	2334.0	47	0.8	46.2	658	96.7	2%
12/01/08	2350.0	14	0.7	13.3	672	97.4	5%
01/07/09	2685.0	37	14.0	23.0	709	111.3	38%
02/03/09	2832.0	27	6.1	20.9	736	117.5	23%
03/03/09	3204.0	28	15.5	12.5	764	133.0	55%
04/06/09	**3617.0**	**34**	**17.2**	**16.8**	**798**	**150.2**	**51%**
05/04/09	**3649.0**	**28**	**1.3**	**26.7**	**826**	**151.5**	**5%**
06/03/09	**3651.0**	**30**	**0.1**	**29.9**	**856**	**151.6**	**0%**

NA = Not applicable

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

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

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

Date	Flow Rate (cfm)	Vacuum (in Hg)	Sampling Port	Analytes (mg/m^3)					
				GRO	Benzene	Toluene	Ethylbenzene	Xylenes	MtBE
08/05/08	180	NR	Influent	1,100	0.62	0.40	1.9	3.5	10
			A/S-Effluent	<50	<0.0016	0.0096	<0.0022	<0.0043	0.40
			Effluent	<50	<0.0016	0.0071	<0.0022	<0.0043	<0.0072
09/02/08	180	NR	Influent	1,300	0.67	0.31	1.9	4.0	13
			A/S-Effluent	<50	0.0043	0.014	0.0042	0.015	1.1
			Effluent	<50	<0.0016	0.0065	<0.0022	<0.0087	<0.0072
10/1/2008[1]	NR	NR	Influent	---	---	---	---	---	---
			A/S-Effluent	---	---	---	---	---	---
			Effluent	---	---	---	---	---	---
11/17/08	170	NR	Influent	890	1.3	3.1	1.2	4.1	14
			A/S-Effluent	<50	0.023	0.084	0.016	0.062	3.6
			Effluent	<50	<0.0016	0.037	<0.0022	<0.0087	<0.0072
12/01/08	175	NR	Influent	950	0.62	0.30	1.2	2.3	12
			A/S-Effluent	<50	0.063	0.025	0.070	0.13	4.9
			Effluent	<50	<0.0016	0.0057	<0.0022	<0.0087	<0.0072
01/07/09	175	NR	Influent	170	0.065	0.013	0.094	0.16	4.3
			A/S-Effluent	<50	0.032	0.0087	0.024	0.010	1.3
			Effluent	<50	0.0047	0.019	<0.0022	0.019	<0.0072
02/03/09	180	NR	Influent	120	0.023	<0.015	0.028	<0.069	1.0
			A/S-Effluent	<50	0.041	0.028	0.020	0.028	1.3
			Effluent	<50	<0.0016	<0.0019	<0.0022	<0.0087	0.055
03/03/09	175	NR	Influent	<50	0.054	0.0072	0.077	0.049	0.70
			A/S-Effluent	<50	0.041	0.0070	0.030	0.0090	0.56
			Effluent	<50	<0.0016	0.0026	<0.0022	<0.0087	0.37
04/06/09	302	NR	Influent	**120**	**0.16**	**3.6**	**1.0**	**5.4**	**0.84**
			A/S-Effluent	<50	**0.0096**	**0.041**	**0.014**	**0.062**	**0.11**
			Effluent	<50	<0.0016	<0.0019	<0.0022	<0.0087	<0.0072
05/04/09	219	NR	Influent	**120**	**0.17**	**0.18**	**0.28**	**0.26**	**1.7**
			A/S-Effluent	<50	**0.0023**	**0.014**	**0.0033**	**0.013**	**0.099**
			Effluent	<50	<0.0016	**0.0076**	<0.0022	<0.0087	<0.0072
06/03/09	231	NR	Influent	**180**	**0.18**	**0.16**	**0.36**	**0.24**	**2.1**
			A/S-Effluent	<38	**0.038**	**0.13**	**0.028**	**0.032**	**0.73**
			Effluent	<38	<0.0016	**0.11**	<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
1/29/07	1.35	0.00	0.09	0.00	93.5%	80.0%	1.35	1.35
2/5/07	7.10	0.18	0.09	0.00	98.8%	99.5%	29.18	30.53
3/5/07	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
5/1/07*	2.56	0.00	0.40	0.00	84.4%	0.0%	12.03	94.66
6/4/07*	5.28	0.01	0.42	0.00	92.0%	55.4%	63.06	157.72
7/2/07	3.20	0.00	0.09	0.00	97.2%	80.0%	25.84	183.56
8/1/07	11.72	0.01	0.09	0.00	99.2%	90.0%	94.00	277.56
9/5/07*	20.25	0.01	0.42	0.00	97.9%	68.4%	20.78	298.34
10/1/07	21.94	0.02	0.08	0.00	99.6%	79.2%	4.22	302.56
11/6/07	16.87	0.03	0.08	0.00	99.5%	87.5%	27.17	329.72
12/5/07*	14.01	0.00	0.08	0.00	99.4%	0.0%	27.79	357.51
1/7/08	7.28	0.04	0.44	0.00	93.9%	88.6%	1.06	358.58
2/5/08**	0.42	0.00	0.42	0.00	0.0%	99.5%	1.54	360.12
3/5/08**	1.05	0.01	0.42	0.00	59.7%	99.9%	0.15	360.27
4/1/08[1]	9.91	0.03	0.40	0.00	96.0%	99.4%	0.00	360.27
5/6/08[1]	15.52	0.02	0.42	0.00	97.3%	99.9%	1.06	361.33
6/2/08[1]	3.68	0.00	0.40	0.00	89.1%	99.4%	163.61	524.93
7/1/08	14.92	0.02	0.31	0.00	97.9%	99.9%	92.60	617.53
8/5/08	17.58	0.01	0.40	0.00	97.7%	99.9%	19.64	637.17
9/2/08	20.78	0.01	0.40	0.00	98.1%	99.9%	27.18	664.34
10/1/08[2]	---	---	---	---	---	---	---	---
11/17/08	13.44	0.02	0.38	0.00	97.2%	99.9%	42.06	706.41
12/1/08	14.76	0.01	0.39	0.00	97.4%	99.9%	9.40	715.81
1/7/09	**2.64**	**0.00**	**0.39**	**0.00**	**85.3%**	**92.8%**	**121.49**	**837.29**
2/3/09*	**1.92**	**0.00**	**0.40**	**0.00**	**79.2%**	**96.5%**	**13.97**	**851.26**
3/3/09**	**0.39**	**0.00**	**0.39**	**0.00**	**0.0%**	**98.5%**	**17.88**	**869.14**
4/6/09**	**3.22**	**0.00**	**0.67**	**0.00**	**79.2%**	**99.5%**	**31.04**	**900.17**
5/4/09**	**2.33**	**0.00**	**0.49**	**0.00**	**79.2%**	**99.5%**	**3.70**	**903.87**
6/3/09	**3.69**	**0.00**	**0.39**	**0.00**	**89.4%**	**99.6%**	**0.25**	**904.12**

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

Sample Calculations

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

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

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

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

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

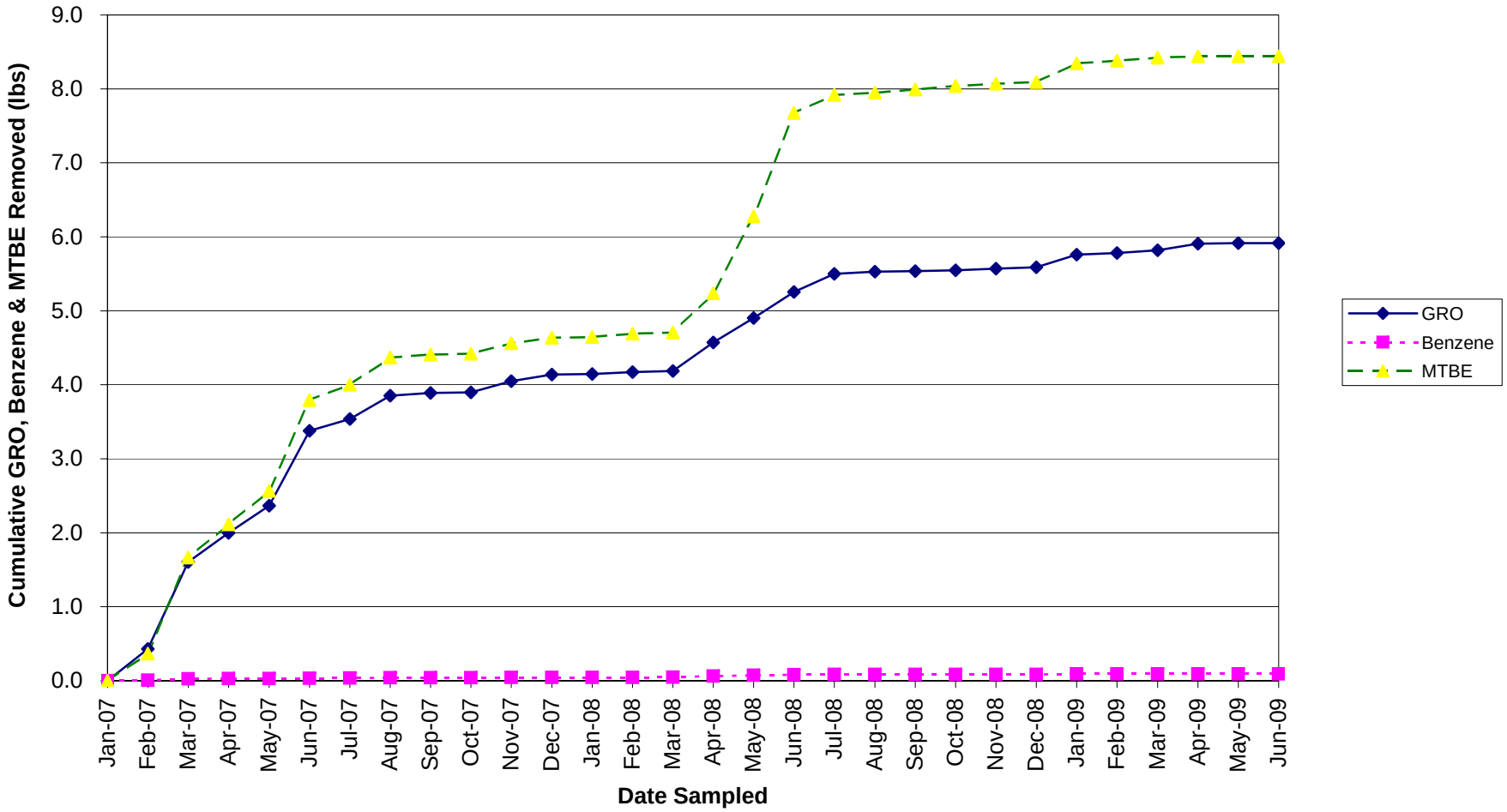


Figure 2
GWE Influent Concentrations for GRO, Benzene, and MTBE
Station #2111, 1156 Davis Street, San Leandro, California

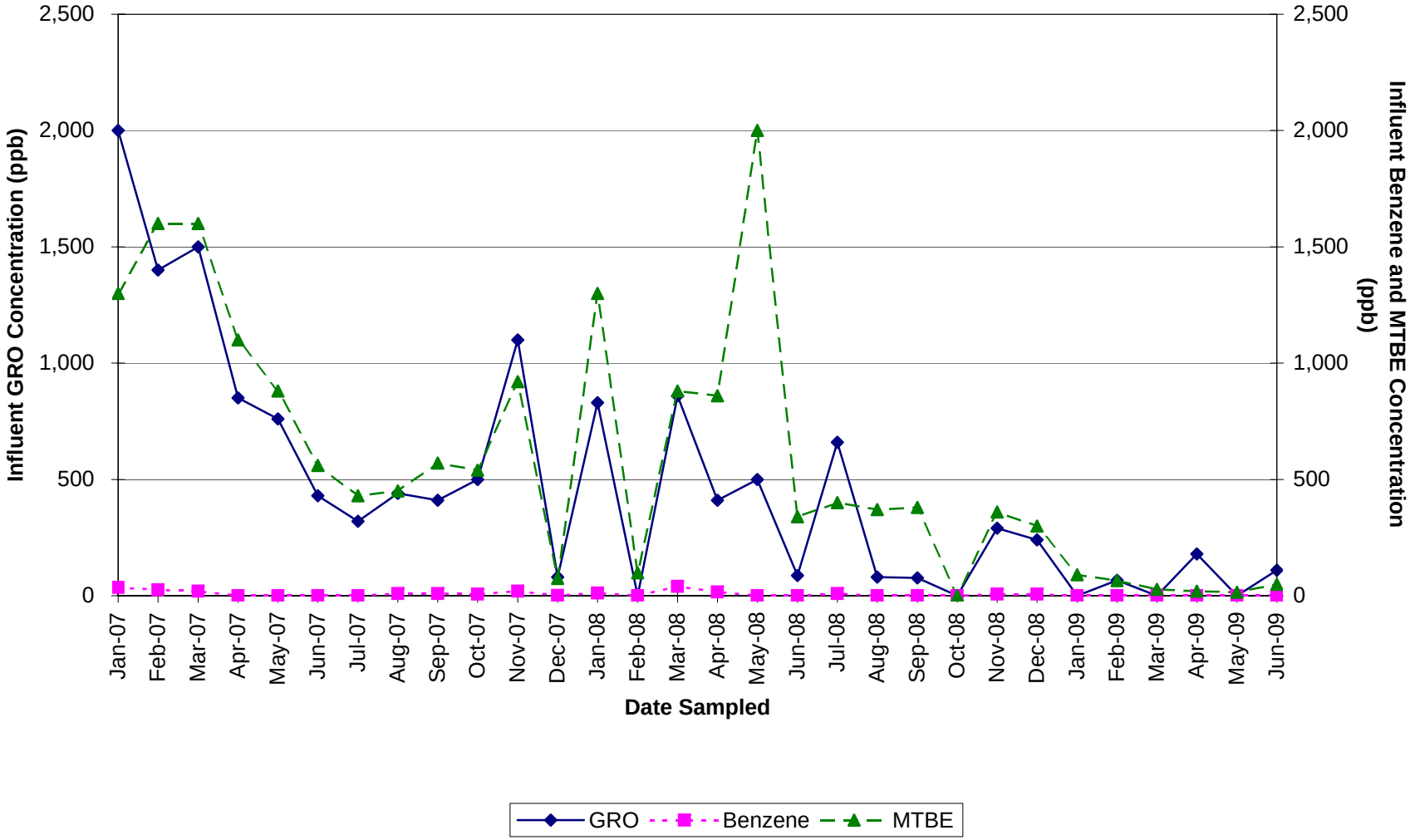


Figure 3
SVE System Influent Concentration vs.Time
Station #2111, 1156 Davis Street, San Leandro, California

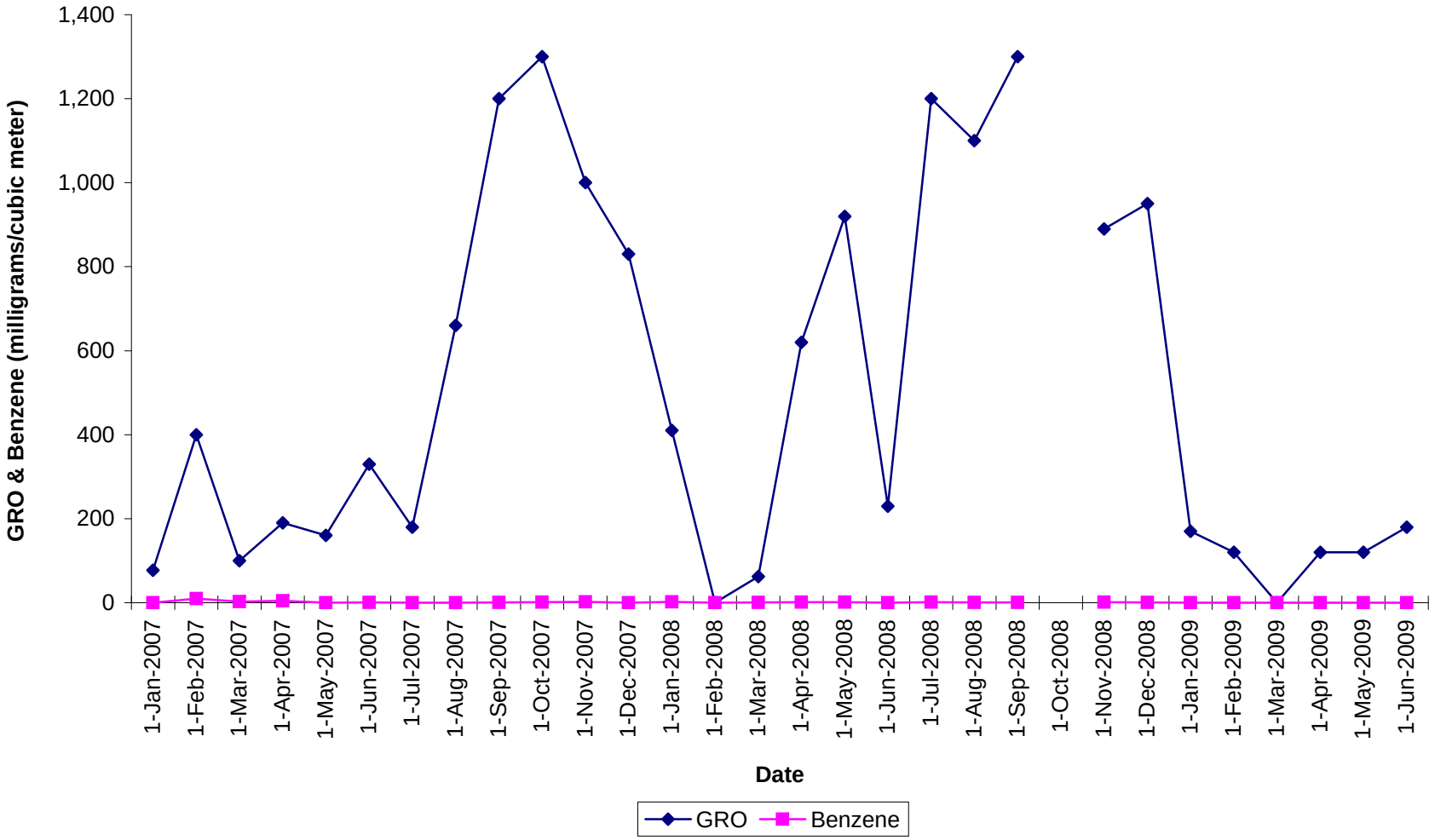
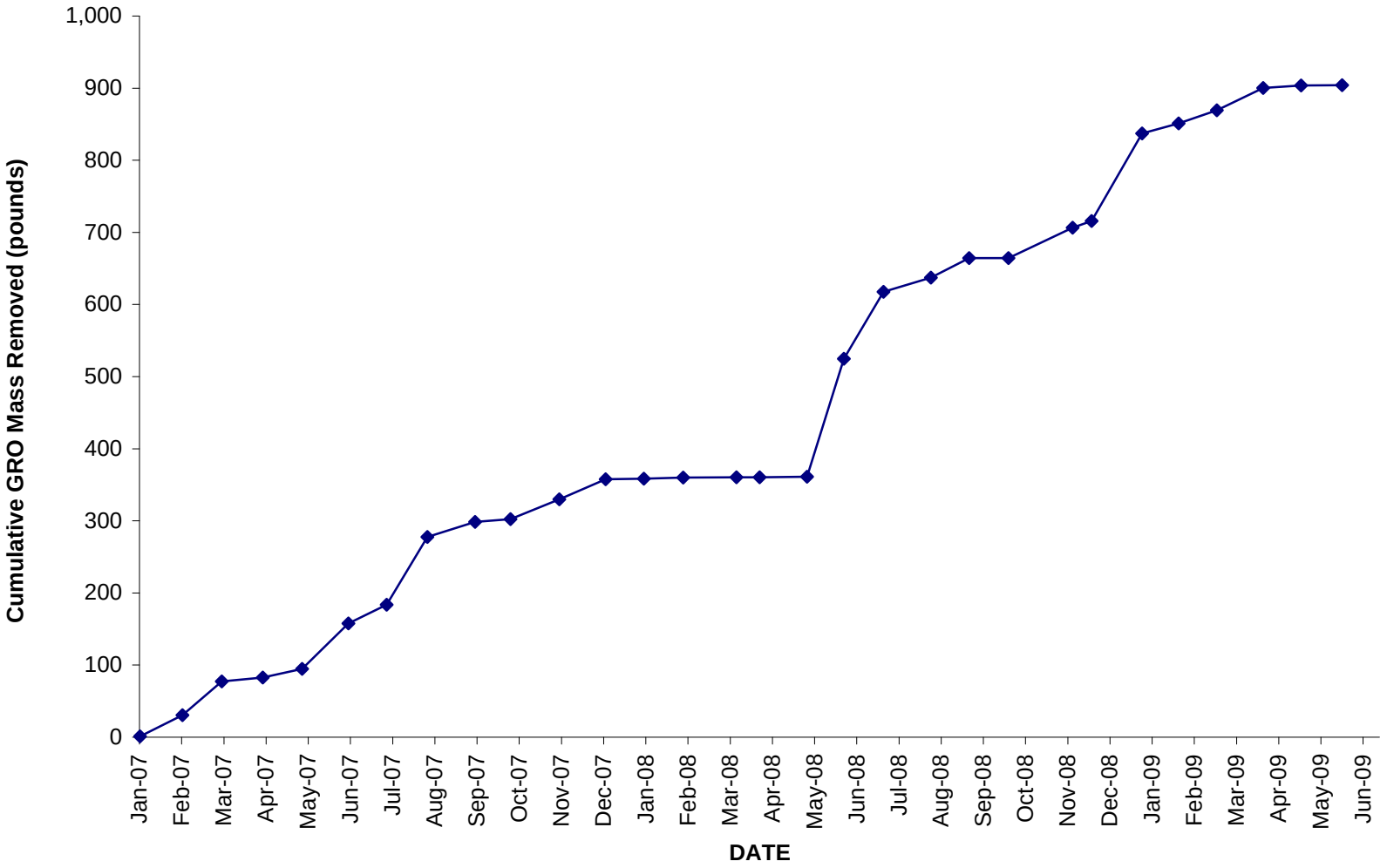


