

8:14 am, Mar 15, 2007

Alameda County Environmental Health





February 28, 2007 Project No. E2111-03

Mr. Robert E. Cave Bay Area Air Quality Management District 939 Ellis Street San Francisco, California 94109

Re: Source Test Report

Application Number: 09947 and Plant Number: 16189

ARCO Service Station No. 2111

1156 Davis Street

San Leandro, California 94577

Dear Mr. Cave:

STRATUS ENVIRONMENTAL INC.

Stratus Environmental Inc. (Stratus) has prepared this letter, on behalf of Atlantic Richfield Company (ARCO – a BP affiliated company), to present the results of source testing conducted during the start-up of a dual phase extraction (DPE) system, air stripper (AS) system, and a groundwater extraction and treatment (GET) system at ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California (see Figure 1). The start-up operations of the remediation systems were conducted on January 29, 2007, in accordance with the requirements identified in Bay Area Air Quality Management District (BAAQMD) authority to construct (Plant Number 16189, dated March 9, 2006), City of San Leandro sewer discharge permit (No. SD-036 dated July 7, 2006) and Stratus' *Start-up Notification letter* dated January 24, 2007.

Upon start-up, petroleum hydrocarbon laden soil vapors and groundwater were extracted from wells V-1, V-2, V-3, MW-1, MW-3, and MW-7 (see Figure 2) using the 20-horsepower (hp) liquid ring pump on the DPE system. Soil vapors were separated from groundwater in the knockout tank of the DPE system, which were then routed through two 2,000-pound vapor phase carbon vessels, in series, prior to discharge to the atmosphere. Groundwater in the knockout tank was transferred into an oil-water separator/holding tank pending treatment using the AS and the aqueous phase carbon vessels. Groundwater was also extracted from well MW-2 using a ¾-hp electric submersible pump and stored in the oil-water separator/holding tank pending treatment using the AS and the aqueous phase carbon vessels. The groundwater from the oil-water separator/holding tank was routed through an AS that incorporates a series of stripper trays where the petroleum hydrocarbons are volatilized by ambient air. Ambient air is drawn into the AS using a 7.5-hp blower that applies vacuum on the positive side of the

Mr. Robert E. Cave, BAAQMD Source Test Report (Plant No. 16189) ARCO Facility No. 2111 San Leandro, California Page 2

AS. Volatilized petroleum hydrocarbons are routed through the two 2,000-pound vapor phase carbon vessels prior to discharge to the atmosphere. Two 2,000-pound aqueous phase carbon vessels are used to remove residual petroleum hydrocarbons post AS, prior to discharge to the sanitary sewer. A process flow illustration for the soil vapor and groundwater extraction and treatment is presented in Figure 3.

SYSTEM START-UP AND OPERATION

Upon start-up of the remediation systems, the following parameters were monitored and recorded on field data sheets on a daily basis until a request for a revised monitoring frequency of bi-monthly (once every 15 days) was approved by BAAQMD (on February 1, 2007):

- Soil vapor extraction flow rate and temperature on the positive side of the liquid ring pump of the DPE system,
- Air flow rate and temperature on the positive side of the AS blower,
- Influent air flow rate and temperature to the first carbon adsorption vessel,
- Applied vacuum to the extraction wells,
- Effluent totalizer readings after AS treatment and after carbon treatment, and
- PID measurements for organic vapors before and after carbon treatment and between carbon vessels.

In accordance with BAAQMD permit requirements, one set of influent (positive side of the liquid ring pump, positive side of the AS blower, inlet to the first carbon vessel), mid-fluent (between first and second carbon vessels), and effluent air samples were collected on the start-up day (January 29, 2007). In addition, a water sample influent to the AS was also collected on the start-up day and for two consecutive days after the start-up. The air samples were analyzed by TestAmerica Analytical Testing Corporation, a state certified laboratory (ELAP #1210), for gasoline range organics (GRO), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by United States Environmental Protection Agency (USEPA) Method 8015/8021. The water samples were analyzed for GRO by USEPA Method 8015, and for BTEX, MTBE, ethyl tert-butyl ether (ETBE), tertiary amyl methyl ether (TAME), di-isopropyl ether (DIPE), and tertiary Tabulated summaries of field butyl alcohol (TBA) by USEPA Method 8260B. measurements and analytical results are presented in Tables 1 through 4. Copies of field data sheets are included in Appendix A and certified analytical reports with chain of custody documentation are included in Appendix B.

Mr. Robert E. Cave, BAAQMD Source Test Report (Plant No. 16189) ARCO Facility No. 2111 San Leandro, California Page 3

During the first week of operation (January 29 through February 2, 2007), the soil vapor flow rates measured on the discharge side of the liquid ring pump (at 02111DPEAINF, see Figure 3) of the DPE system were in the range of approximately 49.30 to 69.88 cfm (Table 1), the soil vapor flow rates on the discharge side of the AS blower (at 02111ASAEFF) were in the range of approximately 112.27 to 192.85 cfm, and the soil vapor flow rates prior to the entry to the first carbon vessel (at 02111ASYSINF) were in the range of approximately 198 to 210 cfm. The effluent soil vapor flow rate (at 02111AEFF) was assumed to be equal to the flow rate flow rate entering the carbon vessels.

The petroleum hydrocarbon concentrations measured using a photo-ionization detector (PID) were in the range of approximately 67 to 431 parts per million by volume (ppmv) at sample port 02111DPEAINF, 7 to 151 ppmv at sample port 02111ASAEFF, and 23 to 79.5 ppmv at sample port 02111ASYSINF. Petroleum hydrocarbon concentrations measured using a PID were below detectable levels (0 ppmv) for the effluent air (02111AEFF). The initial (on January 29, 2007) petroleum hydrocarbon concentrations, measured using a PID, at the sample port between the carbon vessels (02111AGAC1) were at 84 ppmv, which during subsequent visits declined to less than 5 ppmv. In the 02111AGAC1 samples collected on January 29 and 30, 2007, petroleum hydrocarbons were below laboratory reporting limits. The initial high concentration measured at sample port 02111AGAC1 was probably from the glue or other construction materials that may have been used in making the piping joints or connections to the carbon vessels.

In the laboratory analyzed air samples collected on January 29, 2007, the influent (02111DPEAINF) GRO and benzene concentrations were at 340 milligrams per cubic meter (mg/m³) and 9.7 mg/m³, respectively (Table 2). Petroleum hydrocarbon concentrations were below laboratory reporting limits in the effluent air sample collected on January 29, 2007. Based on the flow rates measured and the effluent concentrations for January 29, 2007, the GRO and benzene mass emission rates were estimated to be less than 0.164 pounds per day (lbs/day) and less than 0.002 pounds per day (Table 3).

The GRO, benzene, and MTBE concentrations in the AS influent water sample (02111ASWINF) on the start-up day (January 29, 2007) were at 2,000 micrograms per liter (μ g/L), 35 μ g/L, and 1,300 μ g/L, respectively (see Table 4). The GRO, benzene, and MTBE concentrations in the AS influent water sample collected on January 30, 2007, were at 330 μ g/L, less than 12 μ g/L, and 440 μ g/L, respectively, and for samples collected on January 31, 2007, the concentrations were at 300 μ g/L, less than 12 μ g/L, and 490 μ g/L, respectively.

Based on the field data collected until February 1, 2007, and the effluent air results for January 29, 2007, Stratus in an e-mail correspondence to BAAQMD on February 1, 2007,

Mr. Robert E. Cave, BAAQMD <u>Source Test Report (Plant No. 16189)</u> ARCO Facility No. 2111 San Leandro, California Page 4

requested to modify the monitoring frequency from daily to bimonthly basis. BAAQMD subsequently approved this request in an e-mail correspondence on the same day.

The field and analytical data collected during the first week of operation of the remediation systems appear to be in compliance with the requirements identified in the BAAQMD authority to construct. Hence, Stratus requests BAAQMD to issue a permit to operate.

Stratus will continue to operate the DPE system in accordance with BAAQMD requirements and conduct bi-monthly site visits to verify system operation, optimize system performance, and conduct routine maintenance. In addition, influent and effluent air and water samples will be collected on a monthly basis and forwarded to a state-certified laboratory for chemical analysis. The analytical results of air samples and the performance of the DPE system will be summarized in quarterly monitoring reports that will be prepared and submitted by Broadbent & Associates, Inc.

If you have any questions, please contact Kiran Nagaraju at (530) 676-6007.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Kiran Nagaraju Staff Engineer

Attachments Table 1 DPE and AS System Parameters

Table 2 Flow Rate and Analytical Summary of Air Samples

Project Manager

Table 3 Emission Rates and Destruction Efficiencies

Table 4 Groundwater Analytical Data Summary

Figure 1 Site Location Map

Figure 2 Site Plan

Figure 3 Process Flow Diagram Appendix A Field Data Sheets

Appendix B Certified Analytical Report with Chain-of-Custody

Documentation

cc: Mr. Paul Supple, Atlantic Richfield Company

Ms. Tiffany Treece, City of San Leandro

Mr. Rob Miller, Broadbent and Associates, Inc.

Table 1

DPE and AS System Parameters

ARCO Facility No. 2111 1156 Davis Street San Leandro, California

Date	Hour Meter	System	1	after DPE o, measured 1DPEAINI	at	Air Strip	per Air (me: 11ASAEFI			uent Air (int vessel, mea 11ASYSIN	sured at	Et	fluent Stac 2111AEFF	1
Bate	Reading	Uptime	Flow Rate	Temp.	PID	Flow Rate	Temp.	PID	Flow Rate	Temp.	PID	Flow Rate ²	Temp.	PID
			cfm	deg F	ppmv	cfm	deg F	ppmv	cfm	deg F	ppmv	cfm	deg F	ppmv
1/29/2007 8:00	13.60	NA					Start-	up of the re	emediation sy	rstem				
1/29/2007 8:00	13.60	NA	64.08	160	431	174.25	102	151	198.00	106.5	47	198.00	58	0
1/30/2007 4:45	33.80	97.3%	54.12	151	67	192.85	98	7	200.00	70	23	200.00	56	0
1/31/2007 5:30	60.30	100.0%	49.30	159	110	190.23	105	76	210.00	100	79.5	210.00	83	0
2/1/2007 5:15	82.30	92.6%	62.37	160	203	112.27	113	10	200.00	108	65	200.00	88	О
2/2/2007 5:00	106.70	100.0%	69.88	160	195	127.63	115	10	200.00	108	70	200.00	87	0

Notes:

DPE = dual phase extraction system

AS = Air Stripper

cfm = cubic feet per minute

deg F = degree Farhenheit

ppmv = parts per million by volume

021111DPEAINF = Air sample collected on the positive side of the liquid ring pump.

02111ASAEFF = Air sample collected from the effluent sample port of the air stripper

02111ASYSINF = Air sample representative of air flow from the liquid ring pump and also the air

stripper. This sample is collected before the first carbon vessel.

System uptime is calculated as the difference of hour meter reading of two consecutive site visits over the actual number of calendar days between those two site visits.

For e.g.: If the hour meter readings on 01/29/07 at 0800 hours is 13.60 and the hour meter reading on 1/30/07 at 0600 hours is 33.80, then system uptime is calculated as:

$$= \frac{(33.80 - 13.60) \text{ hours}}{(1/30/07\ 0600 - 1/29/07\ 0800) \text{ days}} \times \frac{\text{days}}{\text{hours}} = 100\%$$

Effluent flow rate is assumed to be equal to the system influent air flow rate

Table 2

Flow Rate and Analytical Summary of Air Samples

ARCO Facility No. 2111

1156 Davis Street

San Leandro, California

	S	ystem Influer	nt				Analytical R	esults (mg/m³)		
Date	Flow I	Rate ¹	Temp.	Sample ID			Amary treat in	courts (mg/m/)		
	(acfm)	(scfm)	(°F)		GRO	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
01/29/07	198.00	184.54	106.50	02111DPEAINF	340	9 .7 [1]	<1.0	<1.0	<2.0	58
				02111ASAEFF	<10	0.19	< 0.10	0.10	< 0.20	5.1
				02111ASYSINF	77	<0.50	< 0.50	< 0.50	<1.0	9.4
				02111AGAC1	<10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.50
				02111AEFF	<10	< 0.10	<0.10	< 0.10	< 0.20	< 0.50
01/30/07	200.00	199.25	70.00	02111DPEAINF	NS	NS	NS	NS	NS	NS
				02111ASAEFF	NS	NS	NS	NS	NS	NS
				02111ASYSINF	NS	NS	NS	NS	NS	NS
				02111AGAC1	<10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.50
				02111AEFF	NS	NS	NS	NS	NS	NS

Notes:

021111DPEAINF = Air sample collected on the positive side of the liquid ring pump.

02111ASAEFF = Air sample collected from the effluent sample port of the air stripper

02111ASYSINF = Air sample representative of air flow from the liquid ring pump and also the air stripper. This sample is collected before the first carbon vessel.

02111AGAC1 = Air sample collected between the first and the second carbon vessel

02111AEFF = Air sample collected after the second carbon vessel and is representative of the air discharged to the atmosphere

GRO - gasoline range organics

BTEX = Benzene, toluene, ethylbenzene, and total xylenes

Analytical Laboratory:

MTBE = Methyl tertiary butyl ether

Test America (ELAP #1210)

acfm = actual cubic feet per minute

scfm = standard cubic feet per minute

Analytical Methods:

Temp. =Temperature in degrees Fahrenheit

GRO, BTEX, and MTBE analyzed by EPA Method 8015B/8021B

mg/m³ = milligrams per cubic meter

NS = Not sampled

Flow rate (acfm) measured using standard calibrated devices is converted to standard flow rate (scfm) using the following formula:

Temperature Corrected influent flow rate

Measured flow rate * $\{(460 R + 68 \text{deg F})/(\text{deg F} + 460 R)\}$

Since flow rate is measured on the positive side of the liquid ring blower package, flow is corrected only for temperature

[1] Primary and cofirm results varied by more than 40% RPD

Table 3 Emission Rates and Destruction Efficiencies

ARCO Facility No. 2111 1156 Davis Street San Leandro, California

_	System	Effluent 2		Influent		Efflu	ient concer	ntration		issions Rat		Dest. R	
Date	Influent Flow	Flow Rate		(mg/m ³)			(mg/m ³)		Atmo	sphere (lb:	s/day)	Efficie	ncy %
	Rate (scfm) ¹	(acfm)	GRO	C ₆ H ₆	MTBE	GRO	C ₆ H ₆	MTBE	GRO	C_6H_6	MTBE	GRO	C_6H_6
01/29/07	184.54	184.54	77	<0.50	9.4	<10	<0.10	<0.50	<0.164	<0.002	<0.008	>87.01%	

Notes:

GRO = Gasoline Range Organics C4-C12

Dest. = Destruction

 $C_6H_6 = Benzene$

Corrected for temperature.

Effluent Flow rate = System Influent Flow Rate

Sample Calculations

Emission Rate = (lbs/day)

89.81 <u>cu ft</u> x 10 <u>mg</u> x 0.028 <u>cu me</u>

x 0.028 <u>cu meter</u> x cu ft <u>lb</u> x 1,440 <u>min</u>

min

n cu meter

454000 mg

day

Dest. Removal =

Influent - Effluent

Efficiency, %

Influent

Table 4
Groundwater Analytical Data Summary

ARCO Facility No. 2111 1156 Davis Street San Leandro, California

Date	Sample ID	GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME
		(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)
01/29/07	02111DPEWINF	480	< 5.0	< 5.0	< 5.0	< 5.0	720	4,600	< 5.0	< 5.0	< 5.0
	02111MW2WINF	930	41	< 5.0	27	10	1,300	1,500	< 5.0	< 5.0	< 5.0
	02111ASWINF	2,000	35	<12	23	14	1,300	1,800	<12	<12	<12
	02111ASWEFF	92	< 0.50	< 0.50	< 0.50	< 0.50	150	1,900	< 0.50	< 0.50	< 0.50
	02111WGAC1	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<20	< 0.50	< 0.50	< 0.50
	02111WEFF	<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<20	< 0.50	< 0.50	< 0.50
01/30/07	02111DPEWINF	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02111MW2WINF	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02111ASWINF	330 [1][2]	<12	31	<12	25	440	3,600	<12	<12	<12
	02111ASWEFF	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02111WGAC1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02111WEFF	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
01/31/07	02111DPEWINF	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02111MW2WINF	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02111ASWINF	300 [2]	<12	<12	<12	<12	490	3,200	<12	<12	<12
	02111ASWEFF	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02111WGAC1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02111WEFF	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 4 **Groundwater Analytical Data Summary**

ARCO Facility No. 2111 1156 Davis Street San Leandro, California

Date	Sample ID	GRO	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)

Notes:

02111DPE WINF = Sample representative of water collected in the knockout tank of the DPE system

02111MW2WINF = Sample representative of water collected at the manifold for well MW-2 (well has submersible pump)

02111ASWINF = Sample representative of water that is transferred from oil/water separator to the air stripper. This is influent to the air stripper (Note: Water from well MW-2 and from the knockout tank are collected in the oil/water separator and then transferred to air stripper)

02111ASWEFF = Sample representative of effluent water collected after treatment using the air stripper and before it enters the first carbon vessel

02111WGAC1 = Sample collected between the first and second carbon vessels.

