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				TR/	ANSI	MITTAL				
DATE:	Octobe	r 27, 200	08		REFER	ENCE No.:	2406	12		
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Complete		Peter Sc	haefer			Signed:	etu	-Schiff	_	
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Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577 Denis L. Brown Shell Oil Products US

Email denis.l.brown@shell.com

HSE - Environmental Services 20945 S. Wilmington Ave. Carson, CA 90810-1039 Tel (707) 865 0251 Fax (707) 865 2542

Re:

Shell-branded Service Station 1784 150th Avenue San Leandro, California SAP Code 136019 Incident #98996068 ACHCSA Case No. 0367

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown Project Manager



SOIL VAPOR PROBE SAMPLING REPORT

SHELL-BRANDED SERVICE STATION 1784 150TH AVENUE SAN LEANDRO, CALIFORNIA

SAP CODE 136019 INCIDENT NO. 98996068 AGENCY NO. RO0000367

OCTOBER 24, 2008
REF. NO. 240612 (1)
This report is printed on recycled paper.

Prepared by: Conestoga-Rovers & Associates

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1.0 INTRODUCTION

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. Alameda County Health Care Services Agency's (ACHCSA's) June 27, 2008 letter requested this sampling event.

The site is an operating Shell-branded service station located at the southern corner of the 150th Avenue and Freedom Avenue intersection in San Leandro, California (Figure 1). The area surrounding the site is mixed commercial and residential. The site layout (Figure 2) includes a station building, two dispenser islands, and three fuel underground storage tanks (USTs). One waste oil UST was removed from the site on May 25, 2006.

A summary of previous work performed at the site and additional background information was submitted in CRA's December 19, 2007 *Supplemental Subsurface Investigation Report*, and is not repeated herein.

2.0 SOIL VAPOR PROBE SAMPLING PROCEDURES

2.1 PERSONNEL PRESENT

CRA Staff Geologist Carmen Rodriguez sampled the soil vapor probes in May 2008 and CRA Staff Geologist Lauren Goldfinch sampled the soil vapor probes in September 2008, under the supervision of California Professional Geologist Peter Schaefer.

2.2 SOIL VAPOR SAMPLING

On May 20, 2008 CRA sampled soil vapor probes SVP-1 through SVP-3, and on September 17, 2008 CRA sampled soil vapor probes SVP-1 through SVP-3 and SVP-5 according to CRA's soil vapor probe sampling protocol, included as Appendix A. During the May 20, 2008 sampling event, SVP-4 and SVP-5 could not be sampled because water was present in the probes' Teflon tubing, and during the September 17, 2008 sampling event, SVP-4 could not be sampled for the same reason. Several attempts were made to clear the water from SVP-4 without success. 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 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 SummaTM 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. in Folsom, California for analysis.

2.3 SOIL VAPOR SAMPLING 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), 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 reports are provided in Appendix B.

3.0 SOIL VAPOR PROBE SAMPLING RESULTS

Soil vapor samples collected on May 20, 2008 contained up to 830 micrograms per cubic meter (μg/m³) TPHg from SVP-2 (SVP-4 and SVP-5 could not be sampled due to water in the sampling tubing). No other constituents of concern were detected. 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. None of these compounds were detected

Soil vapor samples collected on September 17, 2008 contained up to $280,000 \, \mu g/m^3$ TPHg, $260 \, \mu g/m^3$ benzene, $780 \, \mu g/m^3$ toluene, $14,000 \, \mu g/m^3$ ethylbenzene, $48,000 \, \mu g/m^3$ xylenes, and $290 \, \mu g/m^3$ MTBE from SVP-5 (SVP-4 could not be sampled due to water in the sampling tubing). Leak testing was performed, and isobutane was detected in the sample from SVP-5. The concentration reported was $880 \, \mu g/m^3$, an amount considered negligible when compared with the amount in the tracer gas compound (approximately $350,000 \, \mu g/m^3$ in shaving cream).

Table 1 summarizes the soil vapor analytical data from both events, TPHg, benzene, and MTBE results from the September 17, 2008 sampling event are shown on Figure 2, and the laboratory analytical reports for both sampling events are presented in Appendix B.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Soil vapor sample concentrations detected during the May 20, 2008 sampling event were all below San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for residential and commercial land use.

Soil vapor sample concentrations in SVP-5 detected during the September 17, 2008 sampling event exceed the ESLs for residential and commercial land use for TPHg and ethylbenzene. Benzene and xylenes concentrations in SVP-5 exceed residential RWQCB ESLs.

Soil vapor sample concentrations in on-site probes have been below the residential land use RWQCB ESLs with the exception of TPHg in probes SVP-1 and SVP-4 during the September 2007 sampling event, and all concentrations of constituents of concern have been below the commercial land use RWQCB ESLs during all four events.

In off-site probe SVP-5 TPHg concentrations exceeded residential and commercial land use RWQCB ESLs 5 in two of the four events, ethylbenzene concentrations exceeded residential and commercial land use RWQCB ESLs during the September 17, 2008 event only, and benzene and xylenes concentrations exceeded residential land use RWQCB ESLs during the September 17, 2008 event only (SVP-5 could not be sampled during the May 20, 2008 event due to water in the sampling tubing).

Pilot testing of multi-phase extraction is currently scheduled for the first 2 weeks of November 2008. CRA recommends an additional round of sampling the soil vapor probes following the pilot test.