Figure 4
SVE System Cumulative GRO Mass Removed vs. Time
Station #2111, 1156 Davis Street, San Leandro, California



APPENDIX A

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

STRATUS
ENVIRONMENTAL, INC.

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

May 20, 2009

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

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

General Information

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

Sampling Date: May 12, 2009
Unusual Field Conditions: None noted.
Scope of Work Performed: Quarterly monitoring and sampling.
Variations from Work Scope: None noted.

This submittal presents the data collected in association with routine groundwater monitoring. The attachments include field data sheets, non-hazardous waste data form, chain of custody documentation, certified analytical results, and field procedures for groundwater sampling documentation. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.

Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Jay R. Johnson, P.G.
Project Manager

Attachments:

- Field Data Sheets
- Non-Hazardous Waste Data Form
- Chain of Custody Documentation
- Certified Analytical Results
- Field Procedures for Groundwater sampling

CC: Mr. Paul Supple, BP/ARCO

STRATUS ENVIRONMENTAL, INC.

Site Address 1156 Davis St.
City San Leandro, CA
Sampled by: JH
Signature

ORIGINAL

Site Number Acco 2111
Project Number E 2111
Project PM Jay Johnson
DATE 5/12/09

Water Level Data					Purge Volume Calculations					Purge Method				Sample Record			Field Data	
Well ID	Time	top of Screen (feet)	Depth to Water (feet)	Total Depth (feet)	Water column (feet)	Diameter (inches)	Multiplier	3 casing volumes (gallons)	Actual water purged (gallons)	No Purge Sample	Bailer	Pump	other	DTW at sample time (feet)	Sample I.D	Sample Time	DO (mg/L)	
MW-1	1150	12.50	17.05	26.08	—	4	2	—	—	X				17.05	MW-1	1245	.88	
2	1142	12.00	15.30	Pump in Well	—	4	2	—	—	X				15.30	2	1305	.82	
3	1155	12.00	16.30	26.22	—	4	2	—	—	X				16.30	3	1210	1.68	
4	1134	10.00	15.26	21.50	—	4	2	—	—	X				15.26	4	1228	.81	
5	1120	9.50	14.48	23.64	—	2	.5	—	—	X				14.48	5	1430	.41	
7	1138	12.00	15.36	26.28	—	4	2	—	—	X				15.36	7	1340	.72	
MW-8	1146	18.00	15.93	38.88	22.95	2	.5	11.48	11.50		X			15.95	MW-8	1415	.31	.82
MW-6	1129		14.09	20.48	—	2												

Post DO

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

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

CALIBRATION DATE
pH 5/10 109 AM
Conductivity
DO

T:\Forms

SIKAIUS
ENVIRONMENTAL, INC.

Site Address 1156 Davis St.
City San Leandro, CA
Site Sampled by TH

Site Number A110 2111
Project No. E 2111
Project PM Jay Johnson
Date Sampled 5/12/09

Well ID MW-1				1245
purge start time bailer				no odor
	Temp C	pH	cond	gallons
time	21.8	6.88	332	Ø
time				
time				
time				
purge stop time				

Well ID MW-2				1305
purge start time bailer				odor
	Temp C	pH	cond	gallons
time	22.0	6.96	327	Ø
time				
time				
time				
pugre stop time				

Well ID MW-3				1210
purge start time bailer				odor
	Temp C	pH	cond	gallons
time	21.4	6.98	317	Ø
time				
time				
time				
purge stop time				

Well ID MW-4				1228
purge start time bailer				No odor
	Temp C	pH	cond	gallons
time	21.4	6.98	334	Ø
time				
time				
time				
purge stop time				

Well ID MW-5				1430
purge start time bailer				No odor
	Temp C	pH	cond	gallons
time	21.1	6.83	299	Ø
time				
time				
time				
purge stop time				

Well ID MW-7				1340
purge start time bailer				no odor
	Temp C	pH	cond	gallons
time	22.0	7.14	332	Ø
time				
time				
time				
purge stop time				

Well ID MW-8				1415
purge start time bailer				No odor
	Temp C	pH	cond	gallons
time	21.8	6.93	313	Ø
time	21.0	6.88	307	6
time	21.2	6.90	307	11.5
time				
purge stop time				

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

ORIGINAL

WELLHEAD OBSERVATION FORM

Site Name/Number: Arco 2111 *Date:* 5/12/09 *Technician:* A. Hill

STRATUS ENVIRONMENTAL, INC.

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 bolt, concrete needs replacement, weather, explain)
MW-1	X											
2	X											
3	X											
4	X											
5								X-2				
6	X											
7	X											
MW-8	X											

DRUM INVENTORY

Drums on site? (Yes) No (circle)

Type and # Steel: 1 Plastic:

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

1/2 Full liquid

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

1/5/09 Gas/water mix

GENERAL SITE CONDITIONS

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

NO. 672174

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

SITE:

NAME: BP WEST COAST PRODUCTS LLC ARCO # 2416

EPA I.D. NO.: NOT REQUIRED

ADDRESS: P.O. BOX 80249 — 1156 ... S. ...

PROFILE NO.:

CITY, STATE, ZIP: RANCHO SANTA MARGARITA CA 92688 — ... CA

PHONE NO. ( )

CONTAINERS: No. ______ VOLUME: 13 gal WEIGHT ______

TYPE: ☐ TANK TRUCK ☐ DUMP TRUCK ☐ DRUMS ☐ CARTONS ☐ OTHER ______

WASTE DESCRIPTION: NON-HAZARDOUS WATER

GENERATING PROCESS: WELL PURGING/DECON WATER

	COMPONENTS OF WASTE	PPM	%		COMPONENTS OF WASTE	PPM	%
1.	WATER 99-100%			5.			
2.	TPH <1%			6.			
3.				7.	BESI#		
4.				8.			

PROPERTIES: pH 7-10 ☐ SOLID ☐ LIQUID ☐ SLUDGE ☐ SLURRY ☐ OTHER ______

HANDLING INSTRUCTIONS: WEAR ALL APPROPRIATE PROTECTIVE CLOTHING

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

Larry Moothart BESI for BP — TYPED OR PRINTED FULL NAME & SIGNATURE — DATE: 5/13/09

TRANSPORTER

Transporter #1 Transporter #2

NAME: STRATUS ENVIRONMENTAL

EPA I.D. NO.:

ADDRESS: 3330 CAMERON PARK DR

SERVICE ORDER NO.:

CITY, STATE, ZIP: CAMERON PARK, CA 95682

PICK UP DATE:

PHONE NO.: 530-676-2031

TRUCK, UNIT, I.D. NO.:

A. Hill [signature] — TYPED OR PRINTED FULL NAME & SIGNATURE — DATE: 5/13/09

TSD FACILITY

NAME: INSTRAT, INC

EPA I.D. NO.:

DISPOSAL METHOD: ☐ LANDFILL ☐ OTHER ______

ADDRESS: 1105 AIRPORT RD #C

CITY, STATE, ZIP: RIO VISTA, CA 94571

PHONE NO.: 530-753-1829

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE

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

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

Page 1 of 1

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

Lab Name:	Cal Science
Lab Address:	7440 Lincoln Way
Lab PM:	Richard Villafania
Lab Phone:	714-895-5494 / 714-895-7501 (fax)
Lab Shipping Accnt:	
Lab Bottle Order No:	
Other Info:	
BP/ARC EBM:	Paul Supple
EBM Phone:	925-275-3506
EBM Email:	paul.supple@bp.com

BP/ARC Facility Address:	1156 Davis Street
City, State, ZIP Code:	San Leandro, CA
Lead Regulatory Agency:	
California Global ID No.:	T0600101764
Enfos Proposal No:	000TV-0002
Accounting Mode:	Provision X OOC-BU ___ OOC-RM ___
Stage:	Operate Activity: Monitor

Consultant/Contractor:	Stralus Environmental
Consultant/Contractor Project No:	E2111-QM/O&M
Address:	3330 Cameron Park Dr., Cameron Park, CA 95682
Consultant/Contractor PM:	Jay Johnson
Phone:	530-676-6000 / 530-676-6005 (fax)
Email EDD To:	chuff@stratusinc.net
Invoice To:	BP/ARC ___ Contractor ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers: Total Number of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analyses: Grab by 8015(M)	Requested Analyses: BTEX / 6 OXY's	Requested Analyses: EDB / Ethanol	Requested Analyses: 1,2 DCA
	MW-1	2009 5/12	1245		X		6				X		X	X	X	X
	2		1305													
	3		1210													
	4		1228													
	5		1430													
	7		1340													
	MW-8		1415													
	TB-2111-05122009						2									

Report Type & QC Level
Standard ___
Full Data Package ___

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

* by 8260
- 2N Hold

Sampler's Name:	A. Hill
Sampler's Company:	Stratus
Shipment Method:	FED EX Ship Date: 5/12/09
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
	5/12	1700			

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

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ___ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Calscience
Environmental
Laboratories, Inc.

May 29, 2009

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

Subject: **Calscience Work Order No.: 09-05-1405**
Client Reference: ARCO 2111

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/15/2009 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/15/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1405
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-05-1405-1-E**	**05/12/09 12:45**	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09 07:15**	**090523B03**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-05-1405-2-E**	**05/12/09 13:05**	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09 07:48**	**090523B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	390	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	100	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-05-1405-3-E**	**05/12/09 12:10**	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09 08:21**	**090523B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	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
MW-4	**09-05-1405-4-E**	**05/12/09 12:28**	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09 08:54**	**090523B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	102	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	05/15/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-1405
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	**09-05-1405-5-E**	**05/12/09 14:30**	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09 09:59**	**090523B03**

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
MW-7	**09-05-1405-6-E**	**05/12/09 13:40**	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09 10:32**	**090523B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	110	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	105	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**09-05-1405-7-E**	**05/12/09 14:15**	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09 11:05**	**090523B03**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	85	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-549**	**N/A**	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09 00:09**	**090523B03**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/15/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1405
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-05-1405-1-A**	**05/12/09 12:45**	**Aqueous**	**GC/MS BB**	**05/20/09**	**05/21/09 06:00**	**090520L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	9.3	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	105	73-145			Dibromofluoromethane	113	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	92	74-110		

MW-2	**09-05-1405-2-A**	**05/12/09 13:05**	**Aqueous**	**GC/MS BB**	**05/20/09**	**05/21/09 06:32**	**090520L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.3	0.50	1		Methyl-t-Butyl Ether (MTBE)	25	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	590	100	10	
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)	0.82	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	100	73-145			Dibromofluoromethane	112	81-135		
Toluene-d8	99	83-119			1,4-Bromofluorobenzene	96	74-110		

MW-3	**09-05-1405-3-A**	**05/12/09 12:10**	**Aqueous**	**GC/MS BB**	**05/20/09**	**05/21/09 03:52**	**090520L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	2.1	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	73-145			Dibromofluoromethane	114	81-135		
Toluene-d8	99	83-119			1,4-Bromofluorobenzene	98	74-110		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/15/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1405
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-05-1405-4-A**	**05/12/09 12:28**	**Aqueous**	**GC/MS BB**	**05/20/09**	**05/21/09 07:04**	**090520L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.62	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	73-145			Dibromofluoromethane	113	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	78	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	**09-05-1405-5-A**	**05/12/09 14:30**	**Aqueous**	**GC/MS BB**	**05/20/09**	**05/21/09 07:36**	**090520L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	2.5	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	29	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	105	73-145			Dibromofluoromethane	115	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	86	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**09-05-1405-6-A**	**05/12/09 13:40**	**Aqueous**	**GC/MS BB**	**05/20/09**	**05/21/09 08:07**	**090520L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	2.0	0.50	1		Methyl-t-Butyl Ether (MTBE)	390	10	20	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	75	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)	1.2	0.50	1	
Xylenes (total)	2.9	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	108	73-145			Dibromofluoromethane	114	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	97	74-110		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	05/15/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-1405
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111		Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**09-05-1405-7-A**	**05/12/09 14:15**	**Aqueous**	**GC/MS BB**	**05/20/09**	**05/21/09 08:39**	**090520L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	30	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	18	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	109	73-145			Dibromofluoromethane	116	81-135		
Toluene-d8	100	83-119			1,4-Bromofluorobenzene	92	74-110		

Method Blank	099-12-703-889	N/A	Aqueous	GC/MS BB	05/20/09	05/21/09 03:20	090520L02

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	108	73-145			Dibromofluoromethane	111	81-135		
Toluene-d8	99	83-119			1,4-Bromofluorobenzene	97	74-110		

Method Blank	099-12-703-890	N/A	Aqueous	GC/MS BB	05/21/09	05/21/09 13:36	090521L01

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	104	73-145			Dibromofluoromethane	111	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	97	74-110		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/15/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1405
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-891**	**N/A**	**Aqueous**	**GC/MS BB**	**05/22/09**	**05/22/09 16:36**	**090522L01**

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	103	73-145			Dibromofluoromethane	102	81-135		
Toluene-d8	100	83-119			1,4-Bromofluorobenzene	78	74-110		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 05/15/09
3330 Cameron Park Drive, Suite 550	Work Order No: 09-05-1405
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8015B (M)

Project ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-1278-6	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09**	**090523S03**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	110	97	38-134	6	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: 05/15/09
Work Order No: 09-05-1405
Preparation: EPA 5030B
Method: EPA 8260B

Project ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-3	**Aqueous**	**GC/MS BB**	**05/20/09**	**05/20/09**	**090520S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	106	106	86-122	0	0-8	
Carbon Tetrachloride	111	110	78-138	1	0-9	
Chlorobenzene	105	105	90-120	0	0-9	
1,2-Dibromoethane	106	106	70-130	0	0-30	
1,2-Dichlorobenzene	105	104	89-119	1	0-10	
1,1-Dichloroethene	85	79	52-142	8	0-23	
Ethylbenzene	96	95	70-130	1	0-30	
Toluene	102	101	85-127	2	0-12	
Trichloroethene	105	103	78-126	2	0-10	
Vinyl Chloride	99	97	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	83	85	64-136	2	0-28	
Tert-Butyl Alcohol (TBA)	101	92	27-183	9	0-60	
Diisopropyl Ether (DIPE)	102	104	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	105	106	67-133	0	0-21	
Tert-Amyl-Methyl Ether (TAME)	102	100	63-141	1	0-21	
Ethanol	98	95	11-167	3	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	05/15/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1405
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-1278-17	**Aqueous**	**GC/MS BB**	**05/21/09**	**05/21/09**	**090521S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	116	114	86-122	1	0-8	
Carbon Tetrachloride	120	122	78-138	2	0-9	
Chlorobenzene	111	110	90-120	1	0-9	
1,2-Dibromoethane	110	114	70-130	4	0-30	
1,2-Dichlorobenzene	108	113	89-119	5	0-10	
1,1-Dichloroethene	96	79	52-142	19	0-23	
Ethylbenzene	102	98	70-130	5	0-30	
Toluene	109	106	85-127	3	0-12	
Trichloroethene	112	109	78-126	2	0-10	
Vinyl Chloride	88	91	56-140	3	0-21	
Methyl-t-Butyl Ether (MTBE)	111	119	64-136	7	0-28	
Tert-Butyl Alcohol (TBA)	106	102	27-183	4	0-60	
Diisopropyl Ether (DIPE)	113	120	78-126	6	0-16	
Ethyl-t-Butyl Ether (ETBE)	113	119	67-133	5	0-21	
Tert-Amyl-Methyl Ether (TAME)	108	110	63-141	2	0-21	
Ethanol	111	105	11-167	5	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 05/15/09
3330 Cameron Park Drive, Suite 550	Work Order No: 09-05-1405
Cameron Park, CA 95682-8861	Preparation: EPA 5030B
	Method: EPA 8260B

