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1:33 pm, Jul 23, 2008

Alameda County Environmental Health

> Denis L. Brown Shell Oil Products US

Mr. Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577 HSE - Environmental Services 20945 S. Wilmington Ave. Carson, CA 90810-1039 Tel (707) 865 0251 Fax (707) 865 2542 Email denis.l.brown@shell.com

Subject:

Soil Vapor Probe Sampling Report

Former Shell Service Station 4411 Foothill Boulevard Oakland, California SAP Code 135686 Incident No. 98995746

Agency Case No. RO0000415

Dear Mr. Wickham:

Attached for your review and comment is a copy of the *Soil Vapor Probe Sampling Report* for the above referenced site. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

As always, please feel free to contact me directly at (707) 865-0251 with any questions or concerns.

Sincerely,

Denis L. Brown Project Manager

5900 Hollis Street, Suite A, Emeryville, Calfornia 94608 Telephone: 510-420-0700 Facsimile: 510-420-9170 www.CRAworld.com

July 22, 2008

Mr. Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Re: Soil Vapor Probe Sampling Report

Former Shell Service Station 4411 Foothill Boulevard Oakland, California SAP Code 135686 Incident No. 98995746 Agency Case No. RO0000415

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) prepared this report on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to present the recent soil vapor probe sampling results. CRA's March 13, 2008 *Subsurface Investigation Report* recommended resampling the nine soil vapor probes at the site, and Alameda County Health Care Services Agency's (ACHCSA's) April 4, 2008 letter concurred.

As was noted in a January 3, 2008 letter to ACHCSA, the proposed onsite vapor probes V-8 and V-9 could not be installed due to potential conflicts with underground utilities, and the proposed offsite groundwater monitoring wells S-10, S-11, and S-12 on the 4340 Bond Street property could not be installed because that site is currently being re-developed as a parking lot. As of June 26, 2008, work on the parking lot was still in progress. Due to reluctance of the property owner at 4320 Bond Street to allow access to their property to install wells, an access request was sent to the owners of 1724/1726/1728 High Street on May 20, 2008. As of this date, the property owners of 1724/1726/1728 High Street have not responded.

Site Location and Description

The site is a former Shell-branded service station located on the southern corner of the intersection of Foothill Boulevard and High Street in Oakland, California (Figure 1). The former station layout included three first-generation underground storage tanks (USTs) (1958 to 1971), three second-generation USTs (1971 to 1984), three third-generation gasoline USTs (1984 to 2002), a waste oil UST (removed 1992), and four product dispensers (Figure 2). Land use in the vicinity of the site is a mix of commercial and residential, with gasoline service stations occupying the northern and western corners of the intersection. The subject property is currently developed as a strip mall with a variety of commercial and retail uses.



A summary of previous work performed at the site and additional background information is contained in CRA's March 13, 2008 *Soil Vapor Probe Installation and Sampling Report*.

Soil Vapor Probe Sampling Procedures

Personnel Present: CRA Staff Geologist Carmen Rodriguez sampled the soil vapor probes, under the supervision of California Professional Geologist Peter Schaefer.

Soil Vapor Sampling: Vapor probes V-2, V-3, V-5 through V-7, and V-10 were sampled on May 22, 2008. Sampling was attempted from vapor probes V-1, V-4 and V-11 but the samples were determined to be invalid due to sampling manifold leaks. Vapor probes V-1, V-4, and V-11 were sampled on June 26, 2008. Soil vapor sampling and leak testing were performed following Department of Toxic Substances Control's January 28, 2003 Advisory-Active Soil Gas Investigation guidelines. Paper towels with shaving cream were placed at sample system connections and wrapped in foil for the leak test.

Purging and sampling were conducted at a rate of approximately 200 milliliters per minute. Vapor samples were collected in 1-liter Summa[™] canisters after removing approximately three purge volumes from the screen interval. Each sample was labeled, documented on a chain-of-custody, and submitted to Air Toxics, Ltd. of Folsom, California for analysis.

Soil Vapor Sample Analysis: Soil vapor samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by EPA Method TO-3 (modified) and benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary-butyl ether (MTBE), tertiary-butyl alcohol and tracer compounds isobutane, butane, and propane (as tentatively identified compounds) by modified EPA Method TO-15. These tracer compounds were identified by EPA Method TO-15 as the most abundant compounds of the specific shaving cream analyzed and indicated by distinctive peaks on the petroleum hydrocarbon chromatograph, separate from TPH in the gasoline range. The laboratory analytical report is provided in Attachment A.

Soil Vapor Probe Sampling Results

Soil vapor samples were collected from the nine onsite soil vapor probes (V-1 through V-7, V-10, and V-11). TPHg was detected in the vapor samples collected from eight of the nine soil vapor probes at concentrations ranging from 750 to 22,000,000 micrograms per cubic meter ($\mu g/m^3$). The TPHg concentrations in six of the probes (V-1 through V-6) exceed the TPHg ESL of 29,000 $\mu g/m^3$ for vapor intrusion from shallow soils on commercial sites. Benzene was detected in the vapor samples collected from vapor probes V-2 and V-3 at concentrations of 7,000 and



 $1,600 \mu g/m^3$, respectively. These concentrations exceed the benzene ESL of $280 \mu g/m^3$ for vapor intrusion from shallow soils on commercial sites.

Ethylbenzene was detected in the vapor sample collected from soil vapor probe V-2 at a concentration of $5,600~\mu g/m^3$, which exceeds the ESL of $980~\mu g/m^3$. Detectable concentrations of toluene were reported in the vapor samples collected from soil vapor probes V-2, V-3, and V-5, but these concentrations did not exceed the ESL for vapor intrusion from shallow soils on commercial sites.

No detectable concentrations of MTBE or TBA were reported in any of the vapor samples collected from the eight soil vapor probes.

Leak testing was performed during sampling using shaving cream to determine if ambient air was entering the SummaTM canisters during sampling by recognizing if the specific leak test compounds were identified in the chemical analysis. Isobutane (2-methyl propane) is the standard compound of the leak test (approximately 350,000 μg/m³ in shaving cream) and was detected in samples from V-3, V-4, V-6, and V-11. The highest concentration of 22,000 μg/m³ (9,300 parts per billion by volume) was detected in V-3, an amount over an order of magnitude below the amount in the tracer gas compound.

Table 1 summarizes the soil vapor analytical data, TPHg and benzene results are shown on Figure 2, and the laboratory analytical report is presented in Attachment A.

Conclusions and Recommendations

CRA recommends that the three proposed offsite monitoring wells and the two proposed onsite soil vapor probes be installed after the property owners of 4340 Bond Street have completed the redevelopment of their site as a parking lot. The groundwater monitoring wells will be added to the regular quarterly monitoring program and an additional round of soil vapor sampling from all of the probes is recommended following the installation of V-8 and V-9.



Closing

If you have any questions regarding this submittal, please call Peter Schaefer at (510) 420-3319.