All of Which is Respectfully Submitted, CONESTOGA-ROVERS & ASSOCIATES

Peter Schaefer, CEG, CHG

Diano haff bor

Project Manager

Aubrey K. Cool, PG Professional Geologist No. C46725 AN CIVIL OF CAUTO O

FIGURES

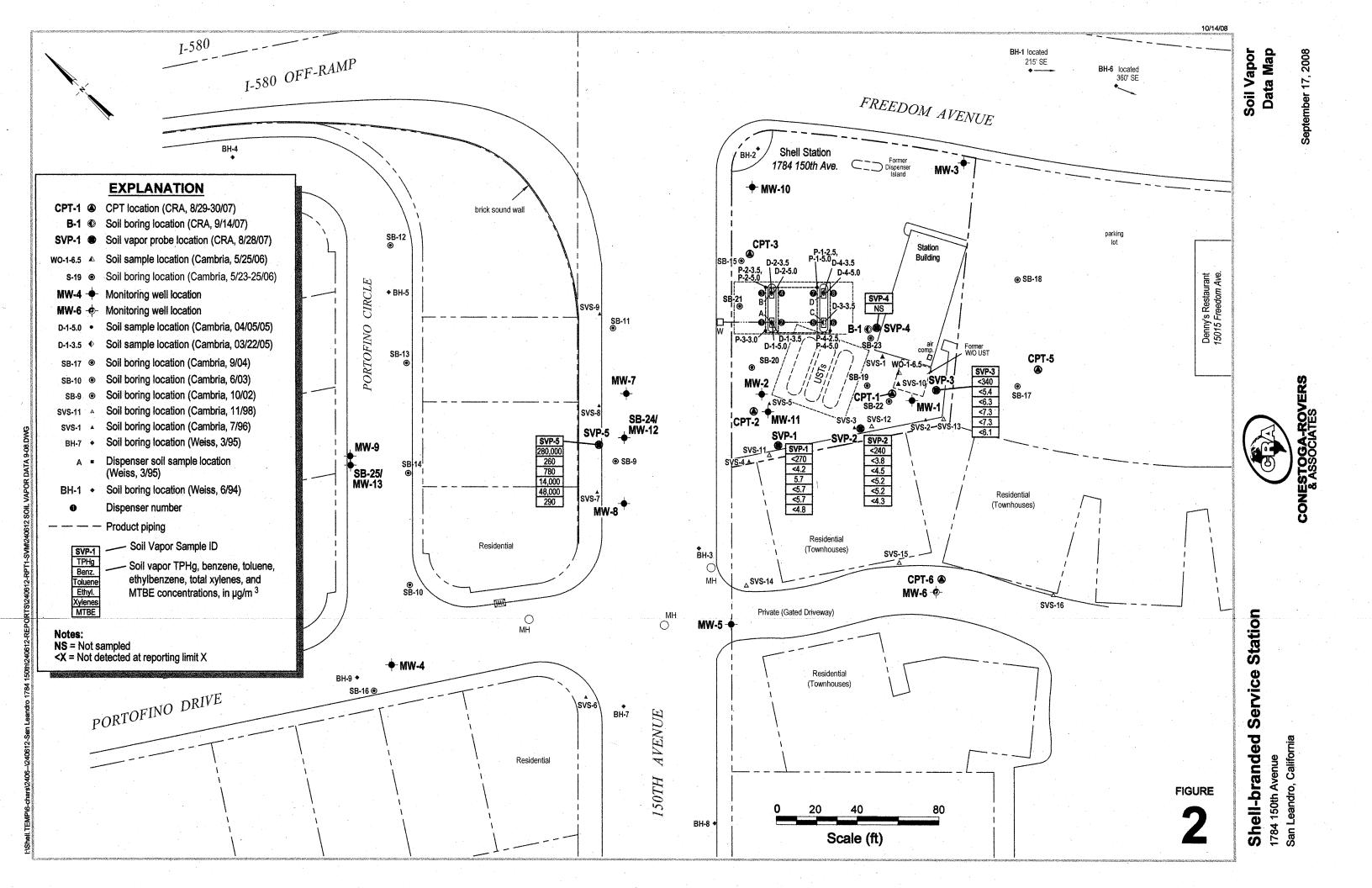
Shell-branded Service Station

1784 150th Avenue San Leandro, California



Vicinity Map

CONESTOGA-ROVERS & ASSOCIATES



TABLES

TABLE 1

SOIL VAPOR ANALYTICAL DATA SHELL-BRANDED SERVICE STATION 1784 150TH AVENUE, SAN LEANDRO, CALIFORNIA

Sample ID	Date	TP	Нд	Bei	nzene	Tol	uene	Ethylb	enzene	Total X	Kylenes	МТ	TBE	Buta		Isobu			pane ^a
Simple 12		ppmv	μg/m³	ppbv	μ g/m ³	ppbv	μ g/m ³	ppbv	μ g/m ³	ppbv	μ g/m ³	ppbv	μ g/m ³	ppbv	µg/т ³	ppbv	µg/m³	ppbv	μg/m ³
CVID 1	0 /25 /2007	3.0	12,000	<5.4	<17	1,900	7,000	28	120	67	300	<5.4	<19	28	67	ND	ND	ND	ND
SVP-1	9/25/2007	<4,800		2.6	8.2	350	1,300	9.4	41	22	95	<2.8	<10	ND	ND	29.5	70.12	ND	ND
SVP-1	3/5/2008	,					•	7.4	32	15	65	<3.0	<11	ND	ND	26.5	62.99	ND	ND
SVP-1 DUP ^d	3/5/2008	<5,100	•	2.5	7.9	110	400	<1.2	<5.2	<1.2	<5.2	<1.2	<4.4	ND	ND	ND	ND	ND	ND
SVP-1	5/20/2008	0.15	620	<1.2	<3.9	<1.2 1.5	<4.6 5.7	<1.2	<5.7	<1.3	< 5.7	<1.3	<4.8	ND	ND	ND	ND	ND	ND
SVP-1	9/17/2008	< 0.066	<270	<1.3	<4.2	1.5	5.7	~1.5	~ 5.7	1.5	-5.7	1.0	2.0						
SVP-2	9/25/2007	0.19	760	3.4	11	24	90	3.1	14	.13	56	6.5	24	ND	ND	ND	ND	ND	ND
SVP-2 SVP-2	3/5/2008	<5,400	<19,000	< 0.85	<2.7	< 0.82	<3.1	< 0.83	<3.6	<1.7	<7.3	<3.3	<12	ND	ND	ND	ND	ND	ND
SVP-2 SVP-2	5/20/2008	0.20	830	<2.0	<6.4	<2.0	<7.6	<2.0	<8.8	<2.0	<8.8	<2.0	<7.3	ND	ND	ND	ND	ND	ND
SVP-2	9/17/2008	< 0.060	<240	<1.2	<3.8	<1.2	<4.5	<1.2	< 5.2	<1.2	<5.2	<1.2	<4.3	ND	ND	ND	ND	ND	ND
SVP-2 DUP d	9/17/2008	<0.057	<230	<1.1	<3.6	<1.1	<4.3	<1.1	<5.0	<1.1	<5.0	<1.1	<4.1	ND	ND	ND	ND	ND	ND
SVP-2 DUP	9/17/2008	\0.037	~230	\1.1	٧٥.٥	-1.1					•								
SVP-3	9/25/2007	0.074	300	<1.4	<4.4	<1.4	<5.2	<1.4	<6.0	<1.4	<6.0	<1.4	< 5.0	ND	ND	ND	ND	ND	ND
SVP-3 DUP d		< 0.064	<260	<1.3	<4.1	<1.3	<4.9	<1.3	<5.6	<1.3	< 5.6	<1.3	<4.6	ND	ND	ND	ND	ND	ND
	9/25/2007	<5,700		1.2	3.9	8.5	32	1.8	7.8	8.7	38	3.6	13	ND	ND	ND	ND	ND	ND
SVP-3	3/5/2008 5/20/2008	0.093	380	<1.2	<3.9	<1.2	<4.6	<1.2	< 5.4	<1.2	< 5.4	<1.2	<4.4	ND	ND	ND	ND	ND	ND
SVP-3 SVP-3	9/17/2008	< 0.093	<340	<1.7	<5.4	<1.7	<6.3	<1.7	<7.3	<1.7	<7.3	<1.7	<6.1	ND	ND	ND	ND	ND	ND
