Atlantic Richfield Company

Chuck Carmel
Environmental Business Manager

PO Box 1257
San Ramon, CA 94583
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30 October 2009

Re: Third Quarter 2009 Ground-Water Monitoring Report
Atlantic Richfield 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,

Chuck Carmel
Environmental Business Manager

Attachment:

Third Quarter 2009 Ground-Water Monitoring
and
Remediation System Status Report
Atlantic Richfield Company Station #2111
1156 Davis Street, San Leandro, California
ACEH Case #RO0000494

Prepared for

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

Prepared by

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

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(530) 566-1400
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30 October 2009

Project No. 06-88-615

Broadbent & Associates, Inc.
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BROADBENT & ASSOCIATES, INC
ENVIRONMENTAL. WATER RESOURCES & ENGINEERING

30 October 2009

Project No. 06-88-615

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

Attn.: Mr. Chuck Carmel

Re: Third Quarter 2009 Ground-Water Monitoring and Remediation System Status Report, Atlantic Richfield Company Station #2111, 1156 Davis Street, San Leandro, California; ACEH Case #RO0000494

Dear Mr. Carmel:

Attached is the *Third Quarter 2009 Ground-Water Monitoring and Remediation System Status Report* for Atlantic Richfield Company (a BP affiliated 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 Third Quarter 2009, and summarizes the performance of the remediation system during the same period prior to its shutdown.

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

Sincerely,

BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

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 (Submitted via GeoTracker)
Electronic copy uploaded to GeoTracker

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

Facility: #2111 Address:	1156 Davis Street, San Leandro, California
Environmental Business Manager:	Mr. Chuck Carmel
Consulting Co./Contact Person:	Broadbent & Associates, Inc.(BAI)/Mr. Tom Venus, PE (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 (Third Quarter 2009):

1. Prepared and submitted *Second Quarter 2009 Ground-Water Monitoring and Remediation System Status Report* (BAI, 07/30/2009).
2. Conducted ground-water monitoring/sampling for Third Quarter 2009. Work performed on 13 August 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 July, August and September 2009 to the City of San Leandro. Work performed by Stratus.
5. Prepared and submitted *Soil and Ground-Water Investigation Work Plan* on 31 August 2009 as requested by Alameda County Environmental Health (ACEH) in their letter dated 9 July 2009.
6. Discontinued operation of the DPE treatment system as authorized by ACEH in their letter dated 24 September 2009. System shutdown on 29 September 2009.

WORK PROPOSED FOR NEXT QUARTER (Fourth Quarter 2009):

1. Prepared and submitted this *Third Quarter 2009 Ground-Water Monitoring and Remediation System Status Report* (contained herein).
2. Prepare and submit Monthly Discharge Reports (of zero discharge) for October, November, and December 2009 to City of San Leandro Environmental Services Division.
3. Prepare and submit Quarterly Status Report for Fourth Quarter 2009 to ACEH.
4. Prepare and submit soil and ground-water investigation work plan addendum for offsite monitoring well installation as requested by ACEH in their letter dated 24 September 2009.

QUARTERLY RESULTS SUMMARY:

Current phase of project:	**Ground-Water Monitoring/Sampling**
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):	**15.80 ft (MW-6) to 24.10 ft (MW-7)**
General ground-water flow direction:	**South**
Approximate hydraulic gradient:	**0.006 ft/ft**

QUARTERLY RESULTS SUMMARY (Continued):

Current remediation techniques:	**DPE treatment system (shutdown 9/29/2009)**			
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 (shutdown 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** **138,074**		**Cumulative** **1,650,611**	
Total operating hours:	**1,614**		**5,281**	
Mass Removal (pounds)				
Gasoline range organics (GRO):	**0.051 (GWE)**	**105.04 (SVE)**	**5.965 (GWE)**	**1009.17 (SVE)**
Benzene:	**0.001 (GWE)**		**0.094 (GWE)**	
Methyl-tert butyl ether (MTBE):	**0.046 (GWE)**		**8.487 (GWE)**	
Ground-water DPE system influent sample results (2111ASWINF):	**07/08/2009**	**08/03/2009**	**09/01/2009**	
GRO (µg/L):	**84**	**<50**	**<50**	
Benzene (µg/L):	**<5.0**	**<0.50**	**<0.50**	
MTBE (µg/L):	**84**	**31**	**14**	
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):	**300**	**76**	**80**	
Benzene (mg/M^3):	**0.24**	**0.12**	**0.034**	
MTBE (mg/M^3):	**4.1**	**1.5**	**0.89**	
Soil vapor DPE system effluent sample results (2111AEFF):				
GRO (mg/M^3):	**<50**	**<38**	**<38**	
Benzene (mg/M^3):	**<0.0016**	**<0.0016**	**<0.0016**	
MTBE (mg/M^3):	**<0.0072**	**<0.0072**	**<0.0072**	

DISCUSSION:

Third quarter 2009 ground-water monitoring and sampling was conducted at Station #2111 on 13 August 2009 by Stratus personnel. Water levels were gauged in the eight wells associated with the Site. No irregularities were noted during water level gauging. Depth to water measurements ranged from 15.80 ft at MW-6 to 24.10 ft at MW-7. Resulting ground-water surface elevations ranged from 21.48 ft above datum in well MW-1 to 14.44 ft in well MW-7. Water level elevations yielded a variable potentiometric ground-water flow direction and gradient to the south at approximately 0.006 ft/ft. 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. Current and historic ground-water flow directions and horizontal gradients are summarized in Table 3. 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 current ground-water sampling schedule, water samples were collected from wells MW-1 through MW-8. No irregularities were reported during 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 Methyl Tert-Butyl Ether (MTBE), Ethyl Tert-Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether (DIPE), 1,2-Dibromomethane (EDB), 1,2-Dichloroethane (1,2-DCA), Tert-Butyl Alcohol (TBA), and Ethanol by EPA Method 8260B. The laboratory noted that the sample vials from wells MW-1, MW-2, and MW-4 through MW-7 and analyzed by EPA Method 8260B contained air bubbles greater than six millimeters in diameter. No other 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 just one of the eight wells sampled at a concentration of 330 micrograms per liter (µg/L) in well MW-2. MTBE was detected above the laboratory reporting limit in seven of the eight wells sampled at concentrations up to 39 µg/L in well MW-2. TBA was detected above the laboratory reporting limit in four of the eight wells sampled at concentrations up to 2,300 µg/L in well MW-2. The remaining fuel additives and oxygenates were not detected above their respective laboratory reporting limits in the eight wells sampled this quarter. 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. Ground-water monitoring data (GEO_WELL) and laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation receipts are provided in Appendix B.

For the Third Quarter 2009 period from 1 July 2009 to 29 September 2009, the DPE system reportedly operated approximately 73 percent of the time. During this period, a total of 138,074 gallons of ground water was treated and discharged. During the Third Quarter of 2009, influent liquid concentrations (Sample 2111ASWINF) ranged between 84 µg/L to non-detect for GRO and between 14 µg/L to 84 µg/L for MTBE. Benzene was not detected above the laboratory reporting limit in the influent liquid samples collected this quarter. During the Third Quarter of 2009, influent vapor concentrations (Sample 2111ASYSINF) ranged between 300 mg/M^3 to 76 mg/M^3 for GRO, between 0.034 mg/M^3 to 0.24 mg/M^3 for Benzene, and between 0.89 mg/M^3 and 4.1 mg/M^3 for MTBE. During the Third Quarter 2009, approximately 0.051 pounds of GRO (0.008 gallons), approximately 0.001 pounds (0.0001 gallons) and approximately 0.046 pounds of MTBE (0.007 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 1,614 hours between 1 July and 29 September 2009 based on the hour meter reading. Stratus found the system non-operational upon arrival at the Site on 8 July 2009 due to a high-water level alarm in either the air stripper tank or oil-water separator. The system was restarted and system samples were collected. The system was left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 13 July 2009 due to a high-water level alarm in either the air stripper tank or oil-water separator. The high level float in the oil-water separator was replaced and the system was restarted and left operational upon departure. Stratus found the system non-operational upon arrival at the Site on 22 July 2009 due to an electrical malfunction of the DPE blower. The system was restarted and left operational upon departure. Stratus found the system operational upon arrival at the Site on 27 July 2009. The system was left operational upon departure.

Stratus found the system operational upon arrival at the Site on 3 August 2009. System samples were collected and the system was left operational upon departure. Stratus found the system operational upon arrival at the Site on 12 August 2009. The system was left operational upon departure. Stratus found the system operational upon arrival at the Site on 12, 17, and 24 August 2009. The system was left operational upon departure following each Site visit.

Stratus found the system operational upon arrival at the Site on 1 and 8 September 2009. System samples were collected and the system was left operational upon departure following each Site visit. Stratus found the system non-operational upon arrival at the Site on 15 September 2009. The reason for the shutdown was not documented in the data package provided by Stratus. Stratus found the system operational upon arrival at the Site on 21 September 2009. The system was left operational upon departure. Stratus found the system operational upon arrival at the Site on 29 September 2009. The system was shutdown on 29 September 2009 as approved by ACEH in their letter dated 24 September 2009. Copies of Stratus' remediation system operation and maintenance data packages for Third Quarter 2009 are contained within Appendix C. Copies of Stratus' remediation system Monthly Discharge Reports for Third Quarter 2009 are contained within Appendix D.

CONCLUSIONS AND RECOMMENDATIONS:

Water level elevations were between historic minimum and maximum ranges for each well, as summarized in Table 1, with the exception of recorded historic minimum water level elevations in wells MW-4 through MW-7. The Third Quarter 2009 ground-water flow direction and horizontal gradient was generally consistent with the highly variable range of historical data. Detected analyte concentrations were within the historic minimum and maximum ranges recorded for each well, with the following exceptions: MTBE reached a historic minimum concentrations in well MW-8 (7.5 µg/L); and TBA reached a historic minimum concentration in well MW-7 (19 µg/L).

The system was shutdown on 29 September 2009 due to 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. The shutdown was approved by ACEH in their letter dated 24 September 2009. Offsite investigation should continue to determine if a plume of petroleum hydrocarbons in ground water presents an exposure hazard to downgradient receptors. BAI shall respond to the ACEH letter dated 24 September 2009 requesting an Addendum to the work plan for offsite monitoring well installation. It should be emphasized again to the ACEH that BAI was unsuccessful in obtaining offsite access to the downgradient strip mall on Davis Street. BAI has previously provided evidence of this offsite access stalemate to the ACEH and requested that ACEH assist in obtaining offsite access if it is interested in determining whether an exposure hazard exists for the strip mall employees and visitors.

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 – 13 August 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

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

Figure 3. SVE System Influent Concentration vs. Time

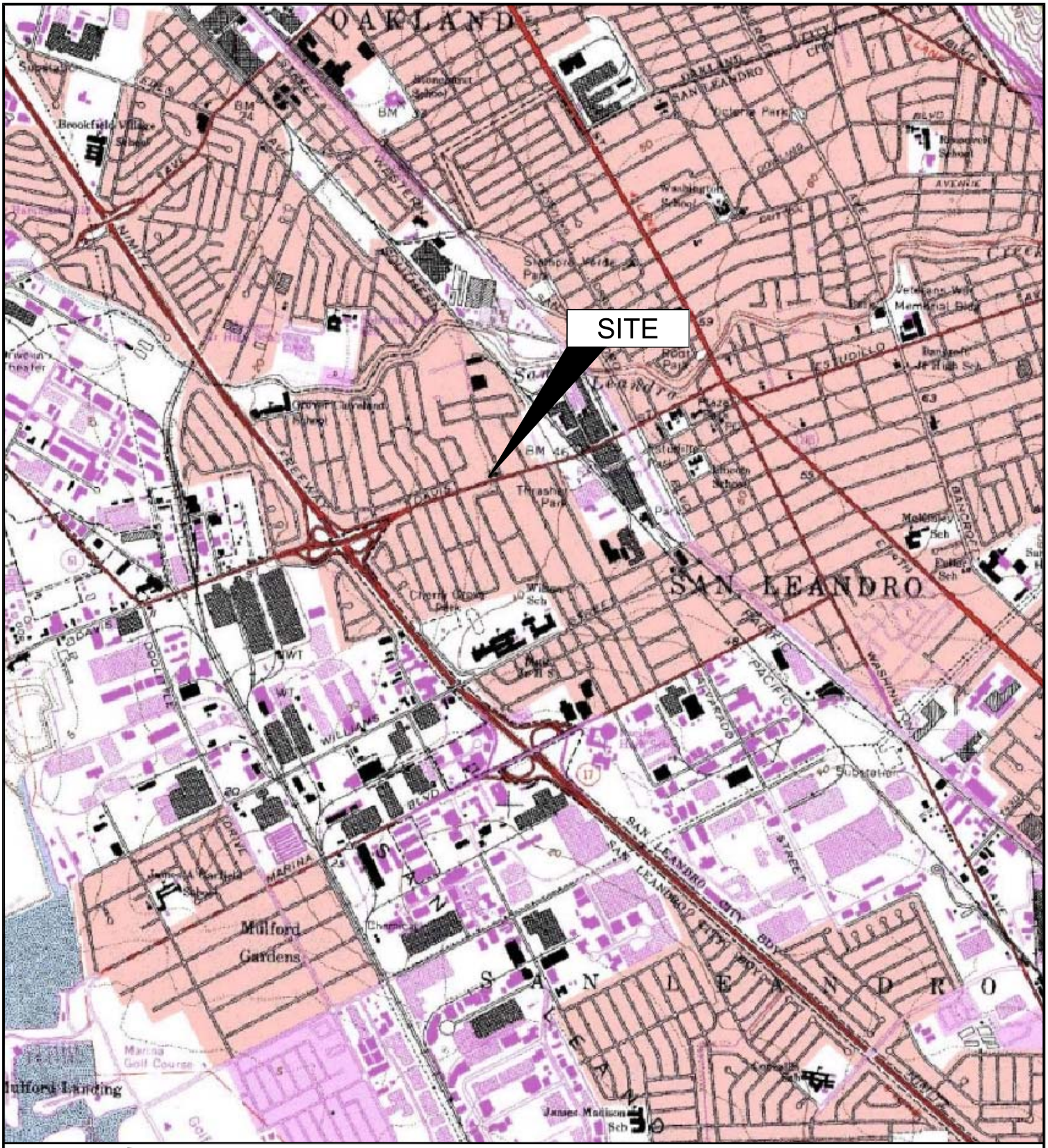
Figure 4. SVE System Cumulative GRO Mass Removed vs. Time

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

Appendix B. GeoTracker Upload Confirmation Receipts

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

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



N

0 2000 4000

APPROXIMATE SCALE (ft)

IMAGE SOURCE: USGS

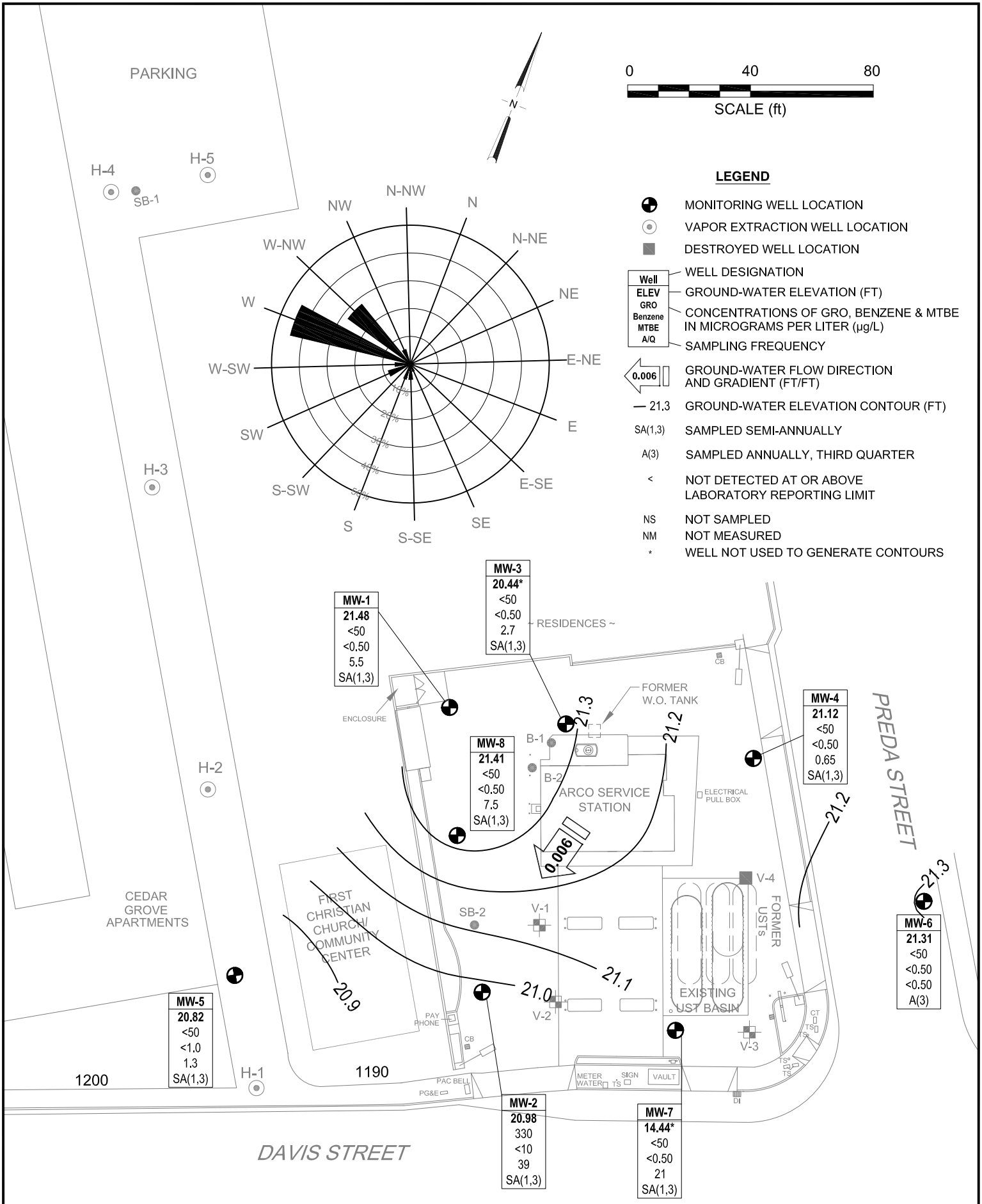
BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, CA 95926

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: 8/13/09	Station #2111 1156 Davis Street San Leandro, California	Ground-Water Elevation Contour and Analytical Summary Map 13 August 2009

Drawing
2

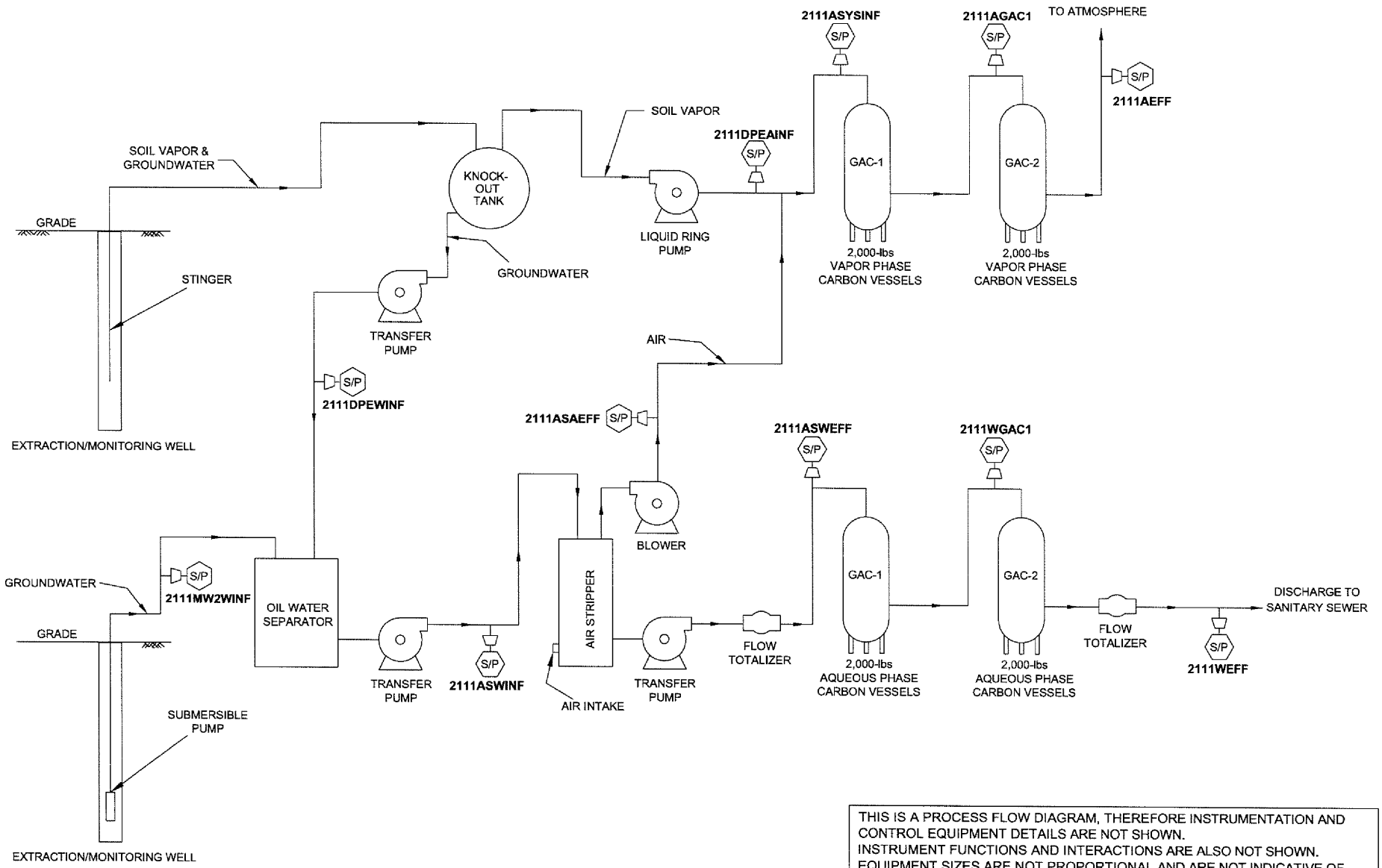


Diagram from Stratus Environmental Inc.