Project ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-1278-4	**Aqueous**	**GC/MS BB**	**05/22/09**	**05/22/09**	**090522S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	90	89	86-122	0	0-8	
Carbon Tetrachloride	101	101	78-138	1	0-9	
Chlorobenzene	100	99	90-120	1	0-9	
1,2-Dibromoethane	100	101	70-130	1	0-30	
1,2-Dichlorobenzene	100	103	89-119	2	0-10	
1,1-Dichloroethene	104	106	52-142	2	0-23	
Ethylbenzene	103	104	70-130	0	0-30	
Toluene	102	102	85-127	0	0-12	
Trichloroethene	98	98	78-126	0	0-10	
Vinyl Chloride	77	74	56-140	4	0-21	
Methyl-t-Butyl Ether (MTBE)	99	103	64-136	3	0-28	
Tert-Butyl Alcohol (TBA)	94	96	27-183	2	0-60	
Diisopropyl Ether (DIPE)	101	104	78-126	3	0-16	
Ethyl-t-Butyl Ether (ETBE)	99	103	67-133	4	0-21	
Tert-Amyl-Methyl Ether (TAME)	96	100	63-141	5	0-21	
Ethanol	93	93	11-167	0	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1405
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
099-12-695-549	**Aqueous**	**GC 4**	**05/23/09**	**05/25/09**	**090523B03**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	109	112	78-120	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received: N/A
3330 Cameron Park Drive, Suite 550	Work Order No: 09-05-1405
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
099-12-703-889	Aqueous	GC/MS BB	05/20/09	05/21/09	090520L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	108	108	87-117	82-122	1	0-7	
Carbon Tetrachloride	114	114	78-132	69-141	0	0-8	
Chlorobenzene	103	103	88-118	83-123	0	0-8	
1,2-Dibromoethane	106	109	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	104	106	88-118	83-123	2	0-8	
1,1-Dichloroethene	106	107	71-131	61-141	1	0-14	
Ethylbenzene	99	98	80-120	73-127	1	0-20	
Toluene	104	104	85-127	78-134	1	0-7	
Trichloroethene	133	125	85-121	79-127	6	0-11	LQ
Vinyl Chloride	111	107	64-136	52-148	4	0-10	
Methyl-t-Butyl Ether (MTBE)	110	116	67-133	56-144	5	0-16	
Tert-Butyl Alcohol (TBA)	98	93	34-154	14-174	5	0-19	
Diisopropyl Ether (DIPE)	112	113	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	112	116	73-127	64-136	3	0-11	
Tert-Amyl-Methyl Ether (TAME)	106	110	69-135	58-146	3	0-12	
Ethanol	109	95	34-124	19-139	14	0-44	

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

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 09-05-1405
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-890	Aqueous	GC/MS BB	05/21/09	05/21/09	090521L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	110	109	87-117	82-122	0	0-7	
Carbon Tetrachloride	114	114	78-132	69-141	1	0-8	
Chlorobenzene	106	105	88-118	83-123	0	0-8	
1,2-Dibromoethane	107	112	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	103	106	88-118	83-123	3	0-8	
1,1-Dichloroethene	107	104	71-131	61-141	3	0-14	
Ethylbenzene	102	101	80-120	73-127	1	0-20	
Toluene	106	106	85-127	78-134	1	0-7	
Trichloroethene	110	111	85-121	79-127	1	0-11	
Vinyl Chloride	94	95	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	107	113	67-133	56-144	5	0-16	
Tert-Butyl Alcohol (TBA)	101	98	34-154	14-174	3	0-19	
Diisopropyl Ether (DIPE)	113	113	80-122	73-129	0	0-8	
Ethyl-t-Butyl Ether (ETBE)	111	114	73-127	64-136	3	0-11	
Tert-Amyl-Methyl Ether (TAME)	105	109	69-135	58-146	4	0-12	
Ethanol	112	104	34-124	19-139	7	0-44	

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

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-1405
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
099-12-703-891	Aqueous	GC/MS BB	05/22/09	05/22/09	090522L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	104	107	87-117	82-122	3	0-7	
Carbon Tetrachloride	105	110	78-132	69-141	4	0-8	
Chlorobenzene	106	105	88-118	83-123	1	0-8	
1,2-Dibromoethane	108	107	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	109	107	88-118	83-123	2	0-8	
1,1-Dichloroethene	114	115	71-131	61-141	1	0-14	
Ethylbenzene	107	107	80-120	73-127	0	0-20	
Toluene	105	108	85-127	78-134	3	0-7	
Trichloroethene	114	115	85-121	79-127	1	0-11	
Vinyl Chloride	87	87	64-136	52-148	0	0-10	
Methyl-t-Butyl Ether (MTBE)	113	114	67-133	56-144	0	0-16	
Tert-Butyl Alcohol (TBA)	103	106	34-154	14-174	3	0-19	
Diisopropyl Ether (DIPE)	110	112	80-122	73-129	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	112	113	73-127	64-136	1	0-11	
Tert-Amyl-Methyl Ether (TAME)	107	109	69-135	58-146	1	0-12	
Ethanol	105	107	34-124	19-139	2	0-44	

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

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-05-1405

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
AZ	Surrogate recovery outside of acceptance limits due to matrix interference.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = 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.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	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,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.

Work Order Number: 09-05-1405

Qualifier	Definition
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
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.
SG	A silica gel cleanup procedure was performed.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: ARCO 2111

BP/ARC Facility No: 2111

Req Due Date (mm/dd/yy): STD TAT   Rush TAT: Yes ___ No X

Lab Work Order Number: 09-05-1405

Lab Name: Cal Science	BP/ARC Facility Address: 1156 Davis Street	Consultant/Contractor: Stratus Environmental
Lab Address: 7440 Lincoln Way	City, State, ZIP Code: San Leandro, CA	Consultant/Contractor Project No: E2111-QM/O&M
Lab PM: Richard Villafania	Lead Regulatory Agency:	Address: 3330 Cameron Park Dr., Cameron Park, CA 95682
Lab Phone: 714-895-5494 / 714-895-7501 (fax)	California Global ID No.: T0600101764	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt:	Enfos Proposal No: 000TV-0002	Phone: 530-676-6000 / 530-676-6005 (fax)
Lab Bottle Order No:	Accounting Mode: Provision X OOC-BU ___ OOC-RM ___	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: Operate Activity: Monitor	Invoice To: BP/ARC ___ Contractor ___
BP/ARC EBM: Paul Supple		
EBM Phone: 925-275-3506		
EBM Email: paul.supple@bp.com		

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

Lab No.	Sample Description	Date (2009)	Time	Soil / Solid	Water / Liquid	Air / Vapor		Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Gro by 8015(M)	BTEX / 5 OXY's*	EDB / Ethanol*	1,2 DCA*	Comments
1	MW-1	5/12	1245		X			6				X			X	X	X	X	* by 8260
2	MW-2	5/12	1305		X			6				X			X	X	X	X	
3	MW-3	5/12	1210		X			6				X			X	X	X	X	
4	MW-4	5/12	1228		X			6				X			X	X	X	X	
5	MW-5	5/12	1430		X			6				X			X	X	X	X	
6	MW-7	5/12	1340		X			6				X			X	X	X	X	
7	MW-8	5/12	1415		X			6				X			X	X	X	X	
8	TB-2111-05122009							2											ON Hold

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

Sampler's Name: A. Hill

Sampler's Company: Stratus

Shipment Method: GSO   Ship Date: 5/12/09

Shipment Tracking No: 89255562236

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature]	5/12	1700			
			[signature]	5/15/09	0930

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

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-05-1 4 0 5

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 05/15/09

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:** NC

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

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

Water: ☐VOA ☑VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB ☐100PB**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ **Checked/Labeled by:** NC

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** SP

Preservative: h: HCL n: HNO3 na$_2$:$Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** NC

ATTACHMENT

FIELD PROCEDURES FOR GROUNDWATER SAMPLING

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

Groundwater and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

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

Subjective Analysis of Groundwater

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

Monitoring Well Sampling

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

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

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These

bottles will be filled completely to prevent air accumulation in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Groundwater Sample Labeling and Preservation

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

Sample Identification and Chain-of-Custody Procedures

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

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

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

Equipment Cleaning

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

APPENDIX B

GEOTRACKER UPLOAD CONFIRMATION RECEIPTS

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:	**2Q09 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:	**7/9/2009 3:27:03 PM**
Confirmation Number:	**8327142179**

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:	**2Q09 GW Monitoring**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09051405.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/9/2009 3:28:16 PM**
Confirmation Number:	**3545189976**

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 0409**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09040466.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/9/2009 3:29:44 PM**
Confirmation Number:	**5467797398**

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 0509**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09050228.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/9/2009 3:30:15 PM**
Confirmation Number:	**3573580086**

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 0609**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09060348.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**7/9/2009 3:30:54 PM**
Confirmation Number:	**9300314664**

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

May 6, 2009

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

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

General Information

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

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

On-Site Supplier Representative: Chris Hill

Number of Site Visits: 4 (April 6, 14, 21, and 29, 2009)

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

Operational Status: Continuous operation (except the submersible pump at well MW-2). Per Broadbent's request, groundwater extraction using well MW-2 was temporarily discontinued on February 18, 2009.

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 April 6, 2009.

Variations from Scope of Work: The remediation systems were found non-functioning on April 6, 2009, 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 April 6, 2009 and shutdown after sampling, pending receipt and verification of analytical results. The submersible pump at well MW-2 was momentarily re-started on April 6, 2009 and shutdown after collecting influent water samples from well MW-2. Upon receipt of analytical results and compliance verification, the remediation systems (except the submersible pump at well MW-2) were re-started on April 14, 2009.

The attachments include field data sheets, chain of custody documentation, and certified analytical results. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.

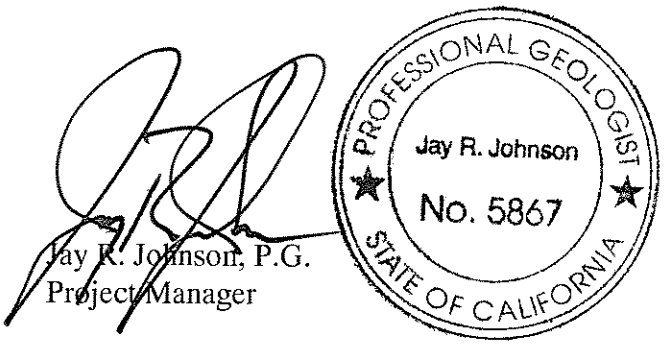
Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Kiran Nagaraju
Project Engineer

Jay R. Johnson, P.G.
Project Manager



Attachments:

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

cc: Paul Supple, BP/ARCO

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

ORIGINAL

Date: 4609
Onsite Time: 0640
Offsite Time: 0815
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 48

System Information

System Status Upon Arrival: Operational ☐ Non-Operational ☒ High H2O
System Status Upon Departure: Operational ☐ Non-Operational ☒ Wait for LABS
Electric Meter Reading: NM
Hour Meter Reading: 3617
Totalizer Reading Prior to Air Stripper: 504203
PID Calibration Date: 4609
Totalizer Reading After Air Stripper: 561630

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		1660	3860		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	20"Hg	.20	NA	NA	
Temperature, deg F		130	130		
PID Readings, ppmv	50	0	23	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	0					
MW-3	100	16					
MW-7	100	15					

Signature: [signature]
Date: 4609

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	4609 0746	02111AGAC1	4609 0737
02111ASAEFF	1 0743	02111AEFF	0734
02111ASYSINF	1 0740		
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: 4609

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

ORIGINAL

Date: 4 6 09
Onsite Time: 0641
Offsite Time: 0815

Technician: CH/LC
Weather Conditions: Clear
Ambient Temperature 48

System Status Upon Arrival: [x] Operational [x] Non-operational High H2O
System Status At Departure: [ ] Operational [x] Non-operational Wait For LAB
Transfer Pump: [ ] Operational [ ] Non-operational

Transfer Pump Hour Meter Reading: —

Effluent Flow Totalizer Reading: 1503553

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.1
Temperature: 14.5°C

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

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	4609 0719	02111MW2WINF	4604 0724
02111ASWINF	0714		
02111ASWEFF	0709		
02111WGAC1	0707		
02111WEFF	0705		
TB2111 4609	0727		

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

Notes: Run MW-2 while onsite Then Turn off

Signature: [signature] Date: 4604

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

ORIGINAL

Date: 4 14 09
Onsite Time: 0805
Offsite Time: 0710
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: clear
Ambient Temperature: 45

System Information

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

Electric Meter Reading: NM
Hour Meter Reading: 3615
Totalizer Reading Prior to Air Stripper: 504555
PID Calibration Date: 41309
Totalizer Reading After Air Stripper: 156940

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		24"			
Air Velocity, FPM		1560	3050		
Pipe Diameter, inches		4	4	3	
Air Flow Rate, cfm					
Applied Vacuum, "wc	20" Hg	.22"	NA	NA	
Temperature, deg F		125	90		
PID Readings, ppmv	20	0	10	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: 4 14 09

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

ORIGINAL

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

Operation & Maintenance Notes

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

Signature: _____ Date: 4/4/09

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

ORIGINAL

Date: 4 14 09
Onsite Time: 0605
Offsite Time: 0710

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 48

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1504091

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					
		409004			

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: 41409

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

ORIGINAL

Date: 4 21 09
Onsite Time: 0930
Offsite Time: 1028
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: clear
Ambient Temperature: 70

System Information

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

Electric Meter Reading:
Hour Meter Reading: 3620
Totalizer Reading Prior to Air Stripper: 505053
PID Calibration Date: 42009
Totalizer Reading After Air Stripper: 562360

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		1480	3057		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	20" HG	.24	NA	NA	
Temperature, deg F			110		
PID Readings, ppmv	21	0	11	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	15					
MW6	0						

Signature:
Date: 4 21 09

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

ORIGINAL

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

Operation & Maintenance Notes

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

Signature: _____ Date: 4 2 09

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

ORIGINAL

Date: 42609
Onsite Time: 0930
Offsite Time: 1028

Technician: CHILL
Weather Conditions: CLEAR
Ambient Temperature 70

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1506412

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 8

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		409004			

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: 42109

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

ORIGINAL

Date: 42909
Onsite Time: 1015
Offsite Time: 1055
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: CLR
Ambient Temperature: 53

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: 3621
Totalizer Reading Prior to Air Stripper: 505369 PID Calibration Date: 42709
Totalizer Reading After Air Stripper: 1562610

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		1390	3061		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	20"Hg	.35	NA	NA	
Temperature, deg F			90		
PID Readings, ppmv	20	0	12	0	PID for GAC-1: 0

Other Readings/Measurements

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

Signature: [signature]
Date: 42909

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: 4 2 90 9

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

ORIGINAL

Date: 4/29/09
Onsite Time: 1015
Offsite Time: 1055

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 59

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: 15068541

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 6

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		409004			

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: 42909

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

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

Lab Name: Calscience Environmental Laboratories, Inc.	BP/ARC Facility Address: 1156 Davis Street	Consultant/Contractor: Stratus Environmental, Inc.
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: San Leandro, California	Consultant/Contractor Project No: E2111-03
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda County Environmental Health	Address: 3330 Cameron Park Dr., Suite 550, Cameron Park, CA 95682
Lab Phone: 714-895-5494	California Global ID No.: T0600101764	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt: 9255	Enfos Proposal No: 000TV-0002	Phone: 530-676-6000
Lab Bottle Order No:	Accounting Mode: Provision x OOC-BU ___ OOC-RM ___	Email EDO To: chuff@stratusinc.net
Other Info:	Stage: Operate Activity: O&M	Invoice To: BP/ARC x Contractor ___
BP/ARC EBM: Paul Supple		
EBM Phone: 925-275-3801		
EBM Email: paul.supple@bp.com		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	____	Requested Analyses: GRO	BTEX	MTBE	5-oxys	____	____	Turnaround Time: 24-hours	Standard	____	____	Report Type & QC Level
1	02111DPEAINF	4/6/09	0746			x	2	x						x	x	x					x			5-oxys include MTBE, TBA, TAME,
2	02111ASAEFF		0743			x	2	x						x	x	x					x			DIPE, & ETBE. 24-hr TAT only for
3	02111ASYSINF		0740			x	2	x						x	x	x					x			GRO, BTEX, & 5-oxys.
4	02111AGAC1		0737			x	2	x						x	x	x					x			
5	02111AEFF		0734			x	2	x						x	x	x					x			
6	02111DPEWINF		0719		x		6				x			x	x		x				x			
7	02111ASWINF		0714		x		6				x			x	x		x				x			
8	02111ASWEFF		0709		x		6				x			x	x		x				x			
9	02111WGAC1		0707		x		6				x			x	x		x				x			
10	02111WEFF		0704		x		6				x			x	x		x				x			
11	02111MW2WINF		0724		x		6				x			x	x		x				x			
12	TB2111 4/6/09	4/6/09	0727		x		2																	Hold

Sampler's Name: Chris Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Stratus Environmental, Inc.	[signature] Stratus	4/6/09	1600			
Shipment Method: GSO Ship Date: 4/6/09						
Shipment Tracking No:						

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

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Calscience
Environmental
Laboratories, Inc.