5Vr-3	9/17/2008	~0.00±	1010	-1.7	-0.1														
SVP-4	9/25/2007	3.0	12,000	<1.2	<3.9	3.4	13	1.4	6.3	7.2	31	<1.2	<4.4	300	713	ND	ND	ND	ND
3V1-4)/ 25/ 2007	. 0.0	12,000											•					
SVP-5	9/25/2007	17	70,000	<18	<56	<18	<66	<18	<76	<18	<76	<18	<63	ND	ND	ND	ND	ND	ND
SVP-5	3/5/2008	<4,800	<17,000	<0.72	<2.3	0.72	2.7	< 0.71	<3.1	<1.5	<6.3	<2.8	<10	ND	ND	9.3	22.11	ND	ND
		68	280,000	82	260	210	780	3,300	14,000	11,000	48,000	80	290	3,600 b	8,600 b	370 ^b	880 b	ND	ND
SVP-5	9/17/2008	00	200,000	. 02	200								-					w market first days.	minero di Carlos Por Porto de Carlos Romano de Car
Residential La	nd Use ESI	<u>. 11.</u>	10,000		84	-	63,000		980		21,000		9,400						
Commercial/Ir																			
Commercial							400.000		2.200		58,000		31 000					, J <u></u>	

TABLE 1

SOIL VAPOR ANALYTICAL DATA SHELL-BRANDED SERVICE STATION 1784 150TH AVENUE, SAN LEANDRO, CALIFORNIA

Notes:

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

Benzene, toluene, ethylbenzene and total xylenes by modified EPA Method TO-15 GC/FID Full Scan

MTBE = Methyl tertiary butyl ether by modified EPA Method TO-15 GC/FID Full Scan

Butane, isobutane, and propane by modified EPA Method TO-15 GC/FID Full Scan

ppmv = Parts per million by volume

ppbv = Parts per billion by volume

 $\mu g/m^3$ = Micrograms per cubic meter

ND = Not detected

--- = Not analyzed

ESL = Environmental screening level

- a = Compounds not listed in Regional Water Quality Control Board (RWQCB) ESLs; detected quantities estimated by laboratory.
- b = The identification is based on presumptive evidence; estimated value
- c = Exceeds instrument calibration range
- d = Field duplicate
- e = San Francisco Bay RWQCB ESLs for shallow soil gas (Table E)

APPENDIX A

STANDARD OPERATING PROCEDURES

Conestoga-Rovers & Associates

STANDARD FIELD PROCEDURES FOR SOIL VAPOR PROBE INSTALLATION AND SAMPLING

VAPOR POINT METHODS

This document describes Conestoga-Rovers & Associates' standard field methods for soil vapor sampling. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil vapor samples are collected and analyzed to assess whether vapor-phase subsurface contaminants pose a threat to human health or the environment.