02111WEFF = Sample representative of treated water (after second carbon vessel) that is discharged to the sewer.

GRO = Gasoline Range Organics C4-C13

BTEX = Benzene, toluene, ethylbenzene, and total xylenes

MTBE = Methyl tertiary butyl ether

TBA = Tertiary butyl alcohol

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

μg/L = micrograms per liter

[1] Initial analysis within holding time but required dilution

[2] Hydrocarbon result partly due to individual peak(s) in quant. range

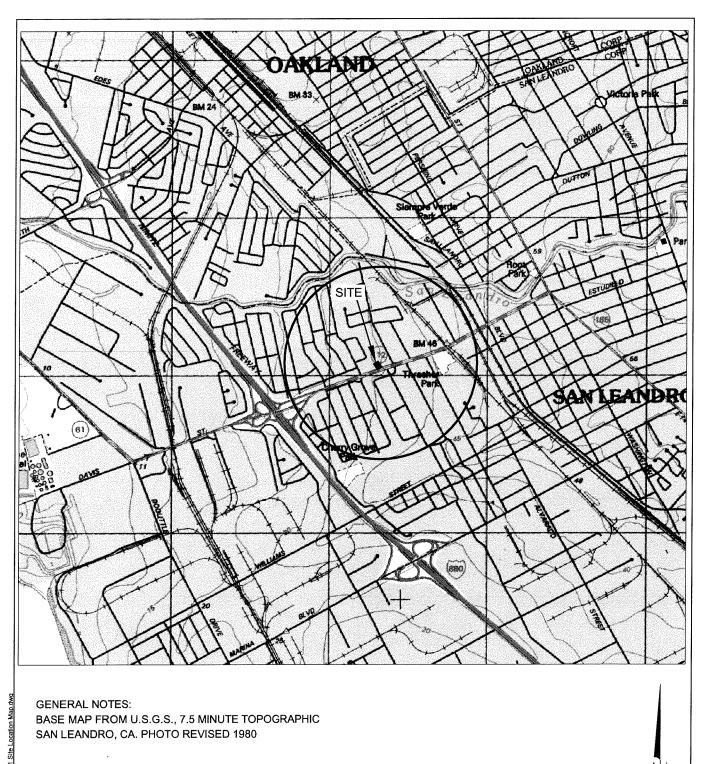
Analytical Laboratory:

Test America (ELAP #1210)

Analytical Methods:

GRO analyzed by EPA Method 8015B/DHS LUFT

BTEX and Oxygenates analyzed by EPA Method 8260B





QUADRANGLE LOCATION

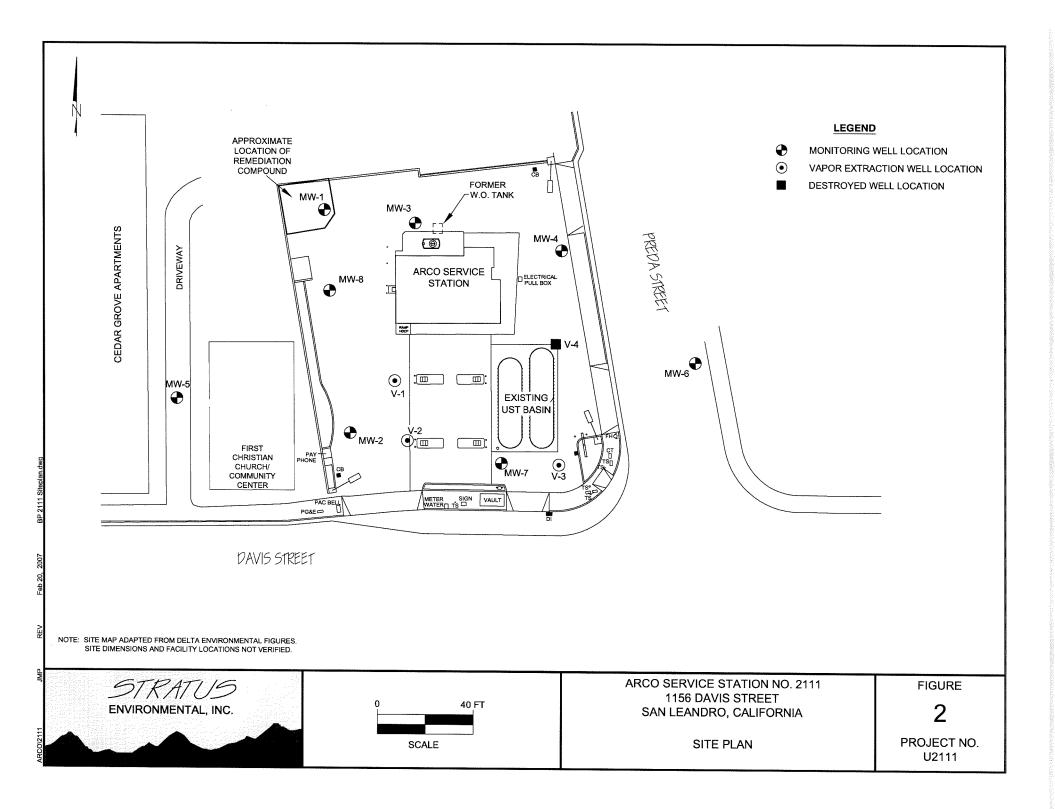


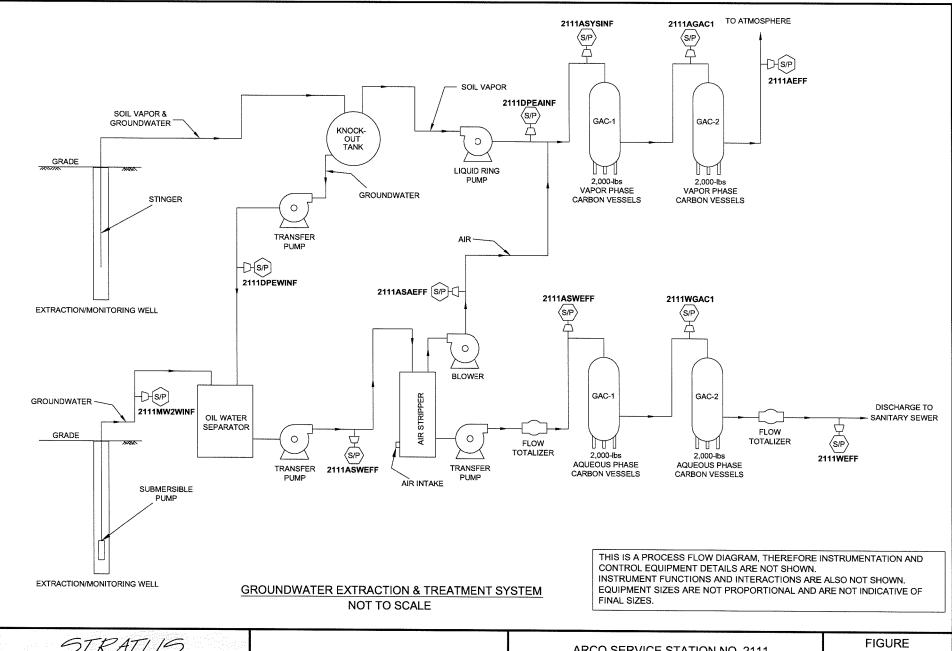
SCALE 1:24,000

STRATUS ENVIRONMENTAL, INC. ARCO SERVICE STATION NO. 2111 1156 DAVIS STREET SAN LEANDRO, CALIFORNIA SITE LOCATION MAP FIGURE

1

PROJECT NO. U2111





STRATUS ENVIRONMENTAL, INC.

ARCO SERVICE STATION NO. 2111 1156 DAVIS STREET SAN LEANDRO, CALIFORNIA PROCESS FLOW DIAGRAM

PROJECT NO. U2111

3

APPENDIX A

FIELD DATA SHEETS

1156 Davis Street San Leandro, California



San Leandro, California Dual Phase Extraction and Air Stripper System

				• •				
Date: Onsite Time: Offsite Time: Equipment M	Onsite Time: 0615 hrs			Technician: Weather Conditions: Ambient Temperature;		Chill Kiran Cold & Clear 5 60°F		
			System Inf	Formation				
				iorniacion		<u> </u>		
System Statu	s Upon Arrival	, ;	Operational		Non-Operat	ional 🗡		
System Status Upon Departure:			Operational	X Non-Operational				
Electric Meter	· Reading:			Sta	ut-up @	0800 has		
Hour Meter R	ū	13.6	7			0800113		
Totalizer Reading Prior to Air Stripper:		A	PID Calibration Date: 1/26/07					
Totalizer Read Stripper:	ding After Air	4-30	10	-				
	**************************************		Field Meas	urements				
Para	meter	influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments		
Differential Pr	essure, "wc							
Air Velocity, F	PM	1305	1996					
Pipe Diameter		3	4	4	3			
Air Flow Rate,				198				
Applied Vacuu		21"Hg	22" WC	NA NA	NA			
Temperature,		160	102	106.5	58			
PID Readings		431	151	47	Φ	PID for GAC-1: 84 PPMV		
		7		Measurements				
Well ID	% Open	Applied Vac., "Hg	Total depth, feet bas	Stinger Depth, feet bas	Dept to Waltifed to	Will dia, "		

	1 19	leer bys	leet bgs	March In 63	i anni	
114	6	18.9	18	15.55	4	
<u> </u>	12	19	18.5	15.06	4	
	15	19.3	19	14.76	4	
)	15	26	25.5	17.0	4	
	18	26.2	25.7	16.18	4	
	18	26	26		4-	
	5	39	25.4		2_	
	114	14 6	14 6 18.9 12 19 (15 19.3) 15 26 (18 26.2 (18 26	14 6 18.9 18 12 19 18.5 15 19.3 19 15 26 25.5 18 26.2 25.7 18 26 26	14 6 18.9 18 15.55 12 19 18.5 15.06 15 19.3 19 14.76 15 26 25.5 17.0 18 26.2 25.7 16.18 18 26 26 26 18 26 26 26	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

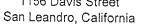
Signature:

Kinan Wagaraja

Date: 1/29/07

_ . . .

1156 Davis Street





Dual Phase Extraction and Air Stripper System

Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF	1129/07 0915	02111AGAC1	1/29/07 0910
02111ASAEFF	1/29/07 0917	02111AEFF	1/29/07 0909
02111ASYSINF	1/29/07 0913		

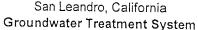
	Oper	ation & Maintenance Notes Mow
MW-8 ->	Just ail	Mow

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:	Kina Nagarij	Date:	129/07
	Commence of the second		

1156 Davis Street

San Leandro, California



1000	Ame consinu
	URGRAL

			- anamat	or redunicin	. Oystem			
Date: Onsite Time: Offsite Time:	1/29/07 06/5 1200		- - -	Technicia Weather (Ambient T			Kisan E Clent	
System Status System Status	Upon Arrival: At Departure:		Operation Operation		Non-operation		t-up @0)e oom
Transfer Pump	o;		Operation		Non-operation			
	Hour Meter Ro	3000 U	NA por an O depu	TVat	i	ater Charact y Field Instru		
No. of Carbon	Vessels:		2,0	oolb	Temperature);	14.8	
Lead Carbon V (psi):	essel Pressure	φ						
Well ID	Hour Meter	Reading	Totaliz	er Reading	Total Depth	Pump Depth	DTW @ sta	tup
MW-2	NA		5 180	42 prior			15.12	,
			7,00		Parino			
		Sam	pling Info					J
Samp	ole ID	Date 8			iple ID	Date & Ti	me	
02111DPEWIN	F	120107	0920	02111MW2		<u> </u>	015	
02111ASWINF		\rangle	0925					
02111ASWEFF	-		0940					
02111WGAC1		\rightarrow	1000			***************************************		
02111WEFF			0915					
Lab Para	ımeters	Sampling F	requency	Sample	Location	Analytical Me	thod	
GRO, BTEX	, & 5-Oxys	Mont	hly	INF8	« EFF	EPA Method 83	260B	
Notes: Mw- at pan for the	2 shut a el. Need Submerhisle	lown (D de evalua	parture. Le plo	Not of	c-Actting		
Signature:	Kiran W	agaraja		Date:	1/29/0	7		



Site Address: Davy5
City SHW Lunding
Sampled By Kinin Chick

Site Number: Avo 21(1

Project No. F 21(1

Project PM J49

Date Sampled 1-29,07

Site Contact Phone No.

	Water L	evel Data				Purge Vo	lume Calci	Ilations		T ==	107 11					·	11.29
Well ID	Time	Depth to water feet	Top of Screen feet	Total Depth of Well feet	Casing Water Column (A)	Well Diameter (inches)	Multiplier Value	Three Casing Volumes		No			Method	DTW At	mple Red		Field Data Dissolve
Mw-2	v 650	15.17			Purnj	- IN	(B)	(gallons)	(gallons)	Purge	Baile	Pump	Other	Tlme	I.D.	Time	Oxyge (mg/L
mw 8		15.82		39	Sting	112/2	ength.	25,	+	Fla	+0	14					
NW-3		16:18		26.20) (LJ.4	1.1	25.7	C		Hugu		History				
1.3		14.76		19:3	Sty	odv l	Eugth	190					olus				
Mw7		15.35		16		Ef II	5714.	uv Z	nig.	24	- Ac	yle	· Ho b	5			
1.2		15.06		19		5 m		494JA	5	Cold	- Aci	rl.	- Hele	5			
y-1		15.55		18.4		LJ 21					- Цц		NUL				
Meri		17.0		26		4	54.1.	1,4	25,5	Cut	Hype	(-	H04				
												` .					

1156 Davis Street

San Leandro, California

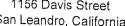


Dual Phase Extraction and Air Stripper System

Date: Onsite Time: Offsite Time: Equipment M	<u> </u>		-	Technician: Weather Cond Ambient Temp		Chil) Clead 40
			System In	formation		
System Statu	ıs Upon Arrival	:	Operational	X	Non-Opera	tional
System Statu	ıs Upon Depart	ture:	Operational	$\overline{\times}$	Non-Opera	tional
Electric Mete	r Reading:	106		الخنسا	rion opora	
Hour Meter R	leading:	33.	8	_		
Totalizer Rea Air Stripper:	ding Prior to	NA		- PID Calibratior -	Date:	1/26/07
Totalizer Rea Stripper:	ding After Air	67.	30	-		
			Field Meas	urements		
Para	meter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments
Differential Pr	essure, "wc					
Air Velocity, F	РМ	1102	2209			
Pipe Diamete	r, inches	3	4	4	3	
Air Flow Rate,	, cfm			200	****	
Applied Vacuu	ım, "wc	21		NA .	NA	
Temperature,	deg F	151	98	70	56	
PID Readings	, ppmv	67	7	23	ф	PID for GAC-1: 3 pprnV
		Oth	or Poodings/N			
\A		Applied Vac.,	Total depth,	Measurements Stinger Depth,		
Well ID	% Open	"Hg	feet bgs	feet bgs		
V-1	14	4-				
V-2	14	15				
V-3	114	14				
MW-1	100	16				
MW-3	14	X8				
MW-7	1 7	1/8	7/			
MW-8	14	/ 9 /)	/			

Date: 1-30-07

1156 Davis Street





San Leandro, California Dual Phase Extraction and Air Stripper System

	Sampling Info	rmation (monthly)	
Sample ID	Date & Time	Sample ID	Date & Time
2111DPEAINF		02111AGAC1	1130 7 0508
02111ASAEFF		02111AEFF	11241 7 0300
02111ASYSINF			
Analyses Required: GRO, B	TEX, and MTBE		
•	,		
	Operation 8 N	laintana	
	Operation & IV	laintenance Notes	

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

Date: 1 3007 Signature:

1156 Davis Street San Leandro, California Groundwater Treatment System



Date: Onsite Time: Offsite Time:	1/30/07	+			n: Conditions: -emperature	Chil Clea 40	A
System Status System Status Transfer Pump	At Departure:		Operation	nal	Non-operati	onal	
Transfer Pump			Operation NA	nai <u> </u>	1	ater Charact	
Effluent Flow T	otalizer Readir	ng:	6200		(Quarterly E	y Field Instru	ment)
No. of Carbon	Vessels:		2		Temperature	j .	
Lead Carbon V (psi):	essel Pressure)	ф	-			
Well ID	Hour Meter	Reading	Totalize	er Reading	Total Depth	Pump Depth	
MW-2	N	+	18	00	Pump	- off	
		Sam	pling Infor	rmation			
Samp	le ID	Date 8	Time	Sam	nple ID	Date & Tir	ne
02111DPEWINI		1 1 -		02111MW2	WINF		
02111ASWINF		13007	0525				
02111ASWEFF 02111WGAC1							
02111WEFF							
Lab Parai	meters	Sampling F	requency	Sample	Location	Analytical Met	hod
GRO, BTEX,	& 5-Oxys	Mont	hly	INF8	& EFF	EPA Method 82	160B
lotes:							
ionature:	A Mar	<u>1 </u>			1 300	7	

1156 Davis Street



San Leandro, California Dual Phase Extraction and Air Stripper System

Date: Onsite Time: Offsite Time: Equipment M		0		Technician: Weather Cond Ambient Temp		Chill Cloudy 2 45
			System in	nformation		
System Statu	ıs Upon Arriva	1:	Operational	1 	Non-Operat	tional
System Statu	ıs Upon Depar	ture:	Operational		Non-Operat	<u> </u>
Electric Mete		163		<u> </u>	14011-Operat	lional
Hour Meter F	Reading:	60	. 2	······································		
Totalizer Rea Air Stripper:	<u>-</u>	NI		– PID Calibration –	Date:	1/31/7
Totalizer Rea Stripper:	ding After Air	908	80	_		
			Field Meas	urements		
Para	meter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System	Stack Air Flow (2111AEFF)	Comments
Differential Pr	essure, "wc					
ir Velocity, F	PM	1004	2/79			
Pipe Diamete	r, inches	3	4	4	3	
ir Flow Rate	, cfm			210		
pplied Vacuu	um, "wc	22"Hg		NA	NA	
emperature,	deg F	159	105	100	8.3	
ID Readings	, ppmv	110	76	79.5	0	PID for GAC-1: IppmV
705		 Oth	er Readings/	Measurements		
Well ID	% Open	Applied Vac.,	Total depth, feet bgs	Stinger Depth, feet bgs		
V-1		5				
V - 2		14				
V-3		15				
MW-1		16				
MW-3		14				
MW-7		18				
MM-8		110 21	po .			