PETER L SCHAEFER NO. 5612

Sincerely,

Conestoga-Rovers & Associates

Peter Schaefer, CEG, CHG

Project Manager

for: Ana Friel, PG

Professional Geologist

Figures:

1 - Vicinity Map

2 - Soil Vapor Chemical Concentration Map

Table:

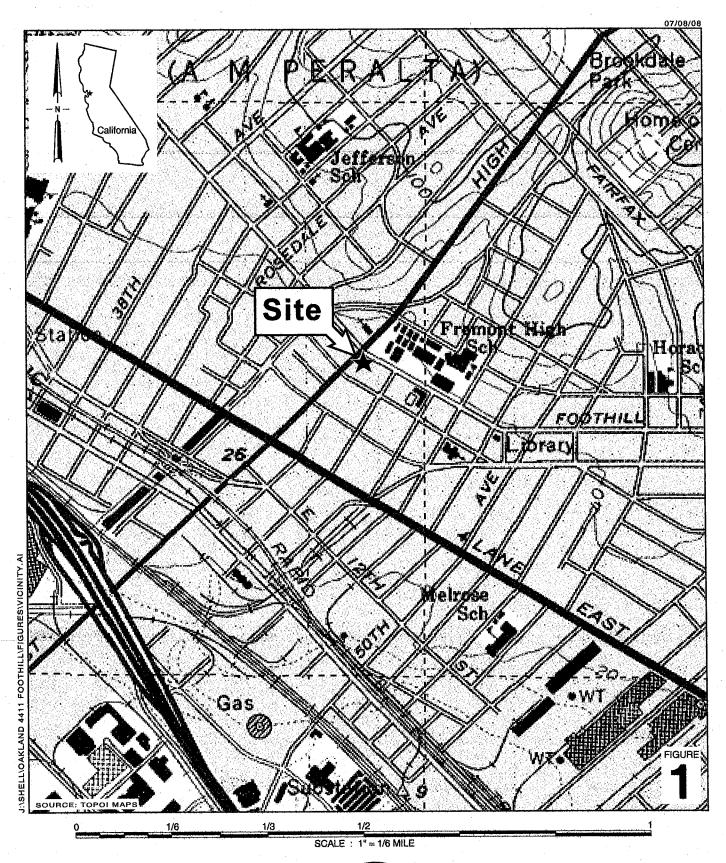
1 - Soil Vapor Analytical Data

Attachment:

A - Laboratory Analytical Reports

cc: Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810

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Former Shell Service Station

4411 Foothill Boulevard Oakland, California



Vicinity Map



EXPLANATION V-8 Proposed soil vapor probe S-10 Proposed monitoring well location Monitoring well location

FOOTHILL BOULEVARD

V-5

V-6

V-6

2,300,000 <130 <140

4419 Foothill

S-4 🗟

Jackson & Hewitt Tax Services 4421 Foothill

Former Building

S-11

parking

V-5

3,300,000

<1,600 <1,800

4417 Foothill

4415 Foothill

BLDG. B

S-10

4411 Foothill

¥ BW-A

Third Generation USTs

(1984 to 2002)

BLDG. A

V-3

22,000,000 1,600 <1,100

S-7

Restaurant

First and Second Generation USTs (~1958 to 1984)

V-12 S-12

V-8

S-9

Wood Moulding

& Doors 4413 Foothill

V-4 980,000 <160 <180

-**√**V-4

№ СВ

V-7

V-7

790 <4.2 <4.8

Nails & Spa

4423 Foothill

S-2 ⊠

Former Shell Station

4411 Foothill

V-2 -V-2

Former W/O UST (removed 2002)

V-11 V-11

<260 <4.0 <4.6

\$-13 🙀 🙀

Residential

4320 Bond St.

8,300,000 7,000 <1,200

HIGH STREET

V-1

S-8 +

Residential 1724 High St.

40

Scale (ft)

₹ V-10

750 <4.1 <4.6

1,000,000 <160 <180

Laundromat

Destroyed monitoring well location

Destroyed tank backfill well location

Fire hydrant

000 Catch basin

Manhole Power pole

Flow direction

Well Well ID

Benzene

MTBE

parking

TPHg, benzene, and MTBE concentrations are in

micrograms per cubic meter

Former Shell Service Station

FIGURE

4411 Foothill Boulevard Oakland, California

Table 1. Soil Vapor Analytical Data, Former Shell Service Station, 4411 Foothill Boulevard, Oakland, California

Sample	Depth	Date	TPHg	В	Т	Е	X	MTBE	TBA
ID	(fbg)	Sampled	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$	$(\mu g/m^3)$
V-1	4.5-4.8	14-Jan-08	16,000,000	<1,200	<1,400	<1,700	<5,000	<5,500	<4,600
V-1	4.5-4.8	26-Jun-08	1,000,000	<160	<190	<220	<220	<180	<610
V-2	4.5-4.8	14-Jan-08	15,000,000	9,000	<1,100	20,000	7,700	<4,100	<3,500
V-2	4.5-4.8	22-May-08	8,300,000	7,000	2,400	5,600	<1,400	<1,200	<4,000
V-3	4.5-4.8	14-Jan-08	20,000,000	3,800	<2,800	<3,300	<9,800	<11,000	<9,100
V-3	4.5-4.8	22-May-08	22,000,000	1,600	1,700	<1,300	<1,300	<1,100	<3,700
			. ,. , , , -	_,	1,700	1,500	11,500		\3,700
V-4	4.5-4.8	14-Jan-08	1,300,000	<150	<180	<210	<620	<680	< 570
V-4	4.5-4.8	26-Jun-08	980,000	<160	<190	<220	<220	<180	<620
							•		
V-5	4.5-4.8	14-Jan-08	2,500,000	<290	<340	<400	<1,190	<1,300	<1,100
V-5	4.5-4.8	22-May-08	3,300,000	<1,600	3,100	<2,200	<2,200	<1,800	<6,100
	4.5.4.0	14.7	15 000 000	0.400					
V-6	4.5-4.8	14-Jan-08	15,000,000	9,100	<270	<310	<930	<1,000	<860
V-6	4.5-4.8	22-May-08	2,300,000	<130	<150	<180	<180	<140	<490
V-7	4.5-4.8	14-Jan-08	170,000	<19	<22	<25	<76	<84	<71
V-7	4.5-4.8	22-May-08	790	<4.2	< 5.0	< 5.7	< 5.7	<4.8	<16
V-10	4.5-4.8	14-Jan-08	Unable to san		water in sa	mple tube			
V-10	4.5-4.8	22-May-08	750	<4.1	<4.9	< 5.6	< 5.6	<4.6	<16
V-11	4.5-4.8	14 T OO	10.000	-2.2		-2.0	.0.0		
V-11 V-11		14-Jan-08	18,000	<2.2	5.1	<3.0	<8.9	<9.8	<8.2
V-11	4.5-4.8	26-Jun-08	<260	<4.0	<4.8	<5.5	<5.5	<4.6	<15
Ambient Air	NA	14-Jan-08	<17,000	<2.4	4.1	<3.2	<9.7	<11	<9.0
SFBRWQCB	ESL's for	Commercial Land Use	29,000	280	180,000	3,300	58,000	31,000	NA
Shallow So	il Gas *	Residential Land Use	10,000	84	63,000	980	21,000	9,400	NA

Abbreviations and Notes:

fbg = Feet below grade

 μ g/m3 = micrograms per cubic meter

< x =Not detected at reporting limit x

--- = Not analyzed

TPHg = Total petroleum hydrocarbons as gasoline by Modified EPA Method TO-3 GC/FID

BTEX = Benzene, tolunene, ethylbenzene, and xylenes by Modified EPA Method TO-15

Methyl tertiary butyl ether (MTBE) and tertiary butyl alcohol (TBA) by Modified EPA Method TO-15

NA = Not applicable or not available

Results in **bold** exceed Environmental Screening Level for commercial land use

^{*} From Table E of SFBRWQCB ESLs. Ref: Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater - Interim Final - November 2007.

Attachment A
Laboratory Analytical Reports



Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- · Work order Summary;
- Laboratory Narrative;
- · Results; and
- Chain of Custody (copy).



WORK ORDER #: 0805566A

Work Order Summary

CLIENT:

Mr. Peter Schaefer

BILL TO:

Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

5900 Hollis Street Suite A

Suite A

Emeryville, CA 94608

Emeryville, CA 94608

PHONE:

510-420-0700

P.O. #

FAX:

510-420-9170

PROJECT #

240897-008

DATE RECEIVED: DATE COMPLETED: 05/28/2008 06/10/2008

CONTACT:

Kyle Vagadori

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	V-10	Modified TO-15/TICs	6.5 "Hg	15 psi
02A	V-2	Modified TO-15/TICs	7.0 "Hg	15 psi
03A	V-6	Modified TO-15/TICs	0.0 "Hg	15 psi
04A	V-7	Modified TO-15/TICs	7.0 "Hg	15 psi
05A	V-3	Modified TO-15/TICs	5.0 "Hg	15 psi
06A	V-5	Modified TO-15/TICs	6.0 "Hg	15 psi
07A	Lab Blank	Modified TO-15/TICs	NA	NA
08A	CCV	Modified TO-15/TICs	NA	NA
09A	LCS	Modified TO-15/TICs	NA	NA

CERTIFIED BY:

Sirota d. Fruman

DATE: <u>06/10/08</u>

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 (800) 985-5955 . FAX (916) 985-1020



LABORATORY NARRATIVE Modified TO-15 Conestoga-Rovers Associates (CRA) Workorder# 0805566A

Six 1 Liter Summa Canister (100% Certified) samples were received on May 28, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	+- 30% Difference	= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers</td
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples V-6, V-3 and V-5 due to the presence of high level non-target species.