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
8/13/2009	**NP**	**u**	**39.49**	**12.50**	**26.00**	**18.01**	**21.48**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**5.5**	**0.14**	**7.02**
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

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.															
08/01/2005	NP		37.86	12.0	26.00	14.89	22.97	24,000	170	<50	1,100	2,700	2,700	0.64	6.9
10/21/2005	--	a	37.86	12.0	26.00	16.05	21.81	--	--	--	--	--	--	--	--
01/18/2006	NP	a	37.86	12.0	26.00	12.81	25.05	21,000	71	<50	470	1,400	1,600	1.18	6.6
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
8/13/2009	**NP**	**u**	**37.86**	**12.0**	**26.00**	**16.88**	**20.98**	**330**	**<10**	**<10**	**<10**	**<10**	**39**	**0.81**	**7.12**
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

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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-3 Cont.															
04/07/03	NP		39.32	12.00	**26.00**	16.15	23.17	88	<0.50	<0.50	<0.50	<0.50	75	7.0	7.0
7/9/2003	--		39.32	12.00	**26.00**	16.79	22.53	100	<0.50	<0.50	<0.50	<0.50	52	6.5	6.5
02/05/2004	NP	m	39.19	12.00	26.00	15.66	23.53	240	<0.50	<0.50	<0.50	<0.50	37	0.5	--
04/05/2004	NP		39.19	12.00	26.00	15.78	23.41	140	<0.50	<0.50	<0.50	0.60	53	1.0	6.6
07/13/2004	NP		39.19	12.00	26.00	17.20	21.99	120	<0.50	<0.50	<0.50	<0.50	35	0.8	6.7
11/04/2004	NP		39.19	12.00	26.00	17.32	21.87	160	<0.50	<0.50	<0.50	<0.50	25	0.8	6.5
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
8/13/2009	**NP**		**39.19**	**12.00**	**26.00**	**18.75**	**20.44**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**2.7**	**0.15**	**7.03**
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	--	--

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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-4 Cont.															
3/13/2001	--		38.10	10.0	24.00	13.73	24.37	76	0.796	<0.5	<0.5	<0.5	53.7/50	--	--
9/18/2001	--		38.10	10.0	24.00	16.50	21.60	<50	<0.5	<0.5	<0.5	<0.5	25/26	--	--
12/28/2001	--		38.10	10.0	24.00	14.03	24.07	<50	<0.5	<0.5	<0.5	<0.5	15/11	--	--
3/14/2002	--		38.10	10.0	24.00	14.10	24.00	<50	<0.5	<0.5	<0.5	<0.5	31/28	--	--
4/23/2002	--		38.10	10.0	24.00	13.57	24.53	<50	2.8	<0.5	<0.5	<0.5	42	--	--
7/17/2002	NP		38.10	10.0	24.00	15.76	22.34	<50	<0.50	<0.50	<0.50	<0.50	16	7.1	7.1
10/9/2002	NP		38.10	10.0	24.00	16.59	21.51	<50	2.2	<0.50	<0.50	<0.50	20/23	7.1	7.1
1/13/2003	NP	d	38.10	10.0	24.00	13.43	24.67	52	<0.50	1.6	<0.50	<0.50	22	6.6	6.6
04/07/03	NP		38.10	10.0	24.00	14.74	23.36	65	<0.50	<0.50	<0.50	<0.50	24	6.6	6.6
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

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								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE		
MW-4 Cont.															
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
8/13/2009	**NP**	**u**	**37.99**	**10.0**	**24.00**	**16.87**	**21.12**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.65**	**0.94**	**7.12**
MW-5															
6/26/2000	--		37.21	9.50	23.50	14.27	22.94	--	--	--	--	--	--	--	--
7/20/2000	--		37.21	9.50	23.50	14.69	22.52	55	<0.5	<0.5	<0.5	<1.0	14,000	--	--
9/19/2000	--		37.21	9.50	23.50	15.36	21.85	54	<0.5	<0.5	<0.5	<1.0	13,000	--	--
12/21/2000	--		37.21	9.50	23.50	15.15	22.06	72.9	2.51	<0.5	<0.5	0.961	19,200/21,200	--	--
3/13/2001	--		37.21	9.50	23.50	13.50	23.71	<500	<5	<5	<5	<5	15,900/20,000	--	--
9/18/2001	--		37.21	9.50	23.50	15.94	21.27	<10,000	<100	<100	<100	<1,000	22,000/20,000	--	--
12/28/2001	--		37.21	9.50	23.50	13.45	23.76	<10,000	<100	<100	<100	<100	10,000/10,000	--	--
3/14/2002	--		37.21	9.50	23.50	13.82	23.39	<5,000	<50	<50	<50	<50	7,100/7,700	--	--
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

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.															
4/18/2007	NP	n, EBZ present in method blank	37.12	9.50	23.50	14.50	22.62	93	<2.5	<2.5	<2.5	<2.5	16	1.66	6.84
7/17/2007	NP	n	37.12	9.50	23.50	15.55	21.57	53	<2.5	<2.5	<2.5	<2.5	6.6	5.02	7.02
10/11/2007	NP		37.12	9.50	23.50	15.83	21.29	<50	<0.50	<0.50	<0.50	<0.50	4.8	2.92	7.23
1/8/2008	NP		37.12	9.50	23.50	13.82	23.30	<50	<0.50	<0.50	<0.50	<0.50	5.6	1.80	6.91
4/8/2008	NP		37.12	9.50	23.50	14.38	22.74	<50	<0.50	<0.50	<0.50	<0.50	8.0	1.14	6.76
8/20/2008	NP		37.12	9.50	23.50	16.11	21.01	<50	<1.0	<1.0	<1.0	<1.0	3.6	1.65	6.86
11/17/2008	NP		37.12	9.50	23.50	16.15	20.97	<50	<0.50	<0.50	<0.50	<0.50	1.3	0.66	6.93
2/3/2009	NP		37.12	9.50	23.50	15.83	21.29	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.38	6.77
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
8/13/2009	**NP**	**u**	**37.12**	**9.50**	**23.50**	**16.30**	**20.82**	**<50**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**1.3**	**0.78**	**7.06**
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	--	--	--	--	--	--	--	--

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.															
04/11/2005	--		37.11	10.00	25.00	12.05	25.06	--	--	--	--	--	--	--	--
08/01/2005	NP		37.11	10.00	25.00	13.79	23.32	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.15	7.6
10/21/2005	--		37.11	10.00	25.00	14.60	22.51	--	--	--	--	--	--	--	--
01/18/2006	--		37.11	10.00	25.00	11.80	25.31	--	--	--	--	--	--	--	--
04/14/2006	--		37.11	10.00	25.00	10.92	26.19	--	--	--	--	--	--	--	--
7/19/2006	NP		37.11	10.00	25.00	12.92	24.19	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	6.9
10/24/2006	--		37.11	10.00	25.00	14.23	22.88	--	--	--	--	--	--	--	--
1/15/2007	--		37.11	10.00	25.00	13.80	23.31	--	--	--	--	--	--	--	--
4/18/2007	--		37.11	10.00	25.00	13.67	23.44	--	--	--	--	--	--	--	--
7/17/2007	NP		37.11	10.00	25.00	14.08	23.03	<50	<0.50	<0.50	<0.50	<0.50	<0.50	4.40	7.02
10/11/2007	--		37.11	10.00	25.00	15.28	21.83	--	--	--	--	--	--	--	--
1/8/2008	--		37.11	10.00	25.00	13.08	24.03	--	--	--	--	--	--	--	--
4/8/2008	--		37.11	10.00	25.00	13.52	23.59	--	--	--	--	--	--	--	--
8/20/2008	NP		37.11	10.00	25.00	15.59	21.52	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.66	6.83
11/17/2008	--		37.11	10.00	25.00	15.61	21.50	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
8/13/2009	**NP**	**u**	**37.11**	**10.00**	**25.00**	**15.80**	**21.31**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**0.85**	**7.02**
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

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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-7 Cont.															
1/13/2003	NP	f	38.68	12.0	**27.00**	13.82	24.86	<50,000	<500	<500	<500	2,200	33,000	6.6	6.6
04/07/03	NP		38.68	12.0	**27.00**	14.52	24.16	<2,500	30	<25	<25	<25	710	7.0	7.0
7/9/2003	--		38.68	12.0	**27.00**	15.97	22.71	66,000	<500	<500	<500	<500	36,000	6.7	6.7
02/05/2004	NP	m	38.54	12.0	27.00	14.75	23.79	55,000	300	<250	<250	<250	34,000	1.0	6.7
04/05/2004	NP		38.54	12.0	27.00	14.63	23.91	62,000	520	<250	<250	380	37,000	1.0	6.7
07/13/2004	NP		38.54	12.0	27.00	16.31	22.23	<100,000	<1,000	<1,000	<1,000	<1,000	56,000	0.7	6.7
11/04/2004	--		38.54	12.0	27.00	16.46	22.08	70,000	<500	<500	<500	<500	71,000	2.0	6.6
01/20/2005	NP	n	38.54	12.0	27.00	14.05	24.49	34,000	<250	<250	<250	<250	36,000	0.6	6.3
04/11/2005	NP		38.54	12.0	27.00	12.55	25.99	<2,500	46	<25	<25	<25	1,200	0.7	6.8
08/01/2005	NP		38.54	12.0	27.00	15.11	23.43	<25,000	<250	<250	<250	<250	4,800	1.78	7.3
10/21/2005	NP	p	38.54	12.0	27.00	15.65	22.89	14,000	350	<100	<100	110	12,000	1.41	6.6
01/18/2006	NP		38.54	12.0	27.00	12.60	25.94	16,000	310	<100	<100	110	13,000	0.87	6.7
04/14/2006	NP		38.54	12.0	27.00	12.09	26.45	<10,000	<100	<100	<100	<100	4,700	0.88	6.9
7/19/2006	NP	q	38.54	12.0	27.00	13.58	24.96	1,300	23	<10	18	26	1,600	1.1	6.8
10/24/2006	P		38.54	12.0	27.00	15.13	23.41	6,800	100	<5.0	16	15	14,000	--	6.93
1/15/2007	P	n	38.54	12.0	27.00	14.43	24.11	2,500	<100	<100	<100	<100	3,900	2.12	7.44
4/18/2007	NP	n	38.54	12.0	27.00	14.30	24.24	3,000	50	<50	<50	<50	2,700	4.47	7.22
7/17/2007	NP	n	38.54	12.0	27.00	23.75	14.79	560	<25	<25	<25	<25	890	4.23	7.41
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
8/13/2009	**NP**	**u**	**38.54**	**12.0**	**27.00**	**24.10**	**14.44**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**21**	**0.84**	**7.11**
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

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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-8 Cont.															
11/04/2004	P		38.91	--	--	17.19	21.72	960	<5.0	<5.0	<5.0	<5.0	820	1.8	6.7
01/20/2005	P		38.91	--	--	15.25	23.66	<2,500	<25	<25	<25	<25	1,400	1.5	6.4
04/11/2005	P		38.91	--	--	14.17	24.74	700	<5.0	<5.0	<5.0	<5.0	610	1.1	7.1
08/01/2005	P		38.91	--	--	16.10	22.81	<1,000	<10	<10	<10	<10	900	2.58	7.7
10/21/2005	P	n	38.91	--	--	17.18	21.73	530	<5.0	<5.0	<5.0	<5.0	490	1.4	6.7
01/18/2006	P		38.91	--	--	13.60	25.31	<500	<5.0	<5.0	<5.0	<5.0	500	2.28	6.6
04/14/2006	P		38.91	--	--	12.36	26.55	<500	<5.0	<5.0	<5.0	<5.0	300	1.97	6.6
7/19/2006	P		38.91	--	--	14.75	24.16	4,500	<25	<25	<25	<25	4,200	1.2	6.6
10/24/2006	--	s	--	--	--	--	--	--	--	--	--	--	--	--	--
1/15/2007	P		38.91	--	--	15.67	23.24	<50	<0.50	<0.50	<0.50	<0.50	67	1.35	6.68
4/18/2007	P	n	38.91	--	--	15.53	23.38	100	0.51	<0.50	<0.50	<0.50	130	1.49	6.86
7/17/2007	NP	n	38.91	--	--	16.76	22.15	63	<0.50	<0.50	<0.50	<0.50	96	1.85	6.97
10/11/2007	P		38.91	--	--	16.99	21.92	100	0.52	<0.50	<0.50	<0.50	130	1.67	7.18
1/8/2008	P	n	38.91	--	--	14.83	24.08	51	<0.50	<0.50	<0.50	<0.50	49	1.30	6.88
4/8/2008	P		38.91	--	--	15.38	23.53	<50	<0.50	<0.50	<0.50	<0.50	32	1.60	6.77
8/20/2008	P		38.91	--	--	17.80	21.11	<50	<0.50	<0.50	<0.50	<0.50	13	1.18	6.94
11/17/2008	P		38.91	--	--	17.47	21.44	<50	<0.50	<0.50	<0.50	<0.50	14	3.74	6.63
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
8/13/2009	**P**		**38.91**	**--**	**--**	**17.50**	**21.41**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**7.5**	**0.65**	**7.44**

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.
u = Sample taken from VOA vial with air bubble > 6mm diameter.

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	
8/13/2009	**<300**	**<10**	**5.5**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**b**
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	

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.									
08/01/2005	<10,000	<2,000	2,700	<50	<50	<50	<50	<50	
01/18/2006	<30,000	<2,000	1,600	<50	<50	<50	<50	<50	
04/14/2006	<30,000	<2,000	2,100	<50	<50	<50	<50	<50	
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	
8/13/2009	**<6,000**	**2,300**	**39**	**<10**	**<10**	**<10**	**<10**	**<10**	**b**
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	

Table 2. Summary of Fuel Additives Analytical Data

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

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-3 Cont.									
4/18/2007	<300	<20	9.5	<0.50	<0.50	0.90	<0.50	<0.50	
7/17/2007	<300	<20	19	<0.50	<0.50	1.5	<0.50	<0.50	
10/11/2007	<300	<20	5.3	<0.50	<0.50	<0.50	<0.50	<0.50	
1/8/2008	<300	<20	8.9	<0.50	<0.50	0.84	<0.50	<0.50	a
4/8/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
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	
8/13/2009	**<300**	**<10**	**2.7**	**<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	

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.									
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	
5/12/2009	<300	<10	0.62	<0.50	<0.50	<0.50	<0.50	<0.50	
8/13/2009	**<300**	**<10**	**0.65**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**b**
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	
8/13/2009	**<600**	**180**	**1.3**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**b**

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									
4/7/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
7/9/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
07/13/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
08/01/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/19/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	r
7/17/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/20/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/13/2009	**<300**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**b**
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	

Table 2. Summary of Fuel Additives Analytical Data

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

Well and Sample Date	Concentrations in (µg/L)								Comments
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-7 Cont.									
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	
8/13/2009	**<300**	**19**	**21**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**b**
MW-8									
02/05/2004	<5,000	<1,000	1,900	<25	<25	<25	<25	<25	
04/05/2004	<2,000	<400	1,200	<10	<10	12	<10	<10	a
07/13/2004	<2,000	770	760	<10	<10	<10	<10	<10	a
11/04/2004	<1,000	<200	820	<5.0	<5.0	9.6	<5.0	<5.0	
01/20/2005	<5,000	<1,000	1,400	<25	<25	<25	<25	<25	a
04/11/2005	<1,000	<200	610	<5.0	<5.0	8.1	<5.0	<5.0	
08/01/2005	<2,000	<400	900	<10	<10	<10	<10	<10	
10/21/2005	<1,000	<200	490	<5.0	<5.0	<5.0	<5.0	<5.0	
01/18/2006	<3,000	<200	500	<5.0	<5.0	5.2	<5.0	<5.0	
04/14/2006	<3,000	<200	300	<5.0	<5.0	<5.0	<5.0	<5.0	
7/19/2006	<15,000	<1,000	4,200	<25	<25	45	<25	<25	
1/15/2007	<300	52	67	<0.50	<0.50	0.88	<0.50	<0.50	
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	
8/13/2009	**<300**	**28**	**7.5**	**<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.
b = Sample taken from VOA vial with air bubble > 6mm diameter.

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
8/13/2009	**South**	**0.006**

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
MW-2	**08/13/09**	**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
1/29/2007	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
	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
2/5/2007	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
	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
3/5/2007	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
	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
4/2/2007	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
	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
5/1/2007	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
	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
6/4/2007	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
	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
7/2/2007	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
	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
8/1/2007	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
	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
9/5/2007	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
	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
10/1/2007	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
	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
11/6/2007	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
	GWE-Influent[4]	Water (µg/L)	1,100	20	<5.0	20	24	6.9	1,300	920
	GWE A/S-Effluent	Water (µg/L)	120	<0.50	<0.50	<0.50	<0.50	<0.50	1,100	93
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50

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
12/5/2007	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
	GWE-Influent[4]	Water (µg/L)	80	0.69	<0.50	1.0	1.1	<0.50	21	74
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	0.61	<20	2.7
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
1/7/2008	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
	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
2/5/2008	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
	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
3/5/2008	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
	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
4/1/2008	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
	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
5/6/2008	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
	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
6/2/2008	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
	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
7/1/2008	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
	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
8/5/2008	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
	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
9/2/2008	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
	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
10/1/2008[5]	SVE-Influent	Air (mg/m^3)	---	---	---	---	---	---	---	---
	SVE A/S-Effluent	Air (mg/m^3)	---	---	---	---	---	---	---	---
	SVE-Effluent	Air (mg/m^3)	---	---	---	---	---	---	---	---
	GWE-Influent	Water (µg/L)	---	---	---	---	---	---	---	---
	GWE A/S-Effluent	Water (µg/L)	---	---	---	---	---	---	---	---
	GWE-Effluent	Water (µg/L)	---	---	---	---	---	---	---	---
11/17/2008	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
	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

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
12/1/2008	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
	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
1/7/2009	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
	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
2/3/2009	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
	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
3/3/2009	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
	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
4/6/2009	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
	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
5/4/2009	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
	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
6/3/2009	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
	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
7/8/2009	SVE-Influent	Air (mg/m^3)	**300**	**0.24**	<0.03	**0.42**	**0.17**	---	---	**4.1**
	SVE A/S-Effluent	Air (mg/m^3)	<50	**0.0017**	**0.0094**	<0.0022	<0.0087	---	---	<0.0072
	SVE-Effluent	Air (mg/m^3)	<50	<0.0016	**0.11**	<0.0022	<0.0087	---	---	<0.0072
	GWE-Influent	Water (µg/L)	**84**	<5.0	<5.0	<5.0	<5.0	<5.0	**1,600**	**84**
	GWE A/S-Effluent	Water (µg/L)	<50	<5.0	<5.0	<5.0	<5.0	<5.0	**1,500**	**7.4**
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**11**	<0.50
8/3/2009	SVE-Influent	Air (mg/m^3)	**76**	**0.012**	<0.0094	**0.024**	<0.043	---	---	**1.5**
	SVE A/S-Effluent	Air (mg/m^3)	<38	<0.0016	**0.0065**	<0.0022	<0.0087	---	---	**0.055**
	SVE-Effluent	Air (mg/m^3)	<38	<0.0016	**0.0058**	<0.0022	<0.0087	---	---	<0.0072
	GWE-Influent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**180**	**31**
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**50**	**8.6**
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
9/1/2009	SVE-Influent	Air (mg/m^3)	**80**	**0.034**	**0.024**	**0.046**	**0.063**	---	---	**0.89**
	SVE A/S-Effluent	Air (mg/m^3)	<38	**0.0021**	**0.014**	<0.0022	<0.0087	---	---	**0.084**
	SVE-Effluent	Air (mg/m^3)	<38	<0.0016	**0.0064**	<0.0022	<0.0087	---	---	<0.0072
	GWE-Influent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**84**	**14**
	GWE A/S-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	**32**	**4.9**
	GWE-Effluent	Water (µg/L)	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50

Notes:

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

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

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

						GRO				Benzene				MTBE			
Sample ID	Date Sampled	Notes	Totalizer Value (gallons)	Monthly Volume (gallons)	Average Discharge Rate (gpm)	Influent Concentration (µg/L)	Removal Rate (lbs/day)	Net Removed (pounds)	Removed To Date (pounds)	Influent Concentration (µg/L)	Removal Rate (lbs/day)	Net Removed (pounds)	Removed To Date (pounds)	Influent Concentration (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
INFL	**07/08/09**		**1,528,493**	**15,956**	**0.32**	**84**	**0.00**	**0.013**	**5.927**	**<5.0**	**5.7E-06**	**0.000**	**0.094**	**84**	**2.5E-04**	**0.009**	**8.449**
INFL	**08/03/09**		**1,578,072**	**49,579**	**1.32**	**<50**	**0.00**	**0.023**	**5.950**	**<0.50**	**2.2E-05**	**0.001**	**0.094**	**31**	**9.1E-04**	**0.024**	**8.473**
INFL	**09/01/09**		**1,650,611**	**72,539**	**1.74**	**<50**	**0.00**	**0.015**	**5.965**	**<0.50**	**5.2E-06**	**0.000**	**0.094**	**14**	**4.7E-04**	**0.014**	**8.487**
REPORTING PERIOD: THIRD QUARTER 2009																	
PERIOD WATER DISCHARGED (gal):				**138,074**	**as of 9/1/2009**												
AVERAGE DISCHARGE RATE (gpm)				**1.74**													
PERIOD POUNDS REMOVED:								**0.051**				**0.001**				**0.046**	
PERIOD GALLONS REMOVED:								**0.008**				**0.0001**				**0.007**	
TOTAL POUNDS REMOVED:									**5.965**				**0.094**				**8.487**
TOTAL GALLONS REMOVED:				**1,650,611**					**0.978**				**0.013**				**1.373**
ESTIMATED PERCENT CARBON LOADING:					**24.2%**												

Explanations:

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

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

Notes:

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

Assumptions:

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

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

Sample ID	Date Sampled	Notes	Totalizer Value (gallons)	Monthly Volume (gallons)	Average Discharge Rate (gpm)	Effluent Concentrations						
						GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	TBA (µg/L)	MtBE (µg/L)
EFFL	01/29/07		3,000	NA	NA	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	02/05/07		33,400	30,400	3.02	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	03/05/07		130,565	97,165	2.41	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	04/02/07		170,596	40,031	0.99	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	05/01/07		225,297	54,701	1.31	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	06/04/07		429,450	204,153	4.17	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	07/02/07		480,377	50,927	1.26	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	08/01/07		580,301	99,924	2.31	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	09/05/07		589,944	9,643	0.19	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	10/01/07		592,403	2,459	0.07	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	11/06/07		615,161	22,758	0.44	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	12/05/07		633,121	17,960	0.43	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	01/07/08		635,200	2,079	0.04	<50	<0.50	<0.50	<0.50	<0.50	<20	<0.50
EFFL	02/05/08		642,841	7,641	0.18	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	03/05/08		646,123	3,282	0.08	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	04/01/08		719,174	73,051	1.88	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	05/06/08		806,356	87,182	1.73	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	06/02/08		949,693	143,337	3.69	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	07/01/08		1,028,841	79,148	1.90	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	08/05/08		1,037,580	8,739	0.17	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	09/02/08		1,052,669	15,089	0.37	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	10/01/08		1,067,983	15,314	0.37	---	---	---	---	---	---	---
EFFL	11/17/08		1,077,116	9,133	0.13	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	12/01/08		1,085,806	8,690	0.43	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	01/07/09		1,239,376	153,570	2.88	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	02/03/09		1,297,359	57,983	1.49	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	03/03/09		1,402,083	104,724	2.60	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
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
EFFL	**07/08/09**		1,528,493	15,956	0.32	<50	<0.50	<0.50	<0.50	<0.50	**11**	<0.50
EFFL	**08/04/09**		1,578,072	49,579	1.28	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50
EFFL	**09/01/09**		1,650,611	72,539	1.80	<50	<0.50	<0.50	<0.50	<0.50	<10	<0.50

REPORTING PERIOD: THIRD QUARTER 2009

PERIOD WATER DISCHARGED (gal): 138,074 as of 9/01/2009

AVERAGE DISCHARGE RATE (gpm) 1.74

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%
07/08/09	**3669.4**	**35**	**0.8**	**34.2**	**891**	**152.3**	**2%**
08/03/09	**3982.0**	**26**	**13.0**	**13.0**	**917**	**165.4**	**50%**
09/01/09	**4679.0**	**29**	**29.0**	**0.0**	**946**	**194.4**	**100%**

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
07/08/09	242	NR	Influent	**300**	**0.24**	<0.03	**0.42**	**0.17**	**4.1**
			A/S-Effluent	<50	**0.0017**	**0.0094**	<0.0022	<0.0087	<0.0072
			Effluent	<50	<0.0016	**0.11**	<0.0022	<0.0087	<0.0072
08/03/09	246	NR	Influent	**76**	**0.012**	<0.0094	**0.024**	<0.043	**1.5**
			A/S-Effluent	<38	<0.0016	**0.0065**	<0.0022	<0.0087	**0.055**
			Effluent	<38	<0.0016	**0.0058**	<0.0022	<0.0087	<0.0072
09/01/09	235	NR	Influent	**80**	**0.034**	**0.024**	**0.046**	**0.063**	**0.89**
			A/S-Effluent	<38	**0.0021**	**0.014**	<0.0022	<0.0087	**0.084**
			Effluent	<38	<0.0016	**0.0064**	<0.0022	<0.0087	<0.0072

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

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
7/8/09	**6.45**	**0.01**	**0.54**	**0.00**	**91.7%**	**99.7%**	**3.89**	**908.01**
8/3/09**	**1.66**	**0.00**	**0.42**	**0.00**	**75.0%**	**93.3%**	**52.80**	**960.81**
9/1/09**	**1.67**	**0.00**	**0.40**	**0.00**	**76.3%**	**97.6%**	**48.35**	**1009.17**

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

Sample Calculations

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

= 19.27 lbs/day

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

Notes
* = Benzene results negligible, DRE not a true representation
** = GRO results negligible, DRE not a true representation
[1] = Cumulative GRO removed was incorrectly tabulated in the Second Quarter 2008 report. The current values have been
[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

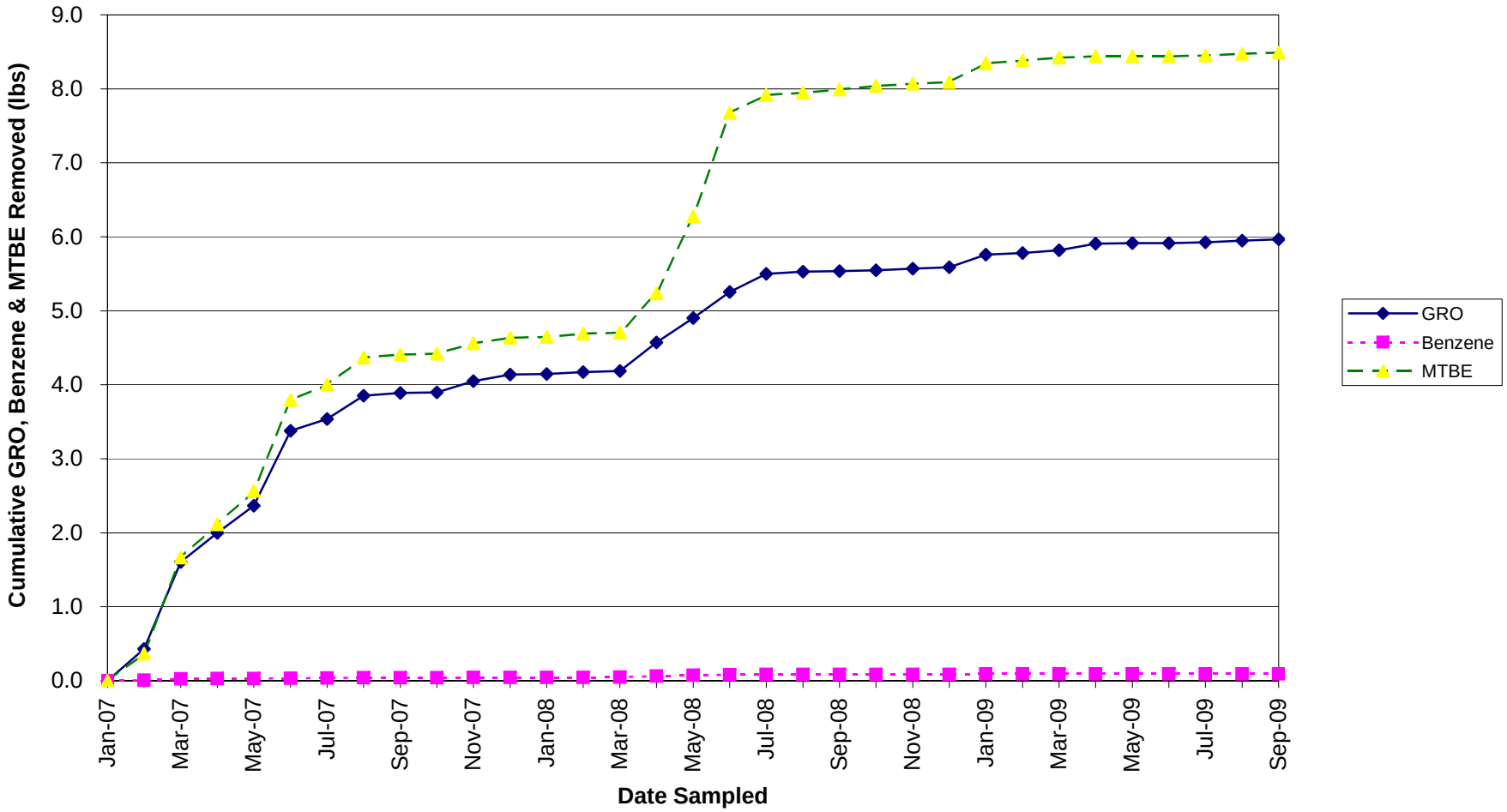


Figure 2
GWE Influent Concentrations for GRO, Benzene, and MTBE
Station #2111, 1156 Davis Street, San Leandro, California

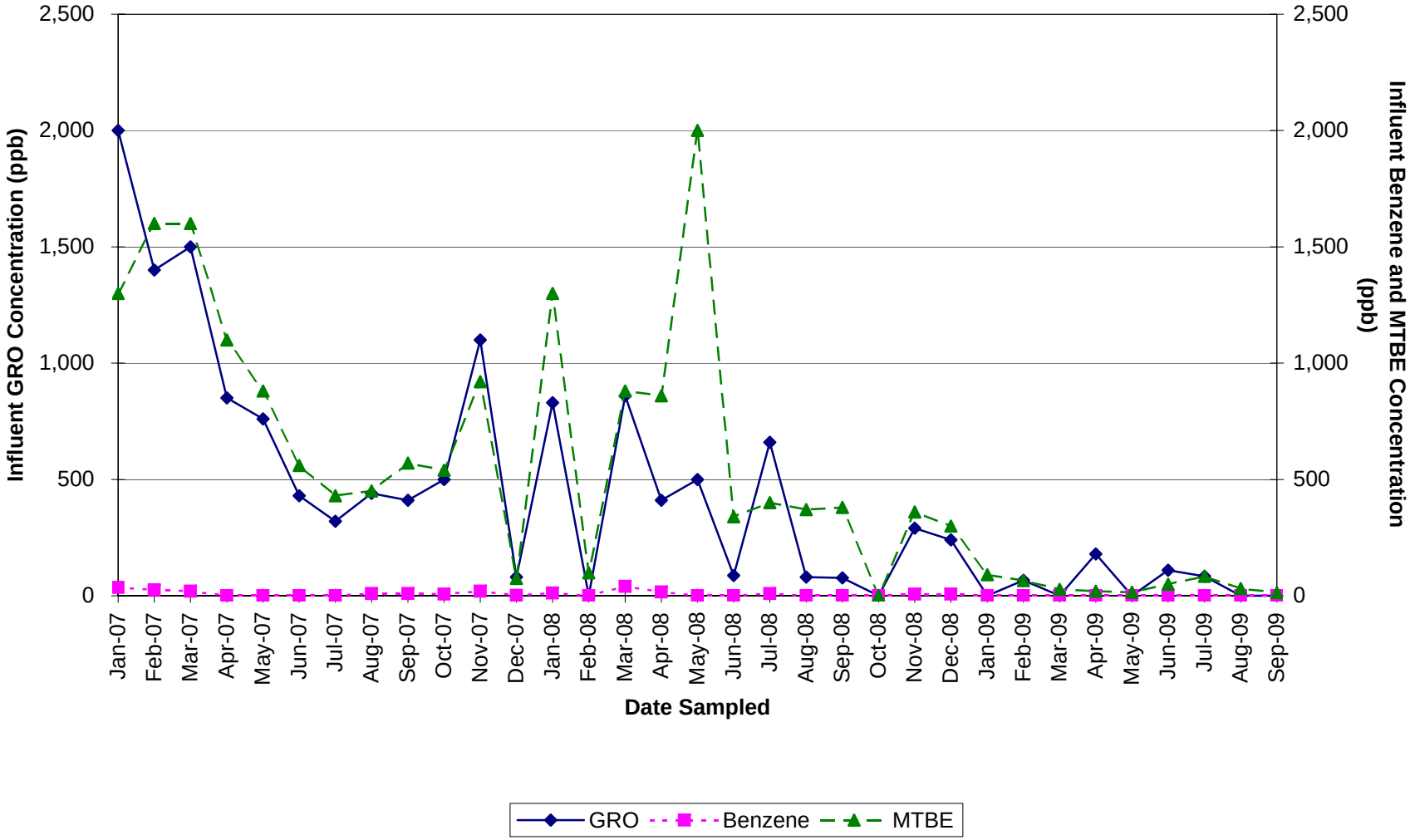


Figure 3
SVE System Influent Concentration vs.Time
Station #2111, 1156 Davis Street, San Leandro, California

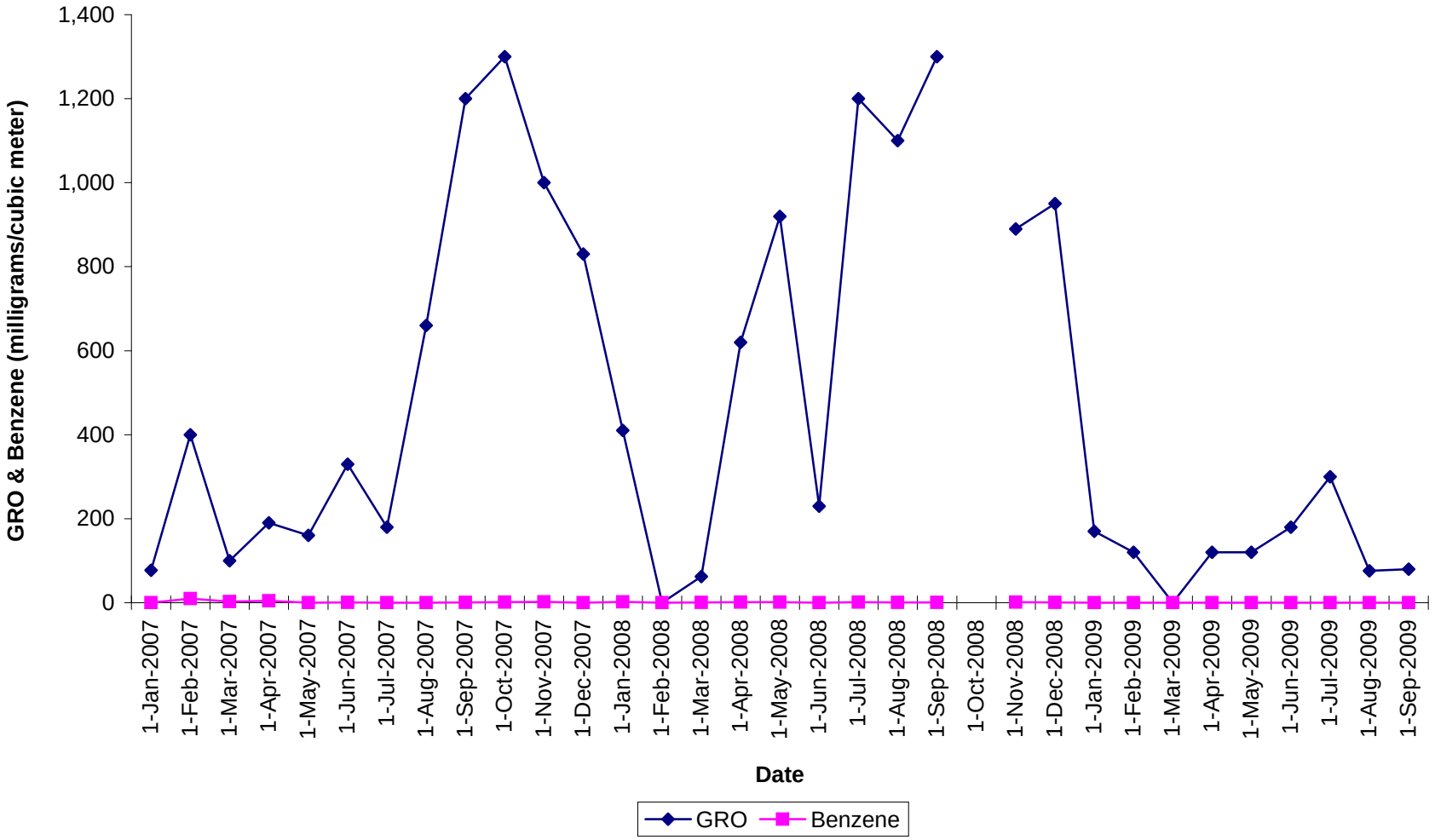
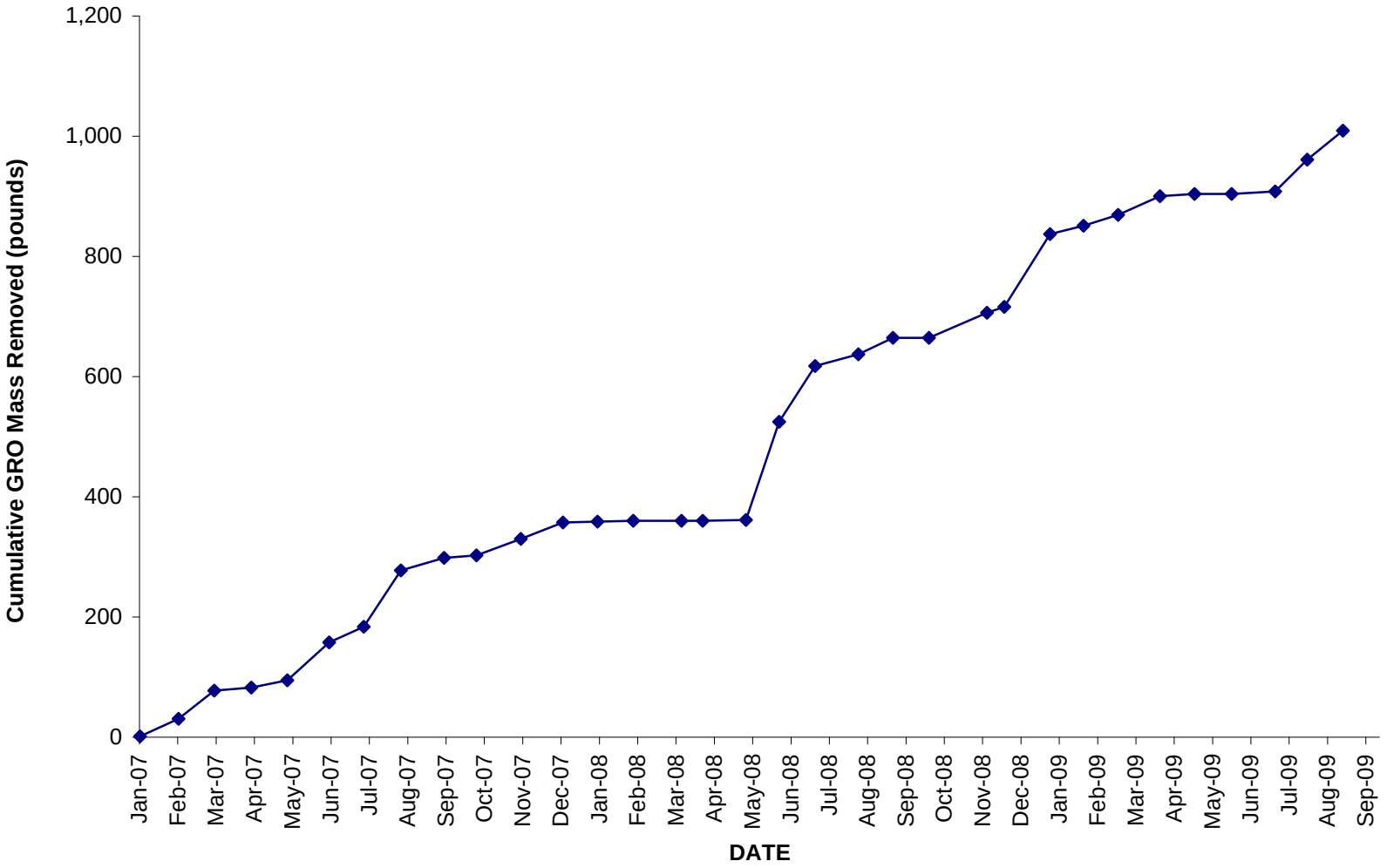


Figure 4
SVE System Cumulative GRO Mass Removed vs. Time
Station #2111, 1156 Davis Street, San Leandro, California



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

August 28, 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: August 13, 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.

August 28, 2009

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

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Jay R. Johnson, P.G.
Project Manager

Attachments:

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

CC: Mr. Paul Supple, BP/ARCO

STRATUS ENVIRONMENTAL, INC.

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

Site Number Arco 2111
Project Number E 2111
Project PM Jay Johnson
DATE 8/13/09

	Water Level Data					Purge Volume Calculations					Purge Method				Sample Record			Field Data
	Well ID	Time	Depth to Product (feet)	Depth to Water (feet)	Total Depth (feet)	Water column (feet)	Diameter (inches)	Multiplier	3 casing volumes (gallons)	Actual water purged (gallons)	No Purge	Bailer	Pump	other	DTW at sample time (feet)	Sample I.D	Sample Time	DO (mg/L)
12.5	MW-1	2102		18.01	26.05	—	4	2	—	—	X	X			18.01	MW-1	2150	.14
12	2	2054		16.88	26.48	—	4	2	—	—	X	X			16.88	2	2215	.81
12	3	2100		18.75	26.21	—	4	2	—	—	X	X			18.75	3	2200	.15
10	4	2110		16.87	21.53	—	4	2	—	—	X	X			16.87	4	2245	.94
9.5	5	2045		16.36	23.64	—	2	.5	—	—	X	X			16.30	5	2315	.78
10	6	2115		15.80	20.49	—	2	.5	—	—	X	X			15.80	6	2300	.85
12	7	2050		24.10	26.30	—	4	2	—	—	X	X			24.10	7	0835	.84
* 18	MW-8	2058		17.50	38.91	21.41	2	.5	10.71	10.5		X			17.54	MW-8	0935	.65

MW-8 sampled 2135 not 0935 ways labeled 0935 note on COC w/ issue.

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

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

CALIBRATION DATE
pH ATH 8/10/09
Conductivity
DO

T:\Forms

STATUS
ENVIRONMENTAL, INC.

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

Site Number Arco 2111
Project No. E 2111
Project PM Jay Johnson
Date Sampled 8/13/09

Well ID MW-8 (2135) 0935
purge start time bailer odor

	Temp C	pH	cond	gallons
time	19.2	7.52	599	0
time	19.2	7.47	541	5
time	19.2	7.44	537	10
time				
purge stop time				

Well ID MW-1 2150
purge start time bailer no odor

	Temp C	pH	cond	gallons
time	19.1	7.02	535	0
time				
time				
time				
pugre stop time				

Well ID MW-3 2200
purge start time bailer no odor

	Temp C	pH	cond	gallons
time	19.0	7.03	535	0
time				
time				
time				
purge stop time				

Well ID MW-7 2235
purge start time bailer no odor

	Temp C	pH	cond	gallons
time	19.1	7.11	568	0
time				
time				
time				
purge stop time				

Well ID MW-2 2215
purge start time bailer no odor

	Temp C	pH	cond	gallons
time	19.0	7.12	545	0
time				
time				
time				
purge stop time				

Well ID MW-4 2245
purge start time bailer no odor

	Temp C	pH	cond	gallons
time	19.4	7.12	578	0
time				
time				
time				
purge stop time				

Well ID MW-6 2300
purge start time bailer no odor

	Temp C	pH	cond	gallons
time	19.8	7.02	590	0
time				
time				
time				
purge stop time				

Well ID MW-5 2315
purge start time bailer no odor

	Temp C	pH	cond	gallons
time	18.9	7.06	457	0
time				
time				
time				
purge stop time				

WELLHEAD OBSERVATION FORM

Site Name/Number: Arco 2111 *Date:* 8/13/09 *Technician:* A.H.

STRATUS ENVIRONMENTAL, INC

Well I.D.	Box in Good Condition? X = Yes Blank = No	Well lid secure? X=Yes If not call PM prior to departure	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? # of missing/ Total # *	Bolts Stripped? # of stripped/ Total # *	Bolt Holes Stripped? # of stripped/ Total # *	Cracked or Broken Lid? X = Yes Blank = No *	Cracked or Broken Box? X = Yes Blank = No *	Grout Level more than 1ft below TOC? X = Yes Blank = No *	Additional Comments (such as missing lid, concrete needs replacement, or other - explain)
MW-1	X												
2	X												
3	X												
4	X												
5	X												
6	X												
7	X												
MW-8	X												

* Explain corrective action taken (replaced bolt/tapped bolt hole etc…) or if a safety issue, please call PM

DRUM INVENTORY

Drums on site? Yes (No) (circle)

Type and # Steel: _____ Plastic: _____

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

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

GENERAL SITE CONDITIONS

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

NO. [illegible]

NON-HAZARDOUS WASTE DATA FORM

1. BESI #

GENERATOR

2. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Generator's Phone:

3. Transporter 1 Company Name

Phone #

4. Transporter 2 Company Name

Phone #

5. Designated Facility Name and Site Address

Phone #

6. Waste Shipping Name and Description	7. Containers No.	7. Containers Type	8. Total Quantity	9. Unit Wt/Vol	10. Profile No.
A.					
B.					
C.					
D.					

11. Special Handling Instructions and Additional Information

12. GENERATOR'S CERTIFICATION: I certify the materials described above on this data form are non-hazardous.

Generator's/Offeror's Printed/Typed Name | Signature | Month | Day | Year

TRANSPORTER

13. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name | Signature | Month | Day | Year

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

FACILITY

14. Designated Facility Owner or Operator: Certification of receipt of materials covered by this data form.

Printed/Typed Name | Signature | Month | Day | Year

GENERATOR

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 / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO by 8015	BTEX / 5 oxys	EDB / Ethanol	1,2 DCA
	MW-1	8/13/2009	2150		X		6				X		X	X	X	X
	2		2215													
	3		2200													
	4		2245													
	5		2315													
	6		2300													
	7		2235													
	MW-8 *		2135													
	TB-2111-08132009						2									

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.

*** by 8260

*MW-8 vocs labeled

ON Hold

Sampler's Name:	
Sampler's Company:	
Shipment Method:	Ship Date:
Shipment Tracking No:	

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time

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

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.

Calscience
Environmental
Laboratories, Inc.

August 27, 2009

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

Subject: **Calscience Work Order No.:** **09-08-1399**
Client Reference: **ARCO 2111**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/15/2009 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:	08/15/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-08-1399
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	**09-08-1399-1-D**	**08/13/09 21:50**	**Aqueous**	**GC 29**	**08/18/09**	**08/18/09 13:22**	**090817B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	84	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2	**09-08-1399-2-D**	**08/13/09 22:15**	**Aqueous**	**GC 29**	**08/18/09**	**08/18/09 13:55**	**090817B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	330	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	88	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**09-08-1399-3-D**	**08/13/09 22:00**	**Aqueous**	**GC 29**	**08/18/09**	**08/18/09 14:29**	**090817B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	84	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-08-1399-4-D**	**08/13/09 22:45**	**Aqueous**	**GC 29**	**08/18/09**	**08/18/09 15:02**	**090817B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	84	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: 08/15/09
Work Order No: 09-08-1399
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	**09-08-1399-5-D**	**08/13/09 23:15**	**Aqueous**	**GC 29**	**08/18/09**	**08/18/09 15:36**	**090817B02**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**09-08-1399-6-D**	**08/13/09 23:00**	**Aqueous**	**GC 29**	**08/18/09**	**08/18/09 16:09**	**090817B02**

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			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**09-08-1399-7-D**	**08/13/09 22:35**	**Aqueous**	**GC 29**	**08/18/09**	**08/18/09 16:42**	**090817B02**

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			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**09-08-1399-8-D**	**08/13/09 21:35**	**Aqueous**	**GC 29**	**08/18/09**	**08/18/09 17:16**	**090817B02**

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			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/15/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-1399
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project: ARCO 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-644**	**N/A**	**Aqueous**	**GC 29**	**08/17/09**	**08/18/09 02:00**	**090817B02**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/15/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-1399
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L

Project: ARCO 2111

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**09-08-1399-1-B**	**08/13/09 21:50**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 15:26**	**090820L01**

Comment(s): -PC = Sample taken from VOA vial with air bubble > 6mm diameter.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	5.5	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	106	80-128			Dibromofluoromethane	102	80-127		
Toluene-d8	92	80-120			1,4-Bromofluorobenzene	86	68-120		

MW-2	**09-08-1399-2-A**	**08/13/09 22:15**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 17:20**	**090820L01**

Comment(s): -PC = Sample taken from VOA vial with air bubble > 6mm diameter.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	10	20		Methyl-t-Butyl Ether (MTBE)	39	10	20	
1,2-Dibromoethane	ND	10	20		Tert-Butyl Alcohol (TBA)	2300	200	20	
1,2-Dichloroethane	ND	10	20		Diisopropyl Ether (DIPE)	ND	10	20	
Ethylbenzene	ND	10	20		Ethyl-t-Butyl Ether (ETBE)	ND	10	20	
Toluene	ND	10	20		Tert-Amyl-Methyl Ether (TAME)	ND	10	20	
Xylenes (total)	ND	10	20		Ethanol	ND	6000	20	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	117	80-128			Dibromofluoromethane	111	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	69	68-120		

MW-3	**09-08-1399-3-C**	**08/13/09 22:00**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 17:49**	**090820L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	2.7	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	109	80-128			Dibromofluoromethane	108	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	83	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	08/15/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-08-1399
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4	**09-08-1399-4-B**	**08/13/09 22:45**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 18:17**	**090820L01**

Comment(s): -PC = Sample taken from VOA vial with air bubble > 6mm diameter.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	0.65	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	110	80-128			Dibromofluoromethane	107	80-127		
Toluene-d8	84	80-120			1,4-Bromofluorobenzene	81	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5	**09-08-1399-5-B**	**08/13/09 23:15**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 18:46**	**090820L01**

Comment(s): -PC = Sample taken from VOA vial with air bubble > 6mm diameter.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.0	2		Methyl-t-Butyl Ether (MTBE)	1.3	1.0	2	
1,2-Dibromoethane	ND	1.0	2		Tert-Butyl Alcohol (TBA)	180	20	2	
1,2-Dichloroethane	ND	1.0	2		Diisopropyl Ether (DIPE)	ND	1.0	2	
Ethylbenzene	ND	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	1.0	2	
Toluene	ND	1.0	2		Tert-Amyl-Methyl Ether (TAME)	ND	1.0	2	
Xylenes (total)	ND	1.0	2		Ethanol	ND	600	2	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	127	80-128			Dibromofluoromethane	116	80-127		
Toluene-d8	85	80-120			1,4-Bromofluorobenzene	83	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**09-08-1399-6-B**	**08/13/09 23:00**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 19:15**	**090820L01**

Comment(s): -PC = Sample taken from VOA vial with air bubble > 6mm diameter.

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	119	80-128			Dibromofluoromethane	114	80-127		
Toluene-d8	87	80-120			1,4-Bromofluorobenzene	83	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/15/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-1399
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**09-08-1399-7-A**	**08/13/09 22:35**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 19:43**	**090820L01**

Comment(s): -PC = Sample taken from VOA vial with air bubble > 6mm diameter.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	21	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	19	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	118	80-128			Dibromofluoromethane	110	80-127		
Toluene-d8	95	80-120			1,4-Bromofluorobenzene	82	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**09-08-1399-8-B**	**08/13/09 21:35**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 20:12**	**090820L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	7.5	0.50	1	
1,2-Dibromoethane	ND	0.50	1		Tert-Butyl Alcohol (TBA)	28	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Ethylbenzene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Toluene	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Ethanol	ND	300	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	115	80-128			Dibromofluoromethane	109	80-127		
Toluene-d8	105	80-120			1,4-Bromofluorobenzene	85	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-1,051**	**N/A**	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09 14:53**	**090820L01**

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	112	80-128			Dibromofluoromethane	108	80-127		
Toluene-d8	103	80-120			1,4-Bromofluorobenzene	80	68-120		

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	08/15/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-08-1399
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
09-08-1397-6	**Aqueous**	**GC 29**	**08/17/09**	**08/18/09**	**090817S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	81	80	38-134	0	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	08/15/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-1399
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project ARCO 2111

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	**Aqueous**	**GC/MS BB**	**08/20/09**	**08/20/09**	**090820S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	103	101	76-124	1	0-20	
Carbon Tetrachloride	110	111	74-134	2	0-20	
Chlorobenzene	103	98	80-120	5	0-20	
1,2-Dibromoethane	101	101	80-120	0	0-20	
1,2-Dichlorobenzene	99	104	80-120	5	0-20	
1,1-Dichloroethene	87	84	73-127	3	0-20	
Ethylbenzene	99	94	78-126	5	0-20	
Toluene	97	100	80-120	2	0-20	
Trichloroethene	98	97	77-120	0	0-20	
Vinyl Chloride	83	80	72-126	4	0-20	
Methyl-t-Butyl Ether (MTBE)	96	94	67-121	1	0-49	
Tert-Butyl Alcohol (TBA)	98	101	36-162	3	0-30	
Diisopropyl Ether (DIPE)	98	98	60-138	0	0-45	
Ethyl-t-Butyl Ether (ETBE)	94	95	69-123	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	94	94	65-120	0	0-20	
Ethanol	107	123	30-180	14	0-72	

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:	09-08-1399
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
099-12-695-644	**Aqueous**	**GC 29**	**08/17/09**	**08/18/09**	**090817B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	95	93	78-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.	Date Received: N/A
3330 Cameron Park Drive, Suite 550	Work Order No: 09-08-1399
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
099-12-703-1,051	Aqueous	GC/MS BB	08/20/09	08/20/09	090820L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	109	105	80-120	73-127	3	0-20	
Carbon Tetrachloride	113	117	74-134	64-144	3	0-20	
Chlorobenzene	106	107	80-120	73-127	1	0-20	
1,2-Dibromoethane	107	111	79-121	72-128	3	0-20	
1,2-Dichlorobenzene	108	107	80-120	73-127	1	0-20	
1,1-Dichloroethene	111	114	78-126	70-134	2	0-28	
Ethylbenzene	109	108	80-120	73-127	1	0-20	
Toluene	111	109	80-120	73-127	1	0-20	
Trichloroethene	107	105	79-127	71-135	2	0-20	
Vinyl Chloride	100	97	72-132	62-142	3	0-20	
Methyl-t-Butyl Ether (MTBE)	103	108	69-123	60-132	4	0-20	
Tert-Butyl Alcohol (TBA)	98	105	63-123	53-133	7	0-20	
Diisopropyl Ether (DIPE)	96	96	59-137	46-150	1	0-37	
Ethyl-t-Butyl Ether (ETBE)	104	108	69-123	60-132	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	105	103	70-120	62-128	2	0-20	
Ethanol	116	128	28-160	6-182	10	0-57	

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: 09-08-1399

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: 09-08-1399

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

(1399)

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

Lab Name: Cal Science	BP/ARC Facility Address: 1156 Davis Street	Consultant/Contractor: Stratus Environmental
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		

Lab No.	Sample Description	Date 2009	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO by 8015	BTEX / 5 oxys	EDB / Ethane	1,2 DCA	Report Type & QC Level
1	MW-1	8/13	2150		X		6				X		X	X	X	X	*** by 8260
2	2		2215														
3	3		2200														
4	4		2245														
5	5		2315														
6	6		2300														
7	7		2235														
8	MW-8 *		2135														* MW-8 was labeled
9	TB-2111-08132009						2										ON Hold

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:	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:						
Shipment Method: GSO Ship Date:				CDC	8/15/09	0930
Shipment Tracking No: 925540232						

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 #: 09-08-1399

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus DATE: 08/15/09

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: _____

CUSTODY SEALS INTACT:

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

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

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	☑ WSC 8/15-09	☑	☐
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** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

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

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelop **Reviewed by:** RW

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:** WSC

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-08-1 3 9 9

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

- ☐ **Samples NOT RECEIVED but listed on COC**
- ☐ **Samples received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s)/preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☑ **Sample labels do not match COC** – Note in comments
  - ☐ **Sample ID**
  - ☑ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of Containers**
  - ☐ **Analysis**
- ☐ **Sample containers compromised** – Note in comments
  - ☐ **Leaking**
  - ☐ **Broken**
  - ☐ **Without Labels**
- ☐ **Air sample containers compromised** – Note in comments
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☐ **Other:** _____

Comments:

#8) collection time per label is 0935.

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

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of RSK or CO_2 or DO Received

Comments: _____

*Transferred at Client's request.

Initial / Date W.S.C 8-15-09

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:	**3Q09 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:	**10/9/2009 9:31:48 AM**
Confirmation Number:	**6257925748**

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:	**3Q09 GW Monitoring**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09081399.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**10/9/2009 9:33:43 AM**
Confirmation Number:	**7924630582**

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 0709**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09070648.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**10/9/2009 9:35:25 AM**
Confirmation Number:	**7791067838**

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 0809**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09080142.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**10/9/2009 9:36:46 AM**
Confirmation Number:	**5102402210**

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 0909**
Facility Global ID:	**T0600101764**
Facility Name:	**ARCO #2111**
File Name:	**09090121.zip**
Organization Name:	**Broadbent & Associates, Inc.**
Username:	**BROADBENT-C**
IP Address:	**67.118.40.90**
Submittal Date/Time:	**10/9/2009 9:37:52 AM**
Confirmation Number:	**3574266731**

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

July 31, 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: Marty Morgan and Chris Hill

Number of Site Visits: 4 (July 8, 13, 22, and 27, 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 July 8, 2009.

Variations from Scope of Work: The remediation systems were observed to be non-operating during the site visits conducted on July 8 and 13, 2009, due to a high-water alarm. The high level float on the oil-water separator was replaced during the site visit conducted on July 13, 2009, to improve the system operating uptime. City of San Leandro Public Works Department (CSLPWD) personnel conducted a routine quarterly inspection on July 13, 2009.

The attachments include field data sheets and certified analytical results with chain of custody 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.

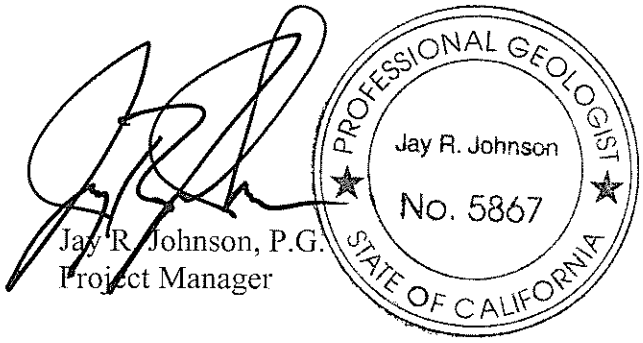
Any questions concerning this submittal should be addressed to the Preparer/Reviewer identified above.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Kiran Nagaraju
Project Engineer

Jay R. Johnson, P.G.
Project Manager



Attachments:

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

cc: Paul Supple, BP/ARCO

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

ORIGINAL

Date: 7/8/09
Onsite Time: 0930
Offsite Time: 1130
Equipment Manufacturer/Model#

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

System Information

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

Electric Meter Reading:
Hour Meter Reading: 3669.4
Totalizer Reading Prior to Air Stripper: 532330
PID Calibration Date: 7/8/09
Totalizer Reading After Air Stripper: 1587160

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc					
Air Velocity, FPM	~~3~~	~~4~~ 1200	~~4~~ 3100	~~3~~	
Pipe Diameter, inches	3	4	4	3	
Air Flow Rate, cfm					
Applied Vacuum, "wc	18" Hg		NA	NA	
Temperature, deg F		130	108		
PID Readings, ppmv	50	Ø	30	Ø	PID for GAC-1: Ø

Other Readings/Measurements

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

Signature:
Date: 7/8/09

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	7/8/09 0956	02111AGAC1	7/8/09 0944
02111ASAEFF	0952	02111AEFF	↓ 0940
02111ASYSINF	↓ 0948		
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: 7/8/09

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

ORIGINAL

Date: 7/8/09
Onsite Time: 0930
Offsite Time:

Technician: MW Morgan
Weather Conditions: Clear
Ambient Temperature 68

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

Transfer Pump Hour Meter Reading:

Effluent Flow Totalizer Reading: 1528493

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.4
Temperature: 21.1

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		422453			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	7/8/09 1036	02111MW2WINF	7/8/09 1040
02111ASWINF	1032		
02111ASWEFF	1028		
02111WGAC1	1024		
02111WEFF	1020		

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

Notes:

Signature: [signature]
Date: 7/8/09

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

ORIGINAL

Date: 7-13-09
Onsite Time: 0630
Offsite Time: 0815
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature: 50

System Information

System Status Upon Arrival: Operational ☐ Non-Operational ☒
System Status Upon Departure: Operational ☒ Non-Operational ☐
Electric Meter Reading: ~~Actual~~ 00246 New meter
Hour Meter Reading: 3673
Totalizer Reading Prior to Air Stripper: 533530 PID Calibration Date: 71309
Totalizer Reading After Air Stripper: 1588240

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		23			
Air Velocity, FPM		1012	3100		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	17" Hg	.15" H2O	NA	NA	
Temperature, deg F		132	110		
PID Readings, ppmv	45	1	31	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	14					
MW-7	100	13					
MW-8	0						

Signature: [signature]
Date: 71309

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

Replace Start Float in oil/water separator Tank
See if that Makes Difference

A400 L6EPB BS3A

Meet with Sewer Department

Systems Cycles on/off seems To Be working

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: 71309

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

ORIGINAL

Date: 7 13 09
Onsite Time: 0630
Offsite Time: 0815

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: NA

Effluent Flow Totalizer Reading: 1529314

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 4

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2	Pump off	422456			

Sampling Information

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

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

Notes:

Signature: [signature] Date: 71309

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

ORIGINAL

Date: 7 22 09
Onsite Time: 0900
Offsite Time: 1000
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: FOG
Ambient Temperature: 60

System Information

System Status Upon Arrival: Operational ☐ Non-Operational ☒ DPE Blower Tripped
System Status Upon Departure: Operational ☒ Non-Operational ☐
Electric Meter Reading: 1503
Hour Meter Reading: 3695
Totalizer Reading Prior to Air Stripper: 539932 PID Calibration Date: 72009
Totalizer Reading After Air Stripper: 1594140

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		1250	2800		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	22" Hg	.24	NA	NA	
Temperature, deg F	~~300~~	120	100		
PID Readings, ppmv	64	~~0~~	30	~~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	16					
V-3	50	17					
MW-1	~~0~~						
MW-3	100	17					
MW-7	100	17					
MW6	~~0~~						

Signature: [signature] Date: 7 22 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

One Leg on Contact For Blower Running High 54/48/48
Might Need New contact. Screws Are All Tight On wires

SC-E3 FE

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: 7 22 09

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

ORIGINAL

Date: 7 22 09
Onsite Time: 0900
Offsite Time: 1000

Technician: CHC
Weather Conditions: FOG
Ambient Temperature 60

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1534997

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		422591			

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: 7220 9

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

ORIGINAL

Date: 7/27/09
Onsite Time: 0545
Offsite Time: 0635
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clouds
Ambient Temperature: 52

System Information

System Status Upon Arrival: Operational ☒ Non-Operational ☐
System Status Upon Departure: Operational ☒ Non-Operational ☐
Electric Meter Reading: NM
Hour Meter Reading: 3817
Totalizer Reading Prior to Air Stripper: 563271
PID Calibration Date: 7/27/09
Totalizer Reading After Air Stripper: 1615330

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		1510	3100		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	15"Hg	.20	NA	NA	
Temperature, deg F		146	120		
PID Readings, ppmv	13	1	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	10					
V-2	50	10					
V-3	50	10					
MW-1	0						
MW-3	100	10					
MW-7	100	10					
MW8	0						

Signature: CHILL
Date: 7/27/09

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: 72709

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

ORIGINAL

Date: 7/27/09
Onsite Time: 0544
Offsite Time: 0635

Technician: CHILL
Weather Conditions: @ High Clouds
Ambient Temperature 52

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 155517

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		422661			

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: 7/27/09

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: 09-07-0648

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	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	7/8/09	0956			x		2	x						x	x	x					x			
2	02111ASAEFF	↓	0952			x		2	x						x	x	x					x			
3	02111ASYSINF	↓	0948			x		2	x						x	x	x					x			
4	02111AGAC1	↓	0944			x		2	x						x	x	x					x			
5	02111AEFF	↓	0940			x		2	x						x	x	x				x				
6	02111DPEWINF	↓	1036		x			6				x			x	x		x				x			
7	02111ASWINF	↓	1032		x			6				x			x	x		x				x			
8	02111ASWEFF	↓	1028		x			6				x			x	x		x				x			
9	02111WGAC1	↓	1024		x			6				x			x	x		x				x			
10	02111WEFF	↓	1020		x			6				x			x	x		x			x				
11	02111MW2WINF	7/8/09	1040		x			6				x			x	x		x				x			
12	TB 2111 7809				X			2																	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.

Sampler's Name: Martin Morgan
Sampler's Company: Stratus Environmental, Inc.
Shipment Method: GSO Ship Date: 7/8/09
Shipment Tracking No: ~~5122 1294~~ 9255302261 9255302260

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature]	7/8/09		[signature] CEL	7/9/09	1030

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.

July 22, 2009

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

Subject: **Calscience Work Order No.:** **09-07-0648**
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 7/9/2009 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: 07/09/09
Work Order No: 09-07-0648
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	**09-07-0648-1-A**	**07/08/09 09:56**	**Air**	**GC/MS V**	**N/A**	**07/09/09 20:24**	**090709L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.63	0.040	25		Xylenes (total)	0.39	0.22	25	
Toluene	ND	0.047	25		Methyl-t-Butyl Ether (MTBE)	6.3	0.72	100	
Ethylbenzene	0.96	0.054	25						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	102	57-129			1,2-Dichloroethane-d4	106	47-137		
Toluene-d8	110	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-07-0648-2-A**	**07/08/09 09:52**	**Air**	**GC/MS V**	**N/A**	**07/09/09 17:51**	**090709L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.0017	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0094	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	107	57-129			1,2-Dichloroethane-d4	106	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	**09-07-0648-3-A**	**07/08/09 09:48**	**Air**	**GC/MS V**	**N/A**	**07/09/09 18:38**	**090709L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.24	0.026	16		Xylenes (total)	0.17	0.14	16	
Toluene	ND	0.030	16		Methyl-t-Butyl Ether (MTBE)	4.1	0.29	40	
Ethylbenzene	0.42	0.035	16						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	102	57-129			1,2-Dichloroethane-d4	111	47-137		
Toluene-d8	113	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-07-0648-4-A**	**07/08/09 09:44**	**Air**	**GC/MS V**	**N/A**	**07/09/09 19:32**	**090709L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.089	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	93	57-129			1,2-Dichloroethane-d4	92	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:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
Cameron Park, CA 95682-8861	Preparation:	N/A
	Method:	EPA TO-15
	Units:	mg/m3

Project: ARCO 2111 - O&M

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AEFF	**09-07-0648-5-A**	**07/08/09 09:40**	**Air**	**GC/MS V**	**N/A**	**07/09/09 16:59**	**090709L01**

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	97	57-129			1,2-Dichloroethane-d4	90	47-137		
Toluene-d8	97	78-156							

Method Blank	**097-09-002-8,758**	**N/A**	**Air**	**GC/MS V**	**N/A**	**07/09/09 13:39**	**090709L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	ND	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	97	57-129			1,2-Dichloroethane-d4	113	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:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
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	**09-07-0648-1-A**	**07/08/09 09:56**	**Air**	**GC 19**	**N/A**	**07/09/09 17:00**	**090709L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	540	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-07-0648-2-A**	**07/08/09 09:52**	**Air**	**GC 19**	**N/A**	**07/09/09 14:36**	**090709L01**

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	**09-07-0648-3-A**	**07/08/09 09:48**	**Air**	**GC 19**	**N/A**	**07/09/09 15:46**	**090709L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	300	50	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-07-0648-4-A**	**07/08/09 09:44**	**Air**	**GC 19**	**N/A**	**07/09/09 16:21**	**090709L01**

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	**09-07-0648-5-A**	**07/08/09 09:40**	**Air**	**GC 19**	**N/A**	**07/09/09 15:11**	**090709L01**

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	**099-12-693-160**	**N/A**	**Air**	**GC 19**	**N/A**	**07/09/09 08:49**	**090709L01**

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: 07/09/09
Work Order No: 09-07-0648
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	**09-07-0648-6-E**	**07/08/09 10:36**	**Aqueous**	**GC 4**	**07/09/09**	**07/10/09 00:25**	**090709B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	79	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
02111ASWINF	**09-07-0648-7-E**	**07/08/09 10:32**	**Aqueous**	**GC 4**	**07/09/09**	**07/10/09 00:58**	**090709B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	84	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
02111ASWEFF	**09-07-0648-8-E**	**07/08/09 10:28**	**Aqueous**	**GC 4**	**07/09/09**	**07/10/09 01:31**	**090709B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-07-0648-9-E**	**07/08/09 10:24**	**Aqueous**	**GC 4**	**07/09/09**	**07/10/09 02:04**	**090709B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	79	38-134			

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
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	**09-07-0648-10-E**	**07/08/09 10:20**	**Aqueous**	**GC 4**	**07/09/09**	**07/10/09 02:37**	**090709B01**

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
02111MW2WINF	**09-07-0648-11-E**	**07/08/09 10:40**	**Aqueous**	**GC 4**	**07/09/09**	**07/10/09 03:10**	**090709B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	240	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
Method Blank	**099-12-695-602**	**N/A**	**Aqueous**	**GC 4**	**07/09/09**	**07/09/09 12:53**	**090709B01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0648
Cameron Park, CA 95682-8861		Preparation:	EPA 5030B
		Method:	EPA 8260B
		Units:	ug/L
Project: ARCO 2111 - O&M			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEWINF	**09-07-0648-6-C**	**07/08/09 10:36**	**Aqueous**	**GC/MS BB**	**07/20/09**	**07/20/09 19:07**	**090720L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	5.0	10		Tert-Butyl Alcohol (TBA)	1700	100	10	
Ethylbenzene	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Toluene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Xylenes (total)	ND	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Methyl-t-Butyl Ether (MTBE)	100	5.0	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	114	80-128		Dibromofluoromethane	100	80-127	
Toluene-d8	105	80-120		1,4-Bromofluorobenzene	93	68-120	

02111ASWINF	09-07-0648-7-C	07/08/09 10:32	Aqueous	GC/MS BB	07/20/09	07/20/09 19:39	090720L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	5.0	10		Tert-Butyl Alcohol (TBA)	1600	100	10	
Ethylbenzene	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Toluene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Xylenes (total)	ND	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Methyl-t-Butyl Ether (MTBE)	84	5.0	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	123	80-128		Dibromofluoromethane	105	80-127	
Toluene-d8	101	80-120		1,4-Bromofluorobenzene	94	68-120	

02111ASWEFF	09-07-0648-8-C	07/08/09 10:28	Aqueous	GC/MS BB	07/20/09	07/20/09 20:10	090720L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	5.0	10		Tert-Butyl Alcohol (TBA)	1500	100	10	
Ethylbenzene	ND	5.0	10		Diisopropyl Ether (DIPE)	ND	5.0	10	
Toluene	ND	5.0	10		Ethyl-t-Butyl Ether (ETBE)	ND	5.0	10	
Xylenes (total)	ND	5.0	10		Tert-Amyl-Methyl Ether (TAME)	ND	5.0	10	
Methyl-t-Butyl Ether (MTBE)	7.4	5.0	10						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	125	80-128		Dibromofluoromethane	110	80-127	
Toluene-d8	100	80-120		1,4-Bromofluorobenzene	94	68-120	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-07-0648-9-C**	**07/08/09 10:24**	**Aqueous**	**GC/MS BB**	**07/17/09**	**07/17/09 23:05**	**090717L01**

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	106	80-128			Dibromofluoromethane	105	80-127		
Toluene-d8	101	80-120			1,4-Bromofluorobenzene	98	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-07-0648-10-A**	**07/08/09 10:20**	**Aqueous**	**GC/MS BB**	**07/09/09**	**07/10/09 00:01**	**090709L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	11	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	80-128			Dibromofluoromethane	102	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	106	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-07-0648-11-B**	**07/08/09 10:40**	**Aqueous**	**GC/MS BB**	**07/21/09**	**07/21/09 17:02**	**090721L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	2.7	2.0	4		Tert-Butyl Alcohol (TBA)	540	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)	11	2.0	4						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	94	80-128			Dibromofluoromethane	98	80-127		
Toluene-d8	96	80-120			1,4-Bromofluorobenzene	94	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-977**	**N/A**	**Aqueous**	**GC/MS BB**	**07/09/09**	**07/09/09 23:31**	**090709L01**

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	80-128		Dibromofluoromethane	98	80-127	
Toluene-d8	97	80-120		1,4-Bromofluorobenzene	100	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-987**	**N/A**	**Aqueous**	**GC/MS BB**	**07/20/09**	**07/20/09 14:18**	**090720L01**

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

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	114	80-128		Dibromofluoromethane	106	80-127	
Toluene-d8	100	80-120		1,4-Bromofluorobenzene	95	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-988**	**N/A**	**Aqueous**	**GC/MS BB**	**07/17/09**	**07/17/09 19:54**	**090717L01**

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	80-128		Dibromofluoromethane	99	80-127	
Toluene-d8	101	80-120		1,4-Bromofluorobenzene	98	68-120	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
Cameron Park, CA 95682-8861	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	**099-12-703-989**	**N/A**	**Aqueous**	**GC/MS BB**	**07/21/09**	**07/21/09 15:58**	**090721L01**

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	93	80-128		Dibromofluoromethane	94	80-127	
Toluene-d8	99	80-120		1,4-Bromofluorobenzene	94	68-120	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.	Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
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 19**	**N/A**	**07/09/09**	**090709D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	540	540	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0648
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
09-07-0675-1	**Aqueous**	**GC 4**	**07/09/09**	**07/09/09**	**090709S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	79	79	38-134	0	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
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**	**07/09/09**	**07/10/09**	**090709S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	98	76-124	1	0-20	
Carbon Tetrachloride	89	90	74-134	1	0-20	
Chlorobenzene	96	96	80-120	1	0-20	
1,2-Dibromoethane	95	93	80-120	2	0-20	
1,2-Dichlorobenzene	94	97	80-120	4	0-20	
1,1-Dichloroethene	99	99	73-127	0	0-20	
Ethylbenzene	92	93	78-126	1	0-20	
Toluene	93	94	80-120	1	0-20	
Trichloroethene	91	92	77-120	1	0-20	
Vinyl Chloride	84	84	72-126	1	0-20	
Methyl-t-Butyl Ether (MTBE)	96	95	67-121	1	0-49	
Tert-Butyl Alcohol (TBA)	94	86	36-162	8	0-30	
Diisopropyl Ether (DIPE)	94	95	60-138	0	0-45	
Ethyl-t-Butyl Ether (ETBE)	94	93	69-123	1	0-30	
Tert-Amyl-Methyl Ether (TAME)	92	90	65-120	2	0-20	
Ethanol	116	115	30-180	1	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0648
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
09-07-1416-5	**Aqueous**	**GC/MS BB**	**07/17/09**	**07/17/09**	**090717S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	106	76-124	2	0-20	
Carbon Tetrachloride	115	110	74-134	5	0-20	
Chlorobenzene	102	105	80-120	3	0-20	
1,2-Dibromoethane	103	107	80-120	4	0-20	
1,2-Dichlorobenzene	99	101	80-120	2	0-20	
1,1-Dichloroethene	85	73	73-127	15	0-20	
Ethylbenzene	102	103	78-126	2	0-20	
Toluene	104	104	80-120	0	0-20	
Trichloroethene	97	99	77-120	1	0-20	
Vinyl Chloride	105	100	72-126	5	0-20	
Methyl-t-Butyl Ether (MTBE)	113	110	67-121	3	0-49	
Tert-Butyl Alcohol (TBA)	117	108	36-162	8	0-30	
Diisopropyl Ether (DIPE)	108	107	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	107	104	69-123	3	0-30	
Tert-Amyl-Methyl Ether (TAME)	100	103	65-120	2	0-20	
Ethanol	99	122	30-180	21	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
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
09-07-0650-2	**Aqueous**	**GC/MS BB**	**07/20/09**	**07/20/09**	**090720S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	100	76-124	2	0-20	
Carbon Tetrachloride	110	114	74-134	3	0-20	
Chlorobenzene	96	97	80-120	1	0-20	
1,2-Dibromoethane	98	99	80-120	1	0-20	
1,2-Dichlorobenzene	95	98	80-120	4	0-20	
1,1-Dichloroethene	115	118	73-127	3	0-20	
Ethylbenzene	93	94	78-126	1	0-20	
Toluene	96	98	80-120	2	0-20	
Trichloroethene	94	97	77-120	3	0-20	
Vinyl Chloride	90	87	72-126	3	0-20	
Methyl-t-Butyl Ether (MTBE)	97	103	67-121	6	0-49	
Tert-Butyl Alcohol (TBA)	109	120	36-162	4	0-30	
Diisopropyl Ether (DIPE)	94	106	60-138	12	0-45	
Ethyl-t-Butyl Ether (ETBE)	91	97	69-123	6	0-30	
Tert-Amyl-Methyl Ether (TAME)	88	92	65-120	4	0-20	
Ethanol	140	124	30-180	12	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	07/09/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-07-0648
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
09-07-1187-3	**Aqueous**	**GC/MS BB**	**07/21/09**	**07/21/09**	**090721S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	93	92	76-124	2	0-20	
Carbon Tetrachloride	94	91	74-134	3	0-20	
Chlorobenzene	99	97	80-120	2	0-20	
1,2-Dibromoethane	98	95	80-120	2	0-20	
1,2-Dichlorobenzene	100	98	80-120	2	0-20	
1,1-Dichloroethene	74	95	73-127	25	0-20	
Ethylbenzene	102	100	78-126	1	0-20	
Toluene	99	98	80-120	1	0-20	
Trichloroethene	94	91	77-120	3	0-20	
Vinyl Chloride	91	89	72-126	2	0-20	
Methyl-t-Butyl Ether (MTBE)	98	96	67-121	3	0-49	
Tert-Butyl Alcohol (TBA)	105	99	36-162	6	0-30	
Diisopropyl Ether (DIPE)	99	92	60-138	7	0-45	
Ethyl-t-Butyl Ether (ETBE)	97	93	69-123	4	0-30	
Tert-Amyl-Methyl Ether (TAME)	94	92	65-120	2	0-20	
Ethanol	105	90	30-180	15	0-72	

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:	09-07-0648
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
097-09-002-8,758	**Air**	**GC/MS V**	**N/A**	**07/09/09**	**090709L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	109	110	60-156	1	0-40	
Toluene	105	108	56-146	3	0-43	
Ethylbenzene	112	117	52-154	4	0-38	
p/m-Xylene	110	114	42-156	4	0-41	
o-Xylene	113	118	52-148	4	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:	09-07-0648
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
099-12-695-602	**Aqueous**	**GC 4**	**07/09/09**	**07/09/09**	**090709B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	105	106	78-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-07-0648
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
099-12-703-977	Aqueous	GC/MS BB	07/09/09	07/09/09	090709L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	100	99	80-120	73-127	1	0-20	
Carbon Tetrachloride	98	97	74-134	64-144	1	0-20	
Chlorobenzene	101	99	80-120	73-127	2	0-20	
1,2-Dibromoethane	109	100	79-121	72-128	8	0-20	
1,2-Dichlorobenzene	97	99	80-120	73-127	2	0-20	
1,1-Dichloroethene	103	103	78-126	70-134	0	0-28	
Ethylbenzene	99	97	80-120	73-127	1	0-20	
Toluene	98	100	80-120	73-127	1	0-20	
Trichloroethene	96	96	79-127	71-135	0	0-20	
Vinyl Chloride	99	96	72-132	62-142	4	0-20	
Methyl-t-Butyl Ether (MTBE)	105	105	69-123	60-132	0	0-20	
Tert-Butyl Alcohol (TBA)	93	93	63-123	53-133	0	0-20	
Diisopropyl Ether (DIPE)	95	101	59-137	46-150	6	0-37	
Ethyl-t-Butyl Ether (ETBE)	99	102	69-123	60-132	4	0-20	
Tert-Amyl-Methyl Ether (TAME)	100	101	70-120	62-128	1	0-20	
Ethanol	96	93	28-160	6-182	3	0-57	

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:	09-07-0648
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
099-12-703-988	Aqueous	GC/MS BB	07/17/09	07/17/09	090717L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	102	101	80-120	73-127	2	0-20	
Carbon Tetrachloride	102	105	74-134	64-144	3	0-20	
Chlorobenzene	103	102	80-120	73-127	1	0-20	
1,2-Dibromoethane	102	104	79-121	72-128	2	0-20	
1,2-Dichlorobenzene	99	100	80-120	73-127	1	0-20	
1,1-Dichloroethene	108	107	78-126	70-134	2	0-28	
Ethylbenzene	103	103	80-120	73-127	1	0-20	
Toluene	103	102	80-120	73-127	1	0-20	
Trichloroethene	98	105	79-127	71-135	7	0-20	
Vinyl Chloride	82	87	72-132	62-142	6	0-20	
Methyl-t-Butyl Ether (MTBE)	100	101	69-123	60-132	1	0-20	
Tert-Butyl Alcohol (TBA)	105	98	63-123	53-133	7	0-20	
Diisopropyl Ether (DIPE)	95	96	59-137	46-150	0	0-37	
Ethyl-t-Butyl Ether (ETBE)	114	113	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	100	97	70-120	62-128	3	0-20	
Ethanol	115	158	28-160	6-182	32	0-57	

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: 09-07-0648
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
099-12-703-987	Aqueous	GC/MS BB	07/20/09	07/20/09	090720L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	92	100	80-120	73-127	8	0-20	
Carbon Tetrachloride	114	111	74-134	64-144	3	0-20	
Chlorobenzene	101	99	80-120	73-127	2	0-20	
1,2-Dibromoethane	102	102	79-121	72-128	0	0-20	
1,2-Dichlorobenzene	100	99	80-120	73-127	1	0-20	
1,1-Dichloroethene	126	116	78-126	70-134	8	0-28	
Ethylbenzene	99	97	80-120	73-127	2	0-20	
Toluene	103	97	80-120	73-127	6	0-20	
Trichloroethene	101	97	79-127	71-135	3	0-20	
Vinyl Chloride	99	85	72-132	62-142	15	0-20	
Methyl-t-Butyl Ether (MTBE)	110	100	69-123	60-132	9	0-20	
Tert-Butyl Alcohol (TBA)	100	112	63-123	53-133	11	0-20	
Diisopropyl Ether (DIPE)	102	102	59-137	46-150	0	0-37	
Ethyl-t-Butyl Ether (ETBE)	95	93	69-123	60-132	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	93	92	70-120	62-128	2	0-20	
Ethanol	102	118	28-160	6-182	14	0-57	

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:	09-07-0648
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
099-12-703-989	Aqueous	GC/MS BB	07/21/09	07/21/09	090721L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	96	97	80-120	73-127	2	0-20	
Carbon Tetrachloride	90	96	74-134	64-144	6	0-20	
Chlorobenzene	94	96	80-120	73-127	3	0-20	
1,2-Dibromoethane	97	101	79-121	72-128	4	0-20	
1,2-Dichlorobenzene	98	99	80-120	73-127	1	0-20	
1,1-Dichloroethene	80	73	78-126	70-134	9	0-28	
Ethylbenzene	99	102	80-120	73-127	3	0-20	
Toluene	95	97	80-120	73-127	3	0-20	
Trichloroethene	90	93	79-127	71-135	4	0-20	
Vinyl Chloride	85	93	72-132	62-142	8	0-20	
Methyl-t-Butyl Ether (MTBE)	97	102	69-123	60-132	5	0-20	
Tert-Butyl Alcohol (TBA)	96	92	63-123	53-133	3	0-20	
Diisopropyl Ether (DIPE)	97	95	59-137	46-150	2	0-37	
Ethyl-t-Butyl Ether (ETBE)	102	100	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	98	103	70-120	62-128	4	0-20	
Ethanol	98	104	28-160	6-182	6	0-57	

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: 09-07-0648

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: 09-07-0648

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: 09-07-0648

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
1	02111DPEAINF	7/8/09	0956			x	2	x					x	x	x			x
2	02111ASAEFF	↓	0952			x	2	x					x	x	x			x
3	02111ASYSINF	↓	0948			x	2	x					x	x	x			x
4	02111AGAC1	↓	0944			x	2	x					x	x	x			x
5	02111AEFF	↓	0940			x	2	x					x	x	x		x	
6	02111DPEWINF	↓	1036		x		6				x		x	x		x		x
7	02111ASWINF	↓	1032		x		6				x		x	x		x		x
8	02111ASWEFF	↓	1028		x		6				x		x	x		x		x
9	02111WGAC1	↓	1024		x		6				x		x	x		x		x
10	02111WEFF	↓	1020		x		6				x		x	x		x	x	
11	02111MW2WINF	7/8/09	1040		x		6				x		x	x		x		x
12	TB 2111 7809				X		2											

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

Sampler's Name: Martin Morgan
Sampler's Company: Stratus Environmental, Inc.
Shipment Method: GSO Ship Date: 7/8/09
Shipment Tracking No: ~~5133 1299~~ 9255302261 9255302260

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature]	7/8/09		[signature] CEL	7/9/09	1030

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 #: 09-07-0618

SAMPLE RECEIPT FORM

Cooler 1 of 2

CLIENT: Stratus

DATE: 07/09/09

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

Temperature 3.9 °C - 0.2 °C (CF) = 3.7 °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:** MC

CUSTODY SEALS INTACT:

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

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

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** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

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

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:** TN

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-07-0624B

SAMPLE RECEIPT FORM

Cooler 2 of 2

CLIENT: Stratus

DATE: 07/09/09

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:** 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** ☐100PJ ☐100PJ**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:** PS

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

STRATUS
ENVIRONMENTAL, INC.