April 16, 2009

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

Subject: **Calscience Work Order No.:** **09-04-0466**
Client Reference: **ARCO 2111 - O&M**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 4/7/2009 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 04/07/09
Work Order No: 09-04-0466
Preparation: N/A
Method: EPA TO-15
Units: mg/m3

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-04-0466-1-B**	**04/06/09 07:46**	**Air**	**GC/MS II**	**N/A**	**04/07/09 15:52**	**090407L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.39	0.032	20		Xylenes (total)	15	0.87	20	
Toluene	8.9	0.19	100		Methyl-t-Butyl Ether (MTBE)	2.1	0.14	20	
Ethylbenzene	2.8	0.043	20						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	106	57-129			1,2-Dichloroethane-d4	106	47-137		
Toluene-d8	101	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-04-0466-2-A**	**04/06/09 07:43**	**Air**	**GC/MS II**	**N/A**	**04/07/09 15:08**	**090407L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.0096	0.0016	1		Xylenes (total)	0.062	0.0087	1	
Toluene	0.041	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.11	0.0072	1	
Ethylbenzene	0.014	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	103	57-129			1,2-Dichloroethane-d4	104	47-137		
Toluene-d8	96	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-04-0466-3-A**	**04/06/09 07:40**	**Air**	**GC/MS II**	**N/A**	**04/07/09 16:38**	**090407L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.16	0.013	8		Xylenes (total)	5.4	0.22	8	
Toluene	3.6	0.047	25		Methyl-t-Butyl Ether (MTBE)	0.84	0.058	8	
Ethylbenzene	1.0	0.017	8						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	109	57-129			1,2-Dichloroethane-d4	103	47-137		
Toluene-d8	97	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-04-0466-4-A**	**04/06/09 07:37**	**Air**	**GC/MS II**	**N/A**	**04/07/09 17:25**	**090407L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	0.017	0.0087	1	
Toluene	0.012	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	0.0032	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	101	57-129			1,2-Dichloroethane-d4	101	47-137		
Toluene-d8	94	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: 04/07/09
Work Order No: 09-04-0466
Preparation: N/A
Method: EPA TO-15
Units: mg/m3

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-04-0466-5-A**	**04/06/09 07:34**	**Air**	**GC/MS II**	**N/A**	**04/07/09 13:37**	**090407L01**

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	104	57-129			1,2-Dichloroethane-d4	103	47-137		
Toluene-d8	94	78-156							

Method Blank	097-09-002-8,401	N/A	Air	GC/MS II	N/A	04/07/09 12:50	090407L01

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	100	57-129			1,2-Dichloroethane-d4	102	47-137		
Toluene-d8	93	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: 04/07/09
Work Order No: 09-04-0466
Preparation: N/A
Method: EPA TO-3M

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-04-0466-1-A**	**04/06/09 07:46**	**Air**	**GC 38**	**N/A**	**04/07/09 11:42**	**090407L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	280	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-04-0466-2-A**	**04/06/09 07:43**	**Air**	**GC 38**	**N/A**	**04/07/09 10:25**	**090407L01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-04-0466-3-A**	**04/06/09 07:40**	**Air**	**GC 38**	**N/A**	**04/07/09 13:01**	**090407L01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-04-0466-4-A**	**04/06/09 07:37**	**Air**	**GC 38**	**N/A**	**04/07/09 13:39**	**090407L01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-04-0466-5-A**	**04/06/09 07:34**	**Air**	**GC 38**	**N/A**	**04/07/09 11:02**	**090407L01**

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	**099-12-693-147**	**N/A**	**Air**	**GC 38**	**N/A**	**04/07/09 08:40**	**090407L01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 04/07/09
Work Order No: 09-04-0466
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-04-0466-6-A**	**04/06/09 07:19**	**Aqueous**	**GC 4**	**04/07/09**	**04/07/09 16:04**	**090407B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	340	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	110	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-04-0466-7-A**	**04/06/09 07:14**	**Aqueous**	**GC 4**	**04/07/09**	**04/07/09 16:37**	**090407B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	180	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	111	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-04-0466-8-A**	**04/06/09 07:09**	**Aqueous**	**GC 4**	**04/07/09**	**04/07/09 17:10**	**090407B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	102	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-04-0466-9-A**	**04/06/09 07:07**	**Aqueous**	**GC 4**	**04/07/09**	**04/07/09 17:43**	**090407B01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 04/07/09
Work Order No: 09-04-0466
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-04-0466-10-A**	**04/06/09 07:05**	**Aqueous**	**GC 4**	**04/07/09**	**04/07/09 13:36**	**090407B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	102	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-04-0466-11-A**	**04/06/09 07:24**	**Aqueous**	**GC 4**	**04/07/09**	**04/07/09 18:16**	**090407B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	340	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	104	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-500**	**N/A**	**Aqueous**	**GC 4**	**04/07/09**	**04/07/09 11:57**	**090407B01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 04/07/09
Work Order No: 09-04-0466
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-04-0466-6-D**	**04/06/09 07:19**	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09 17:52**	**090407L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	1.2	0.50	1		Tert-Butyl Alcohol (TBA)	450	40	4	
Ethylbenzene	13	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	38	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	85	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	56	2.0	4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	99	73-145		Dibromofluoromethane	107	81-135	
Toluene-d8	99	83-119		1,4-Bromofluorobenzene	99	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-04-0466-7-D**	**04/06/09 07:14**	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09 18:21**	**090407L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.51	0.50	1		Tert-Butyl Alcohol (TBA)	170	10	1	
Ethylbenzene	2.3	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	11	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	13	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	19	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	100	73-145		Dibromofluoromethane	106	81-135	
Toluene-d8	94	83-119		1,4-Bromofluorobenzene	97	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-04-0466-8-D**	**04/06/09 07:09**	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09 18:51**	**090407L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	23	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	1.9	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	102	73-145		Dibromofluoromethane	107	81-135	
Toluene-d8	91	83-119		1,4-Bromofluorobenzene	98	74-110	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 04/07/09
Work Order No: 09-04-0466
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-04-0466-9-D**	**04/06/09 07:07**	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09 19:20**	**090407L01**

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	73-145		Dibromofluoromethane	110	81-135	
Toluene-d8	93	83-119		1,4-Bromofluorobenzene	98	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-04-0466-10-D**	**04/06/09 07:05**	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09 13:28**	**090407L01**

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	73-145		Dibromofluoromethane	104	81-135	
Toluene-d8	100	83-119		1,4-Bromofluorobenzene	98	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-04-0466-11-D**	**04/06/09 07:24**	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09 19:50**	**090407L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	6.0	1.0	2		Tert-Butyl Alcohol (TBA)	580	50	5	
Ethylbenzene	3.5	1.0	2		Diisopropyl Ether (DIPE)	ND	1.0	2	
Toluene	ND	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	1.0	2	
Xylenes (total)	ND	1.0	2		Tert-Amyl-Methyl Ether (TAME)	ND	1.0	2	
Methyl-t-Butyl Ether (MTBE)	32	1.0	2						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	116	73-145		Dibromofluoromethane	115	81-135	
Toluene-d8	91	83-119		1,4-Bromofluorobenzene	100	74-110	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 04/07/09
Work Order No: 09-04-0466
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-821**	**N/A**	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09 12:29**	**090407L01**

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	73-145		Dibromofluoromethane	102	81-135	
Toluene-d8	99	83-119		1,4-Bromofluorobenzene	97	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-823**	**N/A**	**Aqueous**	**GC/MS BB**	**04/08/09**	**04/08/09 12:13**	**090408L01**

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

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	102	73-145		Dibromofluoromethane	102	81-135	
Toluene-d8	99	83-119		1,4-Bromofluorobenzene	99	74-110	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

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

Date Received: 04/07/09
Work Order No: 09-04-0466
Preparation: N/A
Method: EPA TO-3M

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
02111DPEAINF	**Air**	**GC 38**	**N/A**	**04/07/09**	**090407D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	280	260	5	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	04/07/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-04-0466
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02111WEFF	**Aqueous**	**GC 4**	**04/07/09**	**04/07/09**	**090407S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	93	94	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:	04/07/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-04-0466
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02111WEFF	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09**	**090407S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	99	86-122	2	0-8	
Carbon Tetrachloride	100	102	78-138	2	0-9	
Chlorobenzene	99	99	90-120	0	0-9	
1,2-Dibromoethane	90	91	70-130	1	0-30	
1,2-Dichlorobenzene	97	98	89-119	1	0-10	
1,1-Dichloroethene	96	97	52-142	2	0-23	
Ethylbenzene	98	98	70-130	0	0-30	
Toluene	92	94	85-127	1	0-12	
Trichloroethene	96	97	78-126	1	0-10	
Vinyl Chloride	93	94	56-140	0	0-21	
Methyl-t-Butyl Ether (MTBE)	89	92	64-136	3	0-28	
Tert-Butyl Alcohol (TBA)	100	110	27-183	9	0-60	
Diisopropyl Ether (DIPE)	92	93	78-126	1	0-16	
Ethyl-t-Butyl Ether (ETBE)	89	90	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	87	88	63-141	1	0-21	
Ethanol	117	120	11-167	3	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	04/07/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-04-0466
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-04-0606-6	**Aqueous**	**GC/MS BB**	**04/08/09**	**04/08/09**	**090408S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	103	86-122	2	0-8	
Carbon Tetrachloride	104	105	78-138	1	0-9	
Chlorobenzene	105	105	90-120	0	0-9	
1,2-Dibromoethane	95	97	70-130	1	0-30	
1,2-Dichlorobenzene	102	102	89-119	0	0-10	
1,1-Dichloroethene	99	100	52-142	0	0-23	
Ethylbenzene	102	102	70-130	0	0-30	
Toluene	103	103	85-127	0	0-12	
Trichloroethene	101	101	78-126	0	0-10	
Vinyl Chloride	99	101	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	94	98	64-136	4	0-28	
Tert-Butyl Alcohol (TBA)	102	101	27-183	1	0-60	
Diisopropyl Ether (DIPE)	97	99	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	92	94	67-133	2	0-21	
Tert-Amyl-Methyl Ether (TAME)	90	91	63-141	1	0-21	
Ethanol	107	116	11-167	8	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-04-0466
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,401	**Air**	**GC/MS II**	**N/A**	**04/07/09**	**090407L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	109	104	60-156	4	0-40	
Toluene	115	108	56-146	6	0-43	
Ethylbenzene	118	110	52-154	8	0-38	
p/m-Xylene	122	114	42-156	7	0-41	
o-Xylene	120	110	52-148	9	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-04-0466
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-500	Aqueous	GC 4	04/07/09	04/07/09	090407B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	97	95	78-120	1	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 09-04-0466
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-821	**Aqueous**	**GC/MS BB**	**04/07/09**	**04/07/09**	**090407L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	97	97	87-117	82-122	0	0-7	
Carbon Tetrachloride	102	97	78-132	69-141	4	0-8	
Chlorobenzene	98	96	88-118	83-123	2	0-8	
1,2-Dibromoethane	90	92	80-120	73-127	2	0-20	
1,2-Dichlorobenzene	97	99	88-118	83-123	2	0-8	
1,1-Dichloroethene	97	94	71-131	61-141	4	0-14	
Ethylbenzene	98	95	80-120	73-127	3	0-20	
Toluene	98	92	85-127	78-134	7	0-7	
Trichloroethene	97	97	85-121	79-127	0	0-11	
Vinyl Chloride	96	93	64-136	52-148	3	0-10	
Methyl-t-Butyl Ether (MTBE)	88	90	67-133	56-144	3	0-16	
Tert-Butyl Alcohol (TBA)	98	94	34-154	14-174	3	0-19	
Diisopropyl Ether (DIPE)	91	90	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	88	89	73-127	64-136	1	0-11	
Tert-Amyl-Methyl Ether (TAME)	84	87	69-135	58-146	4	0-12	
Ethanol	114	102	34-124	19-139	11	0-44	

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

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

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

Date Received: N/A
Work Order No: 09-04-0466
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-823	Aqueous	GC/MS BB	04/08/09	04/08/09	090408L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	100	101	87-117	82-122	2	0-7	
Carbon Tetrachloride	102	102	78-132	69-141	1	0-8	
Chlorobenzene	99	100	88-118	83-123	1	0-8	
1,2-Dibromoethane	94	95	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	98	99	88-118	83-123	1	0-8	
1,1-Dichloroethene	99	99	71-131	61-141	0	0-14	
Ethylbenzene	95	99	80-120	73-127	3	0-20	
Toluene	99	101	85-127	78-134	1	0-7	
Trichloroethene	100	101	85-121	79-127	0	0-11	
Vinyl Chloride	99	103	64-136	52-148	4	0-10	
Methyl-t-Butyl Ether (MTBE)	93	96	67-133	56-144	3	0-16	
Tert-Butyl Alcohol (TBA)	102	98	34-154	14-174	3	0-19	
Diisopropyl Ether (DIPE)	95	96	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	91	93	73-127	64-136	2	0-11	
Tert-Amyl-Methyl Ether (TAME)	88	91	69-135	58-146	3	0-12	
Ethanol	112	104	34-124	19-139	7	0-44	

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

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-04-0466

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
AZ	Surrogate recovery outside of acceptance limits due to matrix interference.
BA, AY	BA = Relative percent difference out of control. AY = 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.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	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, AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH, AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM, AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN, AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.

Work Order Number: 09-04-0466

Qualifier	Definition
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
PC	Sample taken from VOA vial with air bubble > 6mm diameter.
PI	Primary and confirm results varied by > than 40% RPD.
RA	RPD exceeds limit due to matrix interf.; % recovs. within limits.
RB	RPD exceeded method control limit; % recoveries within limits.
SG	A silica gel cleanup procedure was performed.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

0466

BP/ARC Project Name: ARCO 2111- O&M
BP/ARC Facility No: 2111

Req Due Date (mm/dd/yy): [illegible]
Lab Work Order Number: [illegible]
ORIGINAL

Rush TAT: Yes x No ___

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

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

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

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

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	GRO	BTEX	MTBE	5-oxys	24-hours	Standard	Comments
1	02111DPEAINF	4609	0746			x	2	x					x	x	x			x	5-oxys include MTBE, TBA, TAME,
2	02111ASAEFF		0743			x	2	x					x	x	x			x	DIPE, & ETBE. 24-hr TAT only for
3	02111ASYSINF		0740			x	2	x					x	x	x			x	GRO, BTEX, & 5-oxys.
4	02111AGAC1		0737			x	2	x					x	x	x			x	
5	02111AEFF		0734			x	2	x					x	x	x		x		
6	02111DPEWINF		0719		x		6				x		x	x		x		x	
7	02111ASWINF		0714		x		6				x		x	x		x		x	
8	02111ASWEFF		0709		x		6				x		x	x		x		x	
9	02111WGAC1		0707		x		6				x		x	x		x		x	
10	02111WEFF		0704		x		6				x		x	x		x	x		
11	02111MW2WINF		0724		x		6				x		x	x		x		x	
12	TB2111 4609	4609	0727		X		2												Hold

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

Sampler's Name:	Chris Hill
Sampler's Company:	Stratus Environmental, Inc.
Shipment Method:	GSO Ship Date: 4609
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature] Stratus	4/6/09	1600	[signature]	4/7/09	0830

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

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-04- 0 4 6 6

SAMPLE RECEIPT FORM

Box ~~Cooler~~ 1 of 1

CLIENT: Stratus

DATE: 04/08/09

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

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

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

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

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

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

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☑	☐	☐

CONTAINER TYPE:

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

Water: ☐VOA ☐VOA**h** ☐VOA**na_2** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na_2** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB**sterile** ☐100PB**na_2** ☐_____ ☐_____ ☐_____

Air: ☑Tedlar® ☐Summa® ☐_____ **Sludge/Other:** ☐_____ **Checked/Labeled by:** WS

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** RB

Preservative: h: HCL n: HNO3 **na_2**:$Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH **Scanned by:** WS

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-04- 0 4 6 6

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 04/07/09

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

Temperature 2.9 °C - 0.2 °C (CF) = 2.7 °C ☑ Blank ☐ Sample

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

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

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

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

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

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

Water: ☐VOA ☑VOA**h** ☐VOA**na_2** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na_2** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB**sterile** ☐100PB**na_2** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Sludge/Other:** ☐_____ Checked/Labeled by: JP

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar (Wide-mouth) **B:** Bottle (Narrow-mouth) Reviewed by: VM

Preservative: **h:** HCL **n:** HNO3 **na_2:** $Na_2S_2O_3$ **Na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH Scanned by: VM

STRATUS
ENVIRONMENTAL, INC.

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

May 28, 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: Kiran Nagaraju / Jay Johnson

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

On-Site Supplier Representative: Chris Hill and Martin Morgan

Number of Site Visits: 3 (May 4, 12, and 19, 2009)

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

Operational Status: Continuous operation (except the submersible pump at well MW-2). Per Broadbent's request, groundwater extraction using well MW-2 was temporarily discontinued on February 18, 2009.

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 May 4, 2009.

Variations from Scope of Work: The remediation systems were found non-functioning on May 4, 2009, 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 May 4, 2009, and shutdown after sampling, pending receipt and verification of analytical results. The submersible pump at well MW-2 was momentarily re-started on May 4, 2009, and shutdown after collecting influent water samples from well MW-2. Upon receipt of analytical results and compliance verification, Stratus personnel attempted to re-start the remediation systems (except the submersible pump at well MW-2) on May 12, 2009.

However, the PLC malfunctioned on May 12, 2009, and the DPE system could not be re-started. Stratus is currently scheduled to meet with Electrical Installation Contractors, Inc. on June 3, 2009, to reprogram/troubelshoot the PLC.

The effluent totalizer readings recorded on May 12 and May 19, 2009, appear to be erroneous. Stratus will examine the totalizer during the site visit scheduled for June 3, 2009.

The attachments include field data sheets, chain of custody documentation, and certified analytical results. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not include data interpretation or conclusions or recommendations.

Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Kiran Nagaraju
Project Engineer

Jay R. Johnson, P.G.
Project Manager

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

Attachments:

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

cc: Paul Supple, BP/ARCO

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

ORIGINAL

Date: 5409
Onsite Time: 1000
Offsite Time: 0930
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Cloud
Ambient Temperature: 70

System Information

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

Electric Meter Reading: NM
Hour Meter Reading: 3649
Totalizer Reading Prior to Air Stripper: 513234
PID Calibration Date: 5401
Totalizer Reading After Air Stripper: 1569820

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		1250	2800		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	20" HG	30	NA	NA	
Temperature, deg F		130	95		
PID Readings, ppmv	32	0	15	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	15					
V-2	50	15					
V-3	50	15					
MW-1	0						
MW-3	100	16					
MW-7	100	16					
MW8	0						

Signature:
Date: 9409

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	5404 0700	02111AGAC1	5409 0654
02111ASAEFF	0658	02111AEFF	0651
02111ASYSINF	0657		
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes
Run MW 2 Pump For little bit

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

Signature: [signature]

Date: 5409

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

Date: 5409
Onsite Time: 0600
Offsite Time: 0730

Technician: ~~[illegible]~~ ORIGINAL
Weather Conditions: Cloudy
Ambient Temperature 50

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1511815

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.2
Temperature: 15.8°C

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		~~409115~~			
		409115			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	5404 0635	02111MW2WINF	5409 0640
02111ASWINF	0630	TB2145409	0600
02111ASWEFF	0625		
02111WGAC1	0620		
02111WEFF	0615		

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

Notes: Run MW-2 Pump

Signature: [signature] Date: 5409

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

ORIGINAL

Date: 5/20/09
Onsite Time: 1800
Offsite Time: 1930
Equipment Manufacturer/Model#

Technician: CM/LC
Weather Conditions: Clear
Ambient Temperature: 70

System Information

System Status Upon Arrival: Operational ☐ Non-Operational ☒ Restart
System Status Upon Departure: Operational ☒ Non-Operational ☒
Electric Meter Reading: NM
Hour Meter Reading: 3649
Totalizer Reading Prior to Air Stripper: 513339
PID Calibration Date: 5-1209
Totalizer Reading After Air Stripper: 569910

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					
Pipe Diameter, inches					
Air Flow Rate, cfm					
Applied Vacuum, "wc	20"Hg	.25	NA	NA	
Temperature, deg F			90		
PID Readings, ppmv					PID for GAC-1:

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	14					
V-2	50	13					
V-3	56	14					
MW-1	~~0~~						
MW-3	100	15					
MW-7	100	15					
MW-8	0						

Signature: [signature]
Date: 5/20/09

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

ORIGINAL

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

Operation & Maintenance Notes
System Restart Collecting Readings - Then System Stops And PLC Lights Flashing System will Not Re-Start - Need PLC Checked

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

Signature: [signature]

Date: 5/20/09

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

ORIGINAL

Date: 5/20/09
Onsite Time: 1600
Offsite Time: 1930

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 70

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1151034

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		409116			

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: 5/20/09

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

ORIGINAL

Date: 5/19/09
Onsite Time: 1400
Offsite Time: 1445
Equipment Manufacturer/Model#

Technician: MW Manager
Weather Conditions: Clear
Ambient Temperature: 68

System Information

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

Electric Meter Reading: NM
Hour Meter Reading: 3649
Totalizer Reading Prior to Air Stripper: 513339
PID Calibration Date: 5/19/09
Totalizer Reading After Air Stripper: 1569910

Field Measurements

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

Other Readings/Measurements

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

Signature: [signature]
Date: 5/19/09

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

ORIGINAL

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

Operation & Maintenance Notes
- PLC flashing - checked pwr & switches - appears to be PLC failure...