The recovery of surrogate 1,2-Dichloroethane-d4 in samples V-6 and V-3 was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
 - J Estimated value.



- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: V-10 Lab ID#: 0805566A-01A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	5.0%	11
Propane, 2-methyl-	75-28-5	38%	970
Propane	74-98-6	9.0%	68
		•	
Client Sample ID: V-2			

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	330	2200	1000	7000
Toluene	330	630	1200	2400
Ethyl Benzene	330	1300	1400	5600

Compound		CAS Number	Match Quality	Amount ppbv
Butane		106-97-8	42%	2100

Client Sample ID: V-6

Lab ID#: 0805566A-03A

TENTATIVELY IDENTIFIED COMPOUNDS

				Amount
Compound	<u> </u>	CAS Number	Match Quality	ppbv
Butane		106-97-8	72%	3700
Propane, 2-methyl-		75-28-5	9.0%	1900

Client Sample ID: V-7

Lab ID#: 0805566A-04A

No Detections Were Found.

Client Sample ID: V-3

Lab ID#: 0805566A-05A

Lab IDT. VOVJJVVA-VJA					
	Rpt. Limit	Amount	Rpt. Limit	Amount	
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)	



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: V-3

Lab ID#: 0805566A-05A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Benzene	300	500	970	1600
Toluene	300	460	1100	1700

TENTATIVELY IDENTIFIED COMPOUNDS

			Amount
Compound	CAS Number	Match Quality	ppbv
Butane	106-97-8	72%	53000
Propane, 2-methyl-	75-28-5	40%	9300

Client Sample ID: V-5

Lab ID#: 0805566A-06A

	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Toluene	500	820	1900	3100



Client Sample ID: V-10 Lab ID#: 0805566A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	t060223 2,58		Date of Collection: Date of Analysis: 6	The state of the s
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
Toluene	1.3	Not Detected	4.9	Not Detected
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected
tert-Butyl alcohol	5.2	Not Detected	16	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound		CAS Number	Match Quality	Amount ppbv
Butane		106-97-8	5.0%	11
Propane, 2-methyl-		75-28-5	38%	970
Propane		74-98-6	9.0%	68

		Method	
Surrogates		%Recovery	Limits
Toluene-d8		94	70-130
1,2-Dichloroethane-d4		122	70-130
4-Bromofluorobenzene		100	70-130



Client Sample ID: V-2 Lab ID#: 0805566A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name; Dil. Factor;	t060226 660		Date of Collection: 5/22/08 Date of Analysis: 6/3/08 05:54 AM		
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	330	Not Detected	1200	Not Detected	
Benzene	330	2200	1000	7000	
Toluene	330	630	1200	2400	
Ethyl Benzene	330	1300	1400	5600	
m,p-Xylene	330	Not Detected	1400	Not Detected	
o-Xylene	330	Not Detected	1400	Not Detected	
tert-Butyl alcohol	1300	Not Detected	4000	Not Detected	

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	42%	2100
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	101	70-130	
1,2-Dichloroethane-d4	130	70-130	
4-Bromofluorobenzene	102	70-130	



Client Sample ID: V-6 Lab ID#: 0805566A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name; Dil. Factor:	t060224 80.8		Date of Collection: 5/22/08 Date of Analysis: 6/3/08 04:24 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	40	Not Detected	140	Not Detected	
Benzene	40	Not Detected	130	Not Detected	
Toluene	40	Not Detected	150	Not Detected	
Ethyl Benzene	40	Not Detected	180	Not Detected	
m,p-Xylene	40	Not Detected	180	Not Detected	
o-Xylene	40	Not Detected	180	Not Detected	
tert-Butyl alcohol	160	Not Detected	490	Not Detected	

TENTATIVELY IDENTIFIED COMPOUNDS

			Amount
Compound	CAS Number	Match Quality	ppbv
Butane	106-97-8	72%	3700
Propane, 2-methyl-	75-28-5	9.0%	1900
Propane	74-98-6	NA	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

					Metrioa	
Surrogates				%Recovery		Limits
Toluene-d8				104		70-130
1,2-Dichloroethane-d4	*			217 Q		70-130
4-Bromofluorobenzene		100	•	103	•	70-130



Client Sample ID: V-7 Lab ID#: 0805566A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	t060225 2.64		Date of Collection: 5/22/08 Date of Analysis: 6/3/08 05:12 AM		
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected	
Benzene	1.3	Not Detected	4.2	Not Detected	
Toluene	1.3	Not Detected	5.0	Not Detected	
Ethyl Benzene	1.3	Not Detected	5.7	Not Detected	
m,p-Xylene	1.3	Not Detected	5.7	Not Detected	
o-Xylene	1.3	Not Detected	5.7	Not Detected	
tert-Butyl alcohol	5.3	Not Detected	16	Not Detected	
	TENTATIVELY IDEN	ITIFIED COMPOUNDS	3	A	
Compound		CAS Number	Match Quality	Amount	

					Amount	
Compound			CAS Number	Match Quality	ppbv	
Butane			106-97-8	NA	Not Detected	
Isobutane			75-28-5	NA	Not Detected	
Propane			74-98-6	NA	Not Detected	

Surrogates		%Recovery		Method Limits
Toluene-d8		97	-	70-130
1,2-Dichloroethane-d4		106	 -	70-130
4-Bromofluorobenzene		102		70-130



Client Sample ID: V-3

Lab ID#: 0805566A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

	Rpt. Limit			/3/08 06:35 AM
Compound	(ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	300	Not Detected	1100	Not Detected
Benzene	300	500	970	1600
Toluene	300	460	1100	1700
Ethyl Benzene	300	Not Detected	1300	Not Detected
m,p-Xylene	300	Not Detected	1300	Not Detected
o-Xylene	300	Not Detected	1300	Not Detected
tert-Butyl alcohol	1200	Not Detected	3700	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	72%	53000
Propane, 2-methyl-	75-28-5	40%	9300
Propane	74-98-6	NA	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Surrogatos	%Recovery	Wietriod Limita
Surrogates	76Recovery	Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	159 Q	70-130
4-Bromofluorobenzene	103	70-130



Client Sample ID: V-5 Lab ID#: 0805566A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	t060229 1010		Date of Collection: 5/22/08 Date of Analysis: 6/3/08 08:04 AM		
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	500	Not Detected	1800	Not Detected	
Benzene	500	Not Detected	1600	Not Detected	
Toluene	500	820	1900	3100	
Ethyl Benzene	500	Not Detected	2200	Not Detected	
m,p-Xylene	500	Not Detected	2200	Not Detected	
o-Xylene	500	Not Detected	2200	Not Detected	
tert-Butyl alcohol	2000	Not Detected	6100	Not Detected	
	TENTATIVELY IDENT	TIFIED COMPOUNDS			
Compound		CAS Number	Match Quality	Amount ppbv	
Butane	· · · · · · · · · · · · · · · · · · ·	106-97-8	NA	Not Detected	
Isobutane		75-28-5	NA	Not Detected	
Propane		74-98-6	NA	Not Detected	
Container Type: 1 Liter Summa	a Canister (100% Certified)				
			• •	Method	
Surrogates		%Recovery		Limits	
Toluene-d8		98		70-130	
1,2-Dichloroethane-d4		128		70-130	
4-Bromofluorobenzene		103		70-130	