Shallow Soil Vapor Point Method for Soil Vapor Sampling

The shallow soil vapor point method for soil vapor sampling utilizes a hand auger or drill rig to advance a boring for the installation of a soil vapor sampling point. Once the boring is hand augered to the final depth, a probe, connected with Swagelok fittings to nylon or Teflon tubing of ¼-inch outer-diameter, is placed within 12-inches of number 2/16 filter sand (Figure A). A 12-inch layer of dry granular bentonite is placed on top of the filter pack. Pre-hydrated granular bentonite is then poured to fill the borehole. The tube is coiled and placed within a wellbox finished flush to the surface. Soil vapor samples will be collected no sooner than 48 hours after installation of the soil vapor points to allow adequate time for representative soil vapors to accumulate. Soil vapor sample collection will not be scheduled until after a minimum of three consecutive precipitation-free days and irrigation onsite has ceased. Figure B shows the soil vapor sampling apparatus. A measured volume of air will be purged from the tubing using a different Summa purge canister. Immediately after purging, soil vapor samples will be collected using the appropriate size Summa canister with attached flow regulator and sediment filter. The soil vapor points will be preserved until they are no longer needed for risk evaluation purposes. At that time, they will be destroyed by extracting the tubing, hand augering to remove the sand and bentonite, and backfilling the boring with neat cement. The boring will be patched with asphalt or concrete, as appropriate.

Vapor Sample Storage, Handling, and Transport

Samples are stored and transported under chain-of-custody to a state-certified analytic laboratory. Samples should never be cooled due to the possibility of condensation within the canister.

APPENDIX B

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 #: 0805567A

Work Order Summary

CLIENT:

Ms. Ana Friel

Conestoga-Rovers Associates (CRA)

19449 Riverside Drive

Suite 230

Sonoma, CA 95476

PHONE:

(707)-935-4850

FAX:

707-935-6649

DATE RECEIVED:

05/28/2008

DATE COMPLETED:

06/02/2008

BILL TO:

TO: Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville, CA 94608

P.O. #

240612-010

PROJECT #

240612-2008-6

CONTACT:

Kyle Vagadori

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	SVP-3	Modified TO-15/TICs	5.5 "Hg	15 psi
02A	SVP-2	Modified TO-15/TICs	15.0 "Hg	15 psi
03A	SVP-1	Modified TO-15/TICs	5.0 "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. Frumer

DATE:

06/12/08

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

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# 0805567A

Three 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

There were no analytical discrepancies.

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: SVP-3

Lab ID#: 0805567A-01A

No Detections Were Found.

Client Sample ID: SVP-2

Lab ID#: 0805567A-02A

No Detections Were Found.

Client Sample ID: SVP-1

Lab ID#: 0805567A-03A

No Detections Were Found.



Client Sample ID: SVP-3 Lab ID#: 0805567A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	7052919 2.47		Date of Collection: 5/20/08 Date of Analysis: 5/29/08 11:21 PM			
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)		
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected		
Benzene	1.2	Not Detected	3.9	Not Detected		
Toluene	1.2	Not Detected	4.6	Not Detected		
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected		
m,p-Xylene	1.2	Not Detected	5.4	Not Detected		
o-Xylene	1.2	Not Detected	5.4	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

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

		Method
Surrogates	%Recovery	Limits
Toluene-d8	92	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	100	70-130



Client Sample ID: SVP-2 Lab ID#: 0805567A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	7052920 4.04		Date of Collection: 5/20/08 Date of Analysis: 5/30/08 12:00 AM			
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)		
Methyl tert-butyl ether	2.0	Not Detected	7.3	Not Detected		
Benzene	2.0	Not Detected	6.4	Not Detected		
Toluene	2.0	Not Detected	7.6	Not Detected		
Ethyl Benzene	2.0	Not Detected	8.8	Not Detected		
m,p-Xylene	2.0	Not Detected	8.8	Not Detected		
o-Xylene	2.0	Not Detected	8.8	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

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

		Method
Surrogates	%Recovery	Limits
Toluene-d8	90	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	98	70-130



Client Sample ID: SVP-1 Lab ID#: 0805567A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	7052921 2,42		Date of Collection: 5/20/08 Date of Analysis: 5/30/08 12:39 AM			
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)		
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected		
Benzene	1.2	Not Detected	3.9	Not Detected		
Toluene	1.2	Not Detected	4.6	Not Detected		
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected		
m,p-Xylene	1.2	Not Detected	5.2	Not Detected		
o-Xylene	1.2	Not Detected	5.2	Not Detected		

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	**	ř	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)

					Metriou
Surrogates		%F	Recovery		Limits
Toluene-d8			91	* .	70-130
1,2-Dichloroethane-d4			109		70-130
4-Bromofluorobenzene			100		70-130



Client Sample ID: Lab Blank Lab ID#: 0805567A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	7052904 1.00	Date of Collection: NA Date of Analysis: 5/29/08 10:49								
Compound	Rot. 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						