1156 Davis Street



San Leandro, California Dual Phase Extraction and Air Stripper System

	Sampling Info	ermation (monthly)	
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
Analyses Required: GRO, B	TEX, and MTBE		
	Operation & N	laintenance Notes	
		Maria de la companya	
		No.	

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
	110		

1/31/7 Signature: Date:

ARCO FACILITY NO. 2111 1156 Davis Street



San Leandro, California Groundwater Treatment System

Date: Onsite Time:	0530		-	Techniciar Weather C	Conditions:	Chill Cloud	dy
Offsite Time: System Status System Status Transfer Pump Transfer Pump Effluent Flow To No. of Carbon V Lead Carbon V	©900 Upon Arrival: At Departure: : Hour Meter Re otalizer Readir		Operation Operation Operation NA 8560	Ambient T	emperature Non-operation Non-operation Non-operation Effluent W	onal onal onal ater Characte y Field Instrur	eristics
(psi): Well ID MW-2	Hour Meter	Reading		er Reading	Total Depth	Pump Depth	off
			pling Info				
Samp 02111DPEWINF 02111ASWINF 02111ASWEFF 02111WGAC1 02111WEFF		Date 8	745	92111MW2	pie ID	Date & Tir	me
Lab Parai GRO, BTEX,		Sampling F			Location & EFF	Analytical Mer	
Notes:		7/1		Date:	1	31/2	

1156 Davis Street

San Leandro, California



Dual Phase Extraction and Air Stripper System

Date: Onsite Time: Offsite Time: Equipment Ma	2 7 05 5 0 630 anufacturer/Mo	odel#		Technician: Weather Cond Ambient Temp		Chil clea 24	
			System In	formation			
System Status	s Upon Arrival:		Operational	X	Non-Operat	ional	
System Status	s Upon Depart	ure:	Operational	\boxtimes	Non-Operat	ional	7
Electric Meter	Reading:	2126)	-7		<u> </u>	
Hour Meter R	eading:	82.3	>	_			
Totalizer Read Air Stripper:	ding Prior to	N/	7	- PID Calibratior 	Date:	1/31/07	
Totalizer Read Stripper:	ding After Air	1760	10	-			
			Field Meas	urements			
Parai	meter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Con	nments
Differential Pre	essure, "wc						
Air Velocity, F	PM	1270	1286				
Pipe Diameter	, inches	3	4	4	3		
Air Flow Rate,				200			······································
Applied Vacuu		20"149.		NA	NA		
Temperature,		160	113	503	88		
PID Readings,		203	10	65	P	PID for GA	C-1: OppnV
		Oth	er Readings/	Measurements	1		
Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1			-				
V-2							
V-3			- 1 10 -				
MW-1							
MW-3							
MW-7			/				
Signaturo	13//	<u> </u>			2 1	٦	

1156 Davis Street

San Leandro, California Dual Phase Extraction and Air Stripper System

	Sampling Info	rmation (monthly)	
Sample ID	Date & Time	Sample ID	Date & Time
02111DPEAINF		02111AGAC1	
02111ASAEFF		02111AEFF	
02111ASYSINF			
	SIEX ANGWIRE		
Analyses Required: GRO, E	STEX, and MIBE		
mayses required. GRO, E		aintenance Notes	
That is a second of the second		aintenance 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
МТВЕ	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B

Signature:	Chiph	Date:	2/1/7	
J		Date.	7 ' 1	

1156 Davis Street

San Leandro, California Groundwater Treatment System

Date: Onsite Time: Offsite Time:	2/1/7	- Value	 		n: Conditions: emperature	Chill (lead 40	
System Status System Status	Upon Arrival: At Departure:	\(\frac{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tint{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tint{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tin}\xi}\\ \text{\text{\text{\text{\tinit}\\\ \text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\text{\texi}\text{\text{\texi}\text{\text{\text{\ti}\text{\text{\text{\text{\text{\texi}\text{\ti}}\tint{\text{\texi}\tint{\text{\ti}}}}\timttitex{\text{\text{\text{\texi}}}\timti	Operation Operation		Non-operation		
·	Transfer Pump: Transfer Pump Hour Meter Reading:			ial	Non-operation	onal ater Characte	ristics
Effluent Flow Totalizer Reading:			16861	0	1	y Field Instrum	
No. of Carbon V Lead Carbon V (psi):	Vessels: 'essel Pressure	<u>2</u> ф		-	Temperature	: 	
Well ID	Hour Meter Reading	J	Totalize	r Reading	Total Depth	Pump Depth	-
MW-2			1800) pun	p off		
Samp	· · · · · · · · · · · · · · · · · · ·		pling Infor	·			
02111DPEWIN		ale o	Time Sample ID 02111MW2WINF			Date & Tim	<u>e</u>
02111ASWINF			***************************************	021110002	VVINE	i ************************************	
02111ASWEFF							
02111WGAC1							
02111WEFF							
Lab Para	meters Samp	ling F	requency	Sample	Location	Analytical Meth	od
GRO, BTEX	, & 5-Oxys	Mont	hly	INF& EFF		EPA Method 826	0B
Notes:							
Signature: (Mulif			Date:	211	7	

1156 Davis Street

San Leandro, California

Dual Phase Extraction and Air Stripper System

1		
Q X	URGRA	STANDARDS

Date: Onsite Time: Offsite Time: Equipment Ma	2 2 <u>0500</u> <u>0 630</u> anufacturer/Mo	7 7 7 9 9 9 9 9 9	Air Flou	Technician: Weather Cond Ambient Temp		CHILL Clan 45	
			System Inf	ormation			
System Statu	s Upon Arrival:	:	Operational	N N	Non-Operat	ional	
System Status	s Upon Depart	ure:	Operational	冈	Non-Operati	ional	
Electric Meter	Reading:	077	78	_	•		
Hour Meter R	eading:	106	٠7				
Totalizer Read Air Stripper:	ding Prior to	NA	Installely	- PID Calibration ≰CT	Date: 2	2-07	
Totalizer Read Stripper:	ding After Air	2649	70	-			
			Field Meas	urements			ᅴ
Para	meter	Influent (after blower, 2111DPEAINF)	Air Stripper (2111ASAEFF)	System Influent (2111ASYSINF)	Stack Air Flow (2111AEFF)	Comments	
Differential Pr	essure, "wc		30				_
Air Velocity, F	PM	1423	1462	NM	NM		\dashv
Pipe Diameter	r, inches	3	L(4	3		\exists
Air Flow Rate,	, cfm	-		Z 00			\dashv
Applied Vacuu	ım, "wc	2046	. 45	NA	NA		\dashv
Temperature,	deg F	160	115	108	87		ᅦ
PID Readings	, ppmv	195	ľÚ	70	82	PID for GAC-1: 3, 6	5
			· · · · · · · · · · · · · · · · · · ·	Measurements			4
Well ID	% Open	Applied Vac., "Hg	Total depth, feet bgs	Stinger Depth, feet bgs			
V-1	14	12		スケッグ			\dashv
V-2	1/4	12		18.5			\exists
V-3	1/4	12		9			\exists
MW-1	1/4	3		21.5			\exists
MW-3	1/4	15	,	25.7			
MW-7	1/4	17		26			
maine 5	i i i int	100 301.3		1 - 1 / 1		ı	

Date: 2-2-67

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, B	ΓEX, and MTBE						
ı							

		Oper	ation & Maintena	nce Notes		
(i)	mw-8	Oper Shartened	Stinger	BY 10'	Re ajust	
					ANTI-VIOLEN CONTROL OF THE PROPERTY OF THE PRO	

		· · · · · · · · · · · · · · · · · · ·				
			-			
	· · · · · · · · · · · · · · · · · · ·					
					A SANARA SANA	

Lab Parameters	Sampling Frequency	Sample Location	Analytical Method
GRO	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8015
ВТЕХ	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
MTBE	Monthly	02111DPEAINF, 02111ASAINF, 02111ASYSINF, 02111AGAC1, & 02111AEFF	EPA Method 8260B
	1-1		

Signature:



1156 Davis Street San Leandro, California Groundwater Treatment System

Date: Onsite Time: Offsite Time:	2-2-0 0500 0030	7	- -	Techniciar Weather C Ambient T		CHIL Clum 45	
System Status	Upon Arrival:	A A	Operation	al 🔲	Non-operatio	onal	
System Status	At Departure:	夕	Operation	al 🔲	Non-operation	nal	
Transfer Pump	o:		Operation	al 🔲	Non-operation	onal	
Transfer Pump	o Hour Meter Re	ading:/	VA		1	ater Charact	
Effluent Flow	Totalizer Readin	g: <u>Z</u>	548	<u>D</u>	(Quarterly by	y Field Instrur	nent)
No. of Carbon	Vessels:		-	_	Temperature	:	
Lead Carbon (psi):	Vessel Pressure	[°] &	•	_			
Well ID	Hour Meter	Reading	Totalize	r Reading	Total Depth	Pump Depth	
MW-2	1800	7					
			·				
<u></u>					1		
		Sam	pling Info	rmation			
Sam	ple ID	Date 8	& Time	Sar	nple ID	Date & Ti	me
02111DPEWII	VF			02111MW2	2WINF		
02111ASWINE	-				***************************************		
02111ASWEF	F						:
02111WGAC1							
02111WEFF							
<u> </u>]			
Lab Pa	rameters	Sampling	Frequency	Sample	e Location	Analytical Me	ethod
GRO, BTE	X, & 5-Oxys	Mor	nthly	INF	& EFF	EPA Method 8	3260B
	P1						
Notes:	Ahr I				Ĺ		
Signature:	(MV)	M		Date:	アンと	07	

Page 1 of 1

APPENDIX B

CERTIFIED ANALYTICAL REPORTS WITH CHAIN-OF-CUSTODY DOCUMENTATION



12 February, 2007

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

RE: ARCO #2111, San Leandro, CA

Work Order: MQA1045

Enclosed are the results of analyses for samples received by the laboratory on 01/29/07 13:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race

Senior Project Manager

CA ELAP Certificate # 1210

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





Stratus Environmental Inc. [Arco] Project: ARCO #2111, San Leandro, CA MQA1045
3330 Cameron Park Dr., Suite 550 Project Number: G0C28-0023 Reported:
Cameron Park CA, 95682 Project Manager: Jay Johnson 02/12/07 14:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
02111DPEAINF	MQA1045-01	Vapor	01/29/07 09:20	01/29/07 13:35
02111ASAEFF	MQA1045-02	Vapor	01/29/07 09:25	01/29/07 13:35
02111ASYSINF	MQA1045-03	Vapor	01/29/07 09:40	01/29/07 13:35
02111AGAC1	MQA1045-04	Vapor	01/29/07 10:00	01/29/07 13:35
02111AEFF	MQA1045-05	Vapor	01/29/07 10:15	01/29/07 13:35

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies. These samples were received with no custody seals.





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1045 Reported: 02/12/07 14:41

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
02111DPEAINF (MQA1045-01) Vapor	Sampled: 01/29	0/07 09:20	Received	: 01/29/07	13:35				
Gasoline Range Organics (C4-C12)	340	100	mg/m³ Air	10	7A31011	01/31/07	01/31/07 18:12	EPA 8015B/8021B	
Benzene	9.7	1.0	**	0	н	11	II .	11	P
Toluene	ND	1.0	11	11	u	n	u u	u	
Ethylbenzene	ND	1.0	11	H.	a a	10	н	n	
Xylenes (total)	ND	2.0	н	н	TF.	11	17	и	
Methyl tert-butyl ether	58	5.0	11	н	"	H	H	11	
Surrogate: a,a,a-Trifluorotoluene		91 %	65-	140	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		104 %	70-1	125	"	"	"	n	
Gasoline Range Organics (C4-C12)	98	24	ppmv	10	11		н	**	
Benzene	3.1	0.31	н	u	11	0	11	u	P
Foluene	ND	0.27	tt.	11	0	Ħ	u u	н	
Ethylbenzene	ND	0.23	0	**	11	H	н	11	
Xylenes (total)	ND	0.47	11	н	10	11	11	II .	
Methyl tert-butyl ether	16	1.4	н	n	0	11	11	n	
Surrogate: a,a,a-Trifluorotoluene		91 %	65-1	140	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	70-1	25	"	"	"	"	
02111ASAEFF (MQA1045-02) Vapor	Sampled: 01/29/0	07 09:25	Received:	01/29/07 1	3:35				
Gasoline Range Organics (C4-C12)	ND	10	mg/m³ Air	1	7A31011	01/31/07	01/31/07 16:39	EPA 8015B/8021B	
Benzene	0.19	0.10	н	0	14	***	II .	#	
Foluene	ND	0.10	11	0	н	н	н	"	
Ethylbenzene	0.10	0.10	n n	ŧı	н	11	11	н	
Xylenes (total)	ND	0.20	II .	н	17	11	"	u	
Methyl tert-butyl ether	5.1	0.50	#	11		<u>"</u>	H	"	
Surrogate: a,a,a-Trifluorotoluene		100 %	65-1	40	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	70-1	25	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	2.4	ppmv	**	11	19	11	n .	
Benzene	0.060	0.031	н	D.	11	"	н	11	
l'oluene	ND	0.027	Ħ	"	н	H .	п	11	
Ethylbenzene	0.024	0.023	0	11	н	9	11	U	
Xylenes (total)	ND	0.047	н	#	II .	0	н	e e	
	4.4	0.14	0	н	U	н	11	11	
Methyl tert-butyl ether	1.4	0.14							
Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene	1.4	99 %	65-1	40	"	"	"	"	





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1045 Reported: 02/12/07 14:41

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
02111ASYSINF (MQA1045-03) Vapor	Sampled: 01/2	9/07 09:40	Received	: 01/29/07	13:35				
Gasoline Range Organics (C4-C12)	77	50	mg/m³ Air	5	7A31011	01/31/07	01/31/07 10:55	EPA 8015B/8021B	
Benzene	ND	0.50	н	н	н	н	н	"	
Toluene	ND	0.50	11	n	u	**	11	u .	
Ethylbenzene	ND	0.50	Ħ	11	п	0	н	н	
Xylenes (total)	ND	1.0	ti	11	11	Ħ	н	Œ	
Methyl tert-butyl ether	9.4	2.5	U	н	н	11	0	н	
Surrogate: a,a,a-Trifluorotoluene		92 %	65-1	140	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93 %	70-1	125	"	"	n	"	
Gasoline Range Organics (C4-C12)	22	12	ppmv	5	u u	U	н	u	
Benzene	ND	0.16	10	n	11	н	н	II .	
Toluene	ND	0.13	D	0	11	11	11	H	
Ethylbenzene	ND	0.12		H	Ħ	11	п	11	
Xylenes (total)	ND	0.24	Ħ	н	#	н	н	n	
Methyl tert-butyl ether	2.6	0.69	11	Ħ	н	11	tt	11	
Surrogate: a,a,a-Trifluorotoluene		92 %	65-1	'40	"	"	"	n .	
Surrogate: 4-Bromofluorobenzene		93 %	70-1	25	n	"	n	"	
02111AGAC1 (MQA1045-04) Vapor	Sampled: 01/29/6	07 10:00 R	Received: 0	1/29/07 13	3:35				
Gasoline Range Organics (C4-C12)	ND		mg/m³ Air	1	7A31011	01/31/07	01/31/07 10:26	EPA 8015B/8021B	
Benzene	ND	0.10	н	н	"	n	0	u	
Toluene	ND	0.10	11	11	n	0	н	н	
Ethylbenzene	ND	0.10	н	н	11	н	11	U	
Xylenes (total)	ND	0.20	11	"	"	11	н	н	
Methyl tert-butyl ether	ND	0.50	H	ıı		н		"	
Surrogate: a,a,a-Trifluorotoluene		102 %	65-1	40	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	70-1	25	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	2.4	ppmv	"	11	н	"	н	
Benzene	ND	0.031	0	**	0	0	н	"	
Toluene	ND	0.027	н	н	н	н	**	11	
Ethylbenzene	ND	0.023	11	"	n	**	**	H	
Xylenes (total)	ND	0.047	11	**	"	11	Ħ	11	
Methyl tert-butyl ether	ND	0.14	Н	Ħ	н	H		U	
Surrogate: a,a,a-Trifluorotoluene		101 %	65-1	40	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	70-1.	25	n	n	"	"	
	,								