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

Signature: _____ Date: 5/19/89

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

ORIGINAL

Date: 5/17/09
Onsite Time: 1460
Offsite Time: 1445

Technician: MW Morgan
Weather Conditions: Clear
Ambient Temperature 68

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 115034

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		409116			

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: 5/19/09

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

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

ORIGINAL

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

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

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

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO	BTEX	MTBE	5-oxys	Turnaround Time: 24-hours	Standard
1	02111DPEAINF	5409	0700			x	3	x					x	x	x			x
2	02111ASAEFF		0656			x	3	x					x	x	x			x
3	02111ASYSINF		0656			x	3	x					x	x	x			x
4	02111AGAC1		0654			x	3	x					x	x	x			x
5	02111AEFF		0651			x	2	x					x	x	x			x
6	02111DPEWINF		0639		x		6				x		x	x	x		x	
7	02111ASWINF		0630		x		6				x		x	x		x		x
8	02111ASWEFF		0624		x		6				x		x	x		x		x
9	02111WGAC1		0620		x		6				x		x	x		x		x
10	02111WEFF		0615		x		6				x		x	x		x		x
11	02111MW2WINF		0640		x		6				x		x	x		x	x	
12	TB21K5409	5409	0650		x		2						x	x		x		x

Hold

Comments

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

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

Report Type & QC Level

Standard x
Full Data Package ___

Sampler's Name:	Chris Hill
Sampler's Company:	Stratus Environmental, Inc.
Shipment Method:	GSO Ship Date: 5409
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Chris Hill Stratus	5409	1600			

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

THIS LINE - LAB USE ONLY: Custody Seals in Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ___ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

Calscience
Environmental
Laboratories, Inc.

May 14, 2009

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

Subject: **Calscience Work Order No.:** **09-05-0228**
Client Reference: **ARCO 2111 - O&M**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 5/5/2009 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 05/05/09
Work Order No: 09-05-0228
Preparation: N/A
Method: EPA TO-15M
Units: mg/m3

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-05-0228-1-A**	**05/04/09 07:00**	**Air**	**GC/MS K**	**N/A**	**05/05/09 15:29**	**090505L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.34	0.032	20		Xylenes (total)	0.51	0.17	20	
Toluene	0.38	0.038	20		Methyl-t-Butyl Ether (MTBE)	3.2	0.72	100	
Ethylbenzene	0.53	0.043	20						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	102	57-129			1,2-Dichloroethane-d4	103	47-137		
Toluene-d8	92	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-05-0228-2-A**	**05/04/09 06:58**	**Air**	**GC/MS K**	**N/A**	**05/05/09 16:17**	**090505L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.0023	0.0016	1		Xylenes (total)	0.013	0.0087	1	
Toluene	0.014	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.099	0.0072	1	
Ethylbenzene	0.0033	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	101	57-129			1,2-Dichloroethane-d4	100	47-137		
Toluene-d8	99	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-05-0228-3-A**	**05/04/09 06:56**	**Air**	**GC/MS K**	**N/A**	**05/05/09 17:05**	**090505L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.17	0.016	10		Xylenes (total)	0.26	0.087	10	
Toluene	0.18	0.019	10		Methyl-t-Butyl Ether (MTBE)	1.7	0.29	40	
Ethylbenzene	0.28	0.022	10						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	105	57-129			1,2-Dichloroethane-d4	101	47-137		
Toluene-d8	90	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-05-0228-4-A**	**05/04/09 06:54**	**Air**	**GC/MS K**	**N/A**	**05/05/09 17:52**	**090505L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0069	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	102	57-129			1,2-Dichloroethane-d4	98	47-137		
Toluene-d8	97	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/05/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15M
		Units:	mg/m3
Project: ARCO 2111 - O&M			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-05-0228-5-A**	**05/04/09 06:51**	**Air**	**GC/MS K**	**N/A**	**05/05/09 14:41**	**090505L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0076	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	102	57-129			1,2-Dichloroethane-d4	104	47-137		
Toluene-d8	100	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-09-002-8,493**	**N/A**	**Air**	**GC/MS K**	**N/A**	**05/05/09 12:45**	**090505L01**

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	102	57-129			1,2-Dichloroethane-d4	100	47-137		
Toluene-d8	96	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/05/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-3M

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-05-0228-1-A**	**05/04/09 07:00**	**Air**	**GC 38**	**N/A**	**05/05/09 14:18**	**090505L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	210	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-05-0228-2-A**	**05/04/09 06:58**	**Air**	**GC 38**	**N/A**	**05/05/09 12:59**	**090505L01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-05-0228-3-A**	**05/04/09 06:56**	**Air**	**GC 38**	**N/A**	**05/05/09 15:36**	**090505L01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-05-0228-4-A**	**05/04/09 06:54**	**Air**	**GC 38**	**N/A**	**05/05/09 16:16**	**090505L01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-05-0228-5-A**	**05/04/09 06:51**	**Air**	**GC 38**	**N/A**	**05/05/09 13:39**	**090505L01**

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	**099-12-693-155**	**N/A**	**Air**	**GC 38**	**N/A**	**05/05/09 08:42**	**090505L01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 05/05/09
Work Order No: 09-05-0228
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-05-0228-6-E**	**05/04/09 06:35**	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09 18:17**	**090505B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	66	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
02111ASWINF	**09-05-0228-7-E**	**05/04/09 06:30**	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09 18:50**	**090505B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	96	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-05-0228-8-E**	**05/04/09 06:25**	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09 17:45**	**090505B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	96	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-05-0228-9-E**	**05/04/09 06:20**	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09 17:12**	**090505B01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/05/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-05-0228-10-E**	**05/04/09 06:15**	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09 15:02**	**090505B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-05-0228-11-E**	**05/04/09 06:40**	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09 19:23**	**090505B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	210	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	89	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-527**	**N/A**	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09 13:23**	**090505B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	106	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 05/05/09
Work Order No: 09-05-0228
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-05-0228-6-B**	**05/04/09 06:35**	**Aqueous**	**GC/MS BB**	**05/06/09**	**05/06/09 17:15**	**090506L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.0	4		Tert-Butyl Alcohol (TBA)	760	40	4	
Ethylbenzene	ND	2.0	4		Diisopropyl Ether (DIPE)	ND	2.0	4	
Toluene	ND	2.0	4		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	4	
Xylenes (total)	ND	2.0	4		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	4	
Methyl-t-Butyl Ether (MTBE)	70	2.0	4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	98	73-145		Dibromofluoromethane	98	81-135	
Toluene-d8	97	83-119		1,4-Bromofluorobenzene	75	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-05-0228-7-A**	**05/04/09 06:30**	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/06/09 05:26**	**090505L02**

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)	15	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	99	73-145		Dibromofluoromethane	102	81-135	
Toluene-d8	97	83-119		1,4-Bromofluorobenzene	83	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-05-0228-8-A**	**05/04/09 06:25**	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/06/09 05:58**	**090505L02**

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)	0.69	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	101	73-145		Dibromofluoromethane	106	81-135	
Toluene-d8	96	83-119		1,4-Bromofluorobenzene	78	74-110	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 05/05/09
Work Order No: 09-05-0228
Preparation: EPA 5030B
Method: EPA 8260B
Units: ug/L

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-05-0228-9-A**	**05/04/09 06:20**	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/06/09 02:50**	**090505L02**

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	95	73-145			Dibromofluoromethane	100	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	78	74-110		

02111WEFF	**09-05-0228-10-A**	**05/04/09 06:15**	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/05/09 15:20**	**090505L01**

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	96	73-145			Dibromofluoromethane	100	81-135		
Toluene-d8	96	83-119			1,4-Bromofluorobenzene	75	74-110		

02111MW2WINF	**09-05-0228-11-B**	**05/04/09 06:40**	**Aqueous**	**GC/MS BB**	**05/06/09**	**05/06/09 17:47**	**090506L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	120	10	1	
Ethylbenzene	0.56	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	8.2	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	94	73-145			Dibromofluoromethane	98	81-135		
Toluene-d8	96	83-119			1,4-Bromofluorobenzene	79	74-110		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	05/05/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111 - O&M			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-861**	**N/A**	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/05/09 13:45**	**090505L01**

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	96	73-145		Dibromofluoromethane	99	81-135	
Toluene-d8	96	83-119		1,4-Bromofluorobenzene	78	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-864**	**N/A**	**Aqueous**	**GC/MS BB**	**05/06/09**	**05/06/09 13:03**	**090506L01**

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	95	73-145		Dibromofluoromethane	96	81-135	
Toluene-d8	96	83-119		1,4-Bromofluorobenzene	77	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-865**	**N/A**	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/06/09 02:18**	**090505L02**

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	73-145		Dibromofluoromethane	99	81-135	
Toluene-d8	98	83-119		1,4-Bromofluorobenzene	79	74-110	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.	Date Received:	05/05/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0228
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-3M

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
02111DPEAINF	**Air**	**GC 38**	**N/A**	**05/05/09**	**090505D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	210	230	12	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	05/05/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02111WEFF	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09**	**090505S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	98	99	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:	05/05/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-0224-3	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/05/09**	**090505S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	103	102	86-122	0	0-8	
Carbon Tetrachloride	99	101	78-138	2	0-9	
Chlorobenzene	108	110	90-120	2	0-9	
1,2-Dibromoethane	96	98	70-130	2	0-30	
1,2-Dichlorobenzene	99	101	89-119	2	0-10	
1,1-Dichloroethene	92	95	52-142	3	0-23	
Ethylbenzene	105	105	70-130	1	0-30	
Toluene	99	100	85-127	1	0-12	
Trichloroethene	100	100	78-126	0	0-10	
Vinyl Chloride	88	92	56-140	5	0-21	
Methyl-t-Butyl Ether (MTBE)	84	91	64-136	8	0-28	
Tert-Butyl Alcohol (TBA)	107	107	27-183	0	0-60	
Diisopropyl Ether (DIPE)	89	92	78-126	3	0-16	
Ethyl-t-Butyl Ether (ETBE)	84	89	67-133	6	0-21	
Tert-Amyl-Methyl Ether (TAME)	87	91	63-141	4	0-21	
Ethanol	111	106	11-167	4	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: 05/05/09
Work Order No: 09-05-0228
Preparation: EPA 5030B
Method: EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02111WGAC1	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/06/09**	**090505S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	105	86-122	1	0-8	
Carbon Tetrachloride	101	102	78-138	1	0-9	
Chlorobenzene	106	109	90-120	3	0-9	
1,2-Dibromoethane	101	105	70-130	3	0-30	
1,2-Dichlorobenzene	102	104	89-119	1	0-10	
1,1-Dichloroethene	97	97	52-142	0	0-23	
Ethylbenzene	105	105	70-130	0	0-30	
Toluene	101	109	85-127	8	0-12	
Trichloroethene	99	100	78-126	1	0-10	
Vinyl Chloride	92	97	56-140	6	0-21	
Methyl-t-Butyl Ether (MTBE)	91	93	64-136	1	0-28	
Tert-Butyl Alcohol (TBA)	103	104	27-183	1	0-60	
Diisopropyl Ether (DIPE)	93	93	78-126	0	0-16	
Ethyl-t-Butyl Ether (ETBE)	90	90	67-133	0	0-21	
Tert-Amyl-Methyl Ether (TAME)	90	89	63-141	1	0-21	
Ethanol	96	93	11-167	3	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	05/05/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-05-0228
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-05-0225-1	**Aqueous**	**GC/MS BB**	**05/06/09**	**05/06/09**	**090506S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	94	86-122	3	0-8	
Carbon Tetrachloride	87	87	78-138	1	0-9	
Chlorobenzene	92	92	90-120	1	0-9	
1,2-Dibromoethane	91	93	70-130	2	0-30	
1,2-Dichlorobenzene	95	95	89-119	0	0-10	
1,1-Dichloroethene	82	81	52-142	1	0-23	
Ethylbenzene	85	89	70-130	5	0-30	
Toluene	92	89	85-127	3	0-12	
Trichloroethene	93	89	78-126	3	0-10	
Vinyl Chloride	79	81	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	72	74	64-136	1	0-28	
Tert-Butyl Alcohol (TBA)	114	107	27-183	6	0-60	
Diisopropyl Ether (DIPE)	80	78	78-126	2	0-16	
Ethyl-t-Butyl Ether (ETBE)	77	77	67-133	0	0-21	
Tert-Amyl-Methyl Ether (TAME)	82	81	63-141	1	0-21	
Ethanol	96	93	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:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15M

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,493	**Air**	**GC/MS K**	**N/A**	**05/05/09**	**090505L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	105	60-156	8	0-40	
Toluene	100	107	56-146	6	0-43	
Ethylbenzene	115	124	52-154	7	0-38	
p/m-Xylene	111	117	42-156	6	0-41	
o-Xylene	114	123	52-148	8	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-527	**Aqueous**	**GC 4**	**05/05/09**	**05/05/09**	**090505B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	104	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:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-861	**Aqueous**	**GC/MS BB**	**05/05/09**	**05/05/09**	**090505L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	102	100	87-117	82-122	2	0-7	
Carbon Tetrachloride	97	98	78-132	69-141	1	0-8	
Chlorobenzene	112	104	88-118	83-123	7	0-8	
1,2-Dibromoethane	104	100	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	103	100	88-118	83-123	4	0-8	
1,1-Dichloroethene	94	95	71-131	61-141	1	0-14	
Ethylbenzene	108	105	80-120	73-127	3	0-20	
Toluene	99	97	85-127	78-134	2	0-7	
Trichloroethene	100	98	85-121	79-127	3	0-11	
Vinyl Chloride	92	92	64-136	52-148	0	0-10	
Methyl-t-Butyl Ether (MTBE)	88	87	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	97	96	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	89	88	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	86	85	73-127	64-136	1	0-11	
Tert-Amyl-Methyl Ether (TAME)	89	88	69-135	58-146	2	0-12	
Ethanol	94	97	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.
3330 Cameron Park Drive, Suite 550
Cameron Park, CA 95682-8861

Date Received: N/A
Work Order No: 09-05-0228
Preparation: EPA 5030B
Method: EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-865	Aqueous	GC/MS BB	05/05/09	05/06/09	090505L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	94	94	87-117	82-122	0	0-7	
Carbon Tetrachloride	90	90	78-132	69-141	0	0-8	
Chlorobenzene	102	96	88-118	83-123	6	0-8	
1,2-Dibromoethane	96	95	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	96	97	88-118	83-123	0	0-8	
1,1-Dichloroethene	88	86	71-131	61-141	3	0-14	
Ethylbenzene	98	97	80-120	73-127	1	0-20	
Toluene	91	90	85-127	78-134	1	0-7	
Trichloroethene	102	105	85-121	79-127	3	0-11	
Vinyl Chloride	87	88	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	83	84	67-133	56-144	0	0-16	
Tert-Butyl Alcohol (TBA)	91	93	34-154	14-174	2	0-19	
Diisopropyl Ether (DIPE)	83	83	80-122	73-129	0	0-8	
Ethyl-t-Butyl Ether (ETBE)	82	82	73-127	64-136	1	0-11	
Tert-Amyl-Methyl Ether (TAME)	84	85	69-135	58-146	1	0-12	
Ethanol	85	93	34-124	19-139	10	0-44	

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

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-05-0228
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-864	Aqueous	GC/MS BB	05/06/09	05/06/09	090506L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	93	94	87-117	82-122	2	0-7	
Carbon Tetrachloride	88	91	78-132	69-141	4	0-8	
Chlorobenzene	99	98	88-118	83-123	1	0-8	
1,2-Dibromoethane	88	97	80-120	73-127	10	0-20	
1,2-Dichlorobenzene	96	97	88-118	83-123	1	0-8	
1,1-Dichloroethene	84	87	71-131	61-141	3	0-14	
Ethylbenzene	96	98	80-120	73-127	2	0-20	
Toluene	91	93	85-127	78-134	3	0-7	
Trichloroethene	92	95	85-121	79-127	3	0-11	
Vinyl Chloride	83	86	64-136	52-148	4	0-10	
Methyl-t-Butyl Ether (MTBE)	80	86	67-133	56-144	8	0-16	
Tert-Butyl Alcohol (TBA)	90	91	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	77	84	80-122	73-129	8	0-8	LR
Ethyl-t-Butyl Ether (ETBE)	78	83	73-127	64-136	7	0-11	
Tert-Amyl-Methyl Ether (TAME)	82	88	69-135	58-146	7	0-12	
Ethanol	91	89	34-124	19-139	2	0-44	

Total number of LCS compounds : 16

Total number of ME compounds : 1

Total number of ME compounds allowed : 1

LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 09-05-0228

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
AZ	Surrogate recovery outside of acceptance limits due to matrix interference.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = 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.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	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,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.

Work Order Number: 09-05-0228

Qualifier	Definition
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
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.
SG	A silica gel cleanup procedure was performed.
	Solid - unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for moisture.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

(0228)

Page 1 of 1

BP/ARC Project Name: ARCO 2111- O&M

BP/ARC Facility No: 2111

Req Due Date (mm/dd/yy): Eff 24hrs&othersSTD   Rush TAT: Yes x No ___

Lab Work Order Number:

ORIGINAL

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

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

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

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Water / Liquid	Air / Vapor		No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO	BTEX	MTBE	5-oxys			Turnaround Time: 24-hours	Standard			Comments
1	02111DPEAINF	5404	0700			x		2	x						x	x	x					x			
2	02111ASAEFF		0658			x		2	x						x	x	x					x			5-oxys include MTBE, TBA, TAME,
3	02111ASYSINF		0656			x		2	x						x	x	x					x			DIPE, & ETBE. 24-hr TAT only for
4	02111AGAC1		0654			x		2	x						x	x	x					x			GRO, BTEX, & 5-oxys.
5	02111AEFF		0651			x		2	x						x	x	x				x				
6	02111DPEWINF		0635		x			6				x			x	x		x				x			
7	02111ASWINF		0630		x			6				x			x	x		x				x			
8	02111ASWEFF		0624		x			6				x			x	x		x				x			
9	02111WGAC1		0620		x			6				x			x	x		x				x			
10	02111WEFF		0615		x			6				x			x	x		x			x				
11	02111MW2WINF		0640		x			6				x			x	x		x				x			
12	TB21K5409	5409	0650					2													Hold				

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

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

Sampler's Name: Chris Hill

Sampler's Company: Stratus Environmental, Inc.