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
Container Type: NA - Not Applicable			· · · · · · · · · · · · · · · · · · ·

	•		Method
Surrogates		%Recovery	 Limits
Toluene-d8		91	70-130
1,2-Dichloroethane-d4		103	70-130
4-Bromofluorobenzene	•	99	70-130



Client Sample ID: CCV Lab ID#: 0805567A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 7052902 Date of Collection: NA Dil. Factor: 1.00 Date of Analysis: 5/29/08 09:14	19:14 AM
Dii. Factor. Date of Afraiysis. 3/29/08 69.1	73. 14 AM

Compound		 %Recovery
Methyl tert-butyl ether		101
Benzene		108
Toluene		104
Ethyl Benzene		104
m,p-Xylene		103
o-Xvlene		104

Container Type: NA - Not Applicable

		Method
Surrogates	%Recovery	Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	102	70-130



Client Sample ID: LCS Lab ID#: 0805567A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: 7052903 Date of Collection: NA
File Name: 7052903 Date of Collection: NA
Dil Festeri
Dil. Factor: 1,00 Date of Analysis: 5/29/08 09:58 AM

Compound	%Recovery
Methyl tert-butyl ether	101
Benzene	108
Toluene	108
Ethyl Benzene	100
m,p-Xylene	101
o-Xvlene	101

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	103	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 #: 0805567B

Work Order Summary

CLIENT:

Ms. Ana Friel

Conestoga-Rovers Associates (CRA)

19449 Riverside Drive

Suite 230

Sonoma, CA 95476

PHONE:

(707)-935-4850

FAX:

707-935-6649

DATE RECEIVED:

05/28/2008

DATE COMPLETED:

06/02/2008

BILL TO: Mr. Peter Schaefer

Conestoga-Rovers Associates (CRA)

5900 Hollis Street

Suite A

Emeryville, CA 94608

P.O. #

240612-010

PROJECT #

240612-2008-6

CONTACT:

Kyle Vagadori

	· -		RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	SVP-3	Modified TO-3	5.5 "Hg	15 psi
02A	SVP-2	Modified TO-3	15.0 "Hg	15 psi
03A	SVP-1	Modified TO-3	5.0 "Hg	15 psi
03AA	SVP-1 Lab Duplicate	Modified TO-3	5.0 "Hg	15 psi
04A	Lab Blank	Modified TO-3	NA	NA
05A	LCS	Modified TO-3	NA .	NA

CERTIFIED BY:

Sinda d. Fruman

DATE: 06/02/08

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

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# 0805567B

Three 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

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-3				
Lab ID#: 0805567B-01A				
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.062	0.25	0.093	0.38
Client Sample ID: SVP-2				
ab ID#: 0805567B-02A				
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.10	0.41	0.20	0.83
Client Sample ID: SVP-1				
Lab ID#: 0805567B-03A				
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.060	0.25	0.15	0.62
		t e		
Client Sample ID: SVP-1 Lab Duplicate				
Lab ID#: 0805567B-03AA				
Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.060	0.25	0.18	0.76



Client Sample ID: SVP-3 Lab ID#: 0805567B-01A

File Name: Dil. Factor:	6053113 2.47		Date of Collection: Date of Analysis: 5/	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.062	0.25	0.093	0.38
Container Type: 1 Liter Summ	a Canister (100% Certified)			Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		82		75-150



Client Sample ID: SVP-2 Lab ID#: 0805567B-02A

		THOE TO S GENT	ALLEY ALLEY ALLEY	
File Name: Dil. Factor:	6053114 4.04		Date of Collection: Date of Analysis; 5	LOS A COLOR DE LA COLOR DE
Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.10	0.41	0.20	0.83
Container Type: 1 Liter Summ Surrogates	a Canister (100% Certified)	%Recovery		Method Limits
Fluorobenzene (FID)		76		75-150



Client Sample ID: SVP-1 Lab ID#: 0805567B-03A

File Name: Dil. Factor:	6053116 2.42		ate of Collection: ate of Analysis: 5	THE RESERVE THE PROPERTY OF THE PERSON NAMED IN COLUMN TO SERVE TH
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.060	0.25	0.15	0.62
Container Type: 1 Liter Summa			NA - 411	
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		76		75-150



Client Sample ID: SVP-1 Lab Duplicate

Lab ID#: 0805567B-03AA

File Name; Dil. Factor:	6053117 2.42		Date of Collection: Date of Analysis:	
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
TPH (Gasoline Range)	0.060	0.25	0.18	0.76
Container Type: 1 Liter Summa Surrogates	Canister (100% Certified)	%Recovery		Method Limits
Fluorobenzene (FID)		75		75-150



Client Sample ID: Lab Blank Lab ID#: 0805567B-04A

File Name:	6053104		Date of Collection: N	IA
Dil. Factor:	1.00		Date of Analysis: 5	/31/08 01:52 AM
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 Applie	cable			
Surrogates		%Recovery		Method Limits
Fluorobenzene (FID)		78		75-150



Client Sample ID: LCS

Lab ID#: 0805567B-05A

File Name: 6053118 Date of Collection: NA Dil. Factor: 1.00 Date of Analysis: 5/31/08 05:0	2 PM

Compound		%Recovery
TPH (Gasoline Range)		105
Container Type: NA - Not Applicable		
		Method
Surrogates	%Recovery	Limits
Fluorobenzene (FID)	104	75-150