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1045 Reported: 02/12/07 14:41

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B TestAmerica - Morgan Hill, CA

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
02111AEFF (MQA1045-05) Vapor	Sampled: 01/29/07	10:15 Re	ceived: 01/	/29/07 13:	35				
Gasoline Range Organics (C4-C12)	ND	10	mg/m³ Air	1	7A31011	01/31/07	01/31/07 11:40	EPA 8015B/8021B	
Benzene	ND	0.10	11	n	11	U	11	n	
Toluene	ND	0.10	If	н	"	"	0	н	
Ethylbenzene	ND	0.10	11	u	н	11	н	Ħ	
Xylenes (total)	ND	0.20	U	ti	Ħ	u	н	n	
Methyl tert-butyl ether	ND	0.50	u	н	u u	u	9	"	
Surrogate: a,a,a-Trifluorotoluene		96 %	65-1	140	11	"	"	"	
Surrogate: 4-Bromofluorobenzene		96 %	70-1	125	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	2.4	ppmv	н	n	н	н	11	
Benzene	ND	0.031	н	n	н	11	11	Ħ	
Toluene	ND	0.027	11	11	10		1)	II .	
Ethylbenzene	ND	0.023	II .	н	**	н	н	11	
Xylenes (total)	ND	0.047	н	0	Ħ	11	#1	II .	
Methyl tert-butyl ether	ND	0.14	11	"	U	u	11	н	
Surrogate: a,a,a-Trifluorotoluene		96 %	65-1	140	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96 %	70-1	25	"	"	"	"	





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1045 Reported: 02/12/07 14:41

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control TestAmerica - Morgan Hill, CA

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Blank (7A31011-BLK1)	Prepared & Ar	repared & Analyzed: 01/31/07					
Gasoline Range Organics (C4-C12)	ND	50	mg/m³ Air				
Gasoline Range Organics (C4-C12)	ND	12	ppmv				
Benzene	ND	0.50	mg/m³ Air				
Benzene	ND	0.16	ppmv				
Toluene	ND	0.50	mg/m³ Air				
Toluene	ND	0.13	ppmv				
Ethylbenzene	ND	0.50	mg/m³ Air				
Ethylbenzene	ND	0.12	ppmv				
Xylenes (total)	ND	1.0	mg/m³ Air				
Xylenes (total)	ND	0.24	ppmv				
Methyl tert-butyl ether	ND	2.5	mg/m³ Air				
Methyl tert-butyl ether	ND	0.69	ppmv				
Surrogate: a,a,a-Trifluorotoluene	39.4		mg/m³ Air	40.0	98	65-140	
Surrogate: a,a,a-Trifluorotoluene	6.60		ppmv	6.70	99	65-140	
Surrogate: 4-Bromofluorobenzene	40.2		mg/m³ Air	40.0	100	70-125	
Surrogate: 4-Bromofluorobenzene	5.63		ppmv	5.59	101	70-125	
Laboratory Control Sample (7A31011	-BS1)]	Prepared & An	alyzed: 01/31	07	
Gasoline Range Organics (C4-C12)	240	50	mg/m³ Air	275	87	70-115	
Gasoline Range Organics (C4-C12)	68.2	12	ppmv	78.0	87	70-115	
Benzene	4.74	0.50	mg/m³ Air	4.85	98	80-150	
Benzene	1.49	0.16	ppmv	1.52	98	80-150	
Toluene	21.6	0.50	mg/m³ Air	23.5	92	75-125	
l'oluene	5.73	0.13	ppmv	6.25	92	75-125	
Ethylbenzene	4.04	0.50	mg/m³ Air	4.70	86	75-135	
Ethylbenzene	0.933	0.12	ppmv	1.08	86	75-135	
Xylenes (total)	25.2	1.0	mg/m³ Air	26.5	95	75-135	
Xylenes (total)	5.81	0.24	ppmv	6.12	95	75-135	
Methyl tert-butyl ether	4.84	2.5	mg/m³ Air	6.50	74	60-140	
Methyl tert-butyl ether	1.35	0.69	ppmv	1.81	75	60-140	
Surrogate: a,a,a-Trifluorotoluene	47.7		mg/m³ Air	40.0	119	65-140	
Surrogate: a,a,a-Trifluorotoluene	7.99		ppmv	6.70	119	65-140	
Surrogate: 4-Bromofluorobenzene	40.9		mg/m³ Air	40.0	102	70-125	
Surrogate: 4-Bromofluorobenzene	5.72		ррти	5.59	102	70-125	





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1045 Reported: 02/12/07 14:41

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control TestAmerica - Morgan Hill, CA

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 7A31011 - EPA 5030F	3 P/T / EPA 8015B/8021B
· · · · · · · · · · · · · · · · · · ·	

Laboratory Control Sample Dup (7A3	1011-BSD1)		F	Prepared & Ar	nalyzed: 01/31/	07			
Gasoline Range Organics (C4-C12)	237	50 m	ıg/m³ Air	275	86	70-115	1	35	
Gasoline Range Organics (C4-C12)	67.3	12	ppmv	78.0	86	70-115	1	35	
Benzene	4.45	0.50 m	ıg/m³ Air	4.85	92	80-150	6	35	
Benzene	1.40	0.16	ppmv	1.52	92	80-150	6	35	
Toluene	5.60	0.13	0	6.25	90	75-125	2	30	
Toluene	21.1	0.50 m	g/m³ Air	23.5	90	75-125	2	30	
Ethylbenzene	3.90	0.50	**	4.70	83	75-135	4	30	
Ethylbenzene	0.900	0.12	ppmv	1.08	83	75-135	4	30	
Xylenes (total)	24.5	1.0 m	g/m³ Air	26.5	92	75-135	3	30	
Xylenes (total)	5.65	0.24	ppmv	6.12	92	75-135	3	30	
Methyl tert-butyl ether	4.81	2.5 m	g/m³ Air	6.50	74	60-140	0.6	30	
Methyl tert-butyl ether	1.34	0.69	ppmv	1.81	74	60-140	0.7	30	
Surrogate: a,a,a-Trifluorotoluene	46.7	m,	g/m³ Air	40.0	117	65-140			
Surrogate: a,a,a-Trifluorotoluene	7.82		ppmv	6.70	117	65-140			
Surrogate: 4-Bromofluorobenzene	41.3	m	g/m³ Air	40.0	103	70-125			
Surrogate: 4-Bromofluorobenzene	5.77		ppmv	5.59	103	70-125			





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1045 Reported: 02/12/07 14:41

Notes and Definitions

PI Primary and confirm results varied by > than 40% RPD

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Atlantic Richfield ompany

A BP affiliated company

Chain of Custody Record

Page	l of		
Temp:		65°	F

Proi	ect	Name:
4 4 4	~~~	T JOSTYTA-

ARCO 2111

BP > Americas > West > Retail > Alameda > 2111

BP BU/AR Region/Enfos Segment: State or Lead Regulatory Agency:

RWQCB - San Francisco

Requested Due Date (mm/dd/yy):

See Comments

0615 On-site Time: Off-site Time: 1200 Temp: #90°F Clear Sky Conditions: Meteorological Events: Wind Speed: Direction:

Lab Name: TestAmerica	╨	BP/AR Facility No.	:	2111						"			Con	isulta	ant/C	ontra	actor	:	Stratus Environmental	Inc.	
Address: 885 Jarvis Drive	1_	BP/AR Facility Add	ress:		115	6 Dar	vis Si	reet, 👫	es and	NO THE	SA	n Leandeo	Add	iress	:	33:	30 C	ame	on Park Drive, Suite	550	
Morgan Hill, CA 95937	_	Site Lat/Long:														Ca	merc	on Pa	ırk, CA 95682		
Lab PM: Lisa Race	1_	California Global II	No.	:			1764						Con	ısulta	int/C	ontra	actor	Proje	ect No.:	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
Tele/Fax: 408-782-8156 408-782-6308 (fax)	┸	Enfos Project No.:			G0(:28	- (023	}				Consultant/Contractor PM: Jay Johnson								
BP/AR PM Contact: Paul Supple	_	Provision or OOC	circi	e one)			Prov	ision					Tele/Fax: (530) 676-6000 / (530) 676-6005								
Address: 2010 Crow Canyon Place, Suite 150	1	Phase/WBS:		03-0 & 1	И			~					Report Type & QC Level: Level 1 with EDF								
San Ramon, CA	╢	Sub Phase/Task:		03-Analy	*****	************							E-n	nail I	EDD	To:	Cje	witte	@stratusinc.net		
Tele/Fax: 925-275-3506	<u> </u>	Cost Element:	ost Element: 01-Contractor labor [Inv						-			tlan	tic R	ichfie	ld Co.						
Lab Bottle Order No: Matri	ix	 	,		Pre	serv	ative				,	Request	ted A	naly	'sis						}
Time Date Description Time Water/Liquid		Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO	HCI	Methanol	Car	URC PTEY	2000	MIBE			***************************************				Sample Point L Comm		and
1 02111DPEAINF 0910 1/29/07 x		01					Ī			κ 5	_	x	T	T	T	T	T	T			
2 02111ASAEFF · 0935 1/29/07 x	T	or							١,	x ,	,	x	T	╁	T	T	+	十	Please analyze air sa	imples	
3 02111ASYSINF . D940 1/29/07 x					\vdash		 			╌	╬	x	╁╾	\vdash	╁	+	╫	╁╌	02111ASYSINF and	d 02111 <i>A</i>	
4 02111AGAC1 - [000 1/29/07] x		64			\vdash	 			-#-			^ x	\vdash	╁	╁	╁	╁	+	on a 24-hour TAT		<i>•</i> 6
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8				-							I										
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Sampler's Name: KICAN NAKALAJU		}/ Reli	nquis	hed By / A	Milia	tion	1	11	╁	Date	市	Time	〒	1		Acc	ented	Bv/	Affiliation	Date	Time
Sampler's Company: STRATUS ENVIRONMENTAL		Vicen	W	rzerry	۸.				7	79	可	134	T					心	7	1/29/27	<u></u>
Shipment Date:				v												<i></i>	X			10(1)	12:2
Shipment Method:											╗			····							
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Special Instructions: Please cc results to rmiller	r@b	oadbentinc.com																			
Custody Seals In Place: Yes / No Temp Bla	nk: `	Yes/No) Co	oler	Temp o	n Re	ceip	t:	-°F/	C	<u> </u>	Tri	p Blank: Yes	/ No))	MS/	MSI	O Sai	mple Submitted: Yes	(No)	

Atlantic Richfiel Compan	
Richfiel	d
Compan	V

A BP affiliated company

Chain of Custody Record

Project Name:

ARCO 2111

BP BU/AR Region/Enfos Segment:

BP > Americas > West > Retail > Alameda > 2111

State or Lead Regulatory Agency:

RWQCB - San Francisco

Requested Due Date (mm/dd/yy):

See Comments

		Page of 1
On-site Time:	0615	Temp: 265°F
Off-site Time:	1200	Temp: 490°F
Sky Conditions:	Clear	
Meteorological Eve	nts:	
Wind Speed:		Direction:

Lab Name: TestAmerica		BP/AR Facility No.:		2111										Con	sulta	nt/Co	ntrac	ctor:		Stratus Environmental	inc.	
Address: 885 Jarvis Drive		BP/AR Facility Add			1150	6 Da	vis St	reet,	Sacr	ame	ito			Add	ress:					on Park Drive, Suite	550	
Morgan Hill, CA 95937	┰	Site Lat/Long:															Can	neror	Par	rk, CA 95682		
Lab PM: Lisa Race	1	California Global II) No	.:	T06	0016	1764												·····	et No.:		
Tele/Fax: 408-782-8156 408-782-6308 (fax)		Enfos Project No.:			GOC	C 28								Con	sulta			ctor P		Jay Johnson		
BP/AR PM Contact: Paul Supple	1	Provision or OOC (circl	е опе)			Prov	vision	1					Tele	/Fax		(530	0) 67	6-60	6000 / (530) 676-6005		
Address: 2010 Crow Canyon Place, Suite 150		Phase/WBS:		03-O & I	M													Leve		Level 1 wit	h EDF	
San Ramon, CA		Sub Phase/Task:		03-Analy	tical/													_		<u> Dstratusinc.net</u>		
Tele/Fax: 925-275-3506		Cost Element:		01-Contr	actor	labo)r										tlanti	c Ric	hfiel	d Co.		·····
Lab Bottle Order No: Matri	x				Pre	serv.	ative		,		·	·	Reques	ted A	naly	sis						
Item No. Date Description Time Noter/Liquid		Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO,	HCI	Methanol		GRO	втех	MTBE								Sample Point L Comm	_	and
1 02111DPEAINF 0920 1/29/07 x	T	01								х	x	x			l							
2 02111ASAEFF 0925 1/29/07 x		ov								х	х	x								Please analyze air s 02111ASYSINF an		AFFF
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Sampler's Name: KICAN NAHALAJU		1		shed By /		ation					ate		Time				· · · · · · · · · · · · · · · · · · ·			Affiliation	Date	Time
Sampler's Company: STRATUS ENVIRONMENTAL	,	Viran	VV	agong	n,					四	413		134			4	10	1/	<u> </u>	<i></i>	1/29/07	/3:3
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Special Instructions: Please cc results to rmille	r@b	roadbentinc.com										,										
Custody Seals In Place: Yes / No) Temp Bl	le-	Yes/No) C	0010	r Temp o	n D		~+·		°F/C	`		Trin	Blank: Ye	e / Ki	`) -	MSA	MST	Sar	mple Submitted: Yes	(NO)	
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TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: REC. BY (PRINT) WORKORDER:	ARGO 2111 Slama FIRKIOGS		DATE REC'D AT LAB: TIME REC'D AT LAB: DATE LOGGED IN:	1/29/0 13:3 1-29					NOTER YES NOTER YES (NOTER YES / NOTER YES
CIRCLE THE APPRO	OPRIATE RESPONSE	LAB SAMPLE#	CLIENT ID	CONTAINER DESCRIPTION		рН	SAMPLE	DATE SAMPLED	REMARKS: CONDITION (ETC.)
4 Curtadu Casi/s)	Present / Absent	SAMPLE #		- John Host			WAINA	orum LED	1
Custody Seal(s)	Intact / Broken*								
2. Chain-of-Custody	Present / Absent*	 							
Chain-oi-Custouy Traffic Reports or	TOSHILI AUSCIIL								
3. Tranic Reports of Packing List:	Present (Absept								
4. Airbill:	Airbill / Sticker								
IV I HEMIN	Present / Absent								
5. Airbill #:				~					
6. Sample Labels:	Present / Absent								
7. Sample IDs:	Listed / Not Listed								
·	on Chain-of-Custody								
8. Sample Condition:	Intagt / Broken* /			16/					
	Leaking*			1291	<u> </u>				
9. Does information or	n chain-of-custody,			\					
traffic reports and s	7 7		1 4 1	<u> </u>	 				
agree?	Yes / No*		Min						
10. Sample received with			NV.L		\vdash				
hold time?	(Yes / No*		(1)						
11. Adequate sample vol	lume		100						
received?	Yes / No*				 				
12. Proper preservatives				1	ļl				
13. Trip Blank / Temp Bla				· ·	 	ļ			
(circle which, if yes)	Yes //No					<u> </u>			
14. Read Temp:	-6-0-					ļ			
Corrected Temp:	\$ 6.0					ļ	 		
Is corrected temp 4	+7-2°C7 Yes / No**					ļ			
(Acceptance range for samples	-					ļ			
**Exception (if any): ME	TALS / DFF ON ICE						<u></u>		
or Problem COC									

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



13 February, 2007

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

RE: ARCO #2111, San Leandro, CA

Work Order: MQA1043

Enclosed are the results of analyses for samples received by the laboratory on 01/29/07 13:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race

Senior Project Manager

CA ELAP Certificate # 1210

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





Stratus Environmental Inc. [Arco] Project: ARCO #2111, San Leandro, CA MQA1043
3330 Cameron Park Dr., Suite 550 Project Number: G0C28-0023 Reported:
Cameron Park CA, 95682 Project Manager: Jay Johnson 02/13/07 13:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
02111DPEWINF	MQA1043-01	Water	01/29/07 09:20	01/29/07 13:35
02111ASWINF	MQA1043-02	Water	01/29/07 09:25	01/29/07 13:35
02111ASWEFF	MQA1043-03	Water	01/29/07 09:40	01/29/07 13:35
02111WGAC1	MQA1043-04	Water	01/29/07 10:00	01/29/07 13:35
02111WEFF	MQA1043-05	Water	01/29/07 09:15	01/29/07 13:35
02111MW2WINF	MQA1043-06	Water	01/29/07 10:15	01/29/07 13:35

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies. These samples were received with no custody seals.





