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1:03 pm, Nov 19, 2008

Alameda County  
Environmental Health

**Ian Robb**  
Project Manager  
Marketing Business Unit

**Chevron Environmental  
Management Company**  
6001 Bollinger Canyon Road  
San Ramon, CA 94583  
Tel (925) 842-9496  
Fax (925) 842-8370  
ianrobb@chevron.com

Nov. 18, 2008

RE: Chevron Service Station # - 20-6145

Address 800 Center Street, Oakland, CA

I have reviewed the attached report dated Nov. 18, 2008.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga-Rovers & Associates (CRA) upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Ian Robb

Attachment: Report



**CONESTOGA-ROVERS  
& ASSOCIATES**

5900 Hollis Street, Suite A  
Emeryville, California 94608  
Telephone: (510) 420-0700 Fax: (510) 420-9170  
<http://www.craworld.com>

November 18, 2008

Reference No. 312002

Mr. Steven Plunkett  
Alameda County Environmental Health (ACEH)  
1131 Harbor Bay Parkway  
Alameda, California 94502

Re: Soil Vapor Investigation Results  
Former Signal Oil Station (Chevron Site 20-6145)  
800 Center Street  
Oakland, California  
Fuel Leak Case No. RO0454 (Global ID # T0600102230)

Dear Mr. Plunkett:

## INTRODUCTION

Conestoga-Rovers & Associates (CRA), on behalf of Chevron Environmental Management Company (Chevron), is submitting this *Vapor Intrusion Assessment* performed at the site referenced above. On November 1, 2007, CRA submitted a feasibility study/corrective action plan (FS/CAP) to ACEH. Within the FS/CAP, CRA identified a data gap associated with the lack of soil vapor data for the site. On January 23, 2008, CRA submitted a *FS/CAP Addendum* documenting the installation of vapor probes at the site as well as the results of the first vapor probe sampling event. A description of the second sampling event and results are presented below.

## VAPOR RE-SAMPLING RESULTS

On October 3, 2008, CRA re-sampled vapor wells VP-1 and VP-3 through VP-6 to confirm initial analytical results. VP-2 could not be sampled due to water in the tubing. In accordance with the Department of Toxic Substances Control *Advisory – Active Soil Gas Investigations* guidance document, dated January 23, 2003, leak testing was performed with sampling to determine if ambient air could be entering the sample, potentially resulting in a negative bias.

In the first sampling event of November 6, 2007, isobutane, a shaving cream propellant, was used as the tracer gas. In one of the samples, VP-5, isobutane was detected, but the analytical laboratory was unable to determine if the elevated concentrations were from the high total petroleum hydrocarbons as gasoline (TPHg) concentrations of 2,100,000 micrograms per meter cubed ( $\mu\text{g}/\text{m}^3$ ) or from a potential leak in the

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November 18, 2008

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sampling train. Isobutane is no longer used as a tracer gas because it is a petroleum hydrocarbon and it contains potential impurities, including elevated concentrations of benzene.

During the second sampling event, ultra-high pure grade helium was used as the tracer gas. Ultra-high pure grade helium is preferred since it is not found at impacted fuel sites and should not contain organic impurities. No helium was detected in any of the vapor samples collected during the second sampling event.

Due to the elevated TPHg detected concentrations, elevated reporting limits for benzene, toluene, ethylbenzene and xylenes (BTEX), but lack of carcinogens detected (such as BTEX) from the first sampling event, it was determined that alternate methods would be needed to evaluate risk from potential vapor intrusion at this site, other than comparison to environmental screening levels. Therefore, a full scan was run by Modified EPA Method TO-15 for all of the vapor samples. Plus the top tentatively identified compounds (TICs) were identified so that the composition of the TPHg sample could be divided into aromatic (carcinogenic) and aliphatic (noncarcinogenic) components. These results, and the methods used to determine toxicity of noncarcinogenic soil vapor, were used to evaluate potential risk to human health from vapor intrusion to indoor air (Attachment A).

- Freon-11 was reported in VP-1 at 6.7  $\mu\text{g}/\text{m}^3$ .
- TPHg was detected in VP-4 and VP-4 DUPLICATE at 390  $\mu\text{g}/\text{m}^3$  and 240  $\mu\text{g}/\text{m}^3$ , respectively.
- In VP-5, the TPHg results were: EPA Method TO-3 was 120,000  $\mu\text{g}/\text{m}^3$ , Modified EPA Method TO-15 was 57,000  $\mu\text{g}/\text{m}^3$  and 65,000  $\mu\text{g}/\text{m}^3$  for the Lab Duplicate. All results were from the original sample canister taken from VP-5. Additionally, 2,2,4-trimethylpentane was detected in VP-5 and VP-5 Lab Duplicate at 28,000  $\mu\text{g}/\text{m}^3$  and 25,000  $\mu\text{g}/\text{m}^3$ , respectively.
- Carbon disulfide was detected in VP-5 and VP-6 at 20  $\mu\text{g}/\text{m}^3$  and 12  $\mu\text{g}/\text{m}^3$ , respectively.
- No carcinogens, including benzene, were detected in any samples.

The TPHg results in VP-5 were sampled by two different methods for comparison purposes and to determine the composition of the TPHg sample. Because of increased concentrations of TPHg in the original canister, samples VP-5 by Modified EPA Method TO-15 were diluted, increasing the reporting limits for all constituents. VP-5 Lab Duplicate was more concentrated and had lower reporting limits. The sample volume size for VP-5 Lab Duplicate was 50 milliliters (ml). For comparison purposes, this same sample volume of 50 ml was also run by EPA Method TO-3. All results were within laboratory limits.

The vicinity map is presented on Figure 1. The site plan with monitoring wells and vapor probe locations is presented on Figure 2. Cumulative soil vapor results are presented in Table 1. Analytical results for the second sampling event are included as Attachment A.



**CONESTOGA-ROVERS  
& ASSOCIATES**

November 18, 2008

Reference No. 312002

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**CONCLUSION**

In November 2007 and October 2008, six soil vapor probes were installed and sampled (with the exception of VP-2 in October 2008), and undisturbed soil samples were collected to analyze for physical parameters to provide site specific data for the purpose of modeling current site conditions for potential risk from vapor intrusion. An evaluation of potential vapor intrusion into buildings is being conducted based on California Environmental Protection Agency (Cal-EPA) and USEPA guidelines and will be submitted at a later date.

**CLOSING**

We appreciate the opportunity to work with you on this project. Please contact Charlotte Evans of CRA at (510) 420-3351 or Ian Robb of Chevron at (925) 543-2375 if you have any questions or comments.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

A handwritten signature in cursive script, appearing to read 'Charlotte Evans'.

Charlotte Evans

A handwritten signature in cursive script, appearing to read 'Brandon S. Wilken'.

Brandon S. Wilken P.G. #7564



CE/do/3

Encl.

c.c.: Ian Robb, Chevron EMC  
Rene Boisvert, Boulevard Equity Group

## FIGURES

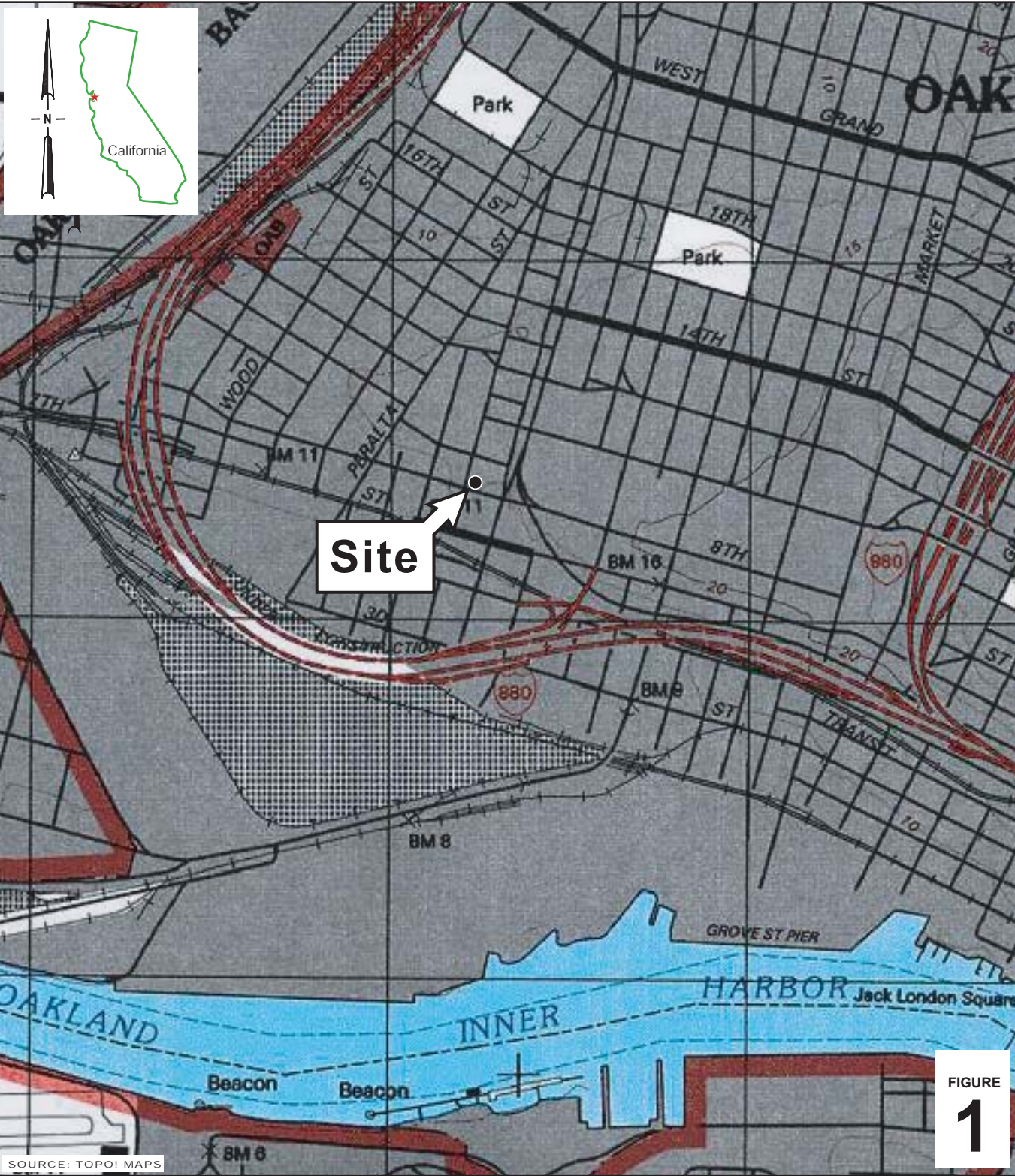


FIGURE 1

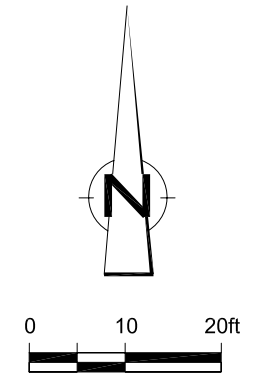
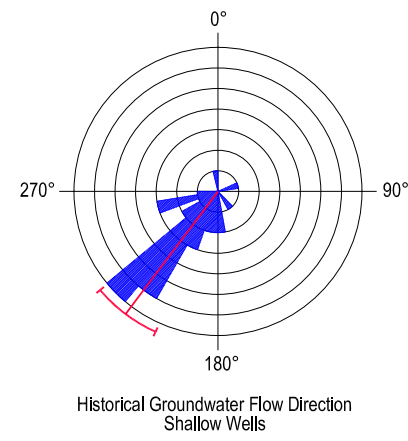
### Chevron Station No. 206145

800 Center Street  
Oakland, California







**CONESTOGA-ROVERS  
& ASSOCIATES**

### Vicinity Map



**EXPLANATION**

- MW-9  Deep monitoring well location
- MW-2  Shallow monitoring well location
- MW-1A  Destroyed well location
- VP-1  Vapor probe location

**FIGURE 2**  
**SITE PLAN with WELLS and VAPOR PROBE LOCATIONS**  
**FORMER CHEVRON SERVICE STATION 20-6145**  
**800 CENTER STREET**  
*Oakland, California*



## TABLES



VAPOR ANALYTICAL DATA  
FORMER CHEVRON STATION 20-6145  
800 CENTER ST., OAKLAND, CALIFORNIA

Sample ID	Sample Date	Probe Depth Interval (fbg)	TPHg	Concentrations reported in micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )							Isobutane <sup>2</sup> ppbv	Oxygen	Carbon Dioxide Methane Helium % Volume		
				Benzene	Toluene	Ethylbenzene	Xylenes <sup>1</sup>	MTBE	Naphthalene						
VP-1	11/06/07	5.0-5.5	1,400	<3.8	16	<5.2	<5.2	<17	<25	6.6	10	<0.024	<0.00024	--	
VP-1	LAB DUPLICATE		--	<3.8	14	<5.2	<5.2	<17	<25	6.5	--	--	--	--	
VP-1	10/3/2008	5.0-5.5	<97	<3.8	<4.5	<5.2	<5.2	<4.3	<25	--	14	0.027	0.00027	<0.12	
VP-2	11/06/07	5.0-5.5	<250	<3.9	<4.6	<5.2	<5.2	<17	<25	ND	10	0.88	<0.00024	--	
VP-2	LAB DUPLICATE		<250	--	--	--	--	--	--	--	10	0.88	<0.00024	--	
VP-2	10/3/2008	5.0-5.5	Not able to sample due to water in tubing.												
VP-3	11/06/07	5.0-5.5	<240	<3.7	<4.4	<5.0	<5.0	<17	<24	ND	16	2.0	<0.00023	--	
VP-3	10/03/08	5.0-5.5	<92	<3.6	<4.2	<4.9	<4.9	<4.0	<23	--	16	2.4	<0.00022	<0.11	
VP-3	LAB DUPLICATE		--	--	--	--	--	--	--	--	16	2.4	<0.00022	<0.11	
VP-4	11/06/07	5.0-5.5	280	<3.9	<4.6	<5.2	<5.2	<17	<25	ND	9.7	4.0	<0.00024	--	
VP-4	10/03/08	5.0-5.5	390	<4.1	<4.9	<5.6	<5.6	<4.6	<27	--	11	4.8	0.00028	<0.13	
VP-4 DUPLICATE	10/03/08	5.0-5.5	240	<4.2	<5.0	<5.7	<5.7	<4.8	<28	--	--	--	--	--	
VP-4	LAB DUPLICATE		--	--	--	--	--	--	--	--	11	5.0	0.00028	<0.13	
VP-5	11/06/07	5.0-5.5	<b>2,100,000</b>	<760	<900	<1000	<1000	<3400	<5000	13,000	16	4.4	<0.00024	--	
VP-5	10/03/08	5.0-5.5	<b>57,000</b>	<86	<100	<120	<120	<97	<560	--	17	4.1	<0.00024	<0.12	
VP-5	LAB DUPLICATE		<b>65,000</b>	<15	<18	<21	<21	<17	<100	--	--	--	--	--	
VP-5*	10/03/08	5.0-5.5	<b>120,000</b>	--	--	--	--	--	--	--	--	--	--	--	
VP-6	11/06/07	5.0-5.5	<260	<4.0	<4.8	<5.5	<5.5	<18	<26	ND	20	1.0	<0.00025	--	
VP-6 DUPLICATE	11/06/07	5.0-5.5	<250	<3.9	<4.6	<5.4	<5.4	<18	<26	ND	20	1.0	<0.00025	--	
VP-6	10/03/08	5.0-5.5	<97	<3.8	<4.5	<5.2	<5.2	<4.3	<25	--	20	0.98	<0.00024	<0.12	
ESL	--	--	10,000	84	63,000	980	21,000	9,400	72	--	--	--	--	--	