LAB: TA □TA - tywige, california				୍ 💯	7	Sł	ΗEI	LL	Ch	nair	1 C)f(Cus	tod	y R	ecc	ord		*				n	8.0	5.5	6 7
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This electronic report includes the following:

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



WORK ORDER #: 0809414B

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 #

240612-010 1784 150th Ave, San Leandro,

DATE RECEIVED:

09/19/2008 09/24/2008

CONTACT:

CA Kyle Vagadori

DATE COMPLETED:	09/24/2008	
FRACTION#	NAME	
01.4	SVP_3	

FRACTION#	NAME	<u>TEST</u>	VAC./PRES.	FINAL PRESSURE
01A	SVP-3	Modified TO-3	12.0 "Hg	15 psi
02A	SVP-2	Modified TO-3	4.5 "Hg	15 psi
03A	SVP-2DUP	Modified TO-3	3.5 "Hg	15 psi
04A	SVP-1	Modified TO-3	7.0 "Hg	15 psi
05A	SVP-5	Modified TO-3	10.0 "Hg	15 psi
05AA	SVP-5 Lab Duplicate	Modified TO-3	10.0 "Hg	15 psi
06A	TRIP BLANK	Modified TO-3	27.5 "Hg	15 psi
07A	Lab Blank	Modified TO-3	NA	NA
08A	LCS	Modified TO-3	NA	NA

CERTIFIED BY:

Sinda S. Truman

DATE: <u>09/24/08</u>

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: 07/01/08, Expiration date: 06/30/09

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# 0809414B

Six 1 Liter Summa Canister (100% Certified) samples were received on September 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

The recovery of surrogate Fluorobenzene in samples SVP-5 and SVP-5 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: SVP-3

Lab ID#: 0809414B-01A

No Detections Were Found.

Client Sample ID: SVP-2

Lab ID#: 0809414B-02A

No Detections Were Found.

Client Sample ID: SVP-2DUP

Lab ID#: 0809414B-03A

No Detections Were Found.

Client Sample ID: SVP-1

Lab ID#: 0809414B-04A

No Detections Were Found.

Client Sample ID: SVP-5

Lab ID#: 0809414B-05A

Compound	Rpt. Limit	Rpt. Limit	Amount	Amount
	(ppmv)	(uG/L)	(ppmv)	(uG/L)
TPH (Gasoline Range)	0.12	0.50	68	280

Client Sample ID: SVP-5 Lab Duplicate

Lab ID#: 0809414B-05AA		ren e rene maria e renem mere.			
Compound	Rpt. Limit	Rpt. Limit (uG/L)	Amount (ppmy)	Amount (uG/L)	
TPH (Gasoline Range)	 0.12	0.50	68	280	

Client Sample ID: TRIP BLANK

Lab ID#: 0809414B-06A

No Detections Were Found.



Client Sample ID: SVP-3 Lab ID#: 0809414B-01A

File Name: Dil. Factor:	6092012 3.37	. · · · · · · · · · · · · · · · · · · ·	Date of Collection: Date of Analysis: 9		
Compound	Rpt. Limit Rpt. Limit nd (ppmv) (uG/L)		Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.084	0.34	Not Detected	Not Detected	
Container Type: 1 Liter Summa Can	ister (100% Certified)			Method	
Surrogates		%Recovery		Limits	
Eluorobenzene (FID)		104		75-150	



Client Sample ID: SVP-2 Lab ID#: 0809414B-02A

File Name: Dil. Factor:	6092008 2.38		Date of Collection: Date of Analysis: 9		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.060	0.24	Not Detected	Not Detected	
Container Type: 1 Liter Summ	a Canister (100% Certified)			Method	
Surrogates		%Recovery		Limits	
Fluorobenzene (FID)		106		75-150	



Client Sample ID: SVP-2DUP Lab ID#: 0809414B-03A

File Name: Dil. Factor:	6092009 2.29	÷	Date of Collection: 9/17/08 Date of Analysis: 9/20/08 04:38 PM		
Compound	Rpt. Limit Rpt. Limit rpound (ppmv) (uG/L)		Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.057	0.23	Not Detected	Not Detected	
Container Type: 1 Liter Summa	Canister (100% Certified)			Method	
Surrogates	**	%Recovery		Limits	
Fluorobenzene (FID)		103		75-150	



Client Sample ID: SVP-1 Lab ID#: 0809414B-04A

File Name: Dil. Factor:	6092010 2.64		Date of Collection: 9/17/08 Date of Analysis: 9/20/08 05:08 PM		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.066	0.27	Not Detected	Not Detected	
Container Type: 1 Liter Summa	Canister (100% Certified)			Method	
Surrogates		%Recovery		Limits	
Fluorobenzene (FID)	•	101		75-150	



Client Sample ID: SVP-5 Lab ID#: 0809414B-05A

File Name: Dil. Factor:	6092007 4.85	Date of Collection: 9/17/08 Date of Analysis: 9/20/08 03:15 PM			
Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)	
TPH (Gasoline Range)	0.12	0.50	68	280	
0 - 5	limita, dua ta matriy affacta. Ma		al la como a ser al colto		
Q = Exceeds Quality Control Container Type: 1 Liter Sum	ma Canister (100% Certified)	urix effects confirme	d by re-analysis.		
•		%Recovery	a by re-analysis.	Method Limits	