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQA1043 Reported: 02/13/07 13:19

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

		Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
02111DPEWINF (MQA1043-01) Water	Sampled: 01/2	29/07 09:20	Received	: 01/29/0	7 13:35				
Gasoline Range Organics (C4-C12)	480	250	ug/l	5	7B06022	02/06/07	02/07/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		97 %	60-1	45	"	"	"	"	
02111ASWINF (MQA1043-02) Water	Sampled: 01/29	/07 09:25 I	Received: (01/29/07	13:35				
Gasoline Range Organics (C4-C12)	2000	1200	ug/l	25	7A30003	01/30/07	01/30/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		96 %	60-1-	45	"	"	"	"	
02111ASWEFF (MQA1043-03) Water	Sampled: 01/29	0/07 09:40	Received:	01/29/07	13:35				
Gasoline Range Organics (C4-C12)	92	50	ug/l	1	7B03008	02/03/07	02/03/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		97 %	60-1-	45	"	"	п	"	
02111WGAC1 (MQA1043-04) Water S	Sampled: 01/29/	07 10:00 R	eceived: 0	1/29/07 1	3:35				
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	7B03008	02/03/07	02/03/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		96 %	60-14	45	"	n	"	"	
02111WEFF (MQA1043-05) Water Sa	mpled: 01/29/07	09:15 Rec	eived: 01/2	29/07 13:	35				
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	7A30003	01/30/07	01/30/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		104 %	60-14	45	"	11	"	"	
02111MW2WINF (MQA1043-06) Water	Sampled: 01/	29/07 10:15	Received	l: 01/29/0	7 13:35				
Gasoline Range Organics (C4-C12)	930	500	ug/l	10	7B03008	02/03/07	02/03/07	LUFT GCMS	
Surrogate: 1,2-Dichloroethane-d4		92 %	60-14	45	"	11	"	"	





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1043 Reported: 02/13/07 13:19

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
02111DPEWINF (MQA1043-01) Water	Sampled: 01/	29/07 09:20	Received	1: 01/29/0	7 13:35				
tert-Amyl methyl ether	ND	5.0	ug/l	10	7B03008	02/03/07	02/03/07	EPA 8260B	
Benzene	ND	5.0	11	н	"	н	н	"	
tert-Butyl alcohol	4600	200	0	н	11	11	11	н	
Di-isopropyl ether	ND	5.0	н	H	11	· ·	н	11	
Ethyl tert-butyl ether	ND	5.0	11	11	n	н	11	*	
Ethylbenzene	ND	5.0	li .	"	н	11	**	11	
Methyl tert-butyl ether	720	5.0	н	0	Ħ	81	H	U	
Toluene	ND	5.0	11	11	"	н	**	н	
Xylenes (total)	ND	5.0			н	11	"	11	
Surrogate: 1,2-Dichloroethane-d4		90 %	60-1	145	"	n	"	"	
Surrogate: 4-Bromofluorobenzene		75 %	60-1	120	"	"	"	"	
Surrogate: Dibromofluoromethane		96 %	75-1	130	"	"	"	"	
Surrogate: Toluene-d8		86 %	70-1	30	"	"	"	"	
02111ASWINF (MQA1043-02) Water	Sampled: 01/29	/07 09:25 I	Received:	01/29/07	13:35				
tert-Amyl methyl ether	ND	12	ug/l	25	7A30003	01/30/07	01/30/07	EPA 8260B	
Benzene	35	12	H.	н	**	17	u.	"	
tert-Butyl alcohol	1800	500	н	ti	Ħ	III	н	н	
Di-isopropyl ether	ND	12	u	н	11	н	0	11	
Ethyl tert-butyl ether	ND	12	u	11	н	11	9	· ·	
Ethylbenzene	23	12	11	н	II	11	H	н	
Methyl tert-butyl ether	1300	12	н	11	н	н	ti	u u	
Toluene	ND	12	"	u	n	н	11	H	
Xylenes (total)	14	12	"	н		"	H	†I	
Surrogate: 1,2-Dichloroethane-d4		96 %	60-1	45	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89 %	60-1	20	"	"	"	"	
Surrogate: Dibromofluoromethane		96 %	75-1	30	n	"	"	"	
Surrogate: Toluene-d8		102 %	70-1	30	"	"	"	"	





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQA1043 Reported: 02/13/07 13:19

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
02111ASWEFF (MQA1043-03) Water	Sampled: 01/29	9/07 09:40	Received	01/29/07	13:35				
tert-Amyl methyl ether	ND	0.50	ug/l	1	7B03008	02/03/07	02/03/07	EPA 8260B	
Benzene	ND	0.50	н	o o	10	**	н	n	
tert-Butyl alcohol	1900	20	11	II .	11	0	U	**	
Di-isopropyl ether	ND	0.50	10	н	"	н	u	**	
Ethyl tert-butyl ether	ND	0.50	н	H	н	н	н	н	
Ethylbenzene	ND	0.50	н	11	0	**	н	H	
Methyl tert-butyl ether	150	0.50	er er	**	н	H	11	**	
Toluene	ND	0.50	0	н	11	н	11	"	
Xylenes (total)	ND	0.50	11	11	н	#1	11	11	
Surrogate: 1,2-Dichloroethane-d4		97 %	60-1	145	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82 %	60-1	120	"	"	"	"	
Surrogate: Dibromofluoromethane		92 %	75-1	130	"	"	"	"	
Surrogate: Toluene-d8		92 %	70-1	30	"	"	n .	"	
02111WGAC1 (MQA1043-04) Water	Sampled: 01/29/	07 10:00	Received: (01/29/07 1	3:35				
tert-Amyl methyl ether	ND	0.50	ug/l	1	7B03008	02/03/07	02/03/07	EPA 8260B	
Benzene	ND	0.50	н	"	11	11	II.	11	
tert-Butyl alcohol	ND	20	11	н	H	11	11	11	
Di-isopropyl ether	ND	0.50	11	41	H	n	н	u .	
Ethyl tert-butyl ether	ND	0.50	н	u	11	11	11	"	
Ethylbenzene	ND	0.50		"	u	н	II .	U	
Methyl tert-butyl ether	ND	0.50	**	11	н	11	н	II.	
Toluene	ND	0.50	**	11	11	**	11	11	
Xylenes (total)	ND	0.50	11	11	"		11	11	
Surrogate: 1,2-Dichloroethane-d4		96 %	60-1	45	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		73 %	60-1	20	"	"	"	"	
Course antes Dibuous offeronous others		93 %	75-1	30	"	"	"	"	
Surrogate: Dibromofluoromethane		73 70	/ 3-1	50					





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQA1043 Reported: 02/13/07 13:19

Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Sampled: 01/29/07	7 09:15 Rec	eived: 01	/29/07 13:	:35				
ND	0.50	ug/l	1	7A30003	01/30/07	01/30/07	EPA 8260B	
ND	0.50	u	0	н	u	11	u	
ND	20	17	Ħ	u	n n	n	11	
ND	0.50	н	н	17	"	н	"	
ND	0.50	н	u	11	**	11	"	
ND	0.50	U	0	н	U	"	"	
ND	0.50	11	н	0	н	н	11	
ND	0.50	н	11	н	11	11	n	
ND	0.50	11	1)		II .	н	11	
	104 %	60-1	145	"	"	"	"	
	95 %	60-1	120	"	"	"	"	
	108 %	75-1	130	"	"	"	"	
	106 %	70-1	130	"	"	"	"	
ater Sampled: 01/	29/07 10:15	Receive	ed: 01/29/0	7 13:35				
ND	5.0	ug/l	10	7B03008	02/03/07	02/03/07	EPA 8260B	
41	5.0	. 11	11	u u	III	N	n	
1500	200	n	n	H	н	11	u	
ND	5.0	н	11	н	11	u	11	
ND	5.0	"	11	н	II .	11	II .	
27	5.0	**	11	н	н	н	n	
1300	5.0	"	u u	н	11	11	11	
ND	5.0	н	11	H	10	**	41	
10	5.0	11	11		"	н	ll	
	92 %	60-1	45	"	"	"	"	
	74 %	60-1	20	"	"	"	"	
	91 %	75-1	30	"	"	"	"	
	88 %	70-1	30	"	"	"	"	
	ND	ND 0.50 ND	ND 0.50	ND	Result	Result	Result	Result





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1043 Reported: 02/13/07 13:19

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7A30003 - EPA 5030B P/T /	LUFT GCMS									
Blank (7A30003-BLK1)				Prepared a	& Analyze	ed: 01/30/	07			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.40		"	2.50		96	60-145			
Laboratory Control Sample (7A30003-	-BS2)			Prepared a	& Analyze	ed: 01/30/	07			
Gasoline Range Organics (C4-C12)	494	50	ug/l	500		99	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.33		11	2.50		93	60-145			
Laboratory Control Sample Dup (7A3	0003-BSD2)			Prepared of	& Analyze	ed: 01/30/	07			
Gasoline Range Organics (C4-C12)	522	50	ug/l	500		104	75-140	6	20	
Surrogate: 1,2-Dichloroethane-d4	2.43		"	2.50		97	60-145			
Batch 7B03008 - EPA 5030B P/T /	LUFT GCMS									
Blank (7B03008-BLK1)				Prepared &	& Analyze	d: 02/03/	07			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.34		11	2.50		94	60-145			
Laboratory Control Sample (7B03008-	BS2)			Prepared &	& Analyze	d: 02/03/0	07			
Gasoline Range Organics (C4-C12)	528	50	ug/l	500		106	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.42		"	2.50		97	60-145			
Laboratory Control Sample Dup (7B0)	3008-BSD2)			Prepared &	& Analyze	d: 02/03/0	07			
Gasoline Range Organics (C4-C12)	501	50	ug/l	500		100	75-140	5	20	
Surrogate: 1,2-Dichloroethane-d4	2.31		"	2.50		92	60-145			
Batch 7B06022 - EPA 5030B P/T /	LUFT GCMS									
Blank (7B06022-BLK1)				Prepared:	02/06/07	Analyzed	: 02/07/07			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.42		"	2.50		97	60-145			





Project: ARCO #2111, San Leandro, CA

Spike

Source

%REC

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1043 Reported: 02/13/07 13:19

RPD

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

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 7B06022 - EPA 5030B P/T / L	UFT GCMS									
Laboratory Control Sample (7B06022-B	SS1)			Prepared a	& Analyz	ed: 02/06/	07			
Gasoline Range Organics (C4-C12)	545	50	ug/l	500		109	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.39		"	2,50		96	60-145			
Matrix Spike (7B06022-MS1)	Source: MQ	A1023-02		Prepared:	02/06/07	Analyzed	1: 02/07/07			
Gasoline Range Organics (C4-C12)	1230	50	ug/l	500	780	90	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.41		"	2.50		96	60-145			
Matrix Spike Dup (7B06022-MSD1)	Source: MQ	A1023-02		Prepared:	02/06/07	Analyzed	1: 02/07/07			
Gasoline Range Organics (C4-C12)	1280	50	ug/l	500	780	100	75-140	4	20	
Surrogate: 1,2-Dichloroethane-d4	2.60		"	2.50		104	60-145			



MQA1043

Notes

RPD

Limit



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

Analyte

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023

Spike

Level

Source

Result

Reported: Project Manager: Jay Johnson 02/13/07 13:19

%REC

%REC

Limits

RPD

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

Units

Reporting

Limit

Result

Blank (7A30003-BLK1)				Prepared & An	nalyzed: 01/30	/07		
tert-Amyl methyl ether	ND	0.50	ug/l					
Benzene	ND	0.50						
tert-Butyl alcohol	ND	20	#1					
Di-isopropyl ether	ND	0.50	- 11					
Ethyl tert-butyl ether	ND	0.50						
Ethylbenzene	ND	0.50	**					
Methyl tert-butyl ether	ND	0.50	11					
Toluene	ND	0.50	0					
Xylenes (total)	ND	0.50	n					
Surrogate: 1,2-Dichloroethane-d4	2.40		"	2.50	96	60-145		****
Surrogate: 4-Bromofluorobenzene	2.13		11	2.50	85	60-120		
Surrogate: Dibromofluoromethane	2.40		"	2.50	96	75-130		
Surrogate: Toluene-d8	2.44		"	2.50	98	70-130		
Laboratory Control Sample (7A30003-	BS1)			Prepared & An	alyzed: 01/30/	′07		
tert-Amyl methyl ether	8.35	0.50	ug/l	10.0	84	65-135		
Benzene	9.07	0.50	11	10.0	91	70-125		
tert-Butyl alcohol	190	20	U	200	95	60-135		
Di-isopropyl ether	8.76	0.50	11	10.0	88	70-130		
Ethyl tert-butyl ether	8.45	0.50	11	10.0	84	65-130		
Ethylbenzene	9.76	0.50	"	10.0	98	70-130		
Methyl tert-butyl ether	7.83	0.50	**	10.0	78	50-140		
Γoluene	9.46	0.50	н	10.0	95	70-120		
Xylenes (total)	30.1	0.50	11	30.0	100	80-125		
Surrogate: 1,2-Dichloroethane-d4	2.30		"	2.50	92	60-145	,	
Surrogate: 4-Bromofluorobenzene	2.43		"	2.50	97	60-120		
Surrogate: Dibromofluoromethane	2.42		"	2.50	97	75-130		
Surrogate: Toluene-d8	2.47		"	2.50	99	70-130		





Analyte

Project: ARCO #2111, San Leandro, CA

Spike

Level

Source

Result

%REC

A MQA1043

RPD

%REC

Limits

Project Number: G0C28-0023
Project Manager: Jay Johnson

Reported: 02/13/07 13:19

Notes

RPD

Limit

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

Units

Reporting

Limit

Result

Potch 7 A 20003 FD A 5020D D/T / I	DA 9360D									
Batch 7A30003 - EPA 5030B P/T / I Matrix Spike (7A30003-MS1)	Source: MQ)A0680-07		Prepared & Analyzed: 01/30/07						
tert-Amyl methyl ether	10.4	0.50	ug/l	10.0	ND	104	65-135			
Benzene	9.96	0.50	0	10.0	ND	100	70-125			
tert-Butyl alcohol	181	20	н	200	ND	90	60-135			
Di-isopropyl ether	9.67	0.50	н	10.0	ND	97	70-130			
Ethyl tert-butyl ether	9.98	0.50	11	10.0	ND	100	65-130			
Ethylbenzene	9.70	0.50	н	10.0	ND	97	70-130			
Methyl tert-butyl ether	9.04	0.50	u	10.0	ND	90	50-140			
Toluene	11.2	0.50	н	10.0	ND	112	70-120			
Xylenes (total)	29.4	0.50	"	30.0	ND	98	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.44		11	2.50		98	60-145			
Surrogate: 4-Bromofluorobenzene	2.67		"	2.50		107	60-120			
Surrogate: Dibromofluoromethane	2.65		"	2.50		106	75-130			
Surrogate: Toluene-d8	2.77		"	2.50		111	70-130			
Matrix Spike Dup (7A30003-MSD1)	Source: MQ	A0680-07		Prepared a	& Analyzo	ed: 01/30/	07			
tert-Amyl methyl ether	10.9	0.50	ug/l	10.0	ND	109	65-135	5	25	
Benzene	10.1	0.50	н	10.0	ND	101	70-125	1	15	
ert-Butyl alcohol	176	20	11	200	ND	88	60-135	3	35	
Di-isopropyl ether	10.0	0.50	н	10.0	ND	100	70-130	3	35	
Ethyl tert-butyl ether	10.3	0.50	н	10.0	ND	103	65-130	3	35	
Ethylbenzene	9.67	0.50	O	10.0	ND	97	70-130	0.3	15	
Methyl tert-butyl ether	9.66	0.50	Ħ	10.0	ND	97	50-140	7	25	
Γoluene	11.4	0.50	11	10.0	ND	114	70-120	2	15	
Xylenes (total)	30.3	0.50	u	30.0	ND	101	80-125	3	15	
Surrogate: 1,2-Dichloroethane-d4	2.49		"	2.50		100	60-145			
Surrogate: 4-Bromofluorobenzene	2.79		"	2.50		112	60-120			
Surrogate: Dibromofluoromethane	2.80		"	2.50		112	75-130			
Surrogate: Toluene-d8	2.70		"	2.50		108	70-130			





Project: ARCO #2111, San Leandro, CA

Spike

Source

0/050

%REC

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1043 Reported: 02/13/07 13:19