Client Sample ID: Lab Blank

Lab ID#: 0805566A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: DII. Factor:	t060206 1.00		Date of Collection: N Date of Analysis: 6/	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2,2	Not Detected
tert-Butyl alcohol	2.0	Not Detected	6.1	Not Detected
Compound		CAS Number	Match Quality	Amount ppbv
Butane		106-97-8	NA	Not Detected
Isobutane		75-28-5	NA	Not Detected
Propane		74-98-6	NA	Not Detected
Container Type: NA - Not Applic	able			
				Method
Surrogates		%Recovery		Limits
Toluene-d8		95		70-130
1,2-Dichloroethane-d4		108		70-130
4-Bromofluorobenzene		102		70-130



Client Sample ID: CCV Lab ID#: 0805566A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Date of Collection: NA	
File Name: Date of Collection: NA	
Dil. Factor: Date of Analysis: 6/2/08 10:54 AM	

Compound	%Recovery
Methyl tert-butyl ether	94
Benzene	90
Toluene	96
Ethyl Benzene	96
n,p-Xylene	. 99
o-Xylene	99
tert-Butyl alcohol	97

Container Type: NA - Not Applicable

Surrogates		%Recovery	Limits
Toluene-d8		101	70-130
1,2-Dichloroethane-d4		113	70-130
4-Bromofluorobenzene		109	70-130



Client Sample ID: LCS

Lab ID#: 0805566A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

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File Name: t060203 Date of Collection: NA	A-12-12-1-1-12-1-12-1-12-1-12-1-12-1-12
File Name: t060203 Date of Collection: NA	
	And the Committee of th
	AND ADDRESS OF PERSONS
D. F. J. C.	A SECTION OF STREET
Dil. Factor: 1.00 Date of Analysis: 6/2/08 10:06	A CONTRACTOR OF THE PARTY OF TH
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Compound				%Recovery
Methyl tert-butyl ether				90
Benzene				88
Toluene				100
Ethyl Benzene				93
m,p-Xylene				94
o-Xylene	 			96
tert-Butyl alcohol	•			94

Container Type: NA - Not Applicable

		Metriod
Surrogates	%Recovery	Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	117	70-130
4-Bromofluorobenzene	106	70-130



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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).



WORK ORDER #: 0805566B

Work Order Summary

CLIENT:

Mr. Peter Schaefer

BILL TO:

Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

5900 Hollis Street

Suite A Emeryville, CA 94608 Suite A

Emeryville, CA 94608

PHONE: FAX:

510-420-0700

P.O. #

DATE RECEIVED:

510-420-9170

PROJECT#

240897-008

DATE COMPLETED:

05/28/2008 06/09/2008

CONTACT:

Kyle Vagadori

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	V-10	Modified TO-3	6.5 "Hg	15 psi
02A	V-2	Modified TO-3	7.0 "Hg	15 psi
03A	V-6	Modified TO-3	0.0 "Hg	15 psi
04A	V-7	Modified TO-3	7.0 "Hg	15 psi
05A	V-3	Modified TO-3	5.0 "Hg	15 psi
05AA	V-3 Lab Duplicate	Modified TO-3	5.0 "Hg	15 psi
06A	V-5	Modified TO-3	6.0 "Hg	15 psi
07A	Lab Blank	Modified TO-3	NA	NA
08A	LCS	Modified TO-3	NA	NA

CERTIFIED BY:

Sinda d. Fruma

06/09/08 DATE:

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



LABORATORY NARRATIVE Modified TO-3 Conestoga-Rovers Associates (CRA) Workorder# 0805566B

Six 1 Liter Summa Canister (100% Certified) samples were received on May 28, 2008. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L. Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The recovery of surrogate Fluorobenzene in samples V-2, V-3 and V-3 Lab Duplicate was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.



- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: V-10				
Lab ID#: 0805566B-01A	er.			
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Ámount (uG/L)
TPH (Gasoline Range)	0.064	0.26	0.18	0.75
Client Sample ID: V-2				
Lab ID#: 0805566B-02A				
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	6.6	27	2000	8300
Client Sample ID: V-6				
Lab ID#: 0805566B-03A				
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	5.0	21	560	2300
Client Sample ID: V-7				
Lab ID#: 0805566B-04A	. •			
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.066	0.27	0.19	0.79
Client Sample ID: V-3				
Lab ID#: 0805566B-05A				
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	8.1	33	5300	22000
Client Comple ID: V 2 Leb Dunlieste				
Client Sample ID: V-3 Lab Duplicate				
Lab ID#: 0805566B-05AA Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	8,1	33	5300	22000



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: V-5

Lab ID#: 0805566B-06A

	Rot. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	2.5	10	810	3300



Client Sample ID: V-10 Lab ID#: 0805566B-01A

File Name: Dil. Factor:	6053018 2.58		Date of Collection: 5/22/08 Date of Analysis: 5/30/08 02:22 PM	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.064	0.26	0.18	0.75
Container Type: 1 Liter Summa	a Canister (100% Certified)	%Recovery		Method Limits
Fluorobenzene (FID)		76		75-150



Client Sample ID: V-2 Lab ID#: 0805566B-02A

File Name: Dil. Factor:	6053020 264			Date of Collection: 5/22/08 Date of Analysis: 5/30/08 03:25 PM	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	6.6	27	2000	8300	
Q = Exceeds Quality Control limit Container Type: 1 Liter Summa	•				
Surrogates		%Recovery		Method Limits	
Fluorobenzene (FID)		184 Q		75-150	



Client Sample ID: V-6

Lab ID#: 0805566B-03A

File Name: Dil. Factor:	6053021 202		Date of Collection: 5/22/08 Date of Analysis: 5/30/08 04:29 PM	
Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	5.0	21	560	2300
Container Type: 1 Liter Summa	Canister (100% Certified)			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		99		75-150



Client Sample ID: V-7 Lab ID#: 0805566B-04A

File Name: Dil. Factor:	6053022 2.64		Date of Collection: 5/22/08 Date of Analysis: 5/30/08 05:38 PM	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.066	0.27	0.19	0.79
Container Type: 1 Liter Summa	a Canister (100% Certified)			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		79		75-150



Fluorobenzene (FID)

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: V-3

Lab ID#: 0805566B-05A

MODIFIED EPA METHOD TO-3 GC/FID					
File Name: Dil. Factor:	6053025 323		Date of Collection: 5/22/08 Date of Analysis: 5/30/08 07:08 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	8.1	33	5300	22000	
Q = Exceeds Quality Control limit Container Type: 1 Liter Summa		atrix effects confirmed	d by re-analysis.		
Surrogates		%Recovery		Method Limits	

152 Q

75-150



Client Sample ID: V-3 Lab Duplicate

Lab ID#: 0805566B-05AA

	Harata Araba and Carlo			医美国牙囊切除的
File Name: Dil. Factor:	6053026 323		Date of Collection: 5/22/08 Date of Analysis: 5/30/08 07:38 PN	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	8.1	33	5300	22000
Q = Exceeds Quality Control Container Type: 1 Liter Sum			ed by re-analysis.	Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		152 Q		75-150



Client Sample ID: V-5 Lab ID#: 0805566B-06A

				法国际名词语用品
File Name:	6053024		Date of Collection:	Annual Control of the
Dil. Factor:	101	EFAMILIES	Date of Analysis: 5	/30/08 06:38 PM
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	2.5	10	810	3300
Container Type: 1 Liter Summa	Canister (100% Certified)			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		110		75-150



Client Sample ID: Lab Blank

Lab ID#: 0805566B-07A

File Name: Dil. Factor:	6053009 1.00		Date of Collection: N Date of Analysis: 5/	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected
Container Type: NA - Not Applicable Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		94		75-150



Client Sample ID: LCS Lab ID#: 0805566B-08A

File Name: Dil. Factor:	6053030 1.00	Date of Collection: NA Date of Analysis: 5/30/08 09:55 PM
Compound		%Recovery
TPH (Gasoline Range)		84
Container Type: NA - Not Applicabl		Method
Surrogates	%Recove	ery Limits
Fluorobenzene (FID)	97	75-150

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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- · Results; and
- Chain of Custody (copy).



WORK ORDER #: 0805566C

Work Order Summary

CLIENT:

FAX:

Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville, CA 94608

PHONE:

510-420-0700 510-420-9170

DATE RECEIVED:

05/28/2008

DATE COMPLETED:

06/10/2008

BILL TO: Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville, CA 94608

P.O. #

PROJECT# 240897-008

CONTACT:

Kyle Vagadori

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
	· · · · · · · · · · · · · · · · · · ·			
01A	V-10	Modified ASTM D-1946	6.5 "Hg	15 psi
01AA	V-10 Lab Duplicate	Modified ASTM D-1946	6.5 "Hg	15 psi
02A	V-2	Modified ASTM D-1946	7.0 "Hg	15 psi
03A	V-6	Modified ASTM D-1946	0.0 "Hg	15 psi
04A	V-7	Modified ASTM D-1946	7.0 "Hg	15 psi
05A	V-3	Modified ASTM D-1946	5.0 "Hg	15 psi
06A	V-5	Modified ASTM D-1946	6.0 "Hg	15 psi
07A	Lab Blank	Modified ASTM D-1946	NA	NA
08A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY:

Sinda S. Frumas

06/09/08 DATE:

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004

NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



LABORATORY NARRATIVE Modified ASTM D-1946 Conestoga-Rovers Associates (CRA) Workorder# 0805566C

Six 1 Liter Summa Canister (100% Certified) samples were received on May 28, 2008. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.



Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: V-10
Lab ID#: 0805566C-01A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.26	21
Carbon Dioxide	0.026	0.043

Client Sample ID: V-10 Lab Duplicate

Lab ID#: 0805566C-01AA

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.26	21
Carbon Dioxide	0.026	0.043

Client Sample ID: V-2

Lab ID#: 0805566C-02A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.26	2.0
Methane	0.00026	0.46
Carbon Dioxide	0.026	9.8

Client Sample ID: V-6

Lab ID#: 0805566C-03A

	Rpt. Limit				
Compound	(%)	(%)			
Oxygen	0.20	10			
Methane	0.00020	2.0			
Carbon Dioxide	0.020	5.3			

Client Sample ID: V-7

Lab ID#: 0805566C-04A

		Rpt. Limit	Amount
Compound		(%)	(%)
Oxygen		0.26	13
Carbon Dioxide		0.026	4.2



Summary of Detected Compounds MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: V-3

Lab ID#: 0805566C-05A

	Rpt. Limit	Amount
Compound	(%)	(%)
Oxygen	0.24	4.3
Methane	0.00024	2.8
Carbon Dioxide	0.024	8.2

Client Sample ID: V-5

Lab ID#: 0805566C-06A

	Rpt. Limit	Amount	
Compound	(%)	(%)	
Oxygen	0.25	1.3	
Methane	0.00025	3.4	
Carbon Dioxide	0.025	7.4	



Client Sample ID: V-10

Lab ID#: 0805566C-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

	ction: 5/22/08 rsis: 5/29/08 11:25 AM
Dil. Factor: 2.58 . Date of Analy	SIS: 5/29/08 11:25 AM
	· ·

		1.5	Rpt. Limit	Amount
Compound			(%)	(%)
Oxygen			0.26	21
Methane			0.00026	Not Detected
Carbon Dioxide	е		0.026	0.043



Client Sample ID: V-10 Lab Duplicate

Lab ID#: 0805566C-01AA

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: Dil. Factor:	3052917 2.58			Date of Collection: 5/22/08 Date of Analysis: 5/29/08 12:50 PM	
Compound		Rpt. Limit (%)			Amount (%)
Oxygen		0.26			21
Methane		0.00026			Not Detected
Carbon Dioxide		0.026			0.043



Client Sample ID: V-2

Lab ID#: 0805566C-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

	Date of Collection: 5/22/08 Date of Analysis: 5/29/08 01:20 PM
--	---

		Rpt. Limit	Amount	
Compound		(%)	(%)	
Oxygen		0.26	2.0	
Methane		0.00026	0.46	
Carbon Dioxide		0.026	9.8	



Client Sample ID: V-6

Lab ID#: 0805566C-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name; 3052919 Dil. Factor: 2.02		Date of Collection: 5/22/08 Date of Analysis: 5/29/08 02:04 PM	
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.20	10
Methane		0.00020	2.0

0.020

5.3

Container Type: 1 Liter Summa Canister (100% Certified)

Carbon Dioxide



Client Sample ID: V-7 Lab ID#: 0805566C-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	3052920	and the familiar control of the cont	te of Collection: 5/22/08
Dil. Factor:	2.64		te of Analysis: 5/29/08 02:49 PM
Compound		Rpt. Limit (%)	Amount (%)
Oxygen		0.26	13
Methane		0.00026	Not Detected

0.026

4.2

Container Type: 1 Liter Summa Canister (100% Certified)

Carbon Dioxide



Client Sample ID: V-3

Lab ID#: 0805566C-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name; Dil. Factor;	3052921 2.42		of Collection: 5/22 of Analysis: 5/29/	
Compound		Rpt. Limit (%)		Amount (%)
Oxygen		0.24		4.3
Methane		0.00024		2.8
Carbon Dioxide		0.024		8.2



Client Sample ID: V-5 Lab ID#: 0805566C-06A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

· · · · · · · · · · · · · · · · · · ·		No.		
Dil. Factor:		2.53	Date of Analysis:	5/29/08 03:33 PM
	夏 助 恵 學 大事製作品			
File Name:	生 痛性 医二位 化基里苯胍	3052922	Date of Collection	1: 5/22/08
	化水溢 计通讯电路 电极			

		Rpt. Limit	Amount
Compound		(%)	(%)
Oxygen		0.25	1.3
Methane		0.00025	3.4
Carbon Dioxide	•	0.025	7.4



Client Sample ID: Lab Blank

Lab ID#: 0805566C-07A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: Dil. Factor:		30529 1.)02 .00		te of Coll te of Ana		8 12:39 AM
Compound				Rpt. Limit (%)			Amount (%)
Oxygen				0.10			Not Detected
Methane				0.00010		!	Not Detected
Carbon Dioxide				0.010		1	Not Detected

Container Type: NA - Not Applicable



Client Sample ID: LCS Lab ID#: 0805566C-08A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

	ame:		52926			ollection: I		
	ctor:		1.00			nalysis: 5		

Compound	%Recovery
Oxygen	97
Methane	99
Carbon Dioxide	94

Container Type: NA - Not Applicable



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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- · Results; and
- Chain of Custody (copy).

(916) 985-1000 .FAX (916) 985-1020 Hours 8:00 A.M to 6:00 P.M. Pacific



WORK ORDER #: 0806354BR1

Work Order Summary

CLIENT:

Mr. Peter Schaefer

BILL TO:

Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Conestoga-Rovers Associates (CRA) 5900 Hollis Street

Suite A

Suite A

Emeryville, CA 94608

Emeryville, CA 94608

PHONE: FAX:

510-420-0700

P.O. #

510-420-9170

PROJECT#

240897-2008

DATE RECEIVED:

06/18/2008

CONTACT:

Kyle Vagadori

DATE COMPLETED:

06/26/2008

DATE REISSUED:

07/14/2008

			RECEIPT	FINAL
FRACTION #	<u>NAME</u>	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	V-4	Modified TO-3	6.5 "Hg	15 psi
02A	V-1	Modified TO-3	6.0 "Hg	15 psi
03A	V-11	Modified TO-3	6.0 "Hg	15 psi
04A	Lab Blank	Modified TO-3	NA	NA
05A	LCS	Modified TO-3	NA	NA
		· · · · · · · · · · · · · · · · · · ·		

CERTIFIED BY:

Sinda S. Fruma,

07/14/08

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE Modified TO-3 Conestoga-Rovers Associates (CRA) Workorder# 0806354BR1

Three 1 Liter Summa Canister (100% Certified) samples were received on June 18, 2008. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

THE WORK ORDER WAS REISSUED ON JULY 14, 2008 TO CORRECT IDENTIFICATION OF THE FOLLOWING SAMPLES V-4, V-1 AND V-11 PER CLIENT REQUEST.



Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: V-4

Lab ID#: 0806354BR1-01A

	Rot. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.32	1.3	240	980

Client Sample ID: V-1

Lab ID#: 0806354BR1-02A

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.32	1.3	250	1000

Client Sample ID: V-11

Lab ID#: 0806354BR1-03A No Detections Were Found.



Client Sample ID: V-4

Lab ID#: 0806354BR1-01A

File Name: Dil. Factor:	d062107 12.9		Date of Collection: Date of Analysis: 6	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.32	1.3	240	980
Container Type: 1 Liter Summa	Canister (100% Certified)			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		110		75-150



Client Sample ID: V-1

Lab ID#: 0806354BR1-02A

File Name: Dil. Factor:	d062106 12.6		Date of Collection: Date of Analysis: 6	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.32	1.3	250	1000
Container Type: 1 Liter Summa	Canister (100% Certified)			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		114		75-150



Client Sample ID: V-11

Lab ID#: 0806354BR1-03A

File Name: Dil. Factor:	d062105 2.53		Date of Collection: Date of Analysis: 6	
Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.063	0.26	Not Detected	Not Detected
Container Type: 1 Liter Summa	a Canister (100% Certified)			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		85		75-150



Client Sample ID: Lab Blank Lab ID#: 0806354BR1-04A

			Change Talent	
File Name:	d062102		Date of Collection: N	The second second second second second
Dil. Factor:	1.00		Date of Analysis: 6/	21/08 10:45 AM
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected
Container Type: NA - Not Applic	cable			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		82		75-150



Client Sample ID: LCS

Lab ID#: 0806354BR1-05A

File Name: Dil. Factor:	d062112 1.00		ollection: NA nalysis: 6/21/08 05:28 PM
Compound			%Recovery
TPH (Gasoline Range)			84
Container Type: NA - No Surrogates		%Recovery	Method Limits
Fluorobenzene (FID)	· · · · · · · · · · · · · · · · · · ·	104	75-150



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Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).



WORK ORDER #: 0806354AR1

Work Order Summary

CLIENT:

Mr. Peter Schaefer

BILL TO:

Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

Suite A

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

5900 Hollis Street Suite A

Emeryville, CA 94608

Emeryville, CA 94608

PHONE:

510-420-0700

P.O. #

FAX:

510-420-9170

PROJECT #

240897-2008

DATE RECEIVED:

06/18/2008 07/01/2008

CONTACT:

Kyle Vagadori

DATE COMPLETED: DATE REISSUED:

07/15/2008

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	V-4	Modified TO-15/TICs	6.5 "Hg	15 psi
02A	V-1	Modified TO-15/TICs	6.0 "Hg	15 psi
03A	V-11	Modified TO-15/TICs	6.0 "Hg	15 psi
04A	Lab Blank	Modified TO-15/TICs	NA	NA
05A	CCV	Modified TO-15/TICs	NA	NA
06A	LCS	Modified TO-15/TICs	NA	NA

CERTIFIED BY:

Sinda d. Fruman

ATE: 07/15/08

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE Modified TO-15 Conestoga-Rovers Associates (CRA) Workorder# 0806354AR1

Three 1 Liter Summa Canister (100% Certified) samples were received on June 18, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	<= 30% Difference	= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.</p
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples V-4 and V-1 due to the presence of high level non-target species.

The recovery of surrogate 1,2-Dichloroethane-d4 in samples V-4 and V-1 was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

PER CLIENT REQUEST, THE WORKORDER WAS REISSUED ON 7/15/08 TO CHANGE IDENTIFICATION OF SAMPLES V-4, V-1 AND V-11 TO REFLECT THE AMENDED COC.

THE PRECEDING NARRATIVES HAVE BEEN AMENDED TO REFLECT THE NEW CHANGES.



Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction no performed).
 - J Estimated value.
 - E Exceeds instrument calibration range.
 - S Saturated peak.
 - Q Exceeds quality control limits.
 - U Compound analyzed for but not detected above the reporting limit.
 - UJ- Non-detected compound associated with low bias in the CCV
 - N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: V-4

Lab ID#: 0806354AR1-01A

TENTATIVELY IDENTIFIED COMPOUNDS

			Amount	
Compound	CAS Number	Match Quality	ppbv	
Butane	106-97-8	53%	610 N J	
Propane, 2-methyl-	75-28-5	50%	790 N J	

Client Sample ID: V-1

Lab ID#: 0806354AR1-02A

TENTATIVELY IDENTIFIED COMPOUNDS

Compound			CAS Number	Match Quality	Amount ppbv	
Butane		14.	106-97-8	72%	460 N J	

Client Sample ID: V-11

Lab ID#: 0806354AR1-03A No Detections Were Found.



Client Sample ID: V-4

Lab ID#: 0806354AR1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	t062615 103		Date of Collection: 6/17/08 Date of Analysis: 6/26/08 09:17 PM		
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	52	Not Detected	180	Not Detected	
Benzene	52	Not Detected	160	Not Detected	
Toluene	52	Not Detected	190	Not Detected	
Ethyl Benzene	52	Not Detected	220	Not Detected	
m,p-Xylene	52	Not Detected	220	Not Detected	
o-Xylene	52	Not Detected	220	Not Detected	
tert-Butyl alcohol	210	Not Detected	620	Not Detected	

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	53%	610 N J
Propane, 2-methyl-	75-28-5	50%	790 N J
Propane	74-98-6	NA	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

		Method Limits	
Surrogates	%Recovery		
Toluene-d8	106	70-130	
1,2-Dichloroethane-d4	152 Q	70-130	
4-Bromofluorobenzene	98	70-130	



Client Sample ID: V-1

Lab ID#: 0806354AR1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	t062617 101		Date of Collection: 6/17/08 Date of Analysis: 6/26/08 10:47 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	50	Not Detected	180	Not Detected
Benzene	50	Not Detected	160	Not Detected
Toluene	50	Not Detected	190	Not Detected
Ethyl Benzene	50	Not Detected	220	Not Detected
m,p-Xylene	50	Not Detected	220	Not Detected
o-Xylene	50	Not Detected	220	Not Detected
tert-Butyl alcohol	200	Not Detected	610	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	72%	460 N J
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

		Method
Surrogates	%Recovery	Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	153 Q	70-130
4-Bromofluorobenzene	95	70-130



Client Sample ID: V-11

Lab ID#: 0806354AR1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	t062618 2.53			Date of Collection: 6/17/08 Date of Analysis: 6/26/08 11:44 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected	
Benzene	1.3	Not Detected	4.0	Not Detected	
Toluene	1.3	Not Detected	4.8	Not Detected	
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected	
m,p-Xylene	1.3	Not Detected	5.5	Not Detected	
o-Xylene	1.3	Not Detected	5.5	Not Detected	
tert-Butyl alcohol	5.1	Not Detected	15	Not Detected	

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ppbv
Butane	106-97-8	NA	Not Detected
Isobutane	75-28-5	NA	Not Detected
Propane	74-98-6	NA	Not Detected

		Method
Surrogates	%Recovery	Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	112	70-130
4-Bromofluorobenzene	94	70-130



Client Sample ID: Lab Blank Lab ID#: 0806354AR1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	t062606 1.00			Date of Collection: NA Date of Analysis: 6/26/08 12:15 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected	
Benzene	0.50	Not Detected	1.6	Not Detected	
Toluene	0.50	Not Detected	1.9	Not Detected	
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected	
m,p-Xylene	0.50	Not Detected	2.2	Not Detected	
o-Xylene	0.50	Not Detected	2.2	Not Detected	
tert-Butyl alcohol	2.0	Not Detected	6.1	Not Detected	