Shipment Method: GSO   Ship Date: 5409

Shipment Tracking No: GSO #92550922071

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature] Stratus	5409	1600	[signature]	5/5/09	10:30

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

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-05-0228

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: STRATUS

DATE: 05/05/09

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

Temperature 3.2 °C - 0.2 °C (CF) = 3.0 °C ☑ Blank ☐ Sample

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

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

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

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

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
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 ☐125AGBp ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐500PB ☐500PBna ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PB ☐100PBna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® ☐_____ **Other:** ☐_____ Checked/Labeled by: PS

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) Reviewed by: W.S.C

Preservative: h: HCL n: HNO3 na_2:$Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered Scanned by: PS

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-05- 0 2 2 8

SAMPLE RECEIPT FORM

BOX
~~Cooler~~ 1 of 1

CLIENT: STRATUS DATE: 05 / 05 / 09

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

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

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

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

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

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

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☑	☐	☐

CONTAINER TYPE:

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

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB ☐100PB**na$_2$** ☐_____ ☐_____ ☐_____

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

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** WB

Preservative: h: HCL n: HNO3 na$_2$:$Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** PS

STRATUS
ENVIRONMENTAL, INC.

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

July 7, 2009

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

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

General Information

Data Submittal Prepared / Reviewed by: Kiran Nagaraju / Jay Johnson

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

On-Site Supplier Representative: Chris Hill

Number of Site Visits: 5 (June 3, 9, 15, 22, and 30, 2009)

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

Operational Status: Continuous operation

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

Variations from Scope of Work: Stratus met with Electrical Installation Contractors, Inc., on June 3, 2009, to troubleshoot the electrical/PLC malfunction. An electrical fuse was replaced during this visit and the electrician also recommended replacement of the air-pressure switch. The air pressure switch was replaced on June 15, 2009. The remediation systems were observed to be non-operating during the site visits conducted on June 9, 15, 22, and 30, 2009, due to a high-water alarm. The level float on the oil-water separator was replaced during the site visit conducted on June 30, 2009, to improve the system operating uptime.

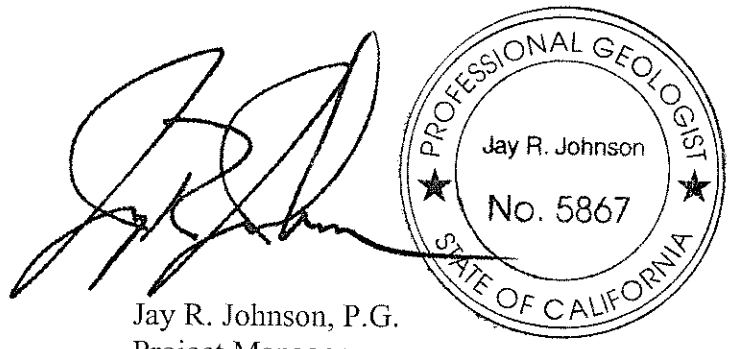
The attachments include field data sheets, chain of custody documentation, and certified analytical results. The information is being provided to BP-ARCO's Scoping Supplier for use in preparing a report for regulatory submittal. This submittal is limited to presentation of collected data and does not 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: 6309
Onsite Time: 0900
Offsite Time: 1000
Equipment Manufacturer/Model#

Technician: CHLG
Weather Conditions: Cloudy
Ambient Temperature: 55

System Information

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

Electric Meter Reading: —
Hour Meter Reading: 3651
Totalizer Reading Prior to Air Stripper: 5140 64
PID Calibration Date: 6109
Totalizer Reading After Air Stripper: 1570580

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc					
Air Velocity, FPM		1950	2960		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	18" Hg		NA	NA	
Temperature, deg F		172	118		
PID Readings, ppmv		1	20	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	25	10					
V-2	25	12					
V-3	25	12					
MW-1	0						
MW-3	100	15					
MW-7	100	12					
MW-8	0						

Signature: [signature]
Date: 6309

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	6309 0936	02111AGAC1	6309 0929
02111ASAEFF	0933	02111AEFF	0927
02111ASYSINF	0931		
Analyses Required: GRO, BTEX, and MTBE			

Operation & Maintenance Notes
BAD Fuse on system - Also Air Switch on Air stripper

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: 6309

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

ORIGINAL

Date: 6309
Onsite Time: 0800
Offsite Time: 1000

Technician: CHILL
Weather Conditions: clouds
Ambient Temperature: 55

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

Transfer Pump Hour Meter Reading: —
Effluent Flow Totalizer Reading: 1512537
No. of Carbon Vessels: 2
Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.5
Temperature: 17.1 C

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		409317			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	6309 0914	02111MW2WINF	6309 0918
02111ASWINF	0910	TB2111 6309	0925
02111ASWEFF	0907		
02111WGAC1	0903		
02111WEFF	0900		

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

Notes:
1950-1-2F Pressure switch Need Lower Range
Need Pressure switch one on system To High In Range
Turn MW-2 on-X

Signature: [signature] Date: 6309

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

ORIGINAL

Date: 6909
Onsite Time: 0630
Offsite Time: 0745
Equipment Manufacturer/Model#

Technician: OHILL
Weather Conditions: Clouds
Ambient Temperature: 55

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: 3656
Totalizer Reading Prior to Air Stripper: 528516
PID Calibration Date: 6809
Totalizer Reading After Air Stripper: 1583730

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		30			
Air Velocity, FPM		1789	3000		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	18" Hg	.25	NA	NA	
Temperature, deg F		118	105		
PID Readings, ppmv	18	1	13	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	25	14					
V-2	25	13					
V-3	25	12					
MW-1	0						
MW-3	100	12					
MW-7	100	12					
MW 6	0						

Signature:
Date: 6909

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
Waiting for Pressure To come in To install on Air Stripper
MW-2 off

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: 6909

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

ORIGINAL

Date: 6909
Onsite Time: 0630
Offsite Time: 0745

Technician: CHILL
Weather Conditions: Clouds
Ambient Temperature 55

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1524993

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 7

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		422257			

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: CHILL Date: 6909

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

ORIGINAL

Date: 6 15 09
Onsite Time: 0630
Offsite Time: 0815
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clouds
Ambient Temperature: 50

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: 3657
Totalizer Reading Prior to Air Stripper: 529114 PID Calibration Date: 61509
Totalizer Reading After Air Stripper: 1584240

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc					
Air Velocity, FPM		1350	3400		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	20"Hg		NA	NA	
Temperature, deg F		134	110		
PID Readings, ppmv	26	1	17	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	12					
V-2	50	12					
V-3	50	10					
MW-1	0						
MW-3	100	13					
MW-7	100	12					
MW-8	0						

Signature: [signature]
Date: 61509

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

Install Lower Range Pressure switch on Air Stripper

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: 6/5/09

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

ORIGINAL

Date: 6/5/09
Onsite Time: 0630
Offsite Time: 0815

Technician: CHILL
Weather Conditions: Clouds
Ambient Temperature 50

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: 1525590

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		422245			

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: Install New Pressure switch on Air stripper
Hope Take care of Down Time

Signature: _____ Date: 6/5/09

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

ORIGINAL

Date: 62209
Onsite Time: 0600
Offsite Time: 0830
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 50

System Information

System Status Upon Arrival: Operational ☐ Non-Operational ☒ High CO
System Status Upon Departure: Operational ☒ Non-Operational ☐
Electric Meter Reading: NM
Hour Meter Reading: 3659
Totalizer Reading Prior to Air Stripper: 529575
PID Calibration Date: 62209
Totalizer Reading After Air Stripper: 1584640

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc					
Air Velocity, FPM		1233	3100		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	17"Hg		NA	NA	
Temperature, deg F		121	100		
PID Readings, ppmv	48	1	29	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	10					
MW-1	8						
MW-3	100	15					
MW-7	100	14					
MW8	8						

Signature: [signature]
Date: 62209

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

Clean Air stripper

System cycles 3 Times Pumping To Air Stripper

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: 6 22 09

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

ORIGINAL

Date: 6 22 09
Onsite Time: 0600
Offsite Time: 0830

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 50

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: 1525578

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 6

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		422285			

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: 6 22 09

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

ORIGINAL

Date: 63009
Onsite Time: 0600
Offsite Time: 0700
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 70

System Information

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

Electric Meter Reading: —
Hour Meter Reading: 3667
Totalizer Reading Prior to Air Stripper: 531695
PID Calibration Date: 62909
Totalizer Reading After Air Stripper: 1586570

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc					
Air Velocity, FPM		1576	3100		
Pipe Diameter, inches	3	4	4	3	
Air Flow Rate, cfm					
Applied Vacuum, "wc	20"Hg		NA	NA	
Temperature, deg F		130	99		
PID Readings, ppmv	45	1	25 25	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	13					
V-2	50	12					
V-3	50	12					
MW-1	0						
MW-3	100	14					
MW-7	100	12					
MW-5	0						

Signature: [signature]
Date: 63009

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

Install New Float Lower on Tank oil/water separator See If That Fixes Problem system cycles when there

Check All Floats They work

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: 6 30 09

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

ORIGINAL

Date: 6 30 09
Onsite Time: 0600
Offsite Time: 0700

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 70

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1527657

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		422343			

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: 6 30 09

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: ARCO 2111- O&M
BP/ARC Facility No: 2111
Req Due Date (mm/dd/yy): Eff 24hrs&othersSTD Rush TAT: Yes x No
Lab Work Order Number: 09-06-0348
Page 1 of 1

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

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

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

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO	BTEX	MTBE	5-oxys	Turnaround Time: 24-hours	Standard
1	02111DPEAINF	6304	0936			x	2	x					x	x	x			x
2	02111ASAEFF		0933			x	2	x					x	x	x			x
3	02111ASYSINF		0931			x	2	x					x	x	x			x
4	02111AGAC1		0929			x	2	x					x	x	x			x
5	02111AEFF		0927			x	2	x					x	x	x			x
6	02111DPEWINF		0914		x		6				x		x	x		x	x	
7	02111ASWINF		0910		x		6				x		x	x		x		x
8	02111ASWEFF		0907		x		6				x		x	x		x		x
9	02111WGAC1		0903		x		6				x		x	x		x		x
10	02111WEFF		0900		x		6				x		x	x		x		x
11	02111MW2WINF		0918		x		6				x		x	x		x	x	
12	TB2111 6309	6309	0925				2											x

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

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

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

Sampler's Name:	Chris Hill
Sampler's Company:	Stratus Environmental, Inc.
Shipment Method:	GSO Ship Date: 6309
Shipment Tracking No:	165749014
Special Instructions:	Please cc results to bpedf@broadbentinc.com

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
	6309	1600			
				6/6/09	1030

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

165749012

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

Calscience
Environmental
Laboratories, Inc.

June 16, 2009

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

Subject: **Calscience Work Order No.:** **09-06-0348**
Client Reference: **ARCO 2111 - O&M**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 6/4/2009 and analyzed in accordance with the attached chain-of-custody.

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

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

Sincerely,

Calscience Environmental
Laboratories, Inc.
Richard Villafania
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 06/04/09
Work Order No: 09-06-0348
Preparation: N/A
Method: EPA TO-15M
Units: mg/m3

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-06-0348-1-A**	**06/03/09 09:36**	**Air**	**GC/MS AA**	**N/A**	**06/04/09 20:20**	**090604L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.29	0.040	25		Xylenes (total)	0.39	0.22	25	
Toluene	0.17	0.047	25		Methyl-t-Butyl Ether (MTBE)	3.2	0.18	25	
Ethylbenzene	0.56	0.054	25						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	97	57-129			1,2-Dichloroethane-d4	86	47-137		
Toluene-d8	69	78-156		LG,AY					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-06-0348-2-A**	**06/03/09 09:33**	**Air**	**GC/MS AA**	**N/A**	**06/04/09 17:54**	**090604L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.038	0.0016	1		Xylenes (total)	0.032	0.0087	1	
Toluene	0.13	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.73	0.072	10	
Ethylbenzene	0.028	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	99	57-129			1,2-Dichloroethane-d4	87	47-137		
Toluene-d8	98	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-06-0348-3-A**	**06/03/09 09:31**	**Air**	**GC/MS AA**	**N/A**	**06/04/09 22:07**	**090604L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.18	0.026	16		Xylenes (total)	0.24	0.14	16	
Toluene	0.16	0.030	16		Methyl-t-Butyl Ether (MTBE)	2.1	0.12	16	
Ethylbenzene	0.36	0.035	16						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	98	57-129			1,2-Dichloroethane-d4	88	47-137		
Toluene-d8	73	78-156		LG,AY					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-06-0348-4-A**	**06/03/09 09:29**	**Air**	**GC/MS AA**	**N/A**	**06/04/09 22:56**	**090604L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.13	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	96	57-129			1,2-Dichloroethane-d4	87	47-137		
Toluene-d8	102	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-0348
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15M
		Units:	mg/m3
Project: ARCO 2111 - O&M			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-06-0348-5-A**	**06/03/09 09:27**	**Air**	**GC/MS AA**	**N/A**	**06/04/09 17:05**	**090604L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.11	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	99	57-129			1,2-Dichloroethane-d4	89	47-137		
Toluene-d8	101	78-156							

Method Blank	097-09-002-8,620	N/A	Air	GC/MS AA	N/A	06/04/09 16:11	090604L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	ND	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	95	57-129			1,2-Dichloroethane-d4	86	47-137		
Toluene-d8	97	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-3M

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-06-0348-1-A**	**06/03/09 09:36**	**Air**	**GC 38**	**N/A**	**06/04/09 13:10**	**090604L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	340	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-06-0348-2-A**	**06/03/09 09:33**	**Air**	**GC 38**	**N/A**	**06/04/09 12:01**	**090604L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-06-0348-3-A**	**06/03/09 09:31**	**Air**	**GC 38**	**N/A**	**06/04/09 14:23**	**090604L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	180	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-06-0348-4-A**	**06/03/09 09:29**	**Air**	**GC 38**	**N/A**	**06/04/09 15:00**	**090604L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-06-0348-5-A**	**06/03/09 09:27**	**Air**	**GC 38**	**N/A**	**06/04/09 12:35**	**090604L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-685-155**	**N/A**	**Air**	**GC 38**	**N/A**	**06/04/09 08:53**	**090604L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	38	1		mg/m3

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-06-0348-6-E**	**06/03/09 09:14**	**Aqueous**	**GC 4**	**06/04/09**	**06/04/09 23:20**	**090604B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	110	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	111	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-06-0348-7-E**	**06/03/09 09:10**	**Aqueous**	**GC 4**	**06/04/09**	**06/05/09 00:26**	**090604B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	110	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	118	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-06-0348-8-E**	**06/03/09 09:07**	**Aqueous**	**GC 4**	**06/04/09**	**06/05/09 00:59**	**090604B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	110	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-06-0348-9-E**	**06/03/09 09:03**	**Aqueous**	**GC 4**	**06/04/09**	**06/05/09 02:05**	**090604B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	114	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-06-0348-10-E**	**06/03/09 09:00**	**Aqueous**	**GC 4**	**06/04/09**	**06/05/09 02:39**	**090604B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	117	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-06-0348-11-E**	**06/03/09 09:18**	**Aqueous**	**GC 4**	**06/04/09**	**06/05/09 03:45**	**090604B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	200	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	113	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-563**	**N/A**	**Aqueous**	**GC 4**	**06/04/09**	**06/04/09 15:04**	**090604B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	109	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-06-0348-6-A**	**06/03/09 09:14**	**Aqueous**	**GC/MS BB**	**06/10/09**	**06/11/09 03:59**	**090610L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	2.0	4		Tert-Butyl Alcohol (TBA)	1700	400	40	
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)	87	2.0	4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	109	73-145		Dibromofluoromethane	102	81-135	
Toluene-d8	96	83-119		1,4-Bromofluorobenzene	93	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-06-0348-7-A**	**06/03/09 09:10**	**Aqueous**	**GC/MS BB**	**06/10/09**	**06/11/09 02:24**	**090610L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.52	0.50	1		Tert-Butyl Alcohol (TBA)	860	200	20	
Ethylbenzene	0.65	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)	49	10	20						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	97	73-145		Dibromofluoromethane	95	81-135	
Toluene-d8	97	83-119		1,4-Bromofluorobenzene	92	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-06-0348-8-A**	**06/03/09 09:07**	**Aqueous**	**GC/MS BB**	**06/10/09**	**06/11/09 02:56**	**090610L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	660	100	10	
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)	3.3	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	99	73-145		Dibromofluoromethane	95	81-135	
Toluene-d8	96	83-119		1,4-Bromofluorobenzene	91	74-110	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-06-0348-9-A**	**06/03/09 09:03**	**Aqueous**	**GC/MS BB**	**06/10/09**	**06/11/09 01:52**	**090610L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	97	73-145			Dibromofluoromethane	100	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	95	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-06-0348-10-A**	**06/03/09 09:00**	**Aqueous**	**GC/MS Z**	**06/04/09**	**06/04/09 16:03**	**090604L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	107	73-145			Dibromofluoromethane	106	81-135		
Toluene-d8	100	83-119			1,4-Bromofluorobenzene	98	74-110		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-06-0348-11-A**	**06/03/09 09:18**	**Aqueous**	**GC/MS BB**	**06/10/09**	**06/11/09 03:27**	**090610L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3.2	0.50	1		Tert-Butyl Alcohol (TBA)	470	100	10	
Ethylbenzene	0.86	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)	19	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	96	73-145			Dibromofluoromethane	95	81-135		
Toluene-d8	98	83-119			1,4-Bromofluorobenzene	93	74-110		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-916**	**N/A**	**Aqueous**	**GC/MS Z**	**06/04/09**	**06/04/09 12:12**	**090604L01**

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	73-145		Dibromofluoromethane	98	81-135	
Toluene-d8	100	83-119		1,4-Bromofluorobenzene	96	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-930**	**N/A**	**Aqueous**	**GC/MS BB**	**06/10/09**	**06/11/09 01:20**	**090610L02**

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	99	73-145		Dibromofluoromethane	98	81-135	
Toluene-d8	97	83-119		1,4-Bromofluorobenzene	93	74-110	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-933**	**N/A**	**Aqueous**	**GC/MS BB**	**06/11/09**	**06/11/09 13:29**	**090611L01**

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	98	73-145		Dibromofluoromethane	97	81-135	
Toluene-d8	97	83-119		1,4-Bromofluorobenzene	92	74-110	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.		Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-0348
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-3M

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
02111DPEAINF	**Air**	**GC 38**	**N/A**	**06/04/09**	**090604D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	340	330	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-0348
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-0353-2	**Aqueous**	**GC 4**	**06/04/09**	**06/04/09**	**090604S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	102	103	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:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-0052-6	**Aqueous**	**GC/MS Z**	**06/04/09**	**06/04/09**	**090604S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	102	86-122	0	0-8	
Toluene	102	103	85-127	1	0-12	
Ethylbenzene	105	104	70-130	1	0-30	
Methyl-t-Butyl Ether (MTBE)	103	104	64-136	2	0-28	
Tert-Butyl Alcohol (TBA)	105	103	27-183	1	0-60	
Diisopropyl Ether (DIPE)	101	102	78-126	1	0-16	
Ethyl-t-Butyl Ether (ETBE)	101	102	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	100	104	63-141	4	0-21	
Ethanol	106	113	11-167	7	0-64	
1,1-Dichloroethene	105	107	52-142	1	0-23	
1,2-Dibromoethane	105	104	70-130	1	0-30	
1,2-Dichlorobenzene	102	104	89-119	2	0-10	
Carbon Tetrachloride	104	102	78-138	1	0-9	
Chlorobenzene	100	100	90-120	0	0-9	
Trichloroethene	98	98	78-126	1	0-10	
Vinyl Chloride	102	104	56-140	2	0-21	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
02111WGAC1	**Aqueous**	**GC/MS BB**	**06/10/09**	**06/11/09**	**090610S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	98	86-122	0	0-8	
Carbon Tetrachloride	93	92	78-138	1	0-9	
Chlorobenzene	98	97	90-120	0	0-9	
1,2-Dibromoethane	95	97	70-130	2	0-30	
1,2-Dichlorobenzene	96	101	89-119	5	0-10	
1,1-Dichloroethene	96	96	52-142	0	0-23	
Ethylbenzene	88	89	70-130	1	0-30	
Toluene	95	95	85-127	0	0-12	
Trichloroethene	97	97	78-126	0	0-10	
Vinyl Chloride	95	94	56-140	2	0-21	
Methyl-t-Butyl Ether (MTBE)	84	83	64-136	1	0-28	
Tert-Butyl Alcohol (TBA)	106	105	27-183	1	0-60	
Diisopropyl Ether (DIPE)	88	88	78-126	0	0-16	
Ethyl-t-Butyl Ether (ETBE)	82	82	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	81	82	63-141	1	0-21	
Ethanol	118	118	11-167	0	0-64	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	06/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
09-06-0487-2	**Aqueous**	**GC/MS BB**	**06/11/09**	**06/11/09**	**090611S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	98	86-122	2	0-8	
Carbon Tetrachloride	91	90	78-138	0	0-9	
Chlorobenzene	97	99	90-120	2	0-9	
1,2-Dibromoethane	96	95	70-130	1	0-30	
1,2-Dichlorobenzene	95	99	89-119	4	0-10	
1,1-Dichloroethene	77	74	52-142	4	0-23	
Ethylbenzene	82	83	70-130	2	0-30	
Toluene	91	91	85-127	0	0-12	
Trichloroethene	97	96	78-126	1	0-10	
Vinyl Chloride	91	100	56-140	9	0-21	
Methyl-t-Butyl Ether (MTBE)	81	81	64-136	1	0-28	
Tert-Butyl Alcohol (TBA)	100	100	27-183	0	0-60	
Diisopropyl Ether (DIPE)	83	84	78-126	1	0-16	
Ethyl-t-Butyl Ether (ETBE)	79	78	67-133	1	0-21	
Tert-Amyl-Methyl Ether (TAME)	80	80	63-141	0	0-21	
Ethanol	119	114	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:	09-06-0348
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15M

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
097-09-002-8,620	Air	GC/MS AA	N/A	06/04/09	090604L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	112	111	60-156	1	0-40	
Toluene	114	114	56-146	0	0-43	
Ethylbenzene	128	125	52-154	2	0-38	
p/m-Xylene	115	112	42-156	2	0-41	
o-Xylene	125	123	52-148	2	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-0348
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-695-563	**Aqueous**	**GC 4**	**06/04/09**	**06/04/09**	**090604B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	104	109	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:	09-06-0348
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-916	Aqueous	GC/MS Z	06/04/09	06/04/09	090604L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	101	102	87-117	82-122	1	0-7	
Carbon Tetrachloride	107	104	78-132	69-141	3	0-8	
Chlorobenzene	100	101	88-118	83-123	1	0-8	
1,2-Dibromoethane	108	104	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	104	101	88-118	83-123	2	0-8	
1,1-Dichloroethene	107	105	71-131	61-141	2	0-14	
Ethylbenzene	104	105	80-120	73-127	0	0-20	
Toluene	100	100	85-127	78-134	0	0-7	
Trichloroethene	99	103	85-121	79-127	3	0-11	
Vinyl Chloride	103	105	64-136	52-148	1	0-10	
Methyl-t-Butyl Ether (MTBE)	101	98	67-133	56-144	2	0-16	
Tert-Butyl Alcohol (TBA)	106	100	34-154	14-174	6	0-19	
Diisopropyl Ether (DIPE)	98	97	80-122	73-129	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	108	98	73-127	64-136	10	0-11	
Tert-Amyl-Methyl Ether (TAME)	101	100	69-135	58-146	1	0-12	
Ethanol	117	114	34-124	19-139	3	0-44	

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

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-06-0348
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-930	Aqueous	GC/MS BB	06/10/09	06/10/09	090610L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	98	95	87-117	82-122	3	0-7	
Carbon Tetrachloride	90	89	78-132	69-141	1	0-8	
Chlorobenzene	97	98	88-118	83-123	1	0-8	
1,2-Dibromoethane	95	92	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	102	100	88-118	83-123	2	0-8	
1,1-Dichloroethene	95	94	71-131	61-141	1	0-14	
Ethylbenzene	89	90	80-120	73-127	1	0-20	
Toluene	95	95	85-127	78-134	0	0-7	
Trichloroethene	100	98	85-121	79-127	2	0-11	
Vinyl Chloride	94	99	64-136	52-148	5	0-10	
Methyl-t-Butyl Ether (MTBE)	84	83	67-133	56-144	1	0-16	
Tert-Butyl Alcohol (TBA)	93	92	34-154	14-174	1	0-19	
Diisopropyl Ether (DIPE)	88	85	80-122	73-129	3	0-8	
Ethyl-t-Butyl Ether (ETBE)	82	80	73-127	64-136	3	0-11	
Tert-Amyl-Methyl Ether (TAME)	82	81	69-135	58-146	1	0-12	
Ethanol	114	113	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.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received:	N/A
3330 Cameron Park Drive, Suite 550	Work Order No:	09-06-0348
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-703-933	**Aqueous**	**GC/MS BB**	**06/11/09**	**06/11/09**	**090611L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	97	98	87-117	82-122	1	0-7	
Carbon Tetrachloride	93	94	78-132	69-141	1	0-8	
Chlorobenzene	98	99	88-118	83-123	1	0-8	
1,2-Dibromoethane	96	100	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	97	99	88-118	83-123	2	0-8	
1,1-Dichloroethene	94	96	71-131	61-141	3	0-14	
Ethylbenzene	90	90	80-120	73-127	0	0-20	
Toluene	96	96	85-127	78-134	0	0-7	
Trichloroethene	98	100	85-121	79-127	2	0-11	
Vinyl Chloride	102	97	64-136	52-148	5	0-10	
Methyl-t-Butyl Ether (MTBE)	82	87	67-133	56-144	6	0-16	
Tert-Butyl Alcohol (TBA)	96	98	34-154	14-174	2	0-19	
Diisopropyl Ether (DIPE)	86	88	80-122	73-129	2	0-8	
Ethyl-t-Butyl Ether (ETBE)	80	84	73-127	64-136	5	0-11	
Tert-Amyl-Methyl Ether (TAME)	82	85	69-135	58-146	4	0-12	
Ethanol	112	117	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.

Glossary of Terms and Qualifiers

Work Order Number: 09-06-0348

Qualifier	Definition
AX	Sample too dilute to quantify surrogate.
BA	Relative percent difference out of control.
BA,AY	BA = Relative percent difference out of control. AY = 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.
BZ	Sample preserved improperly.
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.
DU	Insufficient sample quantity for matrix spike/dup matrix spike.
ET	Sample was extracted past end of recommended max. holding time.
EY	Result exceeds normal dynamic range; reported as a min est.
GR	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,AY	LG= Surrogate recovery below the acceptance limit. AY= Matrix interference suspected.
LH,AY	LH= Surrogate recovery above the acceptance limit. AY= Matrix interference suspected.
LM,AY	LM= MS and/or MSD above acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LN,AY	LN= MS and/or MSD below acceptance limits. See Blank Spike (LCS). AY= Matrix interference suspected.
LQ	LCS recovery above method control limits.

Work Order Number: 09-06-0348

Qualifier	Definition
LR	LCS recovery below method control limits.
LW	Quantitation of unknown hydrocarbon(s) in sample based on gasoline.
LX	Quantitation of unknown hydrocarbon(s) in sample based on diesel.
MB	Analyte present in the method blank.
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.
SG	A silica gel cleanup procedure was performed.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

BP/ARC Project Name: ARCO 2111- O&M
BP/ARC Facility No: 2111
Req Due Date (mm/dd/yy): Eff 24hrs&othersSTD Rush TAT: Yes x No
Lab Work Order Number: 09-06-0348

Lab Name: Calscience Environmental Laboratories, Inc.	BP/ARC Facility Address: 1156 Davis Street	Consultant/Contractor: Stratus Environmental, Inc.
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: San Leandro, California	Consultant/Contractor Project No: E2111-03
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda County Environmental Health	Address: 3330 Cameron Park Dr., Suite 550, Cameron Park, CA 95682
Lab Phone: 714-895-5494	California Global ID No.: T0600101764	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt: 9255	Enfos Proposal No: 000TV-0002	Phone: 530-676-6000
Lab Bottle Order No:	Accounting Mode: Provision x OOC-BU ___ OOC-RM ___	Email EDD To: chuff@stratusinc.net
Other Info:	Stage: Operate Activity: O&M	Invoice To: BP/ARC x Contractor ___
BP/ARC EBM: Paul Supple		
EBM Phone: 925-275-3801		
EBM Email: paul.supple@bp.com		

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO	BTEX	MTBE	5-oxys	Turnaround Time: 24-hours	Standard
1	02111DPEAINF	6304	0936			x	2	x					x	x	x			x
2	02111ASAEFF		0933			x	2	x					x	x	x			x
3	02111ASYSINF		0931			x	2	x					x	x	x			x
4	02111AGAC1		0929			x	2	x					x	x	x			x
5	02111AEFF		0927			x	2	x					x	x	x			x
6	02111DPEWINF		0914		x		6				x		x	x		x		x
7	02111ASWINF		0910		x		6				x		x	x		x		x
8	02111ASWEFF		0907		x		6				x		x	x		x		x
9	02111WGAC1		0903		x		6				x		x	x		x		x
10	02111WEFF		0900		x		6				x		x	x		x		x
11	02111MW2WINF		0918		x		6				x		x	x		x		x
12	TB2111163109	6309	0925				2											

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

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

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

Sampler's Name: Chris Hill
Sampler's Company: Stratus Environmental, Inc.
Shipment Method: GSO Ship Date: 6309
Shipment Tracking No: 167749014

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature] Stratus	6309	1600			
			[signature]	9/6/09	1035

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

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

167749012

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

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-06-0348

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 6/4/09

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

Temperature 3.8 °C - 0.2 °C (CF) = 3.6 °C ☑ Blank ☐ Sample

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

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

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

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

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
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 ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB ☐100PB**na$_2$** ☐_____ ☐_____ ☐_____

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

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** DL

Preservative: h: HCL n: HNO3 **na$_2$**:$Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** DL

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-06- 0348

SAMPLE RECEIPT FORM

Box Cooler 1 of 1

CLIENT: Stratus

DATE: 06/04/09

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

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

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

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

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

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

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ COC not relinquished. ☐ No date relinquished. ☐ No time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Correct containers and volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☑	☐	☐

CONTAINER TYPE:

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

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PB ☐100PB**na$_2$** ☐_____ ☐_____ ☐_____

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

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar (Wide-mouth) B: Bottle (Narrow-mouth) **Reviewed by:** WSC

Preservative: h: HCL n: HNO3 na$_2$: $Na_2S_2O_3$ Na: NaOH p: H_3PO_4 s: H_2SO_4 znna: $ZnAc_2$+NaOH f: Field-filtered **Scanned by:** PS

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 May 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 April 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for April 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 3,730 gallons of treated groundwater were discharged to the sanitary sewer between March 31, 2009 and April 29, 2009.

If you have any questions or need any additional information, please call either Kiran Nagaraju at (530) 676-6007 or myself at (530) 676-6000.

Sincerely,

Jay R. Johnson, P.G.
Project Manager

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

MONTHLY DISCHARGE REPORT
ARCO SERVICE STATION #2111, 1156 DAVIS STREET

This form and enclosed documents serve as the remediation activities monthly discharge report to the City of San Leandro for the reporting period of: March 31, 2009 to April 29, 2009. This report is submitted in compliance with 40 CFR 403.12 and Part III (A) of Special Discharge Permit **SD-036**. The information contained in this report is accurate and complete. For any questions or comments regarding this report, contact Kiran Nagaraju at (530) 676 6007.

Number of days discharged: 29

Total monthly discharge: 3,730 U. S. Gallons

Signature of Certifying Official: _____

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

Title: Project Manager

Date: May 3, 2009

Include a brief statement summarizing the month's operations:

The operation of the dual phase extraction (DPE) system, air stripper (AS), and the groundwater extraction and treatment system (GETS) was initiated on January 29, 2007. Soil vapors and groundwater were concurrently extracted from wells V-1, V-2, V-3, MW-1, MW-3, MW-7, and MW-8 using the liquid ring pump of the DPE system. In addition, groundwater was also extracted from well MW-2 using the electrical submersible pump. The groundwater extracted by both the DPE and the submersible pump is treated using the air stripper and two 2,000-pound carbon vessels in series prior to discharge to the sewer. Groundwater extraction using well MW-2 was temporarily discontinued on February 18, 2009. The remediation systems were found non-functioning on April 6, 2009, 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 April 6, 2009 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 April 14, 2009. The remediation systems were again found non-functioning on April 21, 2009 and April 29, 2009, due to a high-water level alarm either in the air stripper tank or in the oil-water separator and were re-started on the same respective days after re-setting the high level alarms.

Submit reports to: City of San Leandro – Environmental Services Division
835 East 14th Street, San Leandro CA 94577

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
January-07	1/29/07 8:00 1/29/07 8:00 1/29/07[1] 12:00 01/30/07 01/31/07	System Start-up 3,000 5,000 6,200 8,560	5,560
February-07	2/1/07 5:15 2/2/07 5:00 2/5/07 5:00 2/20/07 6:30	16,860 25,480 33,400 122,790	114,230
March-07	3/5/07[2] 5:00 3/8/07[3] 4:50 3/14/07[4] 7:00 3/29/07[5] 10:00	130,565 132,951 NM 133,262	10,472
April-07	4/2/07[6] 5:30 4/10/07[7] 5:00 4/23/07[8] 7:00 4/26/07 6:00	170,596 NM 172,210 200,143	66,881
May-07	5/1/2007[9] 4:50 5/15/2007[10] 5:00 5/29/07 8:30	220,892 225,297 410,246	210,103
June-07	6/4/2007[11] 5:00 6/12/2007[12] 5:00 6/26/2007[13] 4:30	429,450 430,092 430,222	19,976
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

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-07	9/5/2007 [11] 5:00 9/11/2007 [16] 9:00 9/17/2007 [17] 5:30	589,944 589,950 591,443	8,737
October-07	10/1/07 [18] 5:00 10/11/07 [19] 8:15 10/23/07 [16] 5:00 10/30/07 [15] 7:10	592,403 NM NM 593,647	2,204
November-07	11/6/07 [11] 4:30 11/14/07 [16] 6:00 11/20/07 [15] 6:50	612,552 612,552 613,537	19,890
December-07	12/5/07 [11] 5:00 12/17/07 [16] 4:30	633,121 633,123	19,586
January-08	1/7/08 [11] 5:00 1/15/08 [16] 7:00	635,200 636,041	2,918
February-08	2/5/08 [20] 8:15 2/26/08 [8] 6:00	642,841 643,443	7,402
March-08	3/5/08 [11] 4:00 3/17/08 [21] 4:30	646,123 646,221	2,778
April-08	4/1/08 [22] 5:00 4/14/08 [23] 5:00 4/22/08 5:00	719,174 719,881 757,683	111,462
May-08	5/6/08 [24] 5:15 5/12/08 4:45 5/20/08 7:00 5/27/08 6:15	806,356 822,743 844,640 914,563	156,880

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)
June-08	6/2/08 [15] 5:00 6/9/08 [15] 7:15 6/16/08 [15] 7:16 6/23/08 [15] 7:24	949,693 984,702 1,001,527 1,017,867	103,304
July-08	7/1/08 [11] 7:27 7/7/08 [25] 6:54 7/23/08 [26] 7:30 7/29/08 [15] 4:30	1,028,841 1,029,035 1,029,035 1,029,743	11,876
August-08	8/5/08 [15] 4:30 8/12/08 [15] 5:00 8/27/08 [15] 9:15	1,037,580 1,040,731 1,050,359	20,616
September-08	9/2/08 [11] 8:30 9/10/08 [27] 12:30 9/17/08 [15] 7:00 9/24/08 [15] 7:15	1,052,669 1,052,851 1,056,514 1,056,950	6,591
October-08	10/1/08 [28] 6:57 10/2/08 [29] 7:50	1,067,983 NM	11,033
November-08	11/10/08 [30] 6:30 11/11/08 [26] 6:30 11/17/08 [11] 5:00 11/24/08 [16] 4:30	NM 1,068,053 1,077,116 1,075,351	7,368
December-08	12/1/08 [11] 7:50 12/8/08 [16] 6:00 12/17/08 [15] 8:00 12/22/08 6:00 12/30/08 [15] 7:00	1,085,806 1,086,147 1,093,162 1,148,631 1,153,621	78,270

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-09	1/7/09 [3] 7:15	1,239,376	96,244
	1/15/09 [16] 6:00	1,239,672	
	1/20/09 [15] 6:30	1,245,970	
	1/29/09 [15] 4:45	1,249,865	
February-09	2/3/09 [3] 5:00	1,297,359	63,899
	2/10/09 [16] 5:00	1,297,652	
	2/12/09 [15] 7:58	NM	
	2/18/09 [31] 5:30	1,313,764	
	2/25/09 6:00	NM	
March-09	3/3/09 [3] 5:00	1,402,083	189,047
	3/11/09 [16] 7:30	1,402,123	
	3/16/09 6:30	1,435,688	
	3/23/09 7:00	1,460,272	
	3/31/09 6:30	1,502,811	
April-09	4/6/09 [11] 6:40	1,503,553	3,730
	4/14/09 [16] 6:05	1,504,091	
	4/21/09 [15] 9:30	1,506,412	
	4/29/09 [15] 10:15	1,506,541	

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.