Client Sample ID: SVP-5 Lab Duplicate

Lab ID#: 0809414B-05AA

File Name: Dil. Factor:	6092013 4.85		Date of Collection: 9/17/08 Date of Analysis: 9/20/08 06:4		
Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L) 280	
TPH (Gasoline Range)	0.12	0.50	68		
Q = Exceeds Quality Control lin	nits, due to matrix effects. Matrix a Canister (100% Certified)	x effects confire	ned by re-analysis.		
Container Type: 1 Liter Summ			Section 1	NO - (1)	
Surrogates		%Recovery		Method Limits	



Client Sample ID: TRIP BLANK

Lab ID#: 0809414B-06A MODIFIED EPA METHOD TO-3 GC/FID

File Name: Dil. Factor:	6092011 1.00		Date of Collection: 9 Date of Analysis: 9/2	
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% Certifie	d)		Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)	,	104		75-150



Client Sample ID: Lab Blank Lab ID#: 0809414B-07A

File Name: Dil. Factor:	6092004 1.00		Date of Collection: I Date of Analysis: 9	
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				Method
Surrogates		%Recovery		Limits
Fluorobenzene (FID)		88		75-150



Client Sample ID: LCS Lab ID#: 0809414B-08A

		, .	
The second secon			The state of the s
File Name:	6092015		Date of Collection: NA
Dil. Factor:	1.00		Date of Analysis: 9/21/08 08:52 AM

Compound		%Recovery
TPH (Gasoline Range)		92
Container Type: NA - Not Applicable		
	9/ Pagazani	Method Limits
Surrogates Fluorobenzene (FID)	%Recovery 130	75-150

LAB (LOCATION)			Shell (Products Chain Of Custody Record	
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PROJECT CONTROL (Mandage or POF Reported)	· · · · · ·			enda Carter, CRA, Emeryville 310-420-3343 shell-practi	©urauwurkd.com 2406:23-010
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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 #: 0809414A

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

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PHONE:

510-420-0700

Suite A

P.O. #

FAX:

510-420-9170

PROJECT.#

240612-010 1784 150th Ave, San Leandro,

DATE RECEIVED: DATE COMPLETED: 09/19/2008 09/24/2008

CONTACT:

CA Kyle Vagadori

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	SVP-3	Modified TO-15/TICs	12.0 "Hg	15 psi
01AA	SVP-3 Lab Duplicate	Modified TO-15/TICs	12.0 "Hg	15 psi
02A	SVP-2	Modified TO-15/TICs	4.5 "Hg	15 psi
03A	SVP-2DUP	Modified TO-15/TICs	3.5 "Hg	15 psi
04A	SVP-1	Modified TO-15/TICs	7.0 "Hg	15 psi
05A	SVP-5	Modified TO-15/TICs	10.0 "Hg	15 psi
06A	TRIP BLANK	Modified TO-15/TICs	27.5 "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:

Linda d. Fruman

DATE: 09/24/08

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: 07/01/08, Expiration date: 06/30/09

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# 0809414A

Six 1 Liter Summa Canister (100% Certified) samples were received on September 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</td <td><!--= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.</p--></td>	= 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

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: SVP-3

Lab ID#: 0809414A-01A

No Detections Were Found.

Client Sample ID: SVP-3 Lab Duplicate

Lab ID#: 0809414A-01AA

No Detections Were Found.

Client Sample ID: SVP-2

Lab ID#: 0809414A-02A

No Detections Were Found.

Client Sample ID: SVP-2DUP

Lab ID#: 0809414A-03A

No Detections Were Found.

Client Sample ID: SVP-1

Lab ID#: 0809414A-04A

Commonad		Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	The state of the s	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)
Toluene	the second second	1.3	1.5	5.0	5.7

Client Sample ID: SVP-5

Lab ID#: 0809414A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	50	80	180	290
Benzene	50	82	160	260
Toluene	50	210	190	780
Ethyl Benzene	50	3300	220	14000
m,p-Xylene	50	9800	220	43000
o-Xylene	50	1000	220	4600

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number Match Qu	Amount iality (ppbv)
Butane	 106-97-8 64%	3600 N J
Propane, 2-methyl-	75-28-5 4.0%	370 N J



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

Client Sample ID: TRIP BLANK

Lab ID#: 0809414A-06A

No Detections Were Found.



Client Sample ID: SVP-3 Lab ID#: 0809414A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	5092321 3.37		Date of Collection: Date of Analysis: 9	
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	1.7	Not Detected	6.1	Not Detected
Benzene	1.7	Not Detected	5.4	Not Detected
Toluene	1.7	Not Detected	6.3	Not Detected
Ethyl Benzene	1.7	Not Detected	7.3	Not Detected
m,p-Xylene	1.7	Not Detected	7.3	Not Detected
o-Xylene	1.7	Not Detected	7.3	Not Detected
•				• •

TENTATIVELY IDENTIFIED COMPOUNDS

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

•••	•		Method		
Surrogates	%Recovery		Limits		
Toluene-d8	98		70-130		
1,2-Dichloroethane-d4	105	•	70-130		
4-Bromofluorobenzene	110	•	70-130		



Client Sample ID: SVP-3 Lab Duplicate

Lab ID#: 0809414A-01AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	5092322 3.37		Date of Collection: 9/17/08 Date of Analysis: 9/24/08 01:40 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	1.7	Not Detected	6.1	Not Detected	
Benzene	1.7	Not Detected	5.4	Not Detected	
Toluene	1.7	Not Detected	6.3	Not Detected	
Ethyl Benzene	1.7	Not Detected	7.3	Not Detected	
m,p-Xylene	1.7	Not Detected	7.3	Not Detected	
o-Xylene	1.7	Not Detected	7.3	Not Detected	

TENTATIVELY IDENTIFIED COMPOUNDS

*			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

				Wethod
Surrogates		 %Recovery		Limits
Toluene-d8		99		70-130
1,2-Dichloroethane-d4	*.	105		70-130
4-Bromofluorobenzene	•	 110		70-130



Client Sample ID: SVP-2 Lab ID#: 0809414A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

	B 4 11 14	 D .4 1 2 24	A 4
Dil. Factor:	2.38	Date of Analysis: 9/	24/08 02:21 AM
File Name:	5092323	Date of Collection: 9	9/17/08

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	1.2	Not Detected	5.2	Not Detected
o-Xylene	1.2	Not Detected	5.2	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		99	70-130
1,2-Dichloroethane-d4		102	70-130
4-Bromofluorobenzene	•	111	70-130



Client Sample ID: SVP-2DUP Lab ID#: 0809414A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	5092324 2.29	· .	Date of Collection: 9/17/08 Date of Analysis: 9/24/08 03:02 AM		
Compound	Rɒt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit Amou (uG/m3) (uG/m		
Methyl tert-butyl ether	1.1	Not Detected	4.1	Not Detected	
Benzene	1.1	Not Detected	3.6	Not Detected	
Toluene	1.1	Not Detected	4.3	Not Detected	
Ethyl Benzene	1.1	Not Detected	5.0	Not Detected	
m,p-Xylene	1.1	Not Detected	5.0	Not Detected	
o-Xylene	1.1	Not Detected	5.0	Not Detected	

TENTATIVELY IDENTIFIED COMPOUNDS

					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: 1 Liter Summa Canister (100% Certified)

		Method
Surrogates	%Recovery	Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	109	70-130



Client Sample ID: SVP-1 Lab ID#: 0809414A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5092325		Date of Collection: 9	9/17/08
Dil. Factor:	2.64		Date of Analysis: 9/2	24/08 03:44 AM
	Rpt. Limit	Amount	Rpt. Limit	Amount
Compound	(ppbv)	(ppbv)	(uG/m3)	(uG/m3)

Compound	Rpt. 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	1.5	5.0	5.7
Ethyl Benzene	1.3	Not Detected	5.7	Not Detected
m,p-Xylene	1.3	Not Detected	<i>∮</i> 5.7	Not Detected
o-Xylene	1.3	Not Detected	5.7	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

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	

•	*			Method
Surrogates	<u> </u>	%Recovery	*	Limits
Toluene-d8		98		70-130
1,2-Dichloroethane-d4		107		70-130
4-Bromofluorobenzene		110		70-130



Client Sample ID: SVP-5 Lab ID#: 0809414A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	5092328 101	Date of Collection: 9/17 Date of Analysis: 9/24/0			
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)	
Methyl tert-butyl ether	50	80	180	290	
Benzene	50	82	160	260	
Toluene	. 50	210	190	780	
Ethyl Benzene	50	3300	220	14000	
m,p-Xylene	50	9800	220	43000	

TENTATIVELY IDENTIFIED COMPOUNDS

1000

220

4600

50

Compound	CAS Number	Match Quality	Amount (ppbv)
Butane	106-97-8	64%	3600 N J
Propane, 2-methyl-	75-28-5	4.0%	370 N J
Propane	74-98-6	NA	Not Detected

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

o-Xylene

		Meriloa
Surrogates	%Recovery	Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	114	70-130
4-Bromofluorobenzene	113	70-130



Client Sample ID: TRIP BLANK Lab ID#: 0809414A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	5092326 1.00	Date of Collection: 9/17/0 Date of Analysis: 9/24/08		
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
		and the second s		

TENTATIVELY IDENTIFIED COMPOUNDS

			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	100	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	111	70-130



Client Sample ID: Lab Blank

Lab ID#: 0809414A-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name: Dil. Factor:	5092305 1.00	Date of Collection: NA Date of Analysis: 9/23/08 1		77 7.
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

TENTATIVELY IDENTIFIED COMPOUNDS

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
Toluene-d8	 100	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	108	70-130



Client Sample ID: CCV Lab ID#: 0809414A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5092302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/23/08 09:10 AM

Compound	* · · · · · · · · · · · · · · · · · · ·		%Recovery
Methyl tert-butyl ether	. ,		116
Benzene		• • • • • • • • • • • • • • • • • • • •	86
Toluene			98
Ethyl Benzene			95
m,p-Xylene			95
o-Xylene		,	98

Container Type: NA - Not Applicable

Surrogates	rogates %Recovery		%Recovery	
Toluene-d8	100	70-130		
1,2-Dichloroethane-d4	105	70-130		
4-Bromofluorobenzene	116	70-130		



Client Sample ID: LCS Lab ID#: 0809414A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	5092303	*	Date of Collection: NA
Dil. Factor:	1.00		Date of Analysis: 9/23/08 09:48 AM

Compound	%Recovery
Methyl tert-butyl ether	134
Benzene	92
Toluene	110
Ethyl Benzene	99
m,p-Xylene	99
o-Xylene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	116	70-130

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