TENTATIVELY IDENTIFIED COMPOUNDS

umber	Match Quality	Amount ppbv
97-8	NA	Not Detected
8-5	NA	Not Detected
8-6	NA	Not Detected
9	98-6	98-6 NA

		Method Limits	
Surrogates	%Recovery		
Toluene-d8	95	70-130	
1,2-Dichloroethane-d4	113	70-130	
4-Bromofluorobenzene	96	70-130	



Client Sample ID; CCV Lab ID#: 0806354AR1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: t062605 Date of Collection: NA	
Dil. Factor: 1.00 Date of Analysis: 6/26/08 11	
Dil. Factor: 1,00 Date of Analysis: 6/26/08 11	

Compound		%Recovery
Methyl tert-butyl ether		103
Benzene	•	101
Toluene		107
Ethyl Benzene		98
m,p-Xylene		96
o-Xylene		96
tert-Butyl alcohol		104

Surrogates	%Recovery	Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	122	70-130
4-Bromofluorobenzene	105	70-130



Client Sample ID: LCS

Lab ID#: 0806354AR1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

the state of the s		L CO. U. W. ALA
File Name: t0626	04 Da	te of Collection: NA
Dil. Factor:	00 Da	te of Analysis: 6/26/08 10:37 AM
	A STATE OF THE STA	

Compound	%Recovery
Methyl tert-butyl ether	108
Benzene	106
Toluene	118
Ethyl Benzene	99
m,p-Xylene	97
o-Xylene	97
tert-Butyl alcohol	109

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	107	70-130	
1,2-Dichloroethane-d4	127	70-130	
4-Bromofluorobenzene	104	70-130	



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- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).



WORK ORDER #: 0806354CR1

Work Order Summary

CLIENT:

Mr. Peter Schaefer

BILL TO:

Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

5900 Hollis Street

Suite A

Suite A

Emeryville, CA 94608

Emeryville, CA 94608

PHONE:

510-420-0700

P.O. #

FAX:

510-420-9170

PROJECT #

240897-2008

DATE RECEIVED:

06/18/2008

CONTACT:

Kyle Vagadori

DATE COMPLETED:

06/26/2008

DATE REISSUED:

07/15/2008

			RECEIPT	FINAL
FRACTION #	NAME	TEST	VAC./PRES.	PRESSURE
01A	V-4	Modified ASTM D-1946	6.5 "Hg	15 psi
02A	V-1	Modified ASTM D-1946	6.0 "Hg	15 psi
03A	V-11	Modified ASTM D-1946	6.0 "Hg	15 psi
04A	Lab Blank	Modified ASTM D-1946	NA	NA
05A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY:

Sinda d. Fruman

DATE:

07/15/08

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE Modified ASTM D-1946 Conestoga-Rovers Associates (CRA) Workorder# 0806354CR1

Three 1 Liter Summa Canister (100% Certified) samples were received on June 18, 2008. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are/loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.



Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

THE WORK ORDER WAS REISSUED ON JULY 15, 2008 TO CORRECT IDENTIFICATION OF THE FOLLOWING SAMPLES V-4, V-1 AND V-11 PER CLIENT REQUEST.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

Client Sample ID: V-4

Lab ID#: 0806354CR1-01A

	Min. Det. Limit	Amount
Compound	(%)	(%)
Oxygen	0.26	1.6
Methane	0.00026	0.36
Carbon Dioxide	0.026	7.6

Client Sample ID: V-1

Lab ID#: 0806354CR1-02A

	Min. Det. Limit	Amount
Compound	(%)	(%)
Oxygen	0.25	1.9
Methane	0.00025	0.084
Carbon Dioxide	0.025	7.8

Client Sample ID: V-11

Lab ID#: 0806354CR1-03A

	Min. Det. Limit	Amount
Compound	(%)	(%)
Oxygen	0.25	7.7
Carbon Dioxide	0.025	6.1



Client Sample ID: V-4

Lab ID#: 0806354CR1-01A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: Dil. Factor:		llection: 6/17/08 alysis: 6/19/08 01:22 AM
Compound	Min. Det. Limit (%)	Amount (%)
Dxygen	0.26	1.6
Methane	0.00026	0.36
Carbon Dioxide	0.026	7.6



Client Sample ID: V-1

Lab ID#: 0806354CR1-02A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

	Min. Det. Limit	Amount
Compound	(%)	(%)
Oxygen	0.25	1.9
Methane	0.00025	0.084
Carbon Dioxide	0.025	7.8



Client Sample ID: V-11

Lab ID#: 0806354CR1-03A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: DII. Factor:		Collection: 6/17/08 Analysis: 6/19/08 03:00 AM
Compound	Min. Det. Limit (%)	Amount (%)
Oxygen	0.25	7.7
Methane	0.00025	Not Detected
Carbon Dioxide	0.025	6.1



Client Sample ID: Lab Blank Lab ID#: 0806354CR1-04A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name:	9061829a		te of Collection: NA	Carlo and the second se
Dil. Factor:	1.00	Da	te of Analysis: 6/1	3/08 04:39 PM
Compound		Min. Det. Limit (%)		Amount (%)
		0.10		Not Detected
Methane		0.00010		Not Detected
Carbon Dioxide		0.010		Not Detected



Client Sample ID: LCS

Lab ID#: 0806354CR1-05A

MODIFIED NATURAL GAS ANALYSIS BY ASTM D-1946

File Name: 9061846 Date of Collect	
Dil. Factor: 1.00 Date of Analy	sis: 6/19/08 03:51 AM

Compound	%Recovery
Oxygen	100
Methane	102
Carbon Dioxide	99



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WORK ORDER #: 0806376A

Work Order Summary

CLIENT:

Mr. Peter Schaefer

BILL TO: Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

5900 Hollis Street Suite A

Suite A Emeryville, CA 94608

Emeryville, CA 94608

510-420-0700

P.O. #

PHONE: FAX:

510-420-9170

PROJECT #

240897-2008-13

DATE RECEIVED:

06/19/2008

CONTACT:

Kyle Vagadori

DATE COMPLETED:

07/02/2008

			RECEIPT	FINAL
FRACTION #	<u>NAME</u>	TEST	VAC./PRES.	PRESSURE
01A	Trip Blank	Modified TO-15/TICs	28.5 "Hg	15 psi
02A	Lab Blank	Modified TO-15/TICs	NA	NA
03A	CCV	Modified TO-15/TICs	NA	NA
04A	LCS	Modified TO-15/TICs	NA	NA

CERTIFIED BY:

07/02/08

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004

NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

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- · Results; and
- · Chain of Custody (copy).



WORK ORDER #: 0806354B

Work Order Summary

CLIENT:

Mr. Peter Schaefer

BILL TO:

Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

Suite A

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

5900 Hollis Street Suite A

Emeryville, CA 94608

Emeryville, CA 94608

PHONE: FAX:

510-420-0700

P.O. #

D . TTD DE CTD TTD

510-420-9170

PROJECT #

240897-2008

DATE RECEIVED: DATE COMPLETED: 06/18/2008 06/26/2008

CONTACT:

Kyle Vagadori

·			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	SVP-4	Modified TO-3	6.5 "Hg	15 psi
02A	SVP-1	Modified TO-3	6.0 "Hg	15 psi
03A	SVP-11	Modified TO-3	6.0 "Hg	15 psi
04A	Lab Blank	Modified TO-3	NA	NA
05A	LCS	Modified TO-3	NA	NA

CERTIFIED BY:

Sinda d. Fruman

06/26/08

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004

NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

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LABORATORY NARRATIVE Modified TO-3 Conestoga-Rovers Associates (CRA) Workorder# 0806354B

Three 1 Liter Summa Canister (100% Certified) samples were received on June 18, 2008. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B Compound present in laboratory blank greater than reporting limit.
- J Estimated value.



- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: SVP-4

Lab ID#: 0806354B-01A

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.32	1.3	240	980

Client Sample ID: SVP-1

Lab ID#: 0806354B-02A

	Rpt. Limit	Rpt. Limit	Amount	Amount
Compound	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.32	1.3	250	1000

Client Sample ID: SVP-11

Lab ID#: 0806354B-03A

No Detections Were Found.



Client Sample ID: SVP-4 Lab ID#: 0806354B-01A

File Name: Dil, Factor:	d062107 12.9		Date of Collection: 0	
Compound	Rɒt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.32	1.3	240	980
Container Type: 1 Liter Summa	Canister (100% Certified)			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		110		75-150



Client Sample ID: SVP-1 Lab ID#: 0806354B-02A

File Name:	d062106		Date of Collection:	The second secon
Dil. Factor: Compound	12.6 Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Date of Analysis: 6 Amount (ppmv)	/21/08 01:30 PM Amount (uG/L)
TPH (Gasoline Range)	0.32	1.3	250	1000
Container Type: 1 Liter Summa	a Canister (100% Certified)			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		114		75-150



Client Sample ID: SVP-11 Lab ID#: 0806354B-03A

File Name; Dil. Factor:	d062105 2.53		Date of Collection: Date of Analysis: 6	
Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.063	0.26	Not Detected	Not Detected
Container Type: 1 Liter Summa	Canister (100% Certified)			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		85		75-150



Client Sample ID: Lab Blank

Lab ID#: 0806354B-04A

File Name: Dil. Factor:	d062102 1.00		Date of Collection: N Date of Analysis: 6/	
Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected
Container Type: NA - Not Applicable				Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		82		75-150



Client Sample ID: LCS Lab ID#: 0806354B-05A

	1000440 D (TO U (U)
File Name:	d062112 Date of Collection: NA
The second secon	
Dil. Factor:	1.00 Date of Analysis: 6/21/08 05:28 PM
The second secon	2000 017 1100

Compound		%Recovery
TPH (Gasoline Range)		84
Container Type: NA - Not Applicable		•
		Method
Surrogates	 %Recovery	Limits
Fluorobenzene (FID)	104	75-150



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WORK ORDER #: 0806376B

Work Order Summary

CLIENT:

Mr. Peter Schaefer

5900 Hollis Street

Emeryville, CA 94608

Conestoga-Rovers Associates (CRA)

BILL TO: Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville, CA 94608

PHONE:

510-420-0700

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P.O. #

FAX:

510-420-9170

PROJECT #

240897-2008-13

DATE RECEIVED:

06/19/2008

CONTACT:

Kyle Vagadori

DATE COMPLETED:

06/26/2008

			RECEIPT	FINAL
FRACTION#	<u>NAME</u>	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	Trip Blank	Modified TO-3	28.5 "Hg	15 psi
02A	Lab Blank	Modified TO-3	NA	NA
03A	LCS	Modified TO-3	NA	NA

CERTIFIED BY:

Linda S. Fruman

DATE:

06/26/08

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004 NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08

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LABORATORY NARRATIVE Modified TO-3 Conestoga-Rovers Associates (CRA) Workorder# 0806376B

One 1 Liter Summa Canister (100% Certified) sample was received on June 19, 2008. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-3	ATL Modifications
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch = 20 samples</td
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.



- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the detection limit.
- M Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-3 GC/FID

Client Sample ID: Trip Blank

Lab ID#: 0806376B-01A

No Detections Were Found.



Client Sample ID: Trip Blank Lab ID#: 0806376B-01A

File Name: Dil. Factor:	d062232 1.00			Date of Collection: 6/17/08 Date of Analysis: 6/23/08 12:34 PM	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount_ (uG/L)	
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected	
Container Type: 1 Liter Summa	Canister (100% Certified)				
Surrogates		%Recovery		Method Limits	
Fluorobenzene (FID)		97		75-150	



Client Sample ID: Lab Blank Lab ID#: 0806376B-02A

File Name:	d062203		Date of Collection: N	
Dil. Factor:	1.00		Date of Analysis: 6	/22/08 03:54 PM
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected
Container Type: NA - Not Applic	cable			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		86		75-150



Client Sample ID: LCS Lab ID#: 0806376B-03A

File Name: d062212 Date of Collection: NA Dil. Factor: 1.00 Date of Analysis: 6/22/08 09:33 PM
--

Compound		%Recovery
TPH (Gasoline Range)		86
Container Type: NA - Not Applicable		
		Method
Surrogates	%Recovery	Limits
Fluorobenzene (FID)	107	75-150



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(916) 985-1000 .FAX (916) 985-1020 Hours 8:00 A.M to 6:00 P.M. Pacific



LABORATORY NARRATIVE Modified TO-15 Conestoga-Rovers Associates (CRA) Workorder# 0806376A

One 1 Liter Summa Canister (100% Certified) sample was received on June 19, 2008. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode. The method involves concentrating up to 0.2 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	+- 30% Difference	= 30% Difference with two allowed out up to </=40%.;<br flag and narrate outliers
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Specific analytes that are requested by the client to be reported as tentatively identified compounds (TICs) are determined by searching for each compound's characteristic spectra. If no chromatographic peak displaying the compound specific spectra exists, then the TIC is reported as not detected. Please note that the laboratory has not evaluated the stability of any heretofore tentatively identified compound in the vapor phase or for efficiency of recovery through the analytical system.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no



performed).

- J Estimated value.
- E Exceeds instrument calibration range.
- S Saturated peak.
- Q Exceeds quality control limits.
- U Compound analyzed for but not detected above the reporting limit.
- UJ- Non-detected compound associated with low bias in the CCV
- N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: Trip Blank

Lab ID#: 0806376A-01A
No Detections Were Found.



Client Sample ID: Trip Blank Lab ID#: 0806376A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	t062619 1.00		Date of Collection: (Date of Analysis: 6/2	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
tert-Butyl alcohol	2.0	Not Detected	6.1	Not Detected
Compound		CAS Number	Match Quality	Amount ppbv
Butane		106-97-8	NA .	Not Detected
Isobutane		75-28-5	NA	Not Detected
Propane		74-98-6	NA	Not Detected
Container Type: 1 Liter Summa	Canister (100% Certified)			
				Method
Surrogates		%Recovery		Limits
Toluene-d8		100	•	70-130
1,2-Dichloroethane-d4		120		70-130
4-Bromofluorobenzene		95		70-130



File Name:

Toluene-d8

1,2-Dichloroethane-d4 4-Bromofluorobenzene

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank Lab ID#: 0806376A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Date of Collection: NA

70-130

70-130

70-130

t062606

Dil. Factor:	1.00		Date of Analysis: 6/	26/08 12:15 PM
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
tert-Butyl alcohol	2.0	Not Detected	6.1	Not Detected
	TENTATIVELY IDEN	TIFIED COMPOUNDS	i	
				Amount
Compound		CAS Number	Match Quality	ppbv
Butane	:	106-97-8	NA	Not Detected
Isobutane		75-28-5	NA	Not Detected
Propane		74-98-6	NA	Not Detected
Container Type: NA - Not Applicable		·		
			•	Method
Surrogates		%Recovery		Limits

95

113

96



Client Sample ID: CCV Lab ID#: 0806376A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 1062605	Date of Collection: NA
Dil. Factor: 1,00	Date of Analysis: 6/26/08 11:19 AM

%Recovery
103
101
107
98
96
96
104

Surrogates		Method
	%Recovery	Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	122	70-130
4-Bromofluorobenzene	105	70-130



Client Sample ID: LCS Lab ID#: 0806376A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: t062604 Date of Collection: NA
DII. Factor: 1.00 Date of Analysis: 6/26/08 10:37 AM

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	,	108 :
		106
		118
		99
		97
		97
		109
_		

Surrogates		wetnoa
	%Recovery_	Limits
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	127	70-130
4-Bromofluorobenzene	104	70-130