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)

[9] System observed non-functioning upon arrival due to DPE liquid ring pump malfunction. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[10] System re-started upon compliance verification and after conducting maintenance on the liquid ring pump.

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

[12] System re-started momentarily upon compliance verification and to collect carbon sample for profiling and change-out.

[13] System re-started upon receipt of analytical results for carbon profile.

[14] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started after replacing particulate filters on the system.

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

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

[17] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started momentarily after conducting maintenance, but shutdown pending further troubleshooting.

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

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

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

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

[22] System observed non-functioning upon arrival due to power failure. System re-started, but shutdown after sampling pending receipt and verification of analytical results. Floats were replaced on DPE system.

[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to transfer pump contactor malfunction. Currently only GETS operational.

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

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

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

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

[28] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System not re-started, pending carbon change-out for liquid phase carbon vessels.

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

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)
[30] Carbon change-out for liquid phase carbon vessels completed. [31] System observed non-functioning upon arrival. Re-started by re-setting power supply. Groundwater extraction discontinued from well MW-2.			

STRATUS
ENVIRONMENTAL, INC.

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

TRANSMITTAL

Date June 1, 2009

Project E2111-03

To:

Ms. Tiffany Treece

City of San Leandro

Environmental Services Division

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 May 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for May 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 5,274 gallons of treated groundwater were discharged to the sanitary sewer between April 29, 2009 and May 4, 2009.

If you have any questions or need any additional information, please call either Kiran Nagaraju at (530) 676-6007 or myself at (530) 676-6000.

Sincerely,

Jay R. Johnson, P.G.
Project Manager

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

MONTHLY DISCHARGE REPORT
ARCO SERVICE STATION #2111, 1156 DAVIS STREET

This form and enclosed documents serve as the remediation activities monthly discharge report to the City of San Leandro for the reporting period of: April 29, 2009 to May 12, 2009. This report is submitted in compliance with 40 CFR 403.12 and Part III(A) of Special Discharge Permit **SD-036**. The information contained in this report is accurate and complete. For any questions or comments regarding this report, contact Kiran Nagaraju at (530)676 6007.

Number of days discharged: 14 days

Total monthly discharge: 5,274 (between April 29, 2009 and May 4, 2009) U. S. Gallons

Signature of Certifying Official: _____

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

Title: Project Manager

Date: 5/28/09

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 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 system and the submersible pump is treated using the air stripper and two 2,000 pound carbon vessels in series prior to discharge to the sewer. Groundwater extraction using well MW-2 was temporarily discontinued on February 18, 2009.

The remediation systems were found non-functioning during the site visit conducted on May 4, 2009 due to a high-water level alarm either in the air stripper tank or the oil-water separator. The DPE system and the submersible pump for MW-2 were restarted momentarily on May 4, 2009, and shutdown after collecting air and water samples pending compliance verification. Upon receipt of analytical results and compliance verification, Stratus attempted to restart the DPE system on May 12, 2009. However, the DPE system could not be restarted on May 12, 2009, due to a malfunction of PLC. The PLC will be reprogrammed and the DPE system will be restarted during June 2009. The effluent flow totalizer reading for May 12, 2009 appears to be erroneous and hence was not used in calculating the discharge volume for May 2009.

Submit reports to: City of San Leandro – Environmental Services Division
835 East 14th Street, San Leandro CA 94577

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
January-07	1/29/07 8:00 1/29/07 8:00 1/29/07[1] 12:00 01/30/07 01/31/07	System Start-up 3,000 5,000 6,200 8,560	5,560
February-07	2/1/07 5:15 2/2/07 5:00 2/5/07 5:00 2/20/07 6:30	16,860 25,480 33,400 122,790	114,230
March-07	3/5/07[2] 5:00 3/8/07[3] 4:50 3/14/07[4] 7:00 3/29/07[5] 10:00	130,565 132,951 NM 133,262	10,472
April-07	4/2/07[6] 5:30 4/10/07[7] 5:00 4/23/07[8] 7:00 4/26/07 6:00	170,596 NM 172,210 200,143	66,881
May-07	5/1/2007[9] 4:50 5/15/2007[10] 5:00 5/29/07 8:30	220,892 225,297 410,246	210,103
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July-07	7/2/07 5:30 7/10/2007 [14] 5:45 7/17/2007 [15] 5:00	480,377 523,553 546,094	115,872
August-07	8/1/2007 [15] 5:00 8/7/07 5:00 8/20/2007 [15] 5:00	580,301 580,662 582,706	36,612

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1156 Davis Street
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Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
September-07	9/5/2007 [11] 5:00 9/11/2007 [16] 9:00 9/17/2007 [17] 5:30	589,944 589,950 591,443	8,737
October-07	10/1/07 [18] 5:00 10/11/07 [19] 8:15 10/23/07 [16] 5:00 10/30/07 [15] 7:10	592,403 NM NM 593,647	2,204
November-07	11/6/07 [11] 4:30 11/14/07 [16] 6:00 11/20/07 [15] 6:50	612,552 612,552 613,537	19,890
December-07	12/5/07 [11] 5:00 12/17/07 [16] 4:30	633,121 633,123	19,586
January-08	1/7/08 [11] 5:00 1/15/08 [16] 7:00	635,200 636,041	2,918
February-08	2/5/08 [20] 8:15 2/26/08 [8] 6:00	642,841 643,443	7,402
March-08	3/5/08 [11] 4:00 3/17/08 [21] 4:30	646,123 646,221	2,778
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May-08	5/6/08 [24] 5:15 5/12/08 4:45 5/20/08 7:00 5/27/08 6:15	806,356 822,743 844,640 914,563	156,880

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1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
June-08	6/2/08 [15] 5:00	949,693	103,304
	6/9/08 [15] 7:15	984,702	
	6/16/08 [15] 7:16	1,001,527	
	6/23/08 [15] 7:24	1,017,867	
July-08	7/1/08 [11] 7:27	1,028,841	11,876
	7/7/08 [25] 6:54	1,029,035	
	7/23/08 [26] 7:30	1,029,035	
	7/29/08 [15] 4:30	1,029,743	
August-08	8/5/08 [15] 4:30	1,037,580	20,616
	8/12/08 [15] 5:00	1,040,731	
	8/27/08 [15] 9:15	1,050,359	
September-08	9/2/08 [11] 8:30	1,052,669	6,591
	9/10/08 [27] 12:30	1,052,851	
	9/17/08 [15] 7:00	1,056,514	
	9/24/08 [15] 7:15	1,056,950	
October-08	10/1/08 [28] 6:57	1,067,983	11,033
	10/2/08 [29] 7:50	NM	
November-08	11/10/08 [30] 6:30	NM	7,368
	11/11/08 [26] 6:30	1,068,053	
	11/17/08 [11] 5:00	1,077,116	
	11/24/08 [16] 4:30	1,075,351	
December-08	12/1/08 [11] 7:50	1,085,806	78,270
	12/8/08 [16] 6:00	1,086,147	
	12/17/08 [15] 8:00	1,093,162	
	12/22/08 6:00	1,148,631	
	12/30/08 [15] 7:00	1,153,621	

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-09	1/7/09 [3] 7:15	1,239,376	96,244
	1/15/09 [16] 6:00	1,239,672	
	1/20/09 [15] 6:30	1,245,970	
	1/29/09 [15] 4:45	1,249,865	
February-09	2/3/09 [3] 5:00	1,297,359	63,899
	2/10/09 [16] 5:00	1,297,652	
	2/12/09 [15] 7:58	NM	
	2/18/09 [31] 5:30	1,313,764	
	2/25/09 6:00	NM	
March-09	3/3/09 [3] 5:00	1,402,083	189,047
	3/11/09 [16] 7:30	1,402,123	
	3/16/09 6:30	1,435,688	
	3/23/09 7:00	1,460,272	
	3/31/09 6:30	1,502,811	
April-09	4/6/09 [11] 6:40	1,503,553	3,730
	4/14/09 [16] 6:05	1,504,091	
	4/21/09 [15] 9:30	1,506,412	
	4/29/09 [15] 10:15	1,506,541	
May-09	5/4/09 [11] 6:00	1,511,815	5,274
	5/12/09 [32] 18:00	1,151,034 [33]	

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)

Notes:
NM = Not measured

[1] Submersible pump at well MW-2 was shutdown. This pump will be re-started after troubleshooting the level floats/controller malfunction.

[2] System observed non-functioning upon arrival. Re-started by re-setting power supply.

[3] System shutdown to verify effluent air results.

[4] System shutdown due to float malfunction.

[5] System re-started after replacing the floats.

[6] System shutdown due to high-level in oil-water separator. System restarted after replacing a capacitor on the transfer pump.

[7] System shutdown due to transfer pump malfunction. System could not be restarted pending replacement of transfer pump.

[8] System restarted after replacing transfer pump.

[9] System observed non-functioning upon arrival due to DPE liquid ring pump malfunction. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[10] System re-started upon compliance verification and after conducting maintenance on the liquid ring pump.

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

[12] System re-started momentarily upon compliance verification and to collect carbon sample for profiling and change-out.

[13] System re-started upon receipt of analytical results for carbon profile.

[14] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started after replacing particulate filters on the system.

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

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

[17] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started momentarily after conducting maintenance, but shutdown pending further troubleshooting.

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

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

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

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

[22] System observed non-functioning upon arrival due to power failure. System re-started, but shutdown after sampling pending receipt and verification of analytical results. Floats were replaced on DPE system.

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)

[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to transfer pump contactor malfunction. Currently only GETS operational.

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

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

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

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

[28] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System not re-started, pending carbon change-out for liquid phase carbon vessels.

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

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

[31] System observed non-functioning upon arrival. Re-started by re-setting power supply.

[32] Attempt to re-start after compliance verification but PLC malfunction. Hence, system could not be restarted pending reprogramming/troubleshooting of the PLC.

[33] The flow totalizer reading for May 12, 2009 appears to be erroneous and hence was not used in calculating the monthly discharge volume for May 2009.

STRATUS
ENVIRONMENTAL, INC.

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

TRANSMITTAL

Date July 1, 2009

Project E2111-03

To:

Ms. Tiffany Treece

City of San Leandro

Environmental Services Division

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 June 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for June 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 15,742 gallons of treated groundwater were discharged to the sanitary sewer between May 4, 2009 and June 30, 2009.

If you have any questions or need any additional information, please call either Kiran Nagaraju at (530) 676-6007 or myself at (530) 676-6000.

Sincerely,

Jay R. Johnson, P.G.
Project Manager

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

MONTHLY DISCHARGE REPORT
ARCO SERVICE STATION #2111, 1156 DAVIS STREET

This form and enclosed documents serve as the remediation activities monthly discharge report to the City of San Leandro for the reporting period of: May 12, 2009 to June 30, 2009. This report is submitted in compliance with 40 CFR 403.12 and Part III(A) of Special Discharge Permit **SD-036**. The information contained in this report is accurate and complete. For any questions or comments regarding this report, contact Kiran Nagaraju at (530)676 6007.

Number of days discharged: 27 days

Total monthly discharge: 15,742 (between May 4, 2009 and June 30, 2009) U. S. Gallons

Signature of Certifying Official: _____

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

Title: Project Manager

Date: 06/30/09

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 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 system and the submersible pump is treated using the air stripper and two 2,000 pound carbon vessels in series prior to discharge to the sewer. Groundwater extraction using well MW-2 was temporarily discontinued on February 18, 2009.

On June 3, 2009, Stratus met with an electrician to troubleshoot the electrical/PLC problems. The remediation systems were re-started on the same day after replacing a fuse. The groundwater treatment was found non-functioning during all other site visits conducted in June 2009 due to a high-water level alarm in the oil-water separator tank. The level floats on this tank were replaced during a site visit conducted on June 30, 2009 to improve the system operating efficiency.

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	
July-07	7/2/07 5:30	480,377	115,872
	7/10/2007 [14] 5:45	523,553	
	7/17/2007 [15] 5:00	546,094	
August-07	8/1/2007 [15] 5:00	580,301	36,612
	8/7/07 5:00	580,662	
	8/20/2007 [15] 5:00	582,706	

TABLE 1
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1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
September-07	9/5/2007 [11] 5:00 9/11/2007 [16] 9:00 9/17/2007 [17] 5:30	589,944 589,950 591,443	8,737
October-07	10/1/07 [18] 5:00 10/11/07 [19] 8:15 10/23/07 [16] 5:00 10/30/07 [15] 7:10	592,403 NM NM 593,647	2,204
November-07	11/6/07 [11] 4:30 11/14/07 [16] 6:00 11/20/07 [15] 6:50	612,552 612,552 613,537	19,890
December-07	12/5/07 [11] 5:00 12/17/07 [16] 4:30	633,121 633,123	19,586
January-08	1/7/08 [11] 5:00 1/15/08 [16] 7:00	635,200 636,041	2,918
February-08	2/5/08 [20] 8:15 2/26/08 [8] 6:00	642,841 643,443	7,402
March-08	3/5/08 [11] 4:00 3/17/08 [21] 4:30	646,123 646,221	2,778
April-08	4/1/08 [22] 5:00 4/14/08 [23] 5:00 4/22/08 5:00	719,174 719,881 757,683	111,462
May-08	5/6/08 [24] 5:15 5/12/08 4:45 5/20/08 7:00 5/27/08 6:15	806,356 822,743 844,640 914,563	156,880

TABLE 1
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ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
June-08	6/2/08 [15] 5:00 6/9/08 [15] 7:15 6/16/08 [15] 7:16 6/23/08 [15] 7:24	949,693 984,702 1,001,527 1,017,867	103,304
July-08	7/1/08 [11] 7:27 7/7/08 [25] 6:54 7/23/08 [26] 7:30 7/29/08 [15] 4:30	1,028,841 1,029,035 1,029,035 1,029,743	11,876
August-08	8/5/08 [15] 4:30 8/12/08 [15] 5:00 8/27/08 [15] 9:15	1,037,580 1,040,731 1,050,359	20,616
September-08	9/2/08 [11] 8:30 9/10/08 [27] 12:30 9/17/08 [15] 7:00 9/24/08 [15] 7:15	1,052,669 1,052,851 1,056,514 1,056,950	6,591
October-08	10/1/08 [28] 6:57 10/2/08 [29] 7:50	1,067,983 NM	11,033
November-08	11/10/08 [30] 6:30 11/11/08 [26] 6:30 11/17/08 [11] 5:00 11/24/08 [16] 4:30	NM 1,068,053 1,077,116 1,075,351	7,368
December-08	12/1/08 [11] 7:50 12/8/08 [16] 6:00 12/17/08 [15] 8:00 12/22/08 6:00 12/30/08 [15] 7:00	1,085,806 1,086,147 1,093,162 1,148,631 1,153,621	78,270

TABLE 1
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ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
January-09	1/7/09 [3] 7:15	1,239,376	96,244
	1/15/09 [16] 6:00	1,239,672	
	1/20/09 [15] 6:30	1,245,970	
	1/29/09 [15] 4:45	1,249,865	
February-09	2/3/09 [3] 5:00	1,297,359	63,899
	2/10/09 [16] 5:00	1,297,652	
	2/12/09 [15] 7:58	NM	
	2/18/09 [31] 5:30	1,313,764	
	2/25/09 6:00	NM	
March-09	3/3/09 [3] 5:00	1,402,083	189,047
	3/11/09 [16] 7:30	1,402,123	
	3/16/09 6:30	1,435,688	
	3/23/09 7:00	1,460,272	
	3/31/09 6:30	1,502,811	
April-09	4/6/09 [11] 6:40	1,503,553	3,730
	4/14/09 [16] 6:05	1,504,091	
	4/21/09 [15] 9:30	1,506,412	
	4/29/09 [15] 10:15	1,506,541	
May-09	5/4/09 [11] 6:00	1,511,815	5,274
	5/12/09 [32] 18:00	1,151,034 [33]	
June-09	6/3/09 [34] 8:00	1,512,537	15,742
	6/09/09 [15] 6:30	1,524,993	
	6/15/09 [15] 6:30	1,525,590	
	6/22/09 [15] 6:00	1,525,578	
	6/30/09 [35] 6:00	1,527,557	

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)

Notes:
NM = Not measured

[1] Submersible pump at well MW-2 was shutdown. This pump will be re-started after troubleshooting the level floats/controller malfunction.

[2] System observed non-functioning upon arrival. Re-started by re-setting power supply.

[3] System shutdown to verify effluent air results.

[4] System shutdown due to float malfunction.

[5] System re-started after replacing the floats.

[6] System shutdown due to high-level in oil-water separator. System restarted after replacing a capacitor on the transfer pump.

[7] System shutdown due to transfer pump malfunction. System could not be restarted pending replacement of transfer pump.

[8] System restarted after replacing transfer pump.

[9] System observed non-functioning upon arrival due to DPE liquid ring pump malfunction. System re-started, but shutdown after sampling pending receipt and verification of analytical results.

[10] System re-started upon compliance verification and after conducting maintenance on the liquid ring pump.

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

[12] System re-started momentarily upon compliance verification and to collect carbon sample for profiling and change-out.

[13] System re-started upon receipt of analytical results for carbon profile.

[14] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started after replacing particulate filters on the system.

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

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

[17] System observed non-functioning upon arrival due to high-level in oil-water separator. System re-started momentarily after conducting maintenance, but shutdown pending further troubleshooting.

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

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

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

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

[22] System observed non-functioning upon arrival due to power failure. System re-started, but shutdown after sampling pending receipt and verification of analytical results. Floats were replaced on DPE system.

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)

[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to transfer pump contactor malfunction. Currently only GETS operational.

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

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

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

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

[28] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System not re-started, pending carbon change-out for liquid phase carbon vessels.

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

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

[31] System observed non-functioning upon arrival. Re-started by re-setting power supply.

[32] Attempt to re-start after compliance verification but PLC malfunction. Hence, system could not be restarted pending reprogramming/troubleshooting of the PLC.

[33] The flow totalizer reading for May 12, 2009 appears to be erroneous and hence was not used in calculating the monthly discharge volume for May 2009.

[34] System restarted after replacing a fuse. Electrician recommended replacement of the air pressure switch. The switch was replaced on June 15, 2009.

[35] System was observed non-functioning upon arrival due to high water level alarm in oil-water separator. New float was installed on the oil-water separator and system was re-started.