RPD

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

Reporting

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Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 7B03008 - EPA 5030B P/T /	EPA 8260B									
Blank (7B03008-BLK1)				Prepared	& Analyze	ed: 02/03/	07			
tert-Amyl methyl ether	ND	0.50	ug/l	,						
Benzene	ND	0.50	u							
tert-Butyl alcohol	ND	20	н							
Di-isopropyl ether	ND	0.50	**							
Ethyl tert-butyl ether	ND	0.50	н							
Ethylbenzene	ND	0.50	11							
Methyl tert-butyl ether	ND	0.50	II							
Toluene	ND	0.50	н							
Xylenes (total)	ND	0.50	U							
Surrogate: 1,2-Dichloroethane-d4	2.34		11	2.50		94	60-145			
Surrogate: 4-Bromofluorobenzene	2.01		"	2.50		80	60-120			
Surrogate: Dibromofluoromethane	2.19		"	2.50		88	75-130			
Surrogate: Toluene-d8	2.25		"	2.50		90	70-130			
Laboratory Control Sample (7B03008	-BS1)			Prepared &	& Analyze	d: 02/03/0)7			
ert-Amyl methyl ether	7.91	0.50	ug/l	10.0		79	65-135			
Benzene	8.18	0.50	11	10.0		82	70-125			
ert-Butyl alcohol	190	20	0	200		95	60-135			
Di-isopropyl ether	9.35	0.50	**	10.0		94	70-130			
Ethyl tert-butyl ether	8.73	0.50	н	10.0		87	65-130			
Ethylbenzene	8.64	0.50	11	10.0		86	70-130			
Methyl tert-butyl ether	8.04	0.50	Ħ	10.0		80	50-140			
Γoluene	8.35	0.50	н	10.0		84	70-120			
Xylenes (total)	27.8	0.50	11	30.0		93	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.40		"	2.50		96	60-145			***************************************
Surrogate: 4-Bromofluorobenzene	2.39		"	2.50		96	60-120			
Surrogate: Dibromofluoromethane	2.41		"	2.50		96	75-130			
Surrogate: Toluene-d8	2.33		"	2.50		93	70-130			





Analyte

Project: ARCO #2111, San Leandro, CA

Spike

Level

Source

Result

%REC

%REC

Limits

RPD

MQA1043

RPD

Limit

Project Number: G0C28-0023
Project Manager: Jay Johnson

Reported: 02/13/07 13:19

Notes

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

Units

Reporting

Limit

Result

2.32

Matrix Spike (7B03008-MS1)	Source: MQ	A1024-04		Prepared a	& Analyze	ed: 02/03	/07			
tert-Amyl methyl ether	8.21	0.50	ug/l	10.0	ND	82	65-135			
Benzene	7.86	0.50	u	10.0	ND	79	70-125			
tert-Butyl alcohol	216	20	н	200	ND	108	60-135			
Di-isopropyl ether	9.41	0.50	11	10.0	ND	94	70-130			
Ethyl tert-butyl ether	8.76	0.50	**	10.0	ND	88	65-130			
Ethylbenzene	8.99	0.50	н	10.0	ND	90	70-130			
Methyl tert-butyl ether	8.00	0.50	**	10.0	ND	80	50-140			
Foluene	8.57	0.50	ı,	10.0	ND	86	70-120			
Xylenes (total)	29.5	0.50	н	30.0	ND	98	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.38		"	2.50		95	60-145			
Surrogate: 4-Bromofluorobenzene	2.31		"	2.50		92	60-120			
Surrogate: Dibromofluoromethane	2.40		"	2.50		96	75-130			
Surrogate: Toluene-d8	2.29		"	2.50		92	70-130			
Matrix Spike Dup (7B03008-MSD1)	Source: MQ	A1024-04		Prepared &	& Analyze	ed: 02/03	/07			
ert-Amyl methyl ether	8.48	0.50	ug/l	10.0	ND	85	65-135	3	25	
Benzene	7.89	0.50	н	10.0	ND	79	70-125	0.4	15	
ert-Butyl alcohol	217	20	н	200	ND	108	60-135	0.5	35	
Di-isopropyl ether	9.67	0.50	н	10.0	ND	97	70-130	3	35	
Ethyl tert-butyl ether	8.99	0.50		10.0	ND	90	65-130	3	35	
Ethylbenzene	9.00	0.50	#1	10.0	ND	90	70-130	0.1	15	
Methyl tert-butyl ether	8.30	0.50	**	10.0	ND	83	50-140	4	25	
Γoluene	8.80	0.50	н	10.0	ND	88	70-120	3	15	
Kylenes (total)	29.8	0.50	11	30.0	ND	99	80-125	1	15	
Surrogate: 1,2-Dichloroethane-d4	2.42		"	2.50		97	60-145			
Surrogate: 4-Bromofluorobenzene	2.30		"	2.50		92	60-120			
Surrogate: Dibromofluoromethane	2.46		"	2.50		98	75-130			

2.50

Surrogate: Toluene-d8

70-130

93



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

Project: ARCO #2111, San Leandro, CA

MQA1043

Project Number: G0C28-0023 Project Manager: Jay Johnson

Reported: 02/13/07 13:19

Notes and Definitions

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD

Relative Percent Difference

Atlantic Richfield

A BP affiliated company

Chain of Custody Record

Project Name: ARCO 2111

BP BU/AR Region/Enfos Segment: State or Lead Regulatory Agency:

BP > Americas > West > Retail > Alameda > 2111

RWQCB - San Francisco

Requested Due Date (mm/dd/yy):

See comments

Page 1 of 1 100000 5 65°1 Temp:

Off-site Time: 1200 Temp: Sky Conditions: Clear

Meteorological Events:

On-site Time:

Wind Speed: Direction:

0615

·	Name: TestAmerica						BP/AR Facility N	D.:	211	1								ī 									
	ress: 885 Jarvis Drive					┪	BP/AR Facility A			-	56 Th	nria C	typot P			Sn.s.i.	EANDRO	1		Contr			Stratus Environme	ıtal, İnc.			
	gan Hill, CA 95937						Site Lat/Long:		J		/(Da	1715 0	ucet, S		10	JAN E	eandro	Addr	ess:	33	30 (<u> ame</u>	eron Park Drive, Su	ite 550			
	PM: Lisa Race						California Global	ID No	· ·	TA	6001	8176	·				****	 -					ark, CA 95682				
	/Fax: 408-782-8156 408-782-63	08 (fax)				1	Enfos Project No.		/11		_		0023	<u> </u>									ect No.:				
	AR PM Contact Paul Supple					▜	Provision or OOC		le one)	~			vision	·			······································	,,		Contr		~~~					
Addı	ress: 2010 Crow Canyon Place, Sui	te 150		~		╗	Phase/WBS:	(020	03-0 &) A		TIO	vision				···	Tele/	***************************************				6000 / (530) 676-60	105			
	San Ramon, CA				· · · · · · · · · · · · · · · · · · ·	╢	Sub Phase/Task:		03-Anal							·	•	Report Type & QC Level: Level 1 with EDF							***************************************		
	Fax: 925-275-3506					┪	Cost Element:		01-Conti							······································		E-mail EDD To: cjewitt@stratusinc.net Invoice to: Atlantic Richfield Co.									
Lab	Bottle Order No:			Γ	Mati	ix			1		serv			1	·			Invoi	e to:	Atlan	tic R	ichfie	ald Co.				
Item No.	Sample Description	Time	Date	Soll/Solid	Water/Liquid	All	Laboratory Nos	No. of Containers	Unpreserved	H ₂ SO ₄	HNO,		Methanol	GRO	BTEX	5-Oxygenates	Request	ed An	llysis				Sample Poin Com	t Lat/Long	g and		
1	02111DPEWAINF	1120	1/29/07	1	x	T	<i>b</i>)	H		Ħ	 		=	11	T				4	-	<u> </u>	\bot					
2	02111ASWINF	0925	1/29/07		х	十	62	H		-	-	\vdash		X	-	Х			_	 	_	1		WATER			
3	02111ASWEFF	0940		<u> </u>	х	+		H		-	 			X	×	×					_	$oxed{oxed}$	Please analyze samples 02111ASWINF and 02111WE				
4	02111WGAC1	(000	1/29/07		x	╁	54	H		 	-			x	х	X							a 24-hour TAT. F	10 02111 ive oxvo	WEFF on		
5	02111WEFF	1 - 6	1/29/07		х	+	0(H		├-				<u> </u>	Х	×							requested are MT	BE, TBA	DIPE,		
6	02111MW2WINF		1/29/07		х	+	04	H		-	-		_	ļ×.	х	X							ETBE, and TAME	<i>).</i>			
7			2125,0,	-	\vdash	╁	04	H						<u> </u> ×	х	X											
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Samp	oler's Name: KIRAN NA	LAKAJ	<u>"</u>			<u> </u>					\sqcup		<u> </u>	<u> </u>				L									
	oler's Company: STLATUS E	NVILON	MENTAL	. 1	AR.	····	(Car		Nagna		tion			D:	£	Т	ime						Affiliation	Date	Time		
	nent Date:						,		7	<u> </u>				1 20	13				B	how	\sqrt{N}	w		1/29/07	~		
	nent Method:		***************************************									······		∦	_									110000	123		
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ecia	al Instructions:	Please c	c results	to r	miller	@br	oadbentinc.com							<u> </u>								***************************************					
`	Custody Seals In Place: Y		2					oler '	Temp c=	Da-			3 07710					$\overline{\mathcal{A}}$									
	*4	7			<u> </u>			2101	Temp on	NCC.	cipt	<u> </u>	- F/C		Tr	p Blar	nk: Yes/	No		MS/N	1SD	Sam	ple Submitted: Yes	No			

Atlantic Richfield Company
Company
A BP affiliated company

Chain of Custody Record

Project Name:

ARCO 2111

BP BU/AR Region/Enfos Segment:

BP > Americas > West > Retail > Alameda > 2111

State or Lead Regulatory Agency:

RWQCB - San Francisco

Requested Due Date (mm/dd/yy):

See comments

		rage	OI
On-site Time:	0615	Temp:	10000 5 65 A
Off-site Time:	1200	Temp:	70°F
Sky Conditions:	Clear		
Meteorological Ev	ents:		
Wind Speed:		Direction	n:

Lab	Name: TestAmerica					T	BP/AR Facility No).;	211	1								Cons	sultant	/Con	tracto	···	Stratu	s Enviro	nmento	1 Inc	
Add	ess: 885 Jarvis Drive						BP/AR Facility A		:	115	6 Da	vis St	reet, S	acramo	ento		***************************************	Add					eron Par				
ļ	gan Hill, CA 95937						Site Lat/Long:											1					ark, CA			, 550	
ļ 	PM: Lisa Race			···			California Global	D No).:	T06	0010	1764						Con	sultant	***************************************			ject No.:	. ,		······	
	Fax: 408-782-8156 408-782-63	08 (fax)					Enfos Project No.:			G00	C28								ultant					Jay	Johnso	on	
	AR PM Contact: Paul Supple	····				_ _	Provision or OOC	(circ	le one)		(Prov	ision)					Tele.	Fax:	(530)	676-6	6000/(
Addı	ess: 2010 Crow Canyon Place, Sui	te 150				_ _	Phase/WBS:		03-0 &	M		_						Repo	ort Typ							th EDF	
	San Ramon, CA	····				_ _	Sub Phase/Task:		03-Anal									E-m	ail ED	D To	: cj	ewitt	t@strat	usinc.r	net		
	Fax: 925-275-3506 Bottle Order No:			7		ᆜᆫ	Cost Element:	7,	01-Cont												ıntic F	Cichfie	eld Co.				
Lab	Bottle Order No:	1	11	╬	Mat	rix				Pre	serv2	tive		_ _			Reques	ted Ar	alysis								
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air	Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄	HNO3	HCI	Methanol	GRO	BTEX	5-Oxygenates								Sample	Point I Comm	.at/Long ents	and
1	02111DPEWAINF	1120	1/29/07		х	Τ	<i>U</i>			T				x	T	x		1 1		十	十	 	╫				
2	02111ASWINF	0925	1/29/07		х		62							\perp x	+	x		+		十	+	+	Please	e analyz	e air s	amples	
	02111ASWEFF	0940	1/29/07	┞	х		υ')						_	x	x	x		H	-	+	+	┪	02111	IASWII	NF and	102111V	VEFF on
4	02111WGAC1	1000	1/29/07		х		64							x	x	x		$\dagger \lnot \dagger$	_	\dagger	\dashv	╁	reque	iour TA sted are	T. Fiv	ve oxyge E, TBA,	nates DIPF
5	02111WEFF	2180	1/29/07		х		0($ _{\mathbf{x}}$	x	x				T	\top	\top		E, and T		o, 1011,	DI. D,
6	02111MW2WINF	tols	1/29/07		х		04							x	х	x		\Box			\top	1	1				
7															1					1	1	1	1				
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	oler's Company: STLASUS	Envilor	IMENTAL	<u>,]</u>	inic.	·	fin.	M.	Nagno	ካ፞፞፞፞፞				1/2	917		·		0		úv (1129107	
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₹CI	ALTIBULUONS:	riease o	cc results	s to	rmille	r(a)b	roadbentinc.com	***************************************	·																		
	Custody Seals In Place:	Yes No	$\sqrt{1}$	Ten	np Bla	ank: `	Yes /No C	oler	Temp or	n Rec	eipt:	12.3	⊃ °F/	C I	T	rip E	Blank: Yes	/No.)	MS	MS)	D Sar	mple Su	hmitte	· Ves	(No.)	

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: ARCO 2[[] REC. BY (PRINT) WORKORDER: MURKORDER:	7	DATE REC'D AT LAB: TIME REC'D AT LAB: DATE LOGGED IN:	1/28/07-	-07				ntory Purposes? WATER YES / NO
CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE#	CLIENT ID	CONTAINER DESCRIPTION	1 1	pН	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
Custody Seal(s) Present / Absent								
. Intact / Broken*								
2. Chain-of-Custody Present / Absent*				ļi				
Traffic Reports or Packing List: Present Mosent								
4. Airbill: Airbill / Sticker								
Present / Absent								
5. Airbill #:			~					
6. Sample Labels: Present / Absent				<u> </u>				
7. Sample IDs: Listed / Not Listed				04				
on Chain-of-Custody			1/0/	<u>\</u>				,
8. Sample Condition: Intact / Broken* /					ļ		VOIA	6 gerel.
Leaking* 9. Does information on chain-of-custody,		·	7		/	 		<u> </u>
Does information on chain-of-custody, traffic reports and sample labels		H	 		/	 		
agree?		1	 					
10. Sample received within		*						
hold time? Yes / No*								
11. Adequate sample volume			1					
received? Yes / No*		• •						
12. Proper preservatives used? Yes / No*								
13. Trip Blank / Temp Blank Received?								
(circle which, if yes) Yes (No								
14. Read Temp:								
Corrected Temp: 6.0						<u> </u>		
is corrected temp 4 +/-2°C? (Yes) No**								
(Acceptance range for samples requiring thermal pres.)								
**Exception (if any): METALS / DFF ON ICE								
or Problem COC	1 /							

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

SRL Revision 8



16 February, 2007

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

RE: ARCO #2111, San Leandro, CA Work Order: MQB0017

Enclosed are the results of analyses for samples received by the laboratory on 01/31/07 08:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race

Senior Project Manager

CA ELAP Certificate # 1210

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



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0017 Reported: 02/16/07 10:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
02111ASWINF	MQB0017-01	Water	01/30/07 05:25	01/31/07 08:15

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



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0017 Reported: 02/16/07 10:02

Total Purgeable Hydrocarbons by GC/MS (CA LUFT)

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
$\underline{02111ASWINF~(MQB0017\text{-}01RE1)~Water}$	Sampled:	01/30/07 05:2	25 Rece	ived: 01/3	1/07 08:15				CL
Gasoline Range Organics (C4-C12)	330	200	ug/l	4	7B14025	02/14/07	02/15/07	LUFT GCMS	PV
Surrogate: 1,2-Dichloroethane-d4		90 %	60-	145	"	"	"	"	



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQB0017 Reported: 02/16/07 10:02

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
02111ASWINF (MQB0017-01) Water	Sampled: 01/30	/07 05:25	Received	: 01/31/07	08:15				7.00
tert-Amyl methyl ether	ND	12	ug/l	25	7B07011	02/07/07	02/08/07	EPA 8260B	
Benzene	ND	12	0	*	**		0	"	
tert-Butyl alcohol	3600	500	н	11		11	**	tt.	
Di-isopropyl ether	ND	12	11	н	19	ti	н	11	
Ethyl tert-butyl ether	ND	12	11	11	п	п	"	и	
Ethylbenzene	ND	12	11	R	#	н		ŋ	
Methyl tert-butyl ether	440	12	, н	H	#1	11	в	11	
Toluene	31	12	**	Ħ	n	D	**	**	
Xylenes (total)	25	12	н	н	ii .	"	н	В	
Surrogate: 1,2-Dichloroethane-d4		92 %	60-	145	"	"	n .	11	····
Surrogate: 4-Bromofluorobenzene		82 %	60-	120	"	**	"	"	
Surrogate: Dibromofluoromethane		93 %	75-	130	11	"	"	"	
Surrogate: Toluene-d8		82 %	70-	130	n	"	"	"	