**VAPOR ANALYTICAL DATA  
FORMER CHEVRON STATION 20-6145  
800 CENTER ST., OAKLAND, CALIFORNIA**

Notes:

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method TO-3 for samples collected 11/06/07

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method TO-15 for samples collected 10/03/08

Benzene, toluene, ethylbenzene, xylenes (BTEX), methyl-tertiary butyl ether (MTBE), naphthalene by EPA method TO-15

Oxygen, carbon dioxide and helium by ASTM D-1946

fbg = feet below grade

ppbv = parts per billion volume

1 = Values for highest value of xylenes detected

2 = Constituent used as leak detector for samples collected 11/06/07 determined as a Tentatively Identified Compound (TICs) by Modified EPA Method TO-15. Match quality was below 50%.

<x.xxx = Below laboratory method detection limits

ND = Not detected above laboratory method detection limits, detection limit not reported by laboratory

-- = Not analyzed

\* = TPHg samples collected on 10/03/08 from VP-5 were analyzed by EPA Method TO-15 and EPA Method TO-3 for comparison purposes. Results were within laboratory limits.

ESL - Environmental Screening Level, Presented in Table E of Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final November 2007 (Updated May 2008) prepared by the San Francisco Regional Water Quality Control Board.

ATTACHMENT A



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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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).

**180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630**

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



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**WORK ORDER #: 0810122A**

Work Order Summary

<b>CLIENT:</b>	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
<b>PHONE:</b>	510-420-3351	<b>P.O. #</b>	312002/206145
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	206145 Oakland
<b>DATE RECEIVED:</b>	10/06/2008	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	10/14/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-3	Modified TO-15/TICs	3.0 "Hg	15 psi
02A	VP-1	Modified TO-15/TICs	4.5 "Hg	15 psi
03A	VP-4	Modified TO-15/TICs	6.5 "Hg	15 psi
04A	VP-4 DUPLICATE	Modified TO-15/TICs	7.0 "Hg	15 psi
05A	VP-6	Modified TO-15/TICs	4.5 "Hg	15 psi
06A	VP-5	Modified TO-15/TICs	5.0 "Hg	15 psi
06AA	VP-5 Lab Duplicate	Modified TO-15/TICs	5.0 "Hg	15 psi
08A(on hold)	VP-5 Repeat	Modified TO-15/TICs	4.5 "Hg	15 psi
09A	Lab Blank	Modified TO-15/TICs	NA	NA
10A	CCV	Modified TO-15/TICs	NA	NA
11A	LCS	Modified TO-15/TICs	NA	NA

CERTIFIED BY:  DATE: 10/14/08

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: 07/01/08, Expiration date: 06/30/09  
 Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards  
 This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.  
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**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Conestoga-Rovers Associates (CRA)**  
**Workorder# 0810122A**

Seven 1 Liter Summa Canister (100% Certified) samples were received on October 06, 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.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Daily CCV	<=/= 30% Difference	<=/= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
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**

Sample VP-5 Repeat was placed on hold per the client's request.

Sample identification for sample VP-5 was not provided on the sample tag. Therefore the information on the Chain of Custody was used to process and report the sample.

**Analytical Notes**

The recovery of surrogate 1,2-Dichloroethane-d4 in sample VP-5 Lab Duplicate 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



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

**Client Sample ID: VP-3**

**Lab ID#: 0810122A-01A**

No Detections Were Found.

**Client Sample ID: VP-1**

**Lab ID#: 0810122A-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 11	1.2	1.2	6.7	6.7

**Client Sample ID: VP-4**

**Lab ID#: 0810122A-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH ref. to Gasoline (MW=100)	26	95	100	390

### TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
1-Hexanol, 2-ethyl-	104-76-7	78%	6.5 N J
Nonanal	124-19-6	64%	8.0 N J
Benzene, ethyl-1,2,4-trimethyl-	54120-62-6	81%	12 N J
1-Phenylcyclopentanol-1	10487-96-4	43%	11 N J
1H-Indene, 2,3-dihydro-5,6-dimethyl-	1075-22-5	96%	6.9 N J

**Client Sample ID: VP-4 DUPLICATE**

**Lab ID#: 0810122A-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH ref. to Gasoline (MW=100)	26	58	110	240

### TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Benzene, 1-ethyl-2,4-dimethyl-	874-41-9	50%	7.9 N J
Benzene, pentamethyl-	700-12-9	81%	18 N J
Benzene, ethyl-1,2,4-trimethyl-	54120-62-6	83%	14 N J
1H-Indene, 2,3-dihydro-5,6-dimethyl-	1075-22-5	96%	11 N J
1H-Indene, 2,3-dihydro-1,2-dimethyl-	17057-82-8	94%	10 N J
Benzene, 1,3-dimethyl-5-(1-methylethyl)-	4706-90-5	87%	6.6 N J





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

Client Sample ID: VP-6

Lab ID#: 0810122A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Carbon Disulfide	1.2	4.0	3.7	12

Client Sample ID: VP-5

Lab ID#: 0810122A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2,2,4-Trimethylpentane	27	6100	120	28000
TPH ref. to Gasoline (MW=100)	540	14000	2200	57000

### TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Propane, 2,2-dimethyl-	463-82-1	56%	440 N J
Butane, 2,2-dimethyl-	75-83-2	83%	570 N J
Butane, 2,2,3-trimethyl-	464-06-2	64%	550 N J
Pentane, 2,2,3-trimethyl-	564-02-3	83%	470 N J
Pentane, 2,3,4-trimethyl-	565-75-3	91%	1200 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	5600 N J
1-Heptene, 6-methyl-	5026-76-6	43%	160 N J
Heptane, 2,2-dimethyl-	1071-26-7	47%	360 N J

Client Sample ID: VP-5 Lab Duplicate

Lab ID#: 0810122A-06AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Carbon Disulfide	4.8	6.5	15	20
2,2,4-Trimethylpentane	4.8	5300 E	23	25000 E
TPH ref. to Gasoline (MW=100)	97	16000	400	65000

### TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Propane, 2,2-dimethyl-	463-82-1	72%	250 N J
Butane, 2,2-dimethyl-	75-83-2	83%	360 N J
Butane, 2,2,3-trimethyl-	464-06-2	64%	370 N J
Pentane, 2,2,3-trimethyl-	564-02-3	83%	560 N J
Pentane, 2,3,4-trimethyl-	565-75-3	91%	1400 N J



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

Client Sample ID: VP-5 Lab Duplicate

Lab ID#: 0810122A-06AA

### TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount (ppbv)
Pentane, 2,3,3-trimethyl-	560-21-4	90%	5800 N J
Cyclopentane, 1,1,2-trimethyl-	4259-00-1	81%	220 N J
Heptane, 2,2-dimethyl-	1071-26-7	50%	430 N J
Decane, 2,5,6-trimethyl-	62108-23-0	64%	110 N J
Nonane, 3,7-dimethyl-	17302-32-8	64%	100 N J



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Client Sample ID: VP-3

Lab ID#: 0810122A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101010	Date of Collection:	10/3/08
Dil. Factor:	2.24	Date of Analysis:	10/10/08 10:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	4.5	Not Detected	9.2	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	1.1	Not Detected	4.3	Not Detected
Chloroethane	1.1	Not Detected	3.0	Not Detected
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	4.5	Not Detected	8.4	Not Detected
Freon 113	1.1	Not Detected	8.6	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	4.5	Not Detected	11	Not Detected
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	1.1	Not Detected	3.5	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	1.1	Not Detected	3.9	Not Detected
Methyl tert-butyl ether	1.1	Not Detected	4.0	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.1	Not Detected	3.3	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-3

Lab ID#: 0810122A-01A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101010</b>	<b>Date of Collection:</b> 10/3/08
<b>Dil. Factor:</b>	<b>2.24</b>	<b>Date of Analysis:</b> 10/10/08 10:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	Not Detected	7.6	Not Detected
2-Hexanone	4.5	Not Detected	18	Not Detected
Dibromochloromethane	1.1	Not Detected	9.5	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	1.1	Not Detected	4.9	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.5	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.7	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.5	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected
TPH ref. to Gasoline (MW=100)	22	Not Detected	92	Not Detected
Naphthalene	4.5	Not Detected	23	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS**

Compound	CAS Number	Match Quality	Amount ((ppbv))
None Identified			

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

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	116	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-1

Lab ID#: 0810122A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101011	Date of Collection:	10/3/08
Dil. Factor:	2.38	Date of Analysis:	10/10/08 11:36 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Freon 114	1.2	Not Detected	8.3	Not Detected
Chloromethane	4.8	Not Detected	9.8	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	1.2	Not Detected	4.6	Not Detected
Chloroethane	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	1.2	6.7	6.7
Ethanol	4.8	Not Detected	9.0	Not Detected
Freon 113	1.2	Not Detected	9.1	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Acetone	4.8	Not Detected	11	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.7	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.1	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Cyclohexane	1.2	Not Detected	4.1	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.5	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.0	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-1

Lab ID#: 0810122A-02A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101011</b>	<b>Date of Collection:</b> 10/3/08
<b>Dil. Factor:</b>	<b>2.38</b>	<b>Date of Analysis:</b> 10/10/08 11:36 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	Not Detected	8.1	Not Detected
2-Hexanone	4.8	Not Detected	19	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.1	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	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
Styrene	1.2	Not Detected	5.1	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.2	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.8	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	35	Not Detected
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected
TPH ref. to Gasoline (MW=100)	24	Not Detected	97	Not Detected
Naphthalene	4.8	Not Detected	25	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS**

Compound	CAS Number	Match Quality	Amount ((ppbv))
None Identified			

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

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	114	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-4

Lab ID#: 0810122A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101020	Date of Collection:	10/3/08
Dil. Factor:	2.58	Date of Analysis:	10/10/08 05:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.3	Not Detected	6.4	Not Detected
Freon 114	1.3	Not Detected	9.0	Not Detected
Chloromethane	5.2	Not Detected	11	Not Detected
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	5.0	Not Detected
Chloroethane	1.3	Not Detected	3.4	Not Detected
Freon 11	1.3	Not Detected	7.2	Not Detected
Ethanol	5.2	Not Detected	9.7	Not Detected
Freon 113	1.3	Not Detected	9.9	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	5.2	Not Detected	12	Not Detected
2-Propanol	5.2	Not Detected	13	Not Detected
Carbon Disulfide	1.3	Not Detected	4.0	Not Detected
3-Chloropropene	5.2	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.5	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Hexane	1.3	Not Detected	4.5	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.8	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.8	Not Detected
Chloroform	1.3	Not Detected	6.3	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.1	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.0	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Heptane	1.3	Not Detected	5.3	Not Detected
Trichloroethene	1.3	Not Detected	6.9	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.0	Not Detected
1,4-Dioxane	5.2	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.6	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.8	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.3	Not Detected
Toluene	1.3	Not Detected	4.9	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	5.8	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-4

Lab ID#: 0810122A-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101020</b>	<b>Date of Collection:</b> 10/3/08
<b>Dil. Factor:</b>	<b>2.58</b>	<b>Date of Analysis:</b> 10/10/08 05:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethene	1.3	Not Detected	8.8	Not Detected
2-Hexanone	5.2	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	9.9	Not Detected
Chlorobenzene	1.3	Not Detected	5.9	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
Styrene	1.3	Not Detected	5.5	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.3	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.8	Not Detected
Propylbenzene	1.3	Not Detected	6.3	Not Detected
4-Ethyltoluene	1.3	Not Detected	6.3	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.3	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.3	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.7	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
1,2,4-Trichlorobenzene	5.2	Not Detected	38	Not Detected
Hexachlorobutadiene	5.2	Not Detected	55	Not Detected
TPH ref. to Gasoline (MW=100)	26	95	100	390
Naphthalene	5.2	Not Detected	27	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS**

Compound	CAS Number	Match Quality	Amount ((ppbv))
1-Hexanol, 2-ethyl-	104-76-7	78%	6.5 N J
Nonanal	124-19-6	64%	8.0 N J
Benzene, ethyl-1,2,4-trimethyl-	54120-62-6	81%	12 N J
1-Phenylcyclopentanol-1	10487-96-4	43%	11 N J
1H-Indene, 2,3-dihydro-5,6-dimethyl-	1075-22-5	96%	6.9 N J

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

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130





AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-4

Lab ID#: 0810122A-03A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101020</b>	<b>Date of Collection:</b> 10/3/08
<b>Dil. Factor:</b>	<b>2.58</b>	<b>Date of Analysis:</b> 10/10/08 05:48 PM

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	122	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-4 DUPLICATE

Lab ID#: 0810122A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101012	Date of Collection:	10/3/08
Dil. Factor:	2.64	Date of Analysis:	10/10/08 12:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.3	Not Detected	6.5	Not Detected
Freon 114	1.3	Not Detected	9.2	Not Detected
Chloromethane	5.3	Not Detected	11	Not Detected
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
1,3-Butadiene	1.3	Not Detected	2.9	Not Detected
Bromomethane	1.3	Not Detected	5.1	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	1.3	Not Detected	7.4	Not Detected
Ethanol	5.3	Not Detected	9.9	Not Detected
Freon 113	1.3	Not Detected	10	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Acetone	5.3	Not Detected	12	Not Detected
2-Propanol	5.3	Not Detected	13	Not Detected
Carbon Disulfide	1.3	Not Detected	4.1	Not Detected
3-Chloropropene	5.3	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.6	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Hexane	1.3	Not Detected	4.6	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.9	Not Detected
Chloroform	1.3	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Cyclohexane	1.3	Not Detected	4.5	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.2	Not Detected
Benzene	1.3	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.3	Not Detected
Heptane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	Not Detected	7.1	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.1	Not Detected
1,4-Dioxane	5.3	Not Detected	19	Not Detected
Bromodichloromethane	1.3	Not Detected	8.8	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.4	Not Detected
Toluene	1.3	Not Detected	5.0	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-4 DUPLICATE

Lab ID#: 0810122A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101012	Date of Collection:	10/3/08
Dil. Factor:	2.64	Date of Analysis:	10/10/08 12:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	Not Detected	9.0	Not Detected
2-Hexanone	5.3	Not Detected	22	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.1	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
Styrene	1.3	Not Detected	5.6	Not Detected
Bromoform	1.3	Not Detected	14	Not Detected
Cumene	1.3	Not Detected	6.5	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.1	Not Detected
Propylbenzene	1.3	Not Detected	6.5	Not Detected
4-Ethyltoluene	1.3	Not Detected	6.5	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.8	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,2,4-Trichlorobenzene	5.3	Not Detected	39	Not Detected
Hexachlorobutadiene	5.3	Not Detected	56	Not Detected
TPH ref. to Gasoline (MW=100)	26	58	110	240
Naphthalene	5.3	Not Detected	28	Not Detected

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Benzene, 1-ethyl-2,4-dimethyl-	874-41-9	50%	7.9 N J
Benzene, pentamethyl-	700-12-9	81%	18 N J
Benzene, ethyl-1,2,4-trimethyl-	54120-62-6	83%	14 N J
1H-Indene, 2,3-dihydro-5,6-dimethyl-	1075-22-5	96%	11 N J
1H-Indene, 2,3-dihydro-1,2-dimethyl-	17057-82-8	94%	10 N J
Benzene, 1,3-dimethyl-5-(1-methylethyl)-	4706-90-5	87%	6.6 N J

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

Surrogates	%Recovery	Method Limits
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AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: VP-4 DUPLICATE**

**Lab ID#: 0810122A-04A**

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101012</b>	<b>Date of Collection: 10/3/08</b>
<b>Dil. Factor:</b>	<b>2.64</b>	<b>Date of Analysis: 10/10/08 12:21 PM</b>

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	113	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6

Lab ID#: 0810122A-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101013</b>	<b>Date of Collection:</b> 10/3/08
<b>Dil. Factor:</b>	<b>2.38</b>	<b>Date of Analysis:</b> 10/10/08 01:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Freon 114	1.2	Not Detected	8.3	Not Detected
Chloromethane	4.8	Not Detected	9.8	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	1.2	Not Detected	4.6	Not Detected
Chloroethane	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	Not Detected	6.7	Not Detected
Ethanol	4.8	Not Detected	9.0	Not Detected
Freon 113	1.2	Not Detected	9.1	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Acetone	4.8	Not Detected	11	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	1.2	4.0	3.7	12
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	1.2	Not Detected	4.1	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.3	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	Not Detected	3.5	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Cyclohexane	1.2	Not Detected	4.1	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.5	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.0	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6

Lab ID#: 0810122A-05A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101013</b>	<b>Date of Collection:</b> 10/3/08
<b>Dil. Factor:</b>	<b>2.38</b>	<b>Date of Analysis:</b> 10/10/08 01:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	Not Detected	8.1	Not Detected
2-Hexanone	4.8	Not Detected	19	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.1	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	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
Styrene	1.2	Not Detected	5.1	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.2	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.8	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	35	Not Detected
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected
TPH ref. to Gasoline (MW=100)	24	Not Detected	97	Not Detected
Naphthalene	4.8	Not Detected	25	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS**

Compound	CAS Number	Match Quality	Amount ((ppbv))
None Identified			

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

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	114	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5

Lab ID#: 0810122A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101016	Date of Collection:	10/3/08
Dil. Factor:	53.8	Date of Analysis:	10/10/08 03:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	27	Not Detected	130	Not Detected
Freon 114	27	Not Detected	190	Not Detected
Chloromethane	110	Not Detected	220	Not Detected
Vinyl Chloride	27	Not Detected	69	Not Detected
1,3-Butadiene	27	Not Detected	60	Not Detected
Bromomethane	27	Not Detected	100	Not Detected
Chloroethane	27	Not Detected	71	Not Detected
Freon 11	27	Not Detected	150	Not Detected
Ethanol	110	Not Detected	200	Not Detected
Freon 113	27	Not Detected	210	Not Detected
1,1-Dichloroethene	27	Not Detected	110	Not Detected
Acetone	110	Not Detected	260	Not Detected
2-Propanol	110	Not Detected	260	Not Detected
Carbon Disulfide	27	Not Detected	84	Not Detected
3-Chloropropene	110	Not Detected	340	Not Detected
Methylene Chloride	27	Not Detected	93	Not Detected
Methyl tert-butyl ether	27	Not Detected	97	Not Detected
trans-1,2-Dichloroethene	27	Not Detected	110	Not Detected
Hexane	27	Not Detected	95	Not Detected
1,1-Dichloroethane	27	Not Detected	110	Not Detected
2-Butanone (Methyl Ethyl Ketone)	27	Not Detected	79	Not Detected
cis-1,2-Dichloroethene	27	Not Detected	110	Not Detected
Tetrahydrofuran	27	Not Detected	79	Not Detected
Chloroform	27	Not Detected	130	Not Detected
1,1,1-Trichloroethane	27	Not Detected	150	Not Detected
Cyclohexane	27	Not Detected	92	Not Detected
Carbon Tetrachloride	27	Not Detected	170	Not Detected
2,2,4-Trimethylpentane	27	6100	120	28000
Benzene	27	Not Detected	86	Not Detected
1,2-Dichloroethane	27	Not Detected	110	Not Detected
Heptane	27	Not Detected	110	Not Detected
Trichloroethene	27	Not Detected	140	Not Detected
1,2-Dichloropropane	27	Not Detected	120	Not Detected
1,4-Dioxane	110	Not Detected	390	Not Detected
Bromodichloromethane	27	Not Detected	180	Not Detected
cis-1,3-Dichloropropene	27	Not Detected	120	Not Detected
4-Methyl-2-pentanone	27	Not Detected	110	Not Detected
Toluene	27	Not Detected	100	Not Detected
trans-1,3-Dichloropropene	27	Not Detected	120	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5

Lab ID#: 0810122A-06A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101016</b>	<b>Date of Collection:</b> 10/3/08
<b>Dil. Factor:</b>	<b>53.8</b>	<b>Date of Analysis:</b> 10/10/08 03:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	27	Not Detected	150	Not Detected
Tetrachloroethene	27	Not Detected	180	Not Detected
2-Hexanone	110	Not Detected	440	Not Detected
Dibromochloromethane	27	Not Detected	230	Not Detected
1,2-Dibromoethane (EDB)	27	Not Detected	210	Not Detected
Chlorobenzene	27	Not Detected	120	Not Detected
Ethyl Benzene	27	Not Detected	120	Not Detected
m,p-Xylene	27	Not Detected	120	Not Detected
o-Xylene	27	Not Detected	120	Not Detected
Styrene	27	Not Detected	110	Not Detected
Bromoform	27	Not Detected	280	Not Detected
Cumene	27	Not Detected	130	Not Detected
1,1,2,2-Tetrachloroethane	27	Not Detected	180	Not Detected
Propylbenzene	27	Not Detected	130	Not Detected
4-Ethyltoluene	27	Not Detected	130	Not Detected
1,3,5-Trimethylbenzene	27	Not Detected	130	Not Detected
1,2,4-Trimethylbenzene	27	Not Detected	130	Not Detected
1,3-Dichlorobenzene	27	Not Detected	160	Not Detected
1,4-Dichlorobenzene	27	Not Detected	160	Not Detected
alpha-Chlorotoluene	27	Not Detected	140	Not Detected
1,2-Dichlorobenzene	27	Not Detected	160	Not Detected
1,2,4-Trichlorobenzene	110	Not Detected	800	Not Detected
Hexachlorobutadiene	110	Not Detected	1100	Not Detected
TPH ref. to Gasoline (MW=100)	540	14000	2200	57000
Naphthalene	110	Not Detected	560	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS**

Compound	CAS Number	Match Quality	Amount ((ppbv))
Propane, 2,2-dimethyl-	463-82-1	56%	440 N J
Butane, 2,2-dimethyl-	75-83-2	83%	570 N J
Butane, 2,2,3-trimethyl-	464-06-2	64%	550 N J
Pentane, 2,2,3-trimethyl-	564-02-3	83%	470 N J
Pentane, 2,3,4-trimethyl-	565-75-3	91%	1200 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	5600 N J
1-Heptene, 6-methyl-	5026-76-6	43%	160 N J
Heptane, 2,2-dimethyl-	1071-26-7	47%	360 N J

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





AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5

Lab ID#: 0810122A-06A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101016</b>	<b>Date of Collection:</b> 10/3/08
<b>Dil. Factor:</b>	<b>53.8</b>	<b>Date of Analysis:</b> 10/10/08 03:08 PM

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	114	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5 Lab Duplicate

Lab ID#: 0810122A-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101014a	Date of Collection:	10/3/08
Dil. Factor:	9.68	Date of Analysis:	10/10/08 01:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	4.8	Not Detected	24	Not Detected
Freon 114	4.8	Not Detected	34	Not Detected
Chloromethane	19	Not Detected	40	Not Detected
Vinyl Chloride	4.8	Not Detected	12	Not Detected
1,3-Butadiene	4.8	Not Detected	11	Not Detected
Bromomethane	4.8	Not Detected	19	Not Detected
Chloroethane	4.8	Not Detected	13	Not Detected
Freon 11	4.8	Not Detected	27	Not Detected
Ethanol	19	Not Detected	36	Not Detected
Freon 113	4.8	Not Detected	37	Not Detected
1,1-Dichloroethene	4.8	Not Detected	19	Not Detected
Acetone	19	Not Detected	46	Not Detected
2-Propanol	19	Not Detected	48	Not Detected
Carbon Disulfide	4.8	6.5	15	20
3-Chloropropene	19	Not Detected	60	Not Detected
Methylene Chloride	4.8	Not Detected	17	Not Detected
Methyl tert-butyl ether	4.8	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	4.8	Not Detected	19	Not Detected
Hexane	4.8	Not Detected	17	Not Detected
1,1-Dichloroethane	4.8	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	4.8	Not Detected	19	Not Detected
Tetrahydrofuran	4.8	Not Detected	14	Not Detected
Chloroform	4.8	Not Detected	24	Not Detected
1,1,1-Trichloroethane	4.8	Not Detected	26	Not Detected
Cyclohexane	4.8	Not Detected	17	Not Detected
Carbon Tetrachloride	4.8	Not Detected	30	Not Detected
2,2,4-Trimethylpentane	4.8	5300 E	23	25000 E
Benzene	4.8	Not Detected	15	Not Detected
1,2-Dichloroethane	4.8	Not Detected	20	Not Detected
Heptane	4.8	Not Detected	20	Not Detected
Trichloroethene	4.8	Not Detected	26	Not Detected
1,2-Dichloropropane	4.8	Not Detected	22	Not Detected
1,4-Dioxane	19	Not Detected	70	Not Detected
Bromodichloromethane	4.8	Not Detected	32	Not Detected
cis-1,3-Dichloropropene	4.8	Not Detected	22	Not Detected
4-Methyl-2-pentanone	4.8	Not Detected	20	Not Detected
Toluene	4.8	Not Detected	18	Not Detected
trans-1,3-Dichloropropene	4.8	Not Detected	22	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5 Lab Duplicate

Lab ID#: 0810122A-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101014a	Date of Collection:	10/3/08
Dil. Factor:	9.68	Date of Analysis:	10/10/08 01:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	4.8	Not Detected	26	Not Detected
Tetrachloroethene	4.8	Not Detected	33	Not Detected
2-Hexanone	19	Not Detected	79	Not Detected
Dibromochloromethane	4.8	Not Detected	41	Not Detected
1,2-Dibromoethane (EDB)	4.8	Not Detected	37	Not Detected
Chlorobenzene	4.8	Not Detected	22	Not Detected
Ethyl Benzene	4.8	Not Detected	21	Not Detected
m,p-Xylene	4.8	Not Detected	21	Not Detected
o-Xylene	4.8	Not Detected	21	Not Detected
Styrene	4.8	Not Detected	21	Not Detected
Bromoform	4.8	Not Detected	50	Not Detected
Cumene	4.8	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	4.8	Not Detected	33	Not Detected
Propylbenzene	4.8	Not Detected	24	Not Detected
4-Ethyltoluene	4.8	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	4.8	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	4.8	Not Detected	24	Not Detected
1,3-Dichlorobenzene	4.8	Not Detected	29	Not Detected
1,4-Dichlorobenzene	4.8	Not Detected	29	Not Detected
alpha-Chlorotoluene	4.8	Not Detected	25	Not Detected
1,2-Dichlorobenzene	4.8	Not Detected	29	Not Detected
1,2,4-Trichlorobenzene	19	Not Detected	140	Not Detected
Hexachlorobutadiene	19	Not Detected	210	Not Detected
TPH ref. to Gasoline (MW=100)	97	16000	400	65000
Naphthalene	19	Not Detected	100	Not Detected

E = Exceeds instrument calibration range.

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Propane, 2,2-dimethyl-	463-82-1	72%	250 N J
Butane, 2,2-dimethyl-	75-83-2	83%	360 N J
Butane, 2,2,3-trimethyl-	464-06-2	64%	370 N J
Pentane, 2,2,3-trimethyl-	564-02-3	83%	560 N J
Pentane, 2,3,4-trimethyl-	565-75-3	91%	1400 N J
Pentane, 2,3,3-trimethyl-	560-21-4	90%	5800 N J
Cyclopentane, 1,1,2-trimethyl-	4259-00-1	81%	220 N J
Heptane, 2,2-dimethyl-	1071-26-7	50%	430 N J
Decane, 2,5,6-trimethyl-	62108-23-0	64%	110 N J



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5 Lab Duplicate

Lab ID#: 0810122A-06AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101014a	Date of Collection:	10/3/08
Dil. Factor:	9.68	Date of Analysis:	10/10/08 01:44 PM

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	CAS Number	Match Quality	Amount ((ppbv))
Nonane, 3,7-dimethyl-	17302-32-8	64%	100 N J

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

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

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	160 Q	70-130
4-Bromofluorobenzene	116	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0810122A-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101005	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/10/08 07:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0810122A-09A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101005</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/10/08 07:19 AM</b>

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	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
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,1,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected
Naphthalene	2.0	Not Detected	10	Not Detected

**TENTATIVELY IDENTIFIED COMPOUNDS**

Compound	CAS Number	Match Quality	Amount ((ppbv))
None Identified			

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	119	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0810122A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/10/08 05:16 AM

Compound	%Recovery
Freon 12	103
Freon 114	99
Chloromethane	94
Vinyl Chloride	90
1,3-Butadiene	108
Bromomethane	88
Chloroethane	81
Freon 11	102
Ethanol	84
Freon 113	97
1,1-Dichloroethene	91
Acetone	76
2-Propanol	85
Carbon Disulfide	88
3-Chloropropene	81
Methylene Chloride	87
Methyl tert-butyl ether	113
trans-1,2-Dichloroethene	92
Hexane	78
1,1-Dichloroethane	86
2-Butanone (Methyl Ethyl Ketone)	92
cis-1,2-Dichloroethene	88
Tetrahydrofuran	81
Chloroform	99
1,1,1-Trichloroethane	102
Cyclohexane	92
Carbon Tetrachloride	106
2,2,4-Trimethylpentane	82
Benzene	95
1,2-Dichloroethane	102
Heptane	92
Trichloroethene	103
1,2-Dichloropropane	90
1,4-Dioxane	95
Bromodichloromethane	106
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	95
Toluene	101
trans-1,3-Dichloropropene	89



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0810122A-10A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101002</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/10/08 05:16 AM</b>

<b>Compound</b>	<b>%Recovery</b>
1,1,2-Trichloroethane	93
Tetrachloroethene	100
2-Hexanone	81
Dibromochloromethane	104
1,2-Dibromoethane (EDB)	103
Chlorobenzene	103
Ethyl Benzene	103
m,p-Xylene	104
o-Xylene	108
Styrene	118
Bromoform	126
Cumene	112
1,1,1,2-Tetrachloroethane	122
Propylbenzene	119
4-Ethyltoluene	107
1,3,5-Trimethylbenzene	124
1,2,4-Trimethylbenzene	119
1,3-Dichlorobenzene	127
1,4-Dichlorobenzene	123
alpha-Chlorotoluene	117
1,2-Dichlorobenzene	129
1,2,4-Trichlorobenzene	104
Hexachlorobutadiene	103
TPH ref. to Gasoline (MW=100)	Not Spiked
Naphthalene	117

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	117	70-130





AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0810122A-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	t101003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/10/08 05:52 AM

Compound	%Recovery
Freon 12	96
Freon 114	91
Chloromethane	91
Vinyl Chloride	83
1,3-Butadiene	94
Bromomethane	76
Chloroethane	74
Freon 11	97
Ethanol	83
Freon 113	107
1,1-Dichloroethene	94
Acetone	70
2-Propanol	84
Carbon Disulfide	80
3-Chloropropene	76
Methylene Chloride	87
Methyl tert-butyl ether	114
trans-1,2-Dichloroethene	89
Hexane	73
1,1-Dichloroethane	83
2-Butanone (Methyl Ethyl Ketone)	91
cis-1,2-Dichloroethene	84
Tetrahydrofuran	75
Chloroform	102
1,1,1-Trichloroethane	103
Cyclohexane	88
Carbon Tetrachloride	107
2,2,4-Trimethylpentane	75
Benzene	91
1,2-Dichloroethane	101
Heptane	88
Trichloroethene	102
1,2-Dichloropropane	81
1,4-Dioxane	98
Bromodichloromethane	104
cis-1,3-Dichloropropene	98
4-Methyl-2-pentanone	88
Toluene	105
trans-1,3-Dichloropropene	86



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0810122A-11A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>t101003</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/10/08 05:52 AM</b>

<b>Compound</b>	<b>%Recovery</b>
1,1,2-Trichloroethane	91
Tetrachloroethene	104
2-Hexanone	75
Dibromochloromethane	106
1,2-Dibromoethane (EDB)	101
Chlorobenzene	103
Ethyl Benzene	100
m,p-Xylene	103
o-Xylene	106
Styrene	115
Bromoform	129
Cumene	112
1,1,1,2-Tetrachloroethane	120
Propylbenzene	117
4-Ethyltoluene	105
1,3,5-Trimethylbenzene	120
1,2,4-Trimethylbenzene	114
1,3-Dichlorobenzene	124
1,4-Dichlorobenzene	119
alpha-Chlorotoluene	121
1,2-Dichlorobenzene	124
1,2,4-Trichlorobenzene	85
Hexachlorobutadiene	82
TPH ref. to Gasoline (MW=100)	Not Spiked
Naphthalene	91

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	119	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

10/22/2008

Ms. Charlotte Evans  
Conestoga-Rovers Associates (CRA)  
5900 Hollis Street  
Suite A  
Emeryville CA 94608

Project Name: Oakland  
Project #: 206145

Dear Ms. Charlotte Evans

The following report includes the data for the above referenced project for sample(s) received on 10/6/2008 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

A handwritten signature in black ink that reads 'Kyle Vagadori'.

Kyle Vagadori  
Project Manager



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**WORK ORDER #: 0810122D**

Work Order Summary

<b>CLIENT:</b>	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
<b>PHONE:</b>	510-420-3351	<b>P.O. #</b>	312002/206145
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	206145 Oakland
<b>DATE RECEIVED:</b>	10/06/2008	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	10/22/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
06A	VP-5	Modified TO-3	5.0 "Hg	15 psi
07A	Lab Blank	Modified TO-3	NA	NA
08A	LCS	Modified TO-3	NA	NA

CERTIFIED BY: *Sivda J. Fumara*

DATE: 10/22/08

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: 07/01/08, 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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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**  
**Modified TO-3**  
**Conestoga-Rovers Associates (CRA)**  
**Workorder# 0810122D**

One 1 Liter Summa Canister (100% Certified) sample was received on October 06, 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) ppbv result to ug/m<sup>3</sup>.

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

<i>Requirement</i>	<i>TO-3</i>	<i>ATL Modifications</i>
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch <= 20 samples
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**

Sample VP-5 Repeat was placed on hold per the client's request.

Sample identification for sample VP-5 was not provided on the sample tag. Therefore the information on the Chain of Custody was used to process and report the sample.

**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



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

Client Sample ID: VP-5

Lab ID#: 0810122D-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH (Gasoline Range)	240	29000	990	120000



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Client Sample ID: VP-5

Lab ID#: 0810122D-06A

**MODIFIED EPA METHOD TO-3 GC/FID**

<b>File Name:</b>	<b>d101310</b>	<b>Date of Collection:</b>	<b>10/3/08</b>	
<b>Dil. Factor:</b>	<b>9.68</b>	<b>Date of Analysis:</b>	<b>10/13/08 05:38 PM</b>	

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
TPH (Gasoline Range)	240	29000	990	120000

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

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	97	75-150





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Client Sample ID: Lab Blank

Lab ID#: 0810122D-07A

**MODIFIED EPA METHOD TO-3 GC/FID**

<b>File Name:</b>	<b>d101307</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 10/13/08 03:08 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
TPH (Gasoline Range)	25	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	96	75-150



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Client Sample ID: LCS

Lab ID#: 0810122D-08A

**MODIFIED EPA METHOD TO-3 GC/FID**

<b>File Name:</b>	<b>d101312</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 10/13/08 07:08 PM

<b>Compound</b>	<b>%Recovery</b>
TPH (Gasoline Range)	89

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
Fluorobenzene (FID)	114	75-150



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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).

**180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630**

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**WORK ORDER #: 0810122B**

Work Order Summary

<b>CLIENT:</b>	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
<b>PHONE:</b>	510-420-3351	<b>P.O. #</b>	312002/206145
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	206145 Oakland
<b>DATE RECEIVED:</b>	10/06/2008	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	10/13/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	VP-3	Modified ASTM D-1946	3.0 "Hg	15 psi
01AA	VP-3 Lab Duplicate	Modified ASTM D-1946	3.0 "Hg	15 psi
02A	VP-1	Modified ASTM D-1946	4.5 "Hg	15 psi
03A	VP-4	Modified ASTM D-1946	6.5 "Hg	15 psi
04A	VP-4 DUPLICATE	Modified ASTM D-1946	7.0 "Hg	15 psi
05A	VP-6	Modified ASTM D-1946	4.5 "Hg	15 psi
06A	VP-5	Modified ASTM D-1946	5.0 "Hg	15 psi
08A(on hold)	VP-5 Repeat	Modified ASTM D-1946	4.5 "Hg	15 psi
09A	Lab Blank	Modified ASTM D-1946	NA	NA
09B	Lab Blank	Modified ASTM D-1946	NA	NA
10A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY:       DATE: 10/13/08

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: 07/01/08, 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 ASTM D-1946**  
**Conestoga-Rovers Associates (CRA)**  
**Workorder# 0810122B**

Seven 1 Liter Summa Canister (100% Certified) samples were received on October 06, 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.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
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 $\geq 95\%$ 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**

Sample VP-5 Repeat was placed on hold per the client's request.

Sample identification for sample VP-5 was not provided on the sample tag. Therefore the information on the Chain of Custody was used to process and report the sample.

### **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



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

**Client Sample ID: VP-3**

**Lab ID#: 0810122B-01A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	16
Carbon Dioxide	0.022	2.4

**Client Sample ID: VP-3 Lab Duplicate**

**Lab ID#: 0810122B-01AA**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	16
Carbon Dioxide	0.022	2.4

**Client Sample ID: VP-1**

**Lab ID#: 0810122B-02A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	14
Methane	0.00024	0.00027
Carbon Dioxide	0.024	0.027

**Client Sample ID: VP-4**

**Lab ID#: 0810122B-03A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.26	11
Methane	0.00026	0.00028
Carbon Dioxide	0.026	4.8

**Client Sample ID: VP-4 DUPLICATE**

**Lab ID#: 0810122B-04A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.26	11
Methane	0.00026	0.00028
Carbon Dioxide	0.026	5.0



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## Summary of Detected Compounds

### NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

**Client Sample ID: VP-6**

**Lab ID#: 0810122B-05A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	20
Carbon Dioxide	0.024	0.98

**Client Sample ID: VP-5**

**Lab ID#: 0810122B-06A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	17
Carbon Dioxide	0.024	4.1





AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: VP-3**

**Lab ID#: 0810122B-01A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100905</b>	<b>Date of Collection:</b>	<b>10/3/08</b>
<b>Dil. Factor:</b>	<b>2.24</b>	<b>Date of Analysis:</b>	<b>10/9/08 10:09 AM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.22	16
Methane	0.00022	Not Detected
Carbon Dioxide	0.022	2.4
Helium	0.11	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-3 Lab Duplicate

Lab ID#: 0810122B-01AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9100906	Date of Collection:	10/3/08
Dil. Factor:	2.24	Date of Analysis:	10/9/08 10:50 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.22	16
Methane	0.00022	Not Detected
Carbon Dioxide	0.022	2.4
Helium	0.11	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-1

Lab ID#: 0810122B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9100907	Date of Collection:	10/3/08
Dil. Factor:	2.38	Date of Analysis:	10/9/08 11:20 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	14
Methane	0.00024	0.00027
Carbon Dioxide	0.024	0.027
Helium	0.12	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: VP-4**

**Lab ID#: 0810122B-03A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100908</b>	<b>Date of Collection: 10/3/08</b>
<b>Dil. Factor:</b>	<b>2.58</b>	<b>Date of Analysis: 10/9/08 12:17 PM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.26	11
Methane	0.00026	0.00028
Carbon Dioxide	0.026	4.8
Helium	0.13	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: VP-4 DUPLICATE**

**Lab ID#: 0810122B-04A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100909</b>	<b>Date of Collection:</b>	<b>10/3/08</b>
<b>Dil. Factor:</b>	<b>2.64</b>	<b>Date of Analysis:</b>	<b>10/9/08 12:43 PM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.26	11
Methane	0.00026	0.00028
Carbon Dioxide	0.026	5.0
Helium	0.13	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-6

Lab ID#: 0810122B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9100910	Date of Collection:	10/3/08
Dil. Factor:	2.38	Date of Analysis:	10/9/08 01:53 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	20
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	0.98
Helium	0.12	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: VP-5

Lab ID#: 0810122B-06A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100911</b>	<b>Date of Collection:</b>	<b>10/3/08</b>
<b>Dil. Factor:</b>	<b>2.42</b>	<b>Date of Analysis:</b>	<b>10/9/08 02:27 PM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.24	17
Methane	0.00024	Not Detected
Carbon Dioxide	0.024	4.1
Helium	0.12	Not Detected

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: Lab Blank**

**Lab ID#: 0810122B-09A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100904</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/9/08 08:37 AM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Oxygen	0.10	Not Detected
Methane	0.00010	Not Detected
Carbon Dioxide	0.010	Not Detected

**Container Type: NA - Not Applicable**





AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: Lab Blank**

**Lab ID#: 0810122B-09B**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100903b</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/9/08 08:12 AM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.050	Not Detected

**Container Type: NA - Not Applicable**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: LCS**

**Lab ID#: 0810122B-10A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100930</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/10/08 12:57 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Oxygen	100
Methane	101
Carbon Dioxide	100
Helium	106

**Container Type: NA - Not Applicable**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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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).

**180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630**

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**WORK ORDER #: 0810122C**

Work Order Summary

<b>CLIENT:</b>	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	<b>BILL TO:</b>	Ms. Charlotte Evans Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608
<b>PHONE:</b>	510-420-3351	<b>P.O. #</b>	312002/206145
<b>FAX:</b>	510-420-9170	<b>PROJECT #</b>	206145 Oakland
<b>DATE RECEIVED:</b>	10/06/2008	<b>CONTACT:</b>	Kyle Vagadori
<b>DATE COMPLETED:</b>	10/13/2008		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
07A	Helium	Modified ASTM D-1946	8.5 "Hg	15 psi
07AA	Helium Lab Duplicate	Modified ASTM D-1946	8.5 "Hg	15 psi
08A	Lab Blank	Modified ASTM D-1946	NA	NA
09A	LCS	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

DATE: 10/13/08

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: 07/01/08, 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 ASTM D-1946**  
**Conestoga-Rovers Associates (CRA)**  
**Workorder# 0810122C**

One 1 Liter Summa Canister (100% Certified) sample was received on October 06, 2008. The laboratory performed analysis via Modified ASTM Method D-1946 for Helium in air using GC/TCD. The method involves direct injection of 1.0 mL of sample.

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

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
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 $\geq 95\%$ 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



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

**Client Sample ID: Helium**

**Lab ID#: 0810122C-07A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.14	80

**Client Sample ID: Helium Lab Duplicate**

**Lab ID#: 0810122C-07AA**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.14	80



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: Helium**

**Lab ID#: 0810122C-07A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100912b</b>	<b>Date of Collection:</b>	<b>10/3/08</b>
<b>Dil. Factor:</b>	<b>2.82</b>	<b>Date of Analysis:</b>	<b>10/9/08 02:56 PM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.14	80

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





AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: Helium Lab Duplicate**

**Lab ID#: 0810122C-07AA**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100913b</b>	<b>Date of Collection:</b>	<b>10/3/08</b>
<b>Dil. Factor:</b>	<b>2.82</b>	<b>Date of Analysis:</b>	<b>10/9/08 04:02 PM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.14	80

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



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: Lab Blank**

**Lab ID#: 0810122C-08A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100903b</b>	<b>Date of Collection:</b>	<b>NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b>	<b>10/9/08 08:12 AM</b>

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.050	Not Detected

**Container Type: NA - Not Applicable**



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**Client Sample ID: LCS**

**Lab ID#: 0810122C-09A**

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

<b>File Name:</b>	<b>9100930b</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/10/08 12:57 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Helium	106

**Container Type: NA - Not Applicable**



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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Page 1 of 4

Project Manager Charlotte Evans  
 Collected by: (Print and Sign) Charlotte Evans  
 Company CRA Email cevance@craworld.com  
 Address 5900 Hollis St City Emeryville State CA Zip 94608  
 Phone 510-420-3351 Fax 510-420-9170

<b>Project Info:</b> P.O. # <u>312002/206145</u> Project # <u>206145</u> Project Name <u>206145 Oakland</u>	<b>Turn Around Time:</b> <input type="checkbox"/> Normal <input checked="" type="checkbox"/> Rush <u>1 week</u> <small>specify</small>	<small>Lab Use Only</small> Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
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Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	VP-3	SC85	10/03/08	10:55	TPH by TO-15-top TOXICS	-30	-3		
02A	VP-1	SC36	10/03/08	11:24	BTEX, naphthalene	-30	-5		
03A	VP-4	351607	10/03/08	12:16	MTBE by TO-15	-30	-7		
04A	VP-4 DUPLICATE	34059	10/03/08	12:16	CO <sub>2</sub> , O <sub>2</sub> , CH <sub>4</sub> , Helium by	-30	-7		
05A	VP-6	SC1	10/03/08	12:49	ASTM D-1946	-30	-5		
06A	VP-5	2105	10/03/08	13:19		-30	-5		
	Helium	SC53	10/03/08	13:17	Helium by ASTM D-1946 <small>only</small>	-30	-9		
07A	VP-5 Repeat	9402	10/03/08	13:35	HOLD	-30	-5		

Relinquished by: (signature) <u>CEVANCE</u> Date/Time <u>10/03/08 15:45</u>	Received by: (signature) <u>Monica Greggen</u> Date/Time <u>10/03/08 8:55</u>	<b>Notes:</b> Please hold VP-5 Repeat. Any ques. - ask Kyle units $\mu\text{g}/\text{m}^3$ & PPBV <small>EDF data</small>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>Fed-Ex</u>	Air Bill # _____	Temp. (°C) <u>NA</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>(None)</u>	Work Order # <u>0810122</u>
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