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

September 1, 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: Marty Morgan and Chris Hill

Number of Site Visits: 4 (August 3, 12, 17, and 24, 2009)

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

Operational Status: Continuous operation

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

Variations from Scope of Work: None.

The attachments include field data sheets and certified analytical results with chain of custody 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.

Kiran Nagaraju
Project Engineer

Jay R. Johnson, P.G.
Project Manager

Attachments:

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

cc: Paul Supple, BP/ARCO

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

ORIGINAL

Date: 8 30 9
Onsite Time: 0630
Offsite Time: 0810

Technician: CHILL
Weather Conditions: Clouds
Ambient Temperature 60

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

Transfer Pump Hour Meter Reading: —
Effluent Flow Totalizer Reading: 1578072
No. of Carbon Vessels: 2
Lead Carbon Vessel Pressure (psi): 5

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.5
Temperature: 17.2°C

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		422869			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	8309 0726	02111MW2WINF	8309 0731
02111ASWINF	0722	+ Blank 8309	0735
02111ASWEFF	0718		
02111WGAC1	0715		
02111WEFF	0712		

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: 8309

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

ORIGINAL

Date: 8309
Onsite Time: 0630
Offsite Time: 0810
Equipment Manufacturer/Model#

Technician: CHILC
Weather Conditions: Clouds
Ambient Temperature: 60

System Information

System Status Upon Arrival:	Operational	☒	Non-Operational	☐
System Status Upon Departure:	Operational	☒	Non-Operational	☐
Electric Meter Reading:	7734			
Hour Meter Reading:	3982			
Totalizer Reading Prior to Air Stripper:	589133	PID Calibration Date:	8309	
Totalizer Reading After Air Stripper:	1638940			

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		1173	3150		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	15"Hg	20	NA	NA	
Temperature, deg F		151			
PID Readings, ppmv	17	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	10					
V-2	50	10					
V-3	50	10					
MW-1	0	0					
MW-3	100	10					
MW-7	100	10					
MW-8	0	0					

Signature: [signature]
Date: 8309

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	8309 0710	02111AGAC1	8309 0703
02111ASAEFF	" 0708	02111AEFF	" 0700
02111ASYSINF	" 0706		
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: 8309

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

ORIGINAL

Date: 8/12/09
Onsite Time: 0830
Offsite Time: 0930

Technician: MW Morgan
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: _____
Hour Meter Reading: 4198.9
Totalizer Reading Prior to Air Stripper: 617180
PID Calibration Date: 8/12/09
Totalizer Reading After Air Stripper: 1664441

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		26			
Air Velocity, FPM		1056	3000		
Pipe Diameter, inches	3	4	4	3	
Air Flow Rate, cfm					
Applied Vacuum, "Hg	15	.21	NA	NA	
Temperature, deg F		155			
PID Readings, ppmv	~~14.8~~ 16?	0	14.8	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	10					
V-2	50	10					
V-3	50	10					
MW-1	0	—					
MW-3	100	10					
MW-7	100	11					
MW-6	0	—					

Signature: _____ Date: 8/12/09

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	NC
02111ASAEFF	NC	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: 8/12/09

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

ORIGINAL

Date: 8/12/09
Onsite Time: 0830
Offsite Time: 0930

Technician: MW Monger
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: N/A
Effluent Flow Totalizer Reading: 1604111
No. of Carbon Vessels: 2
Lead Carbon Vessel Pressure (psi): 5

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

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2	N/A	422869			

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

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

Notes:

Signature: [signature] Date: 8/12/09

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

ORIGINAL

Date: 81709
Onsite Time: 0515
Offsite Time: 0613
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clouds
Ambient Temperature: 55

System Information

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

Electric Meter Reading: NM
Hour Meter Reading: 4316
Totalizer Reading Prior to Air Stripper: 631528
PID Calibration Date: 81709
Totalizer Reading After Air Stripper: 1677480

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		607	3000		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	15"Hg	.15	NA	NA	
Temperature, deg F		160	120		
PID Readings, ppmv	10	0	5	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	9					
V-2	50	9					
V-3	50	9					
MW-1	0						
MW-3	100	10					
MW-7	100	10					
MW5	0						

Signature:
Date: 81709

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

Do We want To Turn Back on MW-2

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: 81709

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

Date: 81709
Onsite Time: 0915
Offsite Time: 0917

Technician: CHILL
Weather Conditions: Cloudy
Ambient Temperature 53

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1615851

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		422861			

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: Do we want To Turn Back On MW2

Signature: [signature] Date: 81709

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

Date: 82409
Onsite Time: 0530
Offsite Time: 0620
Equipment Manufacturer/Model#

Technician: CHIG
Weather Conditions: Cloudy
Ambient Temperature: 54

System Information

System Status Upon Arrival:	Operational	☒	Non-Operational	☐
System Status Upon Departure:	Operational	☒	Non-Operational	☐
Electric Meter Reading:	NM			
Hour Meter Reading:	4484			
Totalizer Reading Prior to Air Stripper:	650825	PID Calibration Date:	82409	
Totalizer Reading After Air Stripper:	1694970			

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		538	3000		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	14"Hg	.10	NA	NA	
Temperature, deg F		158	120		
PID Readings, ppmv	12	1	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	9					
V-2	50	9					
V-3	50	9					
MW-1	0						
MW-3	100	9					
MW-7	100	9					
MW-8	0						

Signature: [signature]
Date: 82409

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: 82409

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

ORIGINAL

Date: 8 24 09
Onsite Time: 1530
Offsite Time: 0620

Technician: CHILL
Weather Conditions: Cloudy
Ambient Temperature 54

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: 1631641 1631641

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		422917			

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: Run MW-2 while onsite Then Turn off

Signature: [signature] Date: 8 24 09

Calscience
Environmental
Laboratories, Inc.

August 14, 2009

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

Subject: **Calscience Work Order No.: 09-08-0142**
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 8/4/2009 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: 08/04/09
Work Order No: 09-08-0142
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	**09-08-0142-1-A**	**08/03/09 07:10**	**Air**	**GC/MS K**	**N/A**	**08/04/09 15:12**	**090804L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.019	0.013	8		Xylenes (total)	ND	0.069	8	
Toluene	ND	0.015	8		Methyl-t-Butyl Ether (MTBE)	2.6	0.14	20	
Ethylbenzene	0.036	0.017	8						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	57-129		1,2-Dichloroethane-d4	97	47-137	
Toluene-d8	105	78-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-08-0142-2-A**	**08/03/09 07:08**	**Air**	**GC/MS K**	**N/A**	**08/04/09 15:58**	**090804L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0065	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.055	0.0072	1	
Ethylbenzene	ND	0.0022	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	57-129		1,2-Dichloroethane-d4	95	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
02111ASYSINF	**09-08-0142-3-A**	**08/03/09 07:06**	**Air**	**GC/MS K**	**N/A**	**08/04/09 16:52**	**090804L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.012	0.0080	5		Xylenes (total)	ND	0.043	5	
Toluene	ND	0.0094	5		Methyl-t-Butyl Ether (MTBE)	1.5	0.14	20	
Ethylbenzene	0.024	0.011	5						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	105	57-129		1,2-Dichloroethane-d4	95	47-137	
Toluene-d8	105	78-156					

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
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
02111AGAC1	**09-08-0142-4-A**	**08/03/09 07:03**	**Air**	**GC/MS K**	**N/A**	**08/04/09 17:39**	**090804L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0062	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	103	57-129			1,2-Dichloroethane-d4	93	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
02111AEFF	**09-08-0142-5-A**	**08/03/09 07:00**	**Air**	**GC/MS K**	**N/A**	**08/04/09 14:25**	**090804L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0058	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	101	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
Method Blank	**097-09-002-8,856**	**N/A**	**Air**	**GC/MS K**	**N/A**	**08/04/09 13:38**	**090804L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	ND	0.0019	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	98	57-129			1,2-Dichloroethane-d4	97	47-137		
Toluene-d8	99	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
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	**09-08-0142-1-A**	**08/03/09 07:10**	**Air**	**GC 19**	**N/A**	**08/04/09 14:13**	**090804L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	130	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-08-0142-2-A**	**08/03/09 07:08**	**Air**	**GC 19**	**N/A**	**08/04/09 13:04**	**090804L01**

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	**09-08-0142-3-A**	**08/03/09 07:06**	**Air**	**GC 19**	**N/A**	**08/04/09 14:46**	**090804L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	76	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-08-0142-4-A**	**08/03/09 07:03**	**Air**	**GC 19**	**N/A**	**08/04/09 15:20**	**090804L01**

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	**09-08-0142-5-A**	**08/03/09 07:00**	**Air**	**GC 19**	**N/A**	**08/04/09 13:38**	**090804L01**

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	**099-12-685-189-0**	**N/A**	**Air**	**GC 19**	**N/A**	**08/04/09 08:54**	**090804L01**

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

Date Received:	08/04/09
Work Order No:	09-08-0142
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	**09-08-0142-6-D**	**08/03/09 07:26**	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09 20:30**	**090804B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-08-0142-7-D**	**08/03/09 07:22**	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09 21:03**	**090804B01**

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
02111ASWEFF	**09-08-0142-8-D**	**08/03/09 07:18**	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09 21:37**	**090804B01**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-08-0142-9-D**	**08/03/09 07:15**	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09 22:10**	**090804B01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

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

Date Received: 08/04/09
Work Order No: 09-08-0142
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	**09-08-0142-10-D**	**08/03/09 07:12**	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09 12:49**	**090803B02**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	87	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-08-0142-11-D**	**08/03/09 07:31**	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09 22:43**	**090804B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	110	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	84	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-628**	**N/A**	**Aqueous**	**GC 29**	**08/03/09**	**08/04/09 02:19**	**090803B02**

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-629**	**N/A**	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09 17:10**	**090804B01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
Cameron Park, CA 95682-8861	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	**09-08-0142-6-B**	**08/03/09 07:26**	**Aqueous**	**GC/MS BB**	**08/11/09**	**08/12/09 05:21**	**090811L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	1.0	2		Tert-Butyl Alcohol (TBA)	70	20	2	
Ethylbenzene	ND	1.0	2		Diisopropyl Ether (DIPE)	ND	1.0	2	
Toluene	ND	1.0	2		Ethyl-t-Butyl Ether (ETBE)	ND	1.0	2	
Xylenes (total)	ND	1.0	2		Tert-Amyl-Methyl Ether (TAME)	ND	1.0	2	
Methyl-t-Butyl Ether (MTBE)	70	1.0	2						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	132	80-128	LH,AY	Dibromofluoromethane	127	80-127	
Toluene-d8	96	80-120		1,4-Bromofluorobenzene	89	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	**09-08-0142-7-B**	**08/03/09 07:22**	**Aqueous**	**GC/MS BB**	**08/11/09**	**08/12/09 05:53**	**090811L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	180	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)	31	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	115	80-128		Dibromofluoromethane	117	80-127	
Toluene-d8	99	80-120		1,4-Bromofluorobenzene	92	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	**09-08-0142-8-C**	**08/03/09 07:18**	**Aqueous**	**GC/MS BB**	**08/11/09**	**08/12/09 01:08**	**090811L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	50	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	8.6	0.50	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	109	80-128		Dibromofluoromethane	112	80-127	
Toluene-d8	100	80-120		1,4-Bromofluorobenzene	87	68-120	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	**09-08-0142-9-A**	**08/03/09 07:15**	**Aqueous**	**GC/MS BB**	**08/10/09**	**08/11/09 00:51**	**090810L02**

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	124	80-128		Dibromofluoromethane	117	80-127	
Toluene-d8	102	80-120		1,4-Bromofluorobenzene	93	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	**09-08-0142-10-A**	**08/03/09 07:12**	**Aqueous**	**GC/MS Z**	**08/04/09**	**08/04/09 14:40**	**090804L01**

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

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	101	80-128		Dibromofluoromethane	96	80-127	
Toluene-d8	99	80-120		1,4-Bromofluorobenzene	97	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-08-0142-11-A**	**08/03/09 07:31**	**Aqueous**	**GC/MS BB**	**08/12/09**	**08/12/09 14:25**	**090812L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3.4	2.0	4		Tert-Butyl Alcohol (TBA)	660	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)	9.1	2.0	4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	114	80-128		Dibromofluoromethane	115	80-127	
Toluene-d8	95	80-120		1,4-Bromofluorobenzene	89	68-120	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-1,014**	**N/A**	**Aqueous**	**GC/MS Z**	**08/04/09**	**08/04/09 14:11**	**090804L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	80-128			Dibromofluoromethane	100	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	99	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-1,033**	**N/A**	**Aqueous**	**GC/MS BB**	**08/10/09**	**08/11/09 00:20**	**090810L02**

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	122	80-128			Dibromofluoromethane	112	80-127		
Toluene-d8	101	80-120			1,4-Bromofluorobenzene	93	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-1,034**	**N/A**	**Aqueous**	**GC/MS BB**	**08/11/09**	**08/12/09 00:37**	**090811L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
Ethylbenzene	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	0.50	1	
Toluene	ND	0.50	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.50	1	
Xylenes (total)	ND	0.50	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.50	1	
Methyl-t-Butyl Ether (MTBE)	ND	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	110	80-128			Dibromofluoromethane	108	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	91	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
Cameron Park, CA 95682-8861	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: ARCO 2111 - O&M		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	**099-12-703-1,035**	**N/A**	**Aqueous**	**GC/MS BB**	**08/12/09**	**08/12/09 13:22**	**090812L01**

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	80-128		Dibromofluoromethane	102	80-127	
Toluene-d8	95	80-120		1,4-Bromofluorobenzene	90	68-120	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.		Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-08-0142
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-3M

Project: ARCO 2111 - O&M

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
09-08-0150-2	**Air**	**GC 19**	**N/A**	**08/04/09**	**090804D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	1500	1500	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-08-0142
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
09-07-2477-3	**Aqueous**	**GC 29**	**08/03/09**	**08/04/09**	**090803S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	86	87	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:	08/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-08-0142
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
02111ASWEFF	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09**	**090804S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	89	83	38-134	7	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
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 Z**	**08/04/09**	**08/04/09**	**090804S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	92	76-124	4	0-20	
Carbon Tetrachloride	90	87	74-134	3	0-20	
Chlorobenzene	92	89	80-120	3	0-20	
1,2-Dibromoethane	81	76	80-120	6	0-20	LN,AY
1,2-Dichlorobenzene	92	86	80-120	6	0-20	
1,1-Dichloroethene	94	123	73-127	26	0-20	BA,AY
Ethylbenzene	93	95	78-126	1	0-20	
Toluene	91	89	80-120	2	0-20	
Trichloroethene	88	86	77-120	2	0-20	
Vinyl Chloride	123	122	72-126	1	0-20	
Methyl-t-Butyl Ether (MTBE)	95	86	67-121	10	0-49	
Tert-Butyl Alcohol (TBA)	97	90	36-162	7	0-30	
Diisopropyl Ether (DIPE)	117	108	60-138	8	0-45	
Ethyl-t-Butyl Ether (ETBE)	93	86	69-123	8	0-30	
Tert-Amyl-Methyl Ether (TAME)	85	78	65-120	8	0-20	
Ethanol	127	167	30-180	27	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-08-0142
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**	**08/10/09**	**08/11/09**	**090810S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	102	103	76-124	1	0-20	
Carbon Tetrachloride	106	107	74-134	1	0-20	
Chlorobenzene	92	95	80-120	4	0-20	
1,2-Dibromoethane	93	94	80-120	2	0-20	
1,2-Dichlorobenzene	93	92	80-120	1	0-20	
1,1-Dichloroethene	108	107	73-127	1	0-20	
Ethylbenzene	88	90	78-126	3	0-20	
Toluene	95	94	80-120	1	0-20	
Trichloroethene	97	97	77-120	0	0-20	
Vinyl Chloride	106	107	72-126	1	0-20	
Methyl-t-Butyl Ether (MTBE)	96	96	67-121	0	0-49	
Tert-Butyl Alcohol (TBA)	114	118	36-162	4	0-30	
Diisopropyl Ether (DIPE)	116	117	60-138	1	0-45	
Ethyl-t-Butyl Ether (ETBE)	104	103	69-123	1	0-30	
Tert-Amyl-Methyl Ether (TAME)	83	83	65-120	0	0-20	
Ethanol	168	162	30-180	4	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
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
02111ASWEFF	**Aqueous**	**GC/MS BB**	**08/11/09**	**08/12/09**	**090811S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	100	76-124	4	0-20	
Carbon Tetrachloride	102	100	74-134	2	0-20	
Chlorobenzene	96	91	80-120	6	0-20	
1,2-Dibromoethane	95	92	80-120	3	0-20	
1,2-Dichlorobenzene	95	94	80-120	1	0-20	
1,1-Dichloroethene	93	92	73-127	1	0-20	
Ethylbenzene	89	85	78-126	4	0-20	
Toluene	92	91	80-120	1	0-20	
Trichloroethene	99	95	77-120	4	0-20	
Vinyl Chloride	99	108	72-126	9	0-20	
Methyl-t-Butyl Ether (MTBE)	89	81	67-121	5	0-49	
Tert-Butyl Alcohol (TBA)	95	81	36-162	8	0-30	
Diisopropyl Ether (DIPE)	98	98	60-138	0	0-45	
Ethyl-t-Butyl Ether (ETBE)	93	93	69-123	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	82	78	65-120	4	0-20	
Ethanol	131	137	30-180	5	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	08/04/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-08-0142
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
09-08-0455-1	**Aqueous**	**GC/MS BB**	**08/12/09**	**08/12/09**	**090812S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	103	101	76-124	1	0-20	
Carbon Tetrachloride	98	101	74-134	3	0-20	
Chlorobenzene	95	93	80-120	2	0-20	
1,2-Dibromoethane	92	92	80-120	1	0-20	
1,2-Dichlorobenzene	95	95	80-120	0	0-20	
1,1-Dichloroethene	101	99	73-127	2	0-20	
Ethylbenzene	91	89	78-126	3	0-20	
Toluene	91	93	80-120	2	0-20	
Trichloroethene	102	100	77-120	2	0-20	
Vinyl Chloride	103	116	72-126	12	0-20	
Methyl-t-Butyl Ether (MTBE)	92	95	67-121	3	0-49	
Tert-Butyl Alcohol (TBA)	93	101	36-162	7	0-30	
Diisopropyl Ether (DIPE)	96	98	60-138	2	0-45	
Ethyl-t-Butyl Ether (ETBE)	91	92	69-123	0	0-30	
Tert-Amyl-Methyl Ether (TAME)	82	82	65-120	1	0-20	
Ethanol	110	123	30-180	11	0-72	

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:	09-08-0142
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
097-09-002-8,856	**Air**	**GC/MS K**	**N/A**	**08/04/09**	**090804L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	113	60-156	5	0-40	
Toluene	109	115	56-146	5	0-43	
Ethylbenzene	115	120	52-154	5	0-38	
p/m-Xylene	111	116	42-156	5	0-41	
o-Xylene	112	117	52-148	4	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:	09-08-0142
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
099-12-695-628	**Aqueous**	**GC 29**	**08/03/09**	**08/04/09**	**090803B02**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	93	93	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:	09-08-0142
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
099-12-695-629	**Aqueous**	**GC 29**	**08/04/09**	**08/04/09**	**090804B01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	97	97	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:	09-08-0142
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
099-12-703-1,014	**Aqueous**	**GC/MS Z**	**08/04/09**	**08/04/09**	**090804L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	86	90	80-120	73-127	4	0-20	
Carbon Tetrachloride	97	94	74-134	64-144	3	0-20	
Chlorobenzene	84	86	80-120	73-127	3	0-20	
1,2-Dibromoethane	89	87	79-121	72-128	2	0-20	
1,2-Dichlorobenzene	91	95	80-120	73-127	3	0-20	
1,1-Dichloroethene	97	95	78-126	70-134	1	0-28	
Ethylbenzene	90	92	80-120	73-127	2	0-20	
Toluene	87	90	80-120	73-127	3	0-20	
Trichloroethene	85	87	79-127	71-135	2	0-20	
Vinyl Chloride	93	89	72-132	62-142	4	0-20	
Methyl-t-Butyl Ether (MTBE)	111	110	69-123	60-132	1	0-20	
Tert-Butyl Alcohol (TBA)	84	82	63-123	53-133	3	0-20	
Diisopropyl Ether (DIPE)	105	103	59-137	46-150	2	0-37	
Ethyl-t-Butyl Ether (ETBE)	96	100	69-123	60-132	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	95	100	70-120	62-128	6	0-20	
Ethanol	80	80	28-160	6-182	1	0-57	

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:	09-08-0142
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
099-12-703-1,033	**Aqueous**	**GC/MS BB**	**08/10/09**	**08/10/09**	**090810L02**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	102	103	80-120	73-127	1	0-20	
Carbon Tetrachloride	104	103	74-134	64-144	2	0-20	
Chlorobenzene	95	92	80-120	73-127	3	0-20	
1,2-Dibromoethane	93	88	79-121	72-128	5	0-20	
1,2-Dichlorobenzene	94	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	114	110	78-126	70-134	3	0-28	
Ethylbenzene	93	91	80-120	73-127	2	0-20	
Toluene	95	95	80-120	73-127	0	0-20	
Trichloroethene	114	113	79-127	71-135	0	0-20	
Vinyl Chloride	111	117	72-132	62-142	5	0-20	
Methyl-t-Butyl Ether (MTBE)	98	94	69-123	60-132	4	0-20	
Tert-Butyl Alcohol (TBA)	96	95	63-123	53-133	0	0-20	
Diisopropyl Ether (DIPE)	114	110	59-137	46-150	4	0-37	
Ethyl-t-Butyl Ether (ETBE)	104	99	69-123	60-132	5	0-20	
Tert-Amyl-Methyl Ether (TAME)	89	86	70-120	62-128	3	0-20	
Ethanol	112	119	28-160	6-182	6	0-57	

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:	09-08-0142
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
099-12-703-1,034	Aqueous	GC/MS BB	08/11/09	08/11/09	090811L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	100	100	80-120	73-127	0	0-20	
Carbon Tetrachloride	89	97	74-134	64-144	9	0-20	
Chlorobenzene	94	93	80-120	73-127	1	0-20	
1,2-Dibromoethane	95	91	79-121	72-128	4	0-20	
1,2-Dichlorobenzene	95	96	80-120	73-127	1	0-20	
1,1-Dichloroethene	102	100	78-126	70-134	1	0-28	
Ethylbenzene	90	90	80-120	73-127	1	0-20	
Toluene	93	91	80-120	73-127	2	0-20	
Trichloroethene	114	102	79-127	71-135	11	0-20	
Vinyl Chloride	103	109	72-132	62-142	5	0-20	
Methyl-t-Butyl Ether (MTBE)	87	87	69-123	60-132	0	0-20	
Tert-Butyl Alcohol (TBA)	97	98	63-123	53-133	1	0-20	
Diisopropyl Ether (DIPE)	92	95	59-137	46-150	3	0-37	
Ethyl-t-Butyl Ether (ETBE)	89	91	69-123	60-132	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	80	82	70-120	62-128	2	0-20	
Ethanol	99	103	28-160	6-182	3	0-57	

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:	09-08-0142
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
099-12-703-1,035	**Aqueous**	**GC/MS BB**	**08/12/09**	**08/12/09**	**090812L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	99	100	80-120	73-127	1	0-20	
Carbon Tetrachloride	97	100	74-134	64-144	3	0-20	
Chlorobenzene	92	92	80-120	73-127	0	0-20	
1,2-Dibromoethane	88	94	79-121	72-128	6	0-20	
1,2-Dichlorobenzene	92	96	80-120	73-127	3	0-20	
1,1-Dichloroethene	98	100	78-126	70-134	2	0-28	
Ethylbenzene	89	90	80-120	73-127	1	0-20	
Toluene	92	94	80-120	73-127	1	0-20	
Trichloroethene	98	98	79-127	71-135	0	0-20	
Vinyl Chloride	110	105	72-132	62-142	4	0-20	
Methyl-t-Butyl Ether (MTBE)	83	88	69-123	60-132	5	0-20	
Tert-Butyl Alcohol (TBA)	101	95	63-123	53-133	5	0-20	
Diisopropyl Ether (DIPE)	91	93	59-137	46-150	2	0-37	
Ethyl-t-Butyl Ether (ETBE)	87	90	69-123	60-132	4	0-20	
Tert-Amyl-Methyl Ether (TAME)	78	81	70-120	62-128	4	0-20	
Ethanol	118	99	28-160	6-182	18	0-57	

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: 09-08-0142

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.

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

ORIGINAL 0142 Page 1 of 1

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

Lab Name:	Calscience Environmental Laboratories, Inc.	BP/ARC Facility Address:	1156 Davis Street	Consultant/Contractor:	Stratus Environmental, Inc.
Lab Address:	7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code:	San Leandro, California	Consultant/Contractor Project No:	E2111-03
Lab PM:	Richard Villafania	Lead Regulatory Agency:	Alameda County Environmental Health	Address:	3330 Cameron Park Dr., Suite 550, Cameron Park, CA 95682
Lab Phone:	714-895-5494	California Global ID No.:	T0600101764	Consultant/Contractor PM:	Jay Johnson
Lab Shipping Acct:	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	8309	0710			x	2	x					x	x	x			x
2	02111ASAEFF		0708			x	2	x					x	x	x			x
3	02111ASYSINF		0706			x	2	x					x	x	x			x
4	02111AGAC1		0703			x	2	x					x	x	x			x
5	02111AEFF		0700			x	2	x					x	x	x		x	
6	02111DPEWINF		0726		x		6				x		x	x		x		x
7	02111ASWINF		0722		x		6				x		x	x		x		x
8	02111ASWEFF		0718		x		6				x		x	x		x		x
9	02111WGAC1		0715		x		6				x		x	x		x		x
10	02111WEFF		0712		x		6				x		x	x		x	x	
11	02111MW2WINF		0731		x		6				x		x	x		x		x
12	TB2111 8309		0735				2										Hold	

Turnaround Time: 24-hours, Standard

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.

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

Sampler's Name:	Chris Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Stratus Environmental, Inc.	Chris Hill Stratus	8309	1600			
Shipment Method:	GSO Ship Date: 8309						
Shipment Tracking No:	925552285					9/4/09	1030

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 #: 09-08- 0 1 4 2

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 08/04/09

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:** JP

CUSTODY SEALS INTACT:

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

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

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** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

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

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelop **Reviewed by:** JS

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:** YC

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-08-0142

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus

DATE: 08/04/09

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:** JP

CUSTODY SEALS INTACT:

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

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

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ 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** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

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

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelop **Reviewed by:** YL

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:** WB

Atlantic Richfield Company
A BP affiliated company

Laboratory Management Program LaMP Chain of Custody Record

ORIGINAL

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

Lab Name: Calscience Environmental Laboratories, Inc.	BP/ARC Facility Address: 1156 Davis Street	Consultant/Contractor: Stratus Environmental, Inc.
Lab Address: 7440 Lincoln Way, Garden Grove, CA 92841	City, State, ZIP Code: San Leandro, California	Consultant/Contractor Project No: E2111-03
Lab PM: Richard Villafania	Lead Regulatory Agency: Alameda County Environmental Health	Address: 3330 Cameron Park Dr., Suite 550, Cameron Park, CA 95682
Lab Phone: 714-895-5494	California Global ID No.: T0600101764	Consultant/Contractor PM: Jay Johnson
Lab Shipping Accnt: 9255	Enfos Proposal No: 000TV-0002	Phone: 530-676-6000
Lab Bottle Order No:	Accounting Mode: Provision x OOC-BU ___ OOC-RM ___	Email EDD To: 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	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: GRO	BTEX	MTBE	5-oxys			Turnaround Time: 24-hours	Standard		
1	02111DPEAINF	8309	0710			x		2	x						x	x	x					x		
2	02111ASAEFF		0708			x		2	x						x	x	x					x		
3	02111ASYSINF		0706			x		2	x						x	x	x					x		
4	02111AGAC1		0703			x		2	x						x	x	x					x		
5	02111AEFF		0700			x		2	x						x	x	x					x		
6	02111DPEWINF		0726		x			6				x			x	x		x			x			
7	02111ASWINF		0722		x			6				x			x	x		x				x		
8	02111ASWEFF		0718		x			6				x			x	x		x				x		
9	02111WGAC1		0715		x			6				x			x	x		x				x		
10	02111WEFF		0712		x			6				x			x	x		x				x		
11	02111MW2WINF		0731		x			6				x			x	x		x			x			
12	TB2111 8309		0735					2														x		

Sampler's Name: Chris Hill
Sampler's Company: Stratus Environmental, Inc.
Shipment Method: GSO Ship Date: 8309
Shipment Tracking No:

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Chris Hill Stratus	8309	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

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.

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

STRATUS
ENVIRONMENTAL, INC.

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

October 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: Kiran Nagaraju / Jay Johnson

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

On-Site Supplier Representative: Chris Hill

Number of Site Visits: 5 (September 1, 8, 15, 21, and 29, 2009)

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

Operational Status: Continuous operation

Scope of Work Performed: Conducted routine system operation and maintenance and recorded field measurements. Influent, mid-fluent, and effluent air and water samples were collected on September 1, 2009.

Variations from Scope of Work: None.

The attachments include field data sheets and certified analytical results with chain of custody 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.

October 6, 2009

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
- Certified Analytical Results
- Chain of Custody Documentation

cc: Chuck Carmel, BP/ARCO

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

ORIGINAL

Date: 9/09
Onsite Time: 0730
Offsite Time: 0853
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Clouds
Ambient Temperature: 50

System Information

System Status Upon Arrival: Operational [X] Non-Operational [ ]
System Status Upon Departure: Operational [X] Non-Operational [ ]
Electric Meter Reading: 22623
Hour Meter Reading: 4679
Totalizer Reading Prior to Air Stripper: 671887
PID Calibration Date: 8 30 09
Totalizer Reading After Air Stripper: 1714080

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		26"			
Air Velocity, FPM		709	3000		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	13" Hg	.10" H2O	NA	NA	
Temperature, deg F		164	122		
PID Readings, ppmv	15	0	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	50	9					
V-2	50	9					
V-3	50	9					
MW-1	0						
MW-3	100	10					
MW-7	100	9					
MW-8	0						

Signature:

Date: 9/09

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	9/09 0834	02111AGAC1	9/09 0824
02111ASAEFF	" 0831	02111AEFF	" 0822
02111ASYSINF	" 0829		
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: 9/09

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

RESPONSE

Date: 9-1-09
Onsite Time: 0730
Offsite Time: 0853

Technician: CHUCK
Weather Conditions: Cloudy
Ambient Temperature 50

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1650611

No. of Carbon Vessels: 2

Lead Carbon Vessel Pressure (psi): 6

Effluent Water Characteristics
(Quarterly by Field Instrument)
pH: 7.3
Temperature: 18.8

Well ID	Hour Meter Reading	Totalizer Reading	Total Depth	Pump Depth	
MW-2		423148			

Sampling Information

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEWINF	9104 0808	02111MW2WINF	9104 0816
02111ASWINF	0804	TB2111909	0820
02111ASWEFF	0800		
02111WGAC1	0756		
02111WEFF	0753		

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: _____ Date: 9109

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

PRESENT

Date: 9 8 09
Onsite Time: 0350
Offsite Time: 0435
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: CLEAR
Ambient Temperature: 50

System Information

System Status Upon Arrival: Operational [X] Non-Operational [ ]
System Status Upon Departure: Operational [X] Non-Operational [ ]
Electric Meter Reading: NM
Hour Meter Reading: 4842
Totalizer Reading Prior to Air Stripper: 691528 PID Calibration Date: 9-7-09
Totalizer Reading After Air Stripper: 1731960

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		405	3000		
Pipe Diameter, inches			4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	13" Hg	.12	NA	NA	
Temperature, deg F		153	120		
PID Readings, ppmv	12	1	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	9					
V-2	50	9					
V-3	50	9					
MW-1	0						
MW-3	100	10					
MW-7	100	9					
MW8	0						

Signature: [signature]
Date: 9809

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: 9809

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

ORIGINAL

Date: 9809
Onsite Time: 0350
Offsite Time: 0435

Technician: CHILL
Weather Conditions: clear
Ambient Temperature: 47

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1667917

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		423163			

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: 9805

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

ORIGINAL

Date: 91509
Onsite Time: 1000
Offsite Time: 1100
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: CLR
Ambient Temperature: 65

System Information

System Status Upon Arrival: Operational ☐ Non-Operational ☒
System Status Upon Departure: Operational ☒ Non-Operational ☐
Electric Meter Reading: 28356
Hour Meter Reading: 4950
Totalizer Reading Prior to Air Stripper: 703407
PID Calibration Date: 91409
Totalizer Reading After Air Stripper: 1742750

Field Measurements

Parameter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pressure, "wc		10			
Air Velocity, FPM		940	3000		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	17"Hg	.10	NA	NA	
Temperature, deg F		118	100		
PID Readings, ppmv	40	1	35	8	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	10					
V-2	50	10					
V-3	50	10					
MW-1							
MW-3	100	10					
MW-7	100	10					
MW5	0						

Signature: [signature]
Date: 91509

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: 9/5/09

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

ORIGINAL

Date: 91509
Onsite Time: 1000
Offsite Time: 1120

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 65

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: 167725

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		423618			

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: 91509

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

Date: 9 21 09
Onsite Time: 0550
Offsite Time: 0630
Equipment Manufacturer/Model#

Technician: CHUCK
Weather Conditions: CLEAR
Ambient Temperature: 50

System Information

System Status Upon Arrival:	Operational	X	Non-Operational	
System Status Upon Departure:	Operational	X	Non-Operational	
Electric Meter Reading:	NM			
Hour Meter Reading:	5090			
Totalizer Reading Prior to Air Stripper:	719421	PID Calibration Date:	9 21 09	
Totalizer Reading After Air Stripper:	1757280			

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		513	3000		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	15" Hg	.10	NA	NA	
Temperature, deg F		157	120		
PID Readings, ppmv	6	0	6	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	9					
V-2	50	9					
V-3	50	9					
MW-1	0						
MW-3	100	9					
MW-7	100	9					
MW8	0						

Signature: Chuck

Date: 9 21 09

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

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

Operation & Maintenance Notes

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

Signature: _____ Date: 9/20/07

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

Date: 9 2 10 9
Onsite Time: 0550
Offsite Time: 0630

Technician: CHILL
Weather Conditions: Clear
Ambient Temperature 50

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

Transfer Pump Hour Meter Reading: 1691771
Effluent Flow Totalizer Reading: 169177

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		423181			

Sampling Information

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

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

Notes:

Signature: [signature]
Date: 9 2 10 9

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

ORIGINAL

Date: 92909
Onsite Time: 1436
Offsite Time: 0520
Equipment Manufacturer/Model#

Technician: CHILL
Weather Conditions: Cloudy
Ambient Temperature: 50

System Information

System Status Upon Arrival: Operational [X] Non-Operational [ ]
System Status Upon Departure: Operational [ ] Non-Operational [X]
Electric Meter Reading: NM
Shut off
Hour Meter Reading: 5281
Totalizer Reading Prior to Air Stripper: 739588
PID Calibration Date: 9.28.09
Totalizer Reading After Air Stripper: 1775520

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		521	3000		
Pipe Diameter, inches		4	4		
Air Flow Rate, cfm					
Applied Vacuum, "wc	15" Hg	.15	NA	NA	
Temperature, deg F		150	120		
PID Readings, ppmv	7	0	5	0	PID for GAC-1: 0

Other Readings/Measurements

Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	50	9					
V-2	50	9					
V-3	50	9					
MW-1	0						
MW-3	100	9					
MW-7	100	9					
MW-5	0						

Signature: [signature]
Date: 92909

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: 4/29/09

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

ORIGINAL

Date: 9 2 9 0 9
Onsite Time: 0430
Offsite Time: 0520

Technician: CHILL
Weather Conditions: Cloudy
Ambient Temperature 50

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

Transfer Pump Hour Meter Reading: _____

Effluent Flow Totalizer Reading: 1098767

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		423181			

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: Magnehelic on air stripper BAD

Signature: _____ Date: 92909

Calscience
Environmental
Laboratories, Inc.

September 15, 2009

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

Subject: **Calscience Work Order No.:** 09-09-0121
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 9/2/2009 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:	09/02/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-09-0121
Cameron Park, CA 95682-8861		Preparation:	N/A
		Method:	EPA TO-15M
		Units:	mg/m3
Project: ARCO 2111 - O&M			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111DPEAINF	**09-09-0121-1-A**	**09/01/09 08:34**	**Air**	**GC/MS K**	**N/A**	**09/03/09 00:34**	**090902L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.030	0.0040	2.5		Xylenes (total)	0.055	0.022	2.5	
Toluene	0.021	0.0047	2.5		Methyl-t-Butyl Ether (MTBE)	0.69	0.036	5	
Ethylbenzene	0.040	0.0054	2.5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	106	57-129			1,2-Dichloroethane-d4	110	47-137		
Toluene-d8	105	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-09-0121-2-A**	**09/01/09 08:31**	**Air**	**GC/MS K**	**N/A**	**09/02/09 15:56**	**090902L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.0021	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.014	0.0019	1		Methyl-t-Butyl Ether (MTBE)	0.084	0.0072	1	
Ethylbenzene	ND	0.0022	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	107	57-129			1,2-Dichloroethane-d4	101	47-137		
Toluene-d8	102	78-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASYSINF	**09-09-0121-3-A**	**09/01/09 08:29**	**Air**	**GC/MS K**	**N/A**	**09/02/09 16:43**	**090902L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	0.034	0.0080	5		Xylenes (total)	0.063	0.043	5	
Toluene	0.024	0.0094	5		Methyl-t-Butyl Ether (MTBE)	0.89	0.036	5	
Ethylbenzene	0.046	0.011	5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	106	57-129			1,2-Dichloroethane-d4	104	47-137		
Toluene-d8	105	78-156							

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.		Date Received:	09/02/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-09-0121
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
02111AGAC1	**09-09-0121-4-A**	**09/01/09 08:24**	**Air**	**GC/MS K**	**N/A**	**09/02/09 17:30**	**090902L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0048	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	109	57-129			1,2-Dichloroethane-d4	109	47-137		
Toluene-d8	102	78-156							

02111AEFF	**09-09-0121-5-A**	**09/01/09 08:22**	**Air**	**GC/MS K**	**N/A**	**09/02/09 14:21**	**090902L01**

Comment(s): -The method has been modified to use Tedlar bags instead of Summa Canisters.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0016	1		Xylenes (total)	ND	0.0087	1	
Toluene	0.0064	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	105	57-129			1,2-Dichloroethane-d4	110	47-137		
Toluene-d8	99	78-156							

Method Blank	**097-09-002-8,968**	**N/A**	**Air**	**GC/MS K**	**N/A**	**09/02/09 13:34**	**090902L01**

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	103	57-129			1,2-Dichloroethane-d4	111	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:	09/02/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-09-0121
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	**09-09-0121-1-A**	**09/01/09 08:34**	**Air**	**GC 38**	**N/A**	**09/02/09 15:41**	**090902L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	85	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASAEFF	**09-09-0121-2-A**	**09/01/09 08:31**	**Air**	**GC 38**	**N/A**	**09/02/09 12:43**	**090902L01**

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	**09-09-0121-3-A**	**09/01/09 08:29**	**Air**	**GC 38**	**N/A**	**09/02/09 15:04**	**090902L01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	80	38	1		mg/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111AGAC1	**09-09-0121-4-A**	**09/01/09 08:24**	**Air**	**GC 38**	**N/A**	**09/02/09 14:29**	**090902L01**

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	**09-09-0121-5-A**	**09/01/09 08:22**	**Air**	**GC 38**	**N/A**	**09/02/09 13:17**	**090902L01**

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	**099-12-685-203**	**N/A**	**Air**	**GC 38**	**N/A**	**09/02/09 08:55**	**090902L01**

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:	09/02/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-09-0121
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	09-09-0121-6-E	09/01/09 08:08	Aqueous	GC 11	09/02/09	09/03/09 00:07	090902B01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	09-09-0121-7-E	09/01/09 08:04	Aqueous	GC 11	09/02/09	09/03/09 00:41	090902B01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	09-09-0121-8-E	09/01/09 08:00	Aqueous	GC 11	09/02/09	09/03/09 01:14	090902B01

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

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WGAC1	09-09-0121-9-E	09/01/09 07:56	Aqueous	GC 11	09/02/09	09/03/09 02:22	090902B01

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	09/02/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-09-0121
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	**09-09-0121-10-E**	**09/01/09 07:53**	**Aqueous**	**GC 11**	**09/02/09**	**09/03/09 02:56**	**090902B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	79	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	**09-09-0121-11-E**	**09/01/09 08:16**	**Aqueous**	**GC 11**	**09/02/09**	**09/03/09 03:29**	**090902B01**

Parameter	Result	RL	DF	Qual	Units
Gasoline Range Organics (C6-C12)	130	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	81	38-134			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-695-653**	**N/A**	**Aqueous**	**GC 11**	**09/02/09**	**09/02/09 17:56**	**090902B01**

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

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	09/02/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-09-0121
Cameron Park, CA 95682-8861	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	09-09-0121-6-B	09/01/09 08:08	Aqueous	GC/MS BB	09/08/09	09/08/09 16:14	090908L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	27	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)	24	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	80-128			Dibromofluoromethane	104	80-127		
Toluene-d8	99	80-120			1,4-Bromofluorobenzene	86	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWINF	09-09-0121-7-A	09/01/09 08:04	Aqueous	GC/MS BB	09/05/09	09/05/09 19:08	090905L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	84	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)	14	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	104	80-128			Dibromofluoromethane	98	80-127		
Toluene-d8	98	80-120			1,4-Bromofluorobenzene	87	68-120		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111ASWEFF	09-09-0121-8-A	09/01/09 08:00	Aqueous	GC/MS BB	09/05/09	09/05/09 19:37	090905L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Tert-Butyl Alcohol (TBA)	32	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)	4.9	0.50	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,2-Dichloroethane-d4	106	80-128			Dibromofluoromethane	99	80-127		
Toluene-d8	98	80-120			1,4-Bromofluorobenzene	73	68-120		

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	09/02/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-09-0121
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	09-09-0121-9-A	09/01/09 07:56	Aqueous	GC/MS BB	09/05/09	09/05/09 17:42	090905L01

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	80-128		Dibromofluoromethane	101	80-127	
Toluene-d8	95	80-120		1,4-Bromofluorobenzene	73	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111WEFF	09-09-0121-10-A	09/01/09 07:53	Aqueous	GC/MS BB	09/02/09	09/02/09 14:08	090902L01

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	80-128		Dibromofluoromethane	96	80-127	
Toluene-d8	92	80-120		1,4-Bromofluorobenzene	100	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02111MW2WINF	09-09-0121-11-A	09/01/09 08:16	Aqueous	GC/MS BB	09/05/09	09/05/09 18:10	090905L01

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	2.5	2.0	4		Tert-Butyl Alcohol (TBA)	710	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)	4.9	2.0	4						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	101	80-128		Dibromofluoromethane	96	80-127	
Toluene-d8	98	80-120		1,4-Bromofluorobenzene	82	68-120	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Stratus Environmental, inc.	Date Received:	09/02/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-09-0121
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	**099-12-703-1,062**	**N/A**	Aqueous	**GC/MS BB**	**09/02/09**	**09/02/09 12:06**	**090902L01**

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	80-128		Dibromofluoromethane	96	80-127	
Toluene-d8	92	80-120		1,4-Bromofluorobenzene	93	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-1,068**	**N/A**	Aqueous	**GC/MS BB**	**09/05/09**	**09/05/09 11:54**	**090905L01**

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	80-128		Dibromofluoromethane	93	80-127	
Toluene-d8	98	80-120		1,4-Bromofluorobenzene	76	68-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-703-1,071**	**N/A**	Aqueous	**GC/MS BB**	**09/08/09**	**09/08/09 13:18**	**090908L01**

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

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,2-Dichloroethane-d4	104	80-128		Dibromofluoromethane	101	80-127	
Toluene-d8	97	80-120		1,4-Bromofluorobenzene	87	68-120	

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

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Stratus Environmental, inc.		Date Received:	09/02/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-09-0121
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	09/02/09	090902D01

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	85	84	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.		Date Received:	09/02/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-09-0121
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
09-09-0103-3	Aqueous	GC 11	09/02/09	09/02/09	090902S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	85	85	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:	09/02/09
3330 Cameron Park Drive, Suite 550		Work Order No:	09-09-0121
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
09-09-0103-3	Aqueous	GC/MS BB	09/02/09	09/02/09	090902S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	102	76-124	3	0-20	
Carbon Tetrachloride	97	99	74-134	2	0-20	
Chlorobenzene	104	102	80-120	2	0-20	
1,2-Dibromoethane	99	102	80-120	3	0-20	
1,2-Dichlorobenzene	99	100	80-120	1	0-20	
1,1-Dichloroethene	88	64	73-127	31	0-20	LN,BA,AY
Ethylbenzene	100	85	78-126	16	0-20	
Toluene	110	99	80-120	10	0-20	
Trichloroethene	95	101	77-120	6	0-20	
Vinyl Chloride	89	82	72-126	9	0-20	
Methyl-t-Butyl Ether (MTBE)	95	103	67-121	8	0-49	
Tert-Butyl Alcohol (TBA)	103	108	36-162	5	0-30	
Diisopropyl Ether (DIPE)	96	107	60-138	11	0-45	
Ethyl-t-Butyl Ether (ETBE)	94	104	69-123	10	0-30	
Tert-Amyl-Methyl Ether (TAME)	94	100	65-120	6	0-20	
Ethanol	143	134	30-180	6	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received:	09/02/09
3330 Cameron Park Drive, Suite 550	Work Order No:	09-09-0121
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
09-09-0128-3	Aqueous	GC/MS BB	09/05/09	09/05/09	090905S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	99	103	76-124	3	0-20	
Carbon Tetrachloride	103	108	74-134	4	0-20	
Chlorobenzene	100	99	80-120	1	0-20	
1,2-Dibromoethane	112	109	80-120	2	0-20	
1,2-Dichlorobenzene	100	102	80-120	2	0-20	
1,1-Dichloroethene	98	104	73-127	6	0-20	
Ethylbenzene	97	95	78-126	2	0-20	
Toluene	96	95	80-120	1	0-20	
Trichloroethene	99	101	77-120	2	0-20	
Vinyl Chloride	94	93	72-126	1	0-20	
Methyl-t-Butyl Ether (MTBE)	91	100	67-121	9	0-49	
Tert-Butyl Alcohol (TBA)	110	121	36-162	10	0-30	
Diisopropyl Ether (DIPE)	92	97	60-138	5	0-45	
Ethyl-t-Butyl Ether (ETBE)	94	100	69-123	7	0-30	
Tert-Amyl-Methyl Ether (TAME)	93	100	65-120	7	0-20	
Ethanol	95	103	30-180	9	0-72	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Stratus Environmental, inc.	Date Received: 09/02/09
3330 Cameron Park Drive, Suite 550	Work Order No: 09-09-0121
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
09-09-0353-2	Aqueous	GC/MS BB	09/08/09	09/08/09	090908S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	96	76-124	1	0-20	
Carbon Tetrachloride	101	101	74-134	0	0-20	
Chlorobenzene	97	94	80-120	3	0-20	
1,2-Dibromoethane	93	106	80-120	12	0-20	
1,2-Dichlorobenzene	96	97	80-120	1	0-20	
1,1-Dichloroethene	90	94	73-127	4	0-20	
Ethylbenzene	96	94	78-126	2	0-20	
Toluene	88	91	80-120	4	0-20	
Trichloroethene	94	94	77-120	0	0-20	
Vinyl Chloride	84	87	72-126	4	0-20	
Methyl-t-Butyl Ether (MTBE)	96	93	67-121	3	0-49	
Tert-Butyl Alcohol (TBA)	115	106	36-162	8	0-30	
Diisopropyl Ether (DIPE)	93	90	60-138	4	0-45	
Ethyl-t-Butyl Ether (ETBE)	93	92	69-123	1	0-30	
Tert-Amyl-Methyl Ether (TAME)	90	93	65-120	3	0-20	
Ethanol	118	117	30-180	0	0-72	

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:	09-09-0121
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
097-09-002-8,968	Air	GC/MS K	N/A	09/02/09	090902L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	107	122	69-156	13	0-40	
Toluene	114	120	56-146	5	0-43	
Ethylbenzene	122	129	52-154	5	0-38	
p/m-Xylene	124	130	42-156	5	0-41	
o-Xylene	124	129	52-148	4	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:	09-09-0121
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
099-12-695-653	Aqueous	GC 11	09/02/09	09/02/09	090902B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics (C6-C12)	94	94	78-120	0	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Stratus Environmental, inc.		Date Received:	N/A
3330 Cameron Park Drive, Suite 550		Work Order No:	09-09-0121
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
099-12-703-1,062	Aqueous	GC/MS BB	09/02/09	09/02/09	090902L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	98	97	80-120	73-127	2	0-20	
Carbon Tetrachloride	100	99	74-134	64-144	2	0-20	
Chlorobenzene	97	100	80-120	73-127	3	0-20	
1,2-Dibromoethane	90	101	79-121	72-128	12	0-20	
1,2-Dichlorobenzene	102	99	80-120	73-127	3	0-20	
1,1-Dichloroethene	100	98	78-126	70-134	2	0-28	
Ethylbenzene	100	101	80-120	73-127	1	0-20	
Toluene	89	106	80-120	73-127	17	0-20	
Trichloroethene	97	95	79-127	71-135	1	0-20	
Vinyl Chloride	92	92	72-132	62-142	1	0-20	
Methyl-t-Butyl Ether (MTBE)	93	97	69-123	60-132	5	0-20	
Tert-Butyl Alcohol (TBA)	104	106	63-123	53-133	2	0-20	
Diisopropyl Ether (DIPE)	96	93	59-137	46-150	3	0-37	
Ethyl-t-Butyl Ether (ETBE)	93	95	69-123	60-132	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	94	94	70-120	62-128	1	0-20	
Ethanol	111	112	28-160	6-182	1	0-57	

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:	09-09-0121
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
099-12-703-1,068	Aqueous	GC/MS BB	09/05/09	09/05/09	090905L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Benzene	103	101	80-120	73-127	2	0-20	
Carbon Tetrachloride	107	106	74-134	64-144	1	0-20	
Chlorobenzene	100	99	80-120	73-127	1	0-20	
1,2-Dibromoethane	106	106	79-121	72-128	0	0-20	
1,2-Dichlorobenzene	105	103	80-120	73-127	2	0-20	
1,1-Dichloroethene	100	102	78-126	70-134	2	0-28	
Ethylbenzene	98	97	80-120	73-127	1	0-20	
Toluene	101	97	80-120	73-127	4	0-20	
Trichloroethene	102	104	79-127	71-135	2	0-20	
Vinyl Chloride	100	102	72-132	62-142	2	0-20	
Methyl-t-Butyl Ether (MTBE)	96	94	69-123	60-132	2	0-20	
Tert-Butyl Alcohol (TBA)	112	117	63-123	53-133	5	0-20	
Diisopropyl Ether (DIPE)	94	91	59-137	46-150	3	0-37	
Ethyl-t-Butyl Ether (ETBE)	96	95	69-123	60-132	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	98	95	70-120	62-128	4	0-20	
Ethanol	102	116	28-160	0-182	13	0-57	

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:	09-09-0121
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
099-12-703-1,071	Aqueous	GC/MS BB	09/08/09	09/08/09	090908L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	96	93	80-120	73-127	3	0-20	
Carbon Tetrachloride	106	102	74-134	64-144	3	0-20	
Chlorobenzene	92	95	80-120	73-127	4	0-20	
1,2-Dibromoethane	98	106	79-121	72-128	7	0-20	
1,2-Dichlorobenzene	95	94	80-120	73-127	1	0-20	
1,1-Dichloroethene	97	94	78-126	70-134	4	0-28	
Ethylbenzene	88	95	80-120	73-127	8	0-20	
Toluene	90	90	80-120	73-127	0	0-20	
Trichloroethene	97	95	79-127	71-135	2	0-20	
Vinyl Chloride	82	89	72-132	62-142	8	0-20	
Methyl-t-Butyl Ether (MTBE)	88	89	69-123	60-132	1	0-20	
Tert-Butyl Alcohol (TBA)	104	113	63-123	53-133	8	0-20	
Diisopropyl Ether (DIPE)	89	88	59-137	46-150	0	0-37	
Ethyl-t-Butyl Ether (ETBE)	89	90	69-123	60-132	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	89	92	70-120	62-128	3	0-20	
Ethanol	100	104	28-160	6-182	4	0-57	

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: 09-09-0121

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: 09-09-0121

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

Page 1 of 1

ORIGINAL

BP/ARC Project Name: ARCO 2111- O&M
Req Due Date (mm/dd/yy): Eff 24hrs&others ST Turn AT: Yes x No
BP/ARC Facility No: 2111
Lab Work Order Number: 09-09-0121

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 Villafranca	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	Report Type & QC Level
																			Standard x Full Data Package ___
1	02111DPEAINF	9104	0834			x	2	x					x	x	x			x	5-oxys include MTBE, TBA, TAME,
2	02111ASAEFF		0831			x	2	x					x	x	x			x	DIPE, & ETBE. 24-hr TAT only for
3	02111ASYSINF		0829			x	2	x					x	x	x			x	GRO, BTEX, & 5-oxys.
4	02111AGAC1		0824			x	2	x					x	x	x			x	
5	02111AEFF		0822			x	2	x					x	x	x		x		
6	02111DPEWINF		0808		x		6				x		x	x		x		x	
7	02111ASWINF		0804		x		6				x		x	x		x		x	
8	02111ASWEFF		0800		x		6				x		x	x		x		x	
9	02111WGAC1		0756		x		6				x		x	x		x		x	
10	02111WEFF		0753		x		6				x		x	x		x	x		
11	02111MW2WINF		0816		x		6				x		x	x		x		x	
12	TB2111 9109	9104	0820				2										Hold		

Sampler's Name:	Chris Hill	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Stratus Environmental, Inc.		9104	1600			
Shipment Method:	GSO Ship Date: 9109						
Shipment Tracking No:	#925582331/032334					9/4/09	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 #: 09-09-0172

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Stratus DATE: 9/2/09

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

Temperature 1.9 °C - 0.2 °C (CF) = 1.7 °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: PS

CUSTODY SEALS INTACT:

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

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

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 ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

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

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelop Reviewed by: PS

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: WSC

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 09-09-0112

SAMPLE RECEIPT FORM

Box ~~Cooler~~ 1 of 1

CLIENT: STRATUS DATE: 09/02/09

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: YC

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 ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

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

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelop Reviewed by: WS

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: YC

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 July 31, 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 July 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for July 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 27,560 gallons of treated groundwater were discharged to the sanitary sewer between June 30 and July 27, 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: June 30, 2009 to July 27, 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: 27,560 (between June 30 and July 27, 2009) U. S. Gallons

Signature of Certifying Official: _____

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

Title: Project Manager

Date: 07/28/09

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-operating during the site visits conducted on July 8 and 15, 2009, due to a high-level either in the oil-water separator or the air-stripper holding tank. The remediation systems were restarted on the same day(s) they were found non-functioning by re-setting the level alarms. The level floats on the oil-water separator were also replaced during these visits. The remediation systems were again found non-operating during a site visit conducted on July 22, 2009, due to a power trip. The remediation systems were re-started the same day after re-setting the power supply.

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	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]	
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)
July-09	7/8/09 [15] 9:30	1,528,493	27,560
	7/13/09 [15] 6:30	1,529,314	
	7/22/09 [36] 9:00	1,534,997	
	7/27/09 5:45	1,555,117	

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.

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)

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

[22] System observed non-functioning upon arrival due to power failure. System re-started, but shutdown after sampling pending receipt and verification of analytical results. Floats were replaced on DPE system.

[23] System re-started upon receipt of analytical results and compliance verification, but DPE system was shutdown due to transfer pump contactor malfunction. Currently only GETS operational.

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

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

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

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

[28] System observed non-functioning upon arrival due to high water level alarm on air stripper or oil-water separator. System not re-started, pending carbon change-out for liquid phase carbon vessels.

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

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

[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.

[36] System was observed non-functioning upon arrival due to a circuit trip for the liquid ring pump.

STRATUS
ENVIRONMENTAL, INC.

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

TRANSMITTAL

Date August 31, 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 August 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for August 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 76,524 gallons of treated groundwater were discharged to the sanitary sewer between July 27 and August 24, 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: July 27, 2009 to August 24, 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: 28

Total monthly discharge: 76,524 U. S. Gallons

Signature of Certifying Official: _____

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

Title: Project Manager

Date: August 31, 2009

Include a brief statement summarizing the month's operations:

The operation of the dual phase extraction (DPE) system, air stripper (AS) and the groundwater extraction and treatment system (GETS) was initiated on January 29, 2007. Soil vapors and groundwater were concurrently extracted from wells V-1, V-2, V-3, MW-1, MW-3, MW-7, and MW-8 using the liquid ring pump of the DPE system. In addition, groundwater was also extracted from well MW-2 using the electrical submersible pump. The level floats/controller of the submersible pump malfunctioned on January 29, 2007, and the pump shutdown. The submersible pump was re-started during February 2007, after troubleshooting the level floats/controller. 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 the discharge to the sewer. Groundwater extraction using well MW-2 was temporarily discontinued on February 18, 2009.

Submit reports to: City of San Leandro – Environmental Services Division
835 East 14th Street, San Leandro CA 94577

TABLE 1
SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
January-07	1/29/07 8:00 1/29/07 8:00 1/29/07[1] 12:00 01/30/07 01/31/07	System Start-up 3,000 5,000 6,200 8,560	5,560
February-07	2/1/07 5:15 2/2/07 5:00 2/5/07 5:00 2/20/07 6:30	16,860 25,480 33,400 122,790	114,230
March-07	3/5/07[2] 5:00 3/8/07[3] 4:50 3/14/07[4] 7:00 3/29/07[5] 10:00	130,565 132,951 NM 133,262	10,472
April-07	4/2/07[6] 5:30 4/10/07[7] 5:00 4/23/07[8] 7:00 4/26/07 6:00	170,596 NM 172,210 200,143	66,881
May-07	5/1/2007[9] 4:50 5/15/2007[10] 5:00 5/29/07 8:30	220,892 225,297 410,246	210,103
June-07	6/4/2007[11] 5:00 6/12/2007[12] 5:00 6/26/2007[13] 4:30	429,450 430,092 430,222	19,976
July-07	7/2/07 5:30 7/10/2007 [14] 5:45 7/17/2007 [15] 5:00	480,377 523,553 546,094	115,872
August-07	8/1/2007 [15] 5:00 8/7/07 5:00 8/20/2007 [15] 5:00	580,301 580,662 582,706	36,612

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	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]	
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)
July-09	7/8/09 [15] 9:30	1,528,493	27,560
	7/13/09 [15] 6:30	1,529,314	
	7/22/09 [36] 9:00	1,534,997	
	7/27/09 5:45	1,555,117	
August-09	8/3/09 6:30	1,578,072	76,524
	8/12/09 8:30	1,604,111	
	8/17/09 5:15	1,615,851	
	8/24/09 5:30	1,631,641	

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.

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)

[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.

[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.

[36] System was observed non-functioning upon arrival due to a circuit trip for the liquid ring pump.

STRATUS
ENVIRONMENTAL, INC.

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

TRANSMITTAL

Date October 5, 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 September 2009
2	Table 1– Sewer Discharge Summary Report

Comments:

Dear Ms. Treece:

Please find attached for your review the *Monthly Discharge Report* for September 2009, for the remediation systems at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California. A total of approximately 77,126 gallons of treated groundwater were discharged to the sanitary sewer between August 24 and September 29, 2009.

Upon approval from Regional Water Quality Control Board, the remediation systems were shutdown on September 29, 2009, due to low influent concentrations. Stratus requests the City of San Leandro to keep the discharge permit active until a cancellation is requested.

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: August 24, 2009 to September 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: 36

Total monthly discharge: 77,126 U. S. Gallons

Signature of Certifying Official: _____

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

Title: Project Manager

Date: October 5, 2009

Include a brief statement summarizing the month's operations:

The operation of the dual phase extraction (DPE) system, air stripper (AS) and the groundwater extraction and treatment system (GETS) was initiated on January 29, 2007. Soil vapors and groundwater were concurrently extracted from wells V-1, V-2, V-3, MW-1, MW-3, MW-7, and MW-8 using the liquid ring pump of the DPE system. In addition, groundwater was also extracted from well MW-2 using the electrical submersible pump. The groundwater extracted by both the DPE and the submersible pump is treated using the air stripper and two 2,000-pound carbon vessels in series prior to the discharge to the sewer.

Upon approval from Regional Water Quality Control Board, the remediation systems were shutdown on September 29, 2009, due to low influent concentrations.

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
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San Leandro, California

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	6/16/08 [15] 7:16	1,001,527	
	6/23/08 [15] 7:24	1,017,867	
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	7/7/08 [25] 6:54	1,029,035	
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	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]	
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	

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1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
July-09	7/8/09 [15] 9:30	1,528,493	27,560
	7/13/09 [15] 6:30	1,529,314	
	7/22/09 [36] 9:00	1,534,997	
	7/27/09 5:45	1,555,117	
August-09	8/3/09 6:30	1,578,072	76,524
	8/12/09 8:30	1,604,111	
	8/17/09 5:15	1,615,851	
	8/24/09 5:30	1,631,641	
September-09	9/1/09 7:30	1,650,611	77,126
	9/8/09 3:50	1,667,917	
	9/15/09 10:00	1,677,251	
	9/21/09 5:30	1,691,771	
	9/29/09 [37] 4:30	1,708,767	

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.

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SEWER DISCHARGE SUMMARY REPORT
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)

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

[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.

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1156 Davis Street
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Report Month (month/year)	Date	Effluent Totalizer Reading (gallons)	Monthy Discharge (gallons)
[36] System was observed non-functioning upon arrival due to a circuit trip for the liquid ring pump. [37] Upon Regional Water Quality Control Board's approval, the remediation system was shutdown due to low influent petroleum hydrocarbon concentrations.			