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0017 Reported: 02/16/07 10:02

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7B07011 - EPA 5030B P/T /	EPA 8260B								***************************************	
Blank (7B07011-BLK1)				Prepared a	& Analyze	ed: 02/07/	07			
tert-Amyl methyl ether	ND	0.50	ug/l	1			-			
Benzene	ND	0.50	0							
tert-Butyl alcohol	ND	20	If							
Di-isopropyl ether	ND	0.50	tt							
Ethyl tert-butyl ether	ND	0.50	p							
Ethylbenzene	ND	0.50	**							
Methyl tert-butyl ether	ND	0.50	lt.							
Toluene	ND	0.50	11							
Xylenes (total)	ND	0.50	H							
Surrogate: 1,2-Dichloroethane-d4	2.27		"	2.50		91	60-145			
Surrogate: 4-Bromofluorobenzene	2.07		"	2.50		83	60-120			
Surrogate: Dibromofluoromethane	2.33		"	2.50		93	75-130			
Surrogate: Toluene-d8	2.03		u	2.50		81	70-130			
Laboratory Control Sample (7B07011-	·BS1)			Prepared &	& Analyze	d: 02/07/0)7			
tert-Amyl methyl ether	10.6	0.50	ug/l	10.0		106	65-135			
Benzene	10.8	0.50	"	10.0		108	70-125			
tert-Butyl alcohol	171	20	н	200		86	60-135			
Di-isopropyl ether	11.1	0.50	н	10.0		111	70-130			
Ethyl tert-butyl ether	10.7	0.50	11	10.0		107	65-130			
Ethylbenzene	11.2	0.50	н	10.0		112	70-130			
Methyl tert-butyl ether	11.5	0.50	н	10.0		115	50-140			
Toluene	10.6	0.50	н	10.0		106	70-120			
Xylenes (total)	35.2	0.50	#	30.0		117	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.09		"	2.50		84	60-145			
Surrogate: 4-Bromofluorobenzene	2.24		"	2.50		90	60-120			
Surrogate: Dibromofluoromethane	2.21		n	2.50		88	75-130			
Surrogate: Toluene-d8	2.18		"	2.50		87	70-130			





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0017 Reported: 02/16/07 10:02

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7B07011 - EPA 5030B P/T / E	CPA 8260B							- <u> </u>		
Matrix Spike (7B07011-MS1)	Source: M	QB0017-01		Prepared	& Analyze	ed: 02/07/	07			
tert-Amyl methyl ether	267	12	ug/l	250	ND	107	65-135			
Benzene	253	12	н	250	5.2	99	70-125			
tert-Butyl alcohol	8540	500	П	5000	3600	99	60-135			
Di-isopropyl ether	271	12	н	250	ND	108	70-130			
Ethyl tert-butyl ether	265	12	,,	250	ND	106	65-130			
Ethylbenzene	260	12	ø	250	ND	104	70-130			
Methyl tert-butyl ether	744	12	B	250	440	122	50-140			
Toluene	237	12	н	250	31	82	70-120			
Xylenes (total)	808	12	II	750	25	104	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.12		"	2.50		85	60-145			
Surrogate: 4-Bromofluorobenzene	2.17		"	2.50		87	60-120			
Surrogate: Dibromofluoromethane	2.16		"	2.50		86	75-130			
Surrogate: Toluene-d8	2.14		"	2.50		86	70-130			
Matrix Spike Dup (7B07011-MSD1)	Source: M	QB0017-01		Prepared &	& Analyze	d: 02/07/0)7			
tert-Amyl methyl ether	271	12	ug/l	250	ND	108	65-135	1	25	
Benzene	258	12	11	250	5.2	101	70-125	2	15	
tert-Butyl alcohol	8860	500	н	5000	3600	105	60-135	4	35	
Di-isopropyl ether	273	12	н	250	ND	109	70-130	0.7	35	
Ethyl tert-butyl ether	266	12	**	250	ND	106	65-130	0.4	35	
Ethylbenzene	262	12	н	250	ND	105	70-130	0.8	15	
Methyl tert-butyl ether	759	12	1 1	250	440	128	50-140	2	25	
Toluene	251	12	Ħ	250	31	88	70-120	6	15	
Xylenes (total)	810	12	H*	750	25	105	80-125	0.2	15	
Surrogate: 1,2-Dichloroethane-d4	2.17		"	2.50		87	60-145			
Surrogate: 4-Bromofluorobenzene	2.16		"	2.50		86	60-120			
Surrogate: Dibromofluoromethane	2.26		"	2.50		90	75-130			
Surrogate: Toluene-d8	2.20		"	2.50		88	70-130			



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0017 Reported: 02/16/07 10:02

Notes and Definitions

PV Hydrocarbon result partly due to individ. peak(s) in quant. range

CL Initial analysis within holding time but required dilution

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

CLIENT SERVICES REP LISA	DATE RECEIVED 130/07 TURN AROUND TIME 10 ANALYST SACRAMENTO
	D Front) Froze over and temp got to -13°C
RES Client Instruction* Augus	olution norgh left to analyze
Telephone Number of Client:	
Client Contact for Instruction:	
Date and Time of Instruction:	
Date & Time Form Given to Sample Control:	
CLIENT SERVICES REP. SIGNATURE:	

PROBLEM CHAIN-OF-CUSTODY

*If client does not return call within 24 hours, please route this form to the Laboratory Director.

White Copy - Client Services

Pink Copy - Sample Control

MQB0017

Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

Project Name: Avco 2111

BP BU/AR Region/Enfos Segment: State or Lead Regulatory Agency:

BP. America 5 West Retail

Requested Due Date (mm/dd/yy):

Stanfal THI

	Page_/ of_/
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Off-site Time: 1600	Temp:
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TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME:	Anco					-	a strong a		
REC. BY (PRINT)	A.M		DATE REC'D AT LAB:	1-31-0		,		For Regula	atory Purposes?
WORKORDER:			TIME REC'D AT LAB:	8:15					WATER YES NO
MORRONDEN.	MQB0017		DATE LOGGED IN:	21110	7			WASTE W	
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CIRCLE THE APPR	OPRIATE RESPONSE	LAB	CLIENT ID	CONTAINER	PRESER		SAMPLE	DATE	Drift Die
		SAMPLE#	CLIERT ID	DESCRIPTION	VATIVE	pН	ı	SAMPLED	REMARKS: CONDITION (ETC.)
1. Custody Seal(s)	resent / Absent							Origin ELD	SOUPHION (E.IC.)
	(Intact) Broken*								
2. Chain-of-Custody	Presenty Absent*					***************************************			
3. Traffic Reports or							<u> </u>		
Packing List:	Present / Absent				 -	······································			
4. Airbill:	Airbill / Sticker					• • • • • • • • • • • • • • • • • • • •			
	Present/ Absent							/-	
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6. Sample Labels:	Present / Absent								
7. Sample IDs:	Listed / Not Listed								
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8. Sample Condition:	(ntac) / Broken* /					2			2 of 6 Broken
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9. Does information or					- /-				
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(circle which, if yes)	Yes/No			·					100
4. Read Temp:	5%								
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*Exception (if any): MET	ALC / DEC ON ION								
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RL Revision 8 (07/19/05)

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

California Overnight Shipping Label



Date Printed 1/30/2007

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



Tracking#D10010119090209

Sent By: TIM ALBRIGHT Phone#: (916)921-9600

wgt(lbs): 40 Reference:

Decl. Value: \$0.00

Ship To Company:

TESTAMERICA - MORGAN HILL 885 JARVIS DR MORGAN HILL, CA 95037 SAMPLE CONTROL (408)776-9600 Service: S

Sort Code: SJC

Special Services:

Lisa Race

From:

Sandy Hayes [shayes@stratusinc.net]

Sent:

Monday, February 05, 2007 10:30 AM

To:

Lisa Race

Subject:

RE: problem COC for ARCO#2111 - MQB0017

Attachments: 2111 COC.pdf

REVISED

Hi Lisa,

The correct Enfos # is G0C28-0023...I've attached a revised copy.

Thanks, Sandy

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

Fax: 530.676.6005

----Original Message----

From: Lisa Race [mailto:lrace@testamericainc.com]

Sent: Monday, February 05, 2007 10:16 AM

To: knagaraju@stratusinc.net; scarter@stratusinc.net; Sandy Hayes; Scott Bittinger

Subject: problem COC for ARCO#2111 - MQB0017

Please complete the ENFOS # for this project.

Lisa Race Senior Project Manager, Morgan Hill, CA TestAmerica Analytical Testing Corporation

Tel.: 408-776-9600 Direct.: 408-782-8156 Fax: 408-782-6308

e-mail: <u>lrace@testamericainc.com</u> NOTE NEW E-MAIL ADDRESS

^{***}This transmission contains information that may be legally confidential. The information is intended solely for the individual or entity named above and access by anyone else is unauthorized. If you are not the intended recipient, any disclosure, copying, distribution, or use of the contents of this information is prohibited and may be unlawful. If you have received this transmission in error, please reply immediately to the sender that you have received the message in error. Because access to receiving equipment is not under our control, we cannot be responsible for the confidentiality of electronically transmitted data.***

Atlantic Richfield Company

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31 January, 2007

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

RE: ARCO #2111, San Leandro, CA

Work Order: MQA1078

Enclosed are the results of analyses for samples received by the laboratory on 01/31/07 08:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race

Senior Project Manager

CA ELAP Certificate # 1210

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



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023

Project Manager: Jay Johnson

MQA1078 Reported:

01/31/07 15:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
02111AGAC1	MQA1078-01	Vapor	01/30/07 05:08	01/31/07 08:15

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



Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQA1078 Reported: 01/31/07 15:56

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	A 1		.,
						riepared	Analyzed	Method	Notes
02111AGAC1 (MQA1078-01) Vapor	Sampled: 01/30/0	07 05:08 F	Received: 0	1/31/07 0	8:15				
Gasoline Range Organics (C4-C12)	ND	10	mg/m³ Air	1	7A31011	01/31/07	01/31/07 13:21	EPA 8015B/8021B	
Benzene	ND	0.10	li.	п	n	**	n	0	
Toluene	ND	0.10	Ш	н	11	н	н	II .	
Ethylbenzene	ND	0.10	11	n	n	ti	н	н	
Xylenes (total)	ND	0.20	H	11	H	11	н	11	
Methyl tert-butyl ether	ND	0.50	n	**	н	11	n	ŧŧ	
Surrogate: a,a,a-Trifluorotoluene		93 %	65-1	40	11	"	n	"	
Surrogate: 4-Bromofluorobenzene		97 %	70-1	25	"	"	"	"	
Gasoline Range Organics (C4-C12)	ND	2.4	ppmv	#1	н	n	11	и	
Benzene	ND	0.031	**	H	н	н	II	н	
Toluene	ND	0.027	**	H	#	#	н	H	
Ethylbenzene	ND	0.023	н	Ħ	#1	#	11	н	
Xylenes (total)	ND	0.047	н	II .	н	#	. 11	H	
Methyl tert-butyl ether	ND	0.14	"	11	**	D	u	rt .	
Surrogate: a,a,a-Trifluorotoluene		93 %	65-1	40	"	n	"	"	***************************************
Surrogate: 4-Bromofluorobenzene		96 %	70-1	25	"	"	"	"	





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQA1078 Reported: 01/31/07 15:56

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes		
Batch 7A31011 - EPA 5030B [P/T] / EPA 8015B/8	021B										
Blank (7A31011-BLK1)				Prepared a	d & Analyzed: 01/31/07							
Gasoline Range Organics (C4-C12)	ND	50										
Gasoline Range Organics (C4-C12)	ND	12	ppmv									
Benzene	ND	0.50	mg/m³ Air									
Benzene	ND	0.16	ppmv									
Toluene	ND	0.50	mg/m³ Air									
Toluene	ND	0.13	ppmv									
Ethylbenzene	ND	0.50	mg/m³ Air									
Ethylbenzene	ND	0.12	ppmv									
Xylenes (total)	ND	1.0	mg/m³ Air									
Xylenes (total)	ND	0.24	ppmv									
Methyl tert-butyl ether	ND	2.5	mg/m³ Air									
Methyl tert-butyl ether	ND	0.69	ppmv									
Surrogate: a,a,a-Trifluorotoluene	39.4		mg/m³ Air	40.0		98	65-140					
Surrogate: a,a,a-Trifluorotoluene	6.60		рртч	6.70		99	65-140					
Surrogate: 4-Bromofluorobenzene	40.2		mg/m³ Air	40.0		100	70-125					
Surrogate: 4-Bromofluorobenzene	5.63		ppmv	5.59		101	70-125					
Laboratory Control Sample (7A31011	-BS1)]	Prepared &	k Analyze	d: 01/31/0	07					
Gasoline Range Organics (C4-C12)	240	50	mg/m³ Air	275		87	70-115					
Gasoline Range Organics (C4-C12)	68.2	12	ppmv	78.0		87	70-115					
Benzene	4.74	0.50	mg/m³ Air	4.85		98	80-150					
Benzene	1.49	0.16	ppmv	1.52		98	80-150					
Toluene	21.6	0.50	mg/m³ Air	23.5		92	75-125					
Toluene	5.73	0.13	ppmv	6.25		92	75-125					
Ethylbenzene	4.04	0.50	mg/m³ Air	4.70		86	75-135					
Ethylbenzene	0.933	0.12	ppmv	1.08		86	75-135					
Xylenes (total)	25.2	1.0	mg/m³ Air	26.5		95	75-135					
Xylenes (total)	5.81	0.24	ppmv	6.12		95	75-135					
Methyl tert-butyl ether	4.84	2.5	mg/m³ Air	6.50		74	60-140					
Methyl tert-butyl ether	1.35	0.69	ppmv	1.81		75	60-140					
Surrogate: a,a,a-Trifluorotoluene	47.7		mg/m³ Air	40.0		119	65-140					
Surrogate: a,a,a-Trifluorotoluene	7.99		рртч	6.70		119	65-140					
Surrogate: 4-Bromofluorobenzene	40.9		mg/m³ Air	40.0		102	70-125					
Surrogate: 4-Bromofluorobenzene	5.72		ррти	5.59		102	70-125					





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQA1078 Reported: 01/31/07 15:56

Purgeable Hydrocarbons and BTEX by EPA 8015B/8021B - Quality Control TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting		Spike	Source	0/DEC	%REC	DDD	RPD	XY .
Palalyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 7A31011 - EPA 5030B [P/T	/ EPA 8015B/8	021B		,				·		
Laboratory Control Sample Dup (7A3	1011-BSD1)			Prepared	& Analyze	d: 01/31/	07			
Gasoline Range Organics (C4-C12)	237	50	mg/m³ Air	275	***************************************	86	70-115	1	35	
Gasoline Range Organics (C4-C12)	67.3	12	ppmv	78.0		86	70-115	1	35	
Benzene	4.45	0.50	mg/m³ Air	4.85		92	80-150	6	35	
Benzene	1.40	0.16	ppmv	1.52		92	80-150	6	35	
Toluene	5.60	0.13	н	6.25		90	75-125	2	30	
Toluene	21.1	0.50	mg/m³ Air	23.5		90	75-125	2	30	
Ethylbenzene	3.90	0.50	H	4.70		83	75-135	4	30	
Ethylbenzene	0.900	0.12	ppmv	1.08		83	75-135	4	30	
Xylenes (total)	24.5	1.0	mg/m³ Air	26.5		92	75-135	3	30	
Xylenes (total)	5.65	0.24	ppmv	6.12		92	75-135	3	30	
Methyl tert-butyl ether	4.81	2.5	mg/m³ Air	6.50		74	60-140	0.6	30	
Methyl tert-butyl ether	1.34	0.69	ppmv	1.81		74	60-140	0.7	30	
Surrogate: a,a,a-Trifluorotoluene	46.7		mg/m³ Air	40.0		117	65-140	· · · · · · · · · · · · · · · · · · ·		
Surrogate: a,a,a-Trifluorotoluene	7.82		ppmv	6.70		117	65-140			
Surrogate: 4-Bromofluorobenzene	41.3		mg/m³ Air	40.0		103	70-125			
Surrogate: 4-Bromofluorobenzene	5.77		ppmv	5.59		103	70-125			



Stratus Environmental Inc. [Arco] 3330 Cameron Park Dr., Suite 550 Cameron Park CA, 95682 Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQA1078 Reported: 01/31/07 15:56

Notes and Definitions

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Atlantic Richfield ompany

A BP affiliated company

Chain of Custody Record
Project Name: AND 2111

BP BU/AR Region/Enfos Segment: State or Lead Regulatory Agency:

BP AMERICUS West Retal RUBCIS - SAW Fin

Requested Due Date (mm/dd/yy):

On-site Time: 0445 Temp: Off-site Time: Temp: Sky Conditions: Meteorological Events: Wind Speed: Direction:

Lab Name: Flot Howrica	BP/AR Facility No.: 2111	Consultant/Contractor: Huntes					
Address: 884 Tunus Drive	BP/AR Facility Address: 1156 Davis St SAA leave	anddress: 3330 Camerus Ph DD					
Lab PM: Light Race	Site Lat/Long:	Camerun Th Cot 95682					
Lab PM: Lisu Ruce	California Global ID No.: TO GOO 101764	Consultant/Contractor Project No.: E 211					
Tele/Fax: 408782 8156	Enfos Project No.: GOC 28	Consultant/Contractor PM: JAY					
BP/AR EBM: DWU SUIDID P	Provision or OOC (circle one)	Tele/Fax: 530 676 6004					
BP/AR EBM: PWV SUPELLE Address: 2010 Crow Campun Plune #150	Phase/WBS: D3-O/M	Report Type & QC Level: - EDF					
34N Rumon	Sub Phase/Task: Q3 LAB	E-mail EDD To: CJ e witt @ Strutus Inc. net					
Tele/Fax: 924 277 3906	Cost Element: 01	Invoice to: Consultant or BP of Atlantic Richfield Co J (circle one)					
Lab Bottle Order No: Matrix		quested Analysis					
Item No. Sample Description Date Date Air	No. of Containers No. of Containers Unpreserved HNO.3 HNO.3 HCI Methanol MATERIA	Sample Point Lat/Long and Comments					
1 BZIII ABAC 0508 1300 X	0(1	24HR TAY					
2							
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Sampler's Name: (2005 HIII	Reliaquished By / Affiliation Date Time	Accepted By / Affiliation Date Time					
Sampler's Company: Strutus	Salful Statue 1300/1001						
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cial Instructions: EC 1690145 Kmill	er (a) browl bouting, com						
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ustody Seals In Place: Yes) No Temp Blank: Yes / 1	ustody Seals In Place: (res)/ No Temp Blank: Yes /(No) Cooler Temp on Receipt: NA °F/C Trip Blank: Yes /(No) MS/MSD Sample Submitted: Yes /(No)						

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: Ava Rec. by (PRINT) A.M. WORKORDER:		DATE REC'D AT LAB: TIME REC'D AT LAB: DATE LOGGED IN:	8:15			5	For Regulatory Purposes? DRINKING WATER YES N WASTE WATER YES N		
CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE#	CLIENT ID	CONTAINER DESCRIPTION		рН	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION /ETC.)	
Custody Seal(s) Present / Absent Intact / Broken*									
2. Chain-of-Custody Present / Absent*									
Traffic Reports or Packing List: Present / Absent									
4. Airbill: Airbill / Sticker Present / Absent									
5. Airbill #: CA. Overnight			×			r			
6. Sample Labels: Present / Absent					(7			
7. Sample IDs: (isted) Not Listed on Chain-of-Custod									
8. Sample Condition: Intact/ Broken* / Leaking*				χ. χ.					
9. Does information on chain-of-custody,			A						
traffic reports and sample labels agree? (Yes) No*			1,0						
agree? (Yes) No* 10. Sample received within									
hold time? (Yes) No*			7:-						
11. Adequate sample volume					·				
received? Yes/No*	, l								
12. Proper preservatives used? (Yes/ No* N), 13. Trip Blank / Temp Blank Received?	4				<u> </u>				
(circle which, if yes) Yes /(No)								a a	
14. Read Temp: NA								(I) Washington	
Corrected Temp:					VC4				
Is corrected temp 4 +/-2°C? Yes / No**	ļ							i i i i i i i i i i i i i i i i i i i	
(Acceptance range for samples requiring thermal pres.)								**************************************	
**Exception (if any): METALS / DFF ON ICE									
or Problem COC Air Lay				Carry San Asserted Color and Assert	N CANCEL SCHOOL	econo excussor sol s			

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

RL Revision 8 places Rev 7 (07/19/05) California Overnight Shipping Label



Date Printed 1/30/2007

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



Tracking#D10010119101725

Sent By: TIM ALBRIGHT Phone#: (916)921-9600

wgt(lbs): 1 Reference:

Decl. Value: \$0.00

Ship To Company:

TESTAMERICA - MORGAN HILL 885 JARVIS DR MORGAN HILL, CA 95037 SAMPLE CONTROL (408)776-9600 Service: S

Sort Code: SJC

Special Services:



15 February, 2007

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

RE: ARCO #2111, San Leandro, CA Work Order: MQB0043

Enclosed are the results of analyses for samples received by the laboratory on 02/01/07 07:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa Race

Senior Project Manager

CA ELAP Certificate # 1210

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



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0043 Reported: 02/15/07 15:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	7
02111ASWINF	MQB0043-01	Water	01/31/07 07:45	02/01/07 07:30	

The carbon range for the TPH-GRO has been changed from C6-C10 to C4-C12. The carbon range for TPH-DRO has been changed from C10-C28 to C10-C36. EPA 8015B has been modified to better meet the requirements of California regulatory agencies. These samples were received with no custody seals.



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0043 Reported: 02/15/07 15:06

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
02111ASWINF (MQB0043-01RE1) Water	Sampled: (01/31/07 07:4	5 Rece	ived: 02/01	1/07 07:30				
Gasoline Range Organics (C4-C12)	300	100	ug/l	2	7B14008	02/14/07	02/14/07	LUFT GCMS	PV
Surrogate: 1,2-Dichloroethane-d4		96 %	60-	145	"	"	и	"	



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023
Project Manager: Jay Johnson

MQB0043 Reported: 02/15/07 15:06

Volatile Organic Compounds by EPA Method 8260B

TestAmerica - Morgan Hill, CA

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
02111ASWINF (MQB0043-01) Water	Sampled: 01/31	/07 07:45	Received:						
tert-Amyl methyl ether	ND	12	ug/l	25	7B07011	02/07/07	02/08/07	EPA 8260B	
Benzene	ND	12	"	п		11	11	LI A 6200B	
tert-Butyl alcohol	3200	500	н	н	n	11	"	н	
Di-isopropyl ether	ND	12	n	It	0	10	**		
Ethyl tert-butyl ether	ND	12	"	11	"	#	11	**	
Ethylbenzene	ND	12	ır	н	11	ш	II	11	
Methyl tert-butyl ether	490	12	n	11	11	н	n	н	
Toluene	ND	12	**	ц	*	ıı	11	n	
Xylenes (total)	ND	12	н	н	11	ŧ	н	II.	
Surrogate: 1,2-Dichloroethane-d4		96 %	60-1	45	n	"	"	n	
Surrogate: 4-Bromofluorobenzene		77 %	60-1	20	"	"	"	"	
Surrogate: Dibromofluoromethane		100 %	75-1		"	"	"	"	
Surrogate: Toluene-d8		80 %	70-1		"	"	"	"	





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0043 Reported: 02/15/07 15:06

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7B14008 - EPA 5030B P/T /	LUFT GCMS									
Blank (7B14008-BLK1)				Prepared	& Analyze	ed: 02/14/0	07			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 1,2-Dichloroethane-d4	2.41		"	2.50		96	60-145			
Laboratory Control Sample (7B14008-	BS2)			Prepared .	& Analyze	ed: 02/14/0	07			
Gasoline Range Organics (C4-C12)	527	50	ug/l	500		105	75-140			
Surrogate: 1,2-Dichloroethane-d4	2.45		"	2.50		98	60-145			
Laboratory Control Sample Dup (7B14	008-BSD2)			Prepared .	& Analyze	ed: 02/14/0	07			
Gasoline Range Organics (C4-C12)	490	50	ug/l	500		98	75-140	7	20	
Surrogate: 1,2-Dichloroethane-d4	2.48		"	2.50		99	60-145			





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0043 Reported: 02/15/07 15:06

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7B07011 - EPA 5030В Р/Г	/ EPA 8260B									
Blank (7B07011-BLK1)				Prepared 6	& Analyze	ed: 02/07/	07			
tert-Amyl methyl ether	ND	0.50	ug/l		~ 1 Mary 20	u. 02/07/	<u> </u>			
Benzene	ND	0.50	#							
tert-Butyl alcohol	ND	20	**							
Di-isopropyl ether	ND	0.50	n							
Ethyl tert-butyl ether	ND	0.50	n							
Ethylbenzene	ND	0.50	13							
Methyl tert-butyl ether	ND	0.50	11							
Toluene	ND	0.50	11							
Xylenes (total)	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	2.27	· · · · · · · · · · · · · · · · · · ·	11	2.50		91	60-145			
Surrogate: 4-Bromofluorobenzene	2.07		n	2.50		83	60-120			
Surrogate: Dibromofluoromethane	2.33		"	2.50		93	75-130			
Surrogate: Toluene-d8	2.03		"	2.50		81	70-130			
Laboratory Control Sample (7B07011	-BS1)			Prepared &	. Analyze	d- 02/07/0				
tert-Amyl methyl ether	10.6	0.50	ug/l	10.0	·	106	65-135			
Benzene	10.8	0.50	1)	10.0		108	70-125			
ert-Butyl alcohol	171	20	"	200		86	60-135			
Di-isopropyl ether	11.1	0.50	11	10.0		111	70-130			
Ethyl tert-butyl ether	10.7	0.50	n	10.0		107	65-130			
Ethylbenzene	11.2	0.50	**	10.0		112	70-130			
Methyl tert-butyl ether	11.5	0.50	н	10.0		115	50-140			
Γoluene	10.6	0.50	H	10.0		106	70-120			
Kylenes (total)	35.2	0.50	11	30.0		117	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.09		"	2.50		84	60-145			
Surrogate: 4-Bromofluorobenzene	2.24		"	2.50		90	60-120			
Surrogate: Dibromofluoromethane	2.21		"	2.50		88	75-130			
Surrogate: Toluene-d8	2.18		"	2.50		87	70-130			





Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0043 Reported: 02/15/07 15:06

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7B07011 - EPA 5030B P/T / E	PA 8260B									
Matrix Spike (7B07011-MS1)	Source: M	QB0017-01		Prepared	& Analyze	d: 02/07/	07			
tert-Amyl methyl ether	267	12	ug/l	250	ND	107	65-135			
Benzene	253	12	н	250	5.2	99	70-125			
tert-Butyl alcohol	8540	500	#	5000	3600	99	60-135			
Di-isopropyl ether	271	12	н	250	ND	108	70-130			
Ethyl tert-butyl ether	265	12	#	250	ND	106	65-130			
Ethylbenzene	260	12	Ħ	250	ND	104	70-130			
Methyl tert-butyl ether	744	12	n	250	440	122	50-140			
Toluene	237	12	"	250	31	82	70-120			
Xylenes (total)	808	12	Ħ	750	25	104	80-125			
Surrogate: 1,2-Dichloroethane-d4	2.12	**	"	2.50	-	85	60-145			
Surrogate: 4-Bromofluorobenzene	2.17		"	2.50		87	60-120			
Surrogate: Dibromofluoromethane	2.16		"	2.50		86	75-130			
Surrogate: Toluene-d8	2.14		"	2.50		86	70-130			
Matrix Spike Dup (7B07011-MSD1)	Source: M	QB0017-01		Prepared &	& Analyze	d: 02/07/0	07			
tert-Amyl methyl ether	271	12	ug/l	250	ND	108	65-135	1	25	
Benzene	258	12	19	250	5.2	101	70-125	2	15	
tert-Butyl alcohol	8860	500	n n	5000	3600	105	60-135	4	35	
Di-isopropyl ether	273	12	#	250	ND	109	70-130	0.7	35	
Ethyl tert-butyl ether	266	12	**	250	ND	106	65-130	0.4	35	
Ethylbenzene	262	12	н	250	ND	105	70-130	0.8	15	
Methyl tert-butyl ether	759	12	п	250	440	128	50-140	2	25	
Toluene	251	12	n	250	31	88	70-120	6	15	
Xylenes (total)	810	12	II	750	25	105	80-125	0.2	15	
Surrogate: 1,2-Dichloroethane-d4	2.17		"	2.50		87	60-145			
Surrogate: 4-Bromofluorobenzene	2.16		"	2.50		86	60-120			
Surrogate: Dibromofluoromethane	2.26		"	2.50		90	75-130			
Surrogate: Toluene-d8	2.20		n	2.50		88	70-130			



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

Project: ARCO #2111, San Leandro, CA

Project Number: G0C28-0023 Project Manager: Jay Johnson MQB0043 Reported: 02/15/07 15:06

Notes and Definitions

PV Hydrocarbon result partly due to individ. peak(s) in quant. range

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Atlantic Richfield Company

A BP affiliated company

Chain of Custody Record

Project Name:

ARCO 2111

BP BU/AR Region/Enfos Segment:

BP > Americas > West > Retail > Alameda > 2111

State or Lead Regulatory Agency:

RWQCB - San Francisco

Requested Due Date (mm/dd/yy):

ancisco Stindent TAT

	Page/of
On-site Time: 0520	Temp: 45
Off-site Time: OGOU	Temp: 50
Sky Conditions: Clum	
Meteorological Events:	
Wind Speed:	Direction:

Lab	Name: TestAmerica		***************************************				BP/AR Facility No		211	11																
Address: 885 Jarvis Drive							BP/AR Facility Address: 1156 Davis Street, San Leandro									Consultant/Contractor: Stratus Environmental, Inc.										
Morgan Hill, CA 95937							Site Lat/Long:								Address: 3330 Cameron Park Drive, Suite 550											
Lab PM: Lisa Race															Cameron Park, CA 95682											
Tele/Fax: 408-782-8156 408-782-6308 (fax)							California Global ID No.: T0600101764 Enfos Project No.: G0C28-0023								Consultant/Contractor Project No.:											
BP/AR PM Contact: Paul Supple															Consultant/Contractor PM: Jay Johnson											
Address: 2010 Crow Canyon Place, Suite 150							Provision or OOC (circle one) Provision Phase/WBS: 03-O & M								Tele/Fax: (530) 676-6000 / (530) 676-6005											
San Ramon, CA															Report Type & QC Level: Level 1 with EDF											
Tele/Fax: 925-275-3506							Sub Phase/Task: 03-Analytical Cost Element: 01-Contractor labor								E-mail EDD To: cjewitt@stratusinc.net											
	Bottle Order No:			1	Mati	! rix								Invoice to: Atlantic Richfield Co.												
Item No.	Sample Description	Time	Date	Soil/Solid	Water/Liquid	Air	MPB DOG3 Laboratory No.	No. of Containers	Unpreserved	H ₂ SO ₄			Methanol	774.60	550 50X	計	Reques	ted A	inaly	/sis				Sample Point Comi		g and
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	Shipment Tracking No:																									
Speci	pecial Instructions: Please cc results to rmiller@broadbentinc.com																									
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7	Custody Seals In Place: Yes / (No) Temp Blank: Yes / (No) Cooler Temp on Receipt: G *F(C) Trip Blank: Yes / (No) MS/MSD Sample Submitted: Yes / (No)																									
	A																									

TEST AMERICA SAMPLE RECEIPT LOG

8	.M. 1480043		DATE REC'D AT LAB: TIME REC'D AT LAB: DATE LOGGED IN:	2-1-0 7:3 2-1-0	07 0		800 TEACHT ME SE TOMOR	For Regulatory Purposes? DRINKING WATER YES / NO WASTE WATER YES / NO			
CIRCLE THE APPROPRIATE R	ESPQNSE	LAB SAMPLE#	CLIENT ID	CONTAINER DESCRIPTION	PRESER VATIVE	рН	SAMPLE	1	REMARKS:		
Custody Seal(s) Present	(Absen)				******		WATRIX	SAMPLED	CONDITION (ETC.)		
	Broken*								7		
2. Chain-of-Custody Present	Absent*		, , , , , , , , , , , , , , , , , , ,								
Traffic Reports or				-							
Packing List: Present	Absent		***************************************								
4. Airbill: Airbill/S	ticker			<u> </u>	-			-			
Rresent /	Absent							/			
5. Airbill #: See Attached				×.							
6. Sample Labels: Present/	Absent						0				
7. Sample IDs: (isted / N	lot Listed					Je?					
on Chain-	of-Custody										
8. Sample Condition: Intact/ Bi	roken*/				M.						
Does information on chain-of-c traffic reports and sample label	ustody,			0	/						
				1/2/							
10. Sample received within	s) / No*										
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11. Adequate sample volume received?				·							
12 Proper property to	s)/ No*										
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 Trip Blank / Temp Blank Received (circle which, if yes) 	s/No*			,							
14. Read Temp:	s (140)								\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		
Corrected Temp: 49			_/						200		
	5/ No**		/								
Acceptance range for samples requiring thermal		$-\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$							The state of the s		
*Exception (if any): METALS / DFF	ONICE	-/-									
or Problem COC	-	$\angle \perp$							With the state of		
				PLESON LIPERIOR MANAGEMENT							

SRL Revision 8
Replaces Rev 7 (07/19/05)

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

Page ____of__

California Overnight Shipping Label



Date Printed 1/31/2007

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



Tracking#D10010119261123

Sent By: TIM ALBRIGHT Phone#: (916)921-9600

wgt(lbs): 33 Reference:

Decl. Value: \$0.00

Ship To Company:

TESTAMERICA - MORGAN HILL 885 JARVIS DR MORGAN HILL, CA 95037 SAMPLE CONTROL (408)776-9600 Service: S

Sort Code: SJC

Special Services: