

*Appendix A, Part 1*  
*Laboratory Data 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).

**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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509028

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/01/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/18/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1000 Hampton Dr-1st floor	Modified TO-15 SIM	0.0 "Hg
02A	1000 Hampton Dr-Crawl Space	Modified TO-15 SIM	8.0 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/19/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509028**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 01, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1000 Hampton Dr-1st floor

Lab ID#: 0509028-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.027	0.046	0.15	0.25
Benzene	0.067	0.22	0.21	0.70
Toluene	0.027	0.57	0.10	2.1
Tetrachloroethene	0.027	0.050	0.18	0.34
Ethyl Benzene	0.027	0.12	0.12	0.54
m,p-Xylene	0.054	0.25	0.23	1.1
o-Xylene	0.027	0.060	0.12	0.26

Client Sample ID: 1000 Hampton Dr-Crawl Space

Lab ID#: 0509028-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.20	0.29	0.62
Trichloroethene	0.037	0.56	0.20	3.0
Toluene	0.037	0.90	0.14	3.4
Ethyl Benzene	0.037	0.15	0.16	0.67
m,p-Xylene	0.073	0.44	0.32	1.9
o-Xylene	0.037	0.11	0.16	0.47

# AIR TOXICS LTD.

Client Sample ID: 1000 Hampton Dr-1st floor

Lab ID#: 0509028-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091219	Date of Collection:	8/29/05
Dil. Factor:	1.34	Date of Analysis:	9/13/05 11:33 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.053	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.027	0.046	0.15	0.25
Benzene	0.067	0.22	0.21	0.70
1,2-Dichloroethane	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.14	Not Detected
Toluene	0.027	0.57	0.10	2.1
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	0.050	0.18	0.34
Ethyl Benzene	0.027	0.12	0.12	0.54
m,p-Xylene	0.054	0.25	0.23	1.1
o-Xylene	0.027	0.060	0.12	0.26
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Methyl tert-butyl ether	0.13	Not Detected	0.48	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: 1000 Hampton Dr-Crawl Space

Lab ID#: 0509028-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091221	Date of Collection:	8/29/05
Dil. Factor:	1.83	Date of Analysis:	9/13/05 01:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.20	0.29	0.62
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.56	0.20	3.0
Toluene	0.037	0.90	0.14	3.4
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.15	0.16	0.67
m,p-Xylene	0.073	0.44	0.32	1.9
o-Xylene	0.037	0.11	0.16	0.47
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509028-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091210	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/12/05 10:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509028-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/12/05 04:39 PM

Compound	%Recovery
Vinyl Chloride	97
1,1-Dichloroethene	95
1,1-Dichloroethane	103
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	109
Benzene	88
1,2-Dichloroethane	117
Trichloroethene	98
Toluene	104
1,1,2-Trichloroethane	101
Tetrachloroethene	96
Ethyl Benzene	105
m,p-Xylene	110
o-Xylene	105
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	92
Methyl tert-butyl ether	84

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509028-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/12/05 05:33 PM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	83
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	73
1,1,1-Trichloroethane	86
Benzene	73
1,2-Dichloroethane	95
Trichloroethene	77
Toluene	90
1,1,2-Trichloroethane	89
Tetrachloroethene	88
Ethyl Benzene	94
m,p-Xylene	100
o-Xylene	90
1,1,2,2-Tetrachloroethane	84
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130



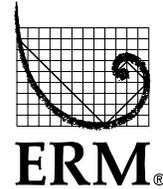
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1000 Hampton Drive (UPRR  
Hookston Station) Samples Collected 29 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509028

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### *CANISTER VACUUM EVALUATION*

One sample was received in the laboratory with zero vacuum. All compounds in that sample are qualified as estimated (J/UJ) as shown in Table 1.

### *OVERALL ASSESSMENT*

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Samples with Zero Canister Vacuum Upon Receipt**  
**1000 Hampton Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compounds	Receipt Vacuum	ERM Qualifier
0509028	1000 Hampton Dr.- 1st Floor	All	0.0" Hg	J/UJ

**Key:**

" Hg = Inches of mercury

J/UJ = Detected/nondetected compounds are qualified as estimated

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

**WORK ORDER #: 0510179**

Work Order Summary

**CLIENT:** Ms. Kimberly Lake  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

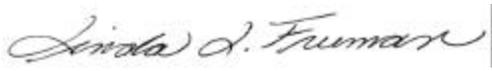
**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** 0020557.10 Hookston Station

**DATE RECEIVED:** 10/10/2005      **CONTACT:** Kelly Buettner

**DATE COMPLETED:** 10/21/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1000 Hampton-1st Floor	Modified TO-15 SIM	4.0 "Hg
01AA	1000 Hampton-1st Floor Duplicate	Modified TO-15 SIM	4.0 "Hg
02A	Lab Blank	Modified TO-15 SIM	NA
03A	CCV	Modified TO-15 SIM	NA
04A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

Laboratory Director

DATE: 10/21/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0510179**

One 6 Liter Summa Canister (SIM Certified) sample was received on October 10, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: 1000 Hampton-1st Floor**

**Lab ID#: 0510179-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
1,1,1-Trichloroethane	0.031	0.23	0.17	1.2
Benzene	0.078	0.28	0.25	0.90
Trichloroethene	0.031	0.25	0.17	1.4
Toluene	0.031	1.4	0.12	5.2
Tetrachloroethene	0.031	0.066	0.21	0.45
Ethyl Benzene	0.031	0.26	0.13	1.1
m,p-Xylene	0.062	0.87	0.27	3.8
o-Xylene	0.031	0.21	0.13	0.91

**Client Sample ID: 1000 Hampton-1st Floor Duplicate**

**Lab ID#: 0510179-01AA**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
1,1,1-Trichloroethane	0.031	0.23	0.17	1.3
Benzene	0.078	0.29	0.25	0.92
Trichloroethene	0.031	0.27	0.17	1.4
Toluene	0.031	1.4	0.12	5.4
Tetrachloroethene	0.031	0.068	0.21	0.46
Ethyl Benzene	0.031	0.26	0.13	1.1
m,p-Xylene	0.062	0.88	0.27	3.8
o-Xylene	0.031	0.22	0.13	0.95

# AIR TOXICS LTD.

Client Sample ID: 1000 Hampton-1st Floor

Lab ID#: 0510179-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	6101910	Date of Collection:	10/5/05
Dil. Factor:	1.55	Date of Analysis:	10/19/05 05:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	0.23	0.17	1.2
Benzene	0.078	0.28	0.25	0.90
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	0.25	0.17	1.4
Toluene	0.031	1.4	0.12	5.2
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	0.066	0.21	0.45
Ethyl Benzene	0.031	0.26	0.13	1.1
m,p-Xylene	0.062	0.87	0.27	3.8
o-Xylene	0.031	0.21	0.13	0.91
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130

# AIR TOXICS LTD.

Client Sample ID: 1000 Hampton-1st Floor Duplicate

Lab ID#: 0510179-01AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	6101911	<b>Date of Collection:</b> 10/5/05
<b>Dil. Factor:</b>	1.55	<b>Date of Analysis:</b> 10/19/05 06:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	0.23	0.17	1.3
Benzene	0.078	0.29	0.25	0.92
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	0.27	0.17	1.4
Toluene	0.031	1.4	0.12	5.4
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	0.068	0.21	0.46
Ethyl Benzene	0.031	0.26	0.13	1.1
m,p-Xylene	0.062	0.88	0.27	3.8
o-Xylene	0.031	0.22	0.13	0.95
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.56	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	111	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0510179-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>6101905</b>	<b>Date of Collection:</b>	<b>NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b>	<b>10/19/05 01:07 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>
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0510179-03A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>6101902</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/19/05 09:34 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	96
1,1-Dichloroethene	99
1,1-Dichloroethane	104
cis-1,2-Dichloroethene	102
1,1,1-Trichloroethane	112
Benzene	77
1,2-Dichloroethane	114
Trichloroethene	103
Toluene	93
1,1,2-Trichloroethane	104
Tetrachloroethene	105
Ethyl Benzene	102
m,p-Xylene	104
o-Xylene	105
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	104
Methyl tert-butyl ether	107

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	109	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0510179-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>6101903</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/19/05 10:25 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	91
1,1-Dichloroethene	98
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	100
Benzene	72
1,2-Dichloroethane	106
Trichloroethene	98
Toluene	91
1,1,2-Trichloroethane	101
Tetrachloroethene	105
Ethyl Benzene	98
m,p-Xylene	102
o-Xylene	94
1,1,2,2-Tetrachloroethane	93
trans-1,2-Dichloroethene	116
Methyl tert-butyl ether	111

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130



# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake

**From:** Jackie Luta

**Date:** 24 October 2005

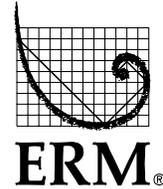
**Subject:** Data Review of 1000 Hampton Drive (UPRR Hookston Station) Samples Collected 105 October 2005

**Project Number:** 0020557.10

**Data Package:** Air Toxics Data Package 0510179

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1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### *ANALYTICAL DUPLICATE EVALUATION*

One analytical duplicate sample was prepared in the laboratory and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 1.

### *OVERALL ASSESSMENT*

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Analytical Duplicate Results and Calculated Relative Percent Differences**  
**1000 Hampton Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
0510179	1000 Hampton Dr. - 1st Floor	1,1,1-Trichloroethane	1.2	1.3	0.17	µg/m <sup>3</sup>	8.0
0510179	1000 Hampton Dr. - 1st Floor	Benzene	0.9	0.92	0.25	µg/m <sup>3</sup>	2.2
0510179	1000 Hampton Dr. - 1st Floor	Trichloroethene	1.4	1.4	0.17	µg/m <sup>3</sup>	0
0510179	1000 Hampton Dr. - 1st Floor	Toluene	5.2	5.4	0.12	µg/m <sup>3</sup>	3.8
0510179	1000 Hampton Dr. - 1st Floor	Tetrachloroethene	0.45	0.5	0.21	µg/m <sup>3</sup>	2.2
0510179	1000 Hampton Dr. - 1st Floor	Ethylbenzene	1.1	1.1	0.13	µg/m <sup>3</sup>	0
0510179	1000 Hampton Dr. - 1st Floor	m,p-Xylene	3.8	3.8	0.27	µg/m <sup>3</sup>	0
0510179	1000 Hampton Dr. - 1st Floor	o-Xylene	0.91	0.95	0.13	µg/m <sup>3</sup>	4.3

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

## **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**

**WORK ORDER #: 0510176**

Work Order Summary

**CLIENT:** Ms. Kimberly Lake  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455

**FAX:** 925-946-9968

**DATE RECEIVED:** 10/10/2005

**DATE COMPLETED:** 10/21/2005

**P.O. #**

**PROJECT #** 0020557.10 Hookston Station

**CONTACT:** Kelly Buettner

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1002 Hampton-1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1002 Hampton-2nd Floor	Modified TO-15 SIM	8.5 "Hg
03A	1002 Hampton-2nd Floor Duplicate	Modified TO-15 SIM	8.5 "Hg
04A	1002 Hampton-crawl	Modified TO-15 SIM	7.0 "Hg
05A	Lab Blank	Modified TO-15 SIM	NA
06A	CCV	Modified TO-15 SIM	NA
07A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

Laboratory Director

DATE: 10/21/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0510176**

Four 6 Liter Summa Canister (SIM Certified) samples were received on October 10, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1002 Hampton-1st Floor

Lab ID#: 0510176-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.30	0.28	0.95
Trichloroethene	0.036	0.039	0.19	0.21
Toluene	0.036	1.2	0.13	4.4
Tetrachloroethene	0.036	0.056	0.24	0.38
Ethyl Benzene	0.036	0.16	0.16	0.70
m,p-Xylene	0.072	0.54	0.31	2.4
o-Xylene	0.036	0.18	0.16	0.78

Client Sample ID: 1002 Hampton-2nd Floor

Lab ID#: 0510176-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	0.028	0.048	0.072
Benzene	0.094	0.31	0.30	1.0
Trichloroethene	0.037	0.044	0.20	0.24
Toluene	0.037	1.1	0.14	4.2
Tetrachloroethene	0.037	0.054	0.25	0.36
Ethyl Benzene	0.037	0.18	0.16	0.77
m,p-Xylene	0.075	0.56	0.32	2.4
o-Xylene	0.037	0.19	0.16	0.84

Client Sample ID: 1002 Hampton-2nd Floor Duplicate

Lab ID#: 0510176-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	0.026	0.048	0.068
Benzene	0.094	0.31	0.30	1.0
Trichloroethene	0.037	0.046	0.20	0.25
Toluene	0.037	1.1	0.14	4.2
Tetrachloroethene	0.037	0.055	0.25	0.37
Ethyl Benzene	0.037	0.18	0.16	0.76
m,p-Xylene	0.075	0.53	0.32	2.3
o-Xylene	0.037	0.18	0.16	0.80

Client Sample ID: 1002 Hampton-crawl

Lab ID#: 0510176-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.20	0.28	0.64

**Client Sample ID: 1002 Hampton-crawl**

**Lab ID#: 0510176-04A**

Toluene	0.035	0.46	0.13	1.7
Ethyl Benzene	0.035	0.084	0.15	0.36
m,p-Xylene	0.070	0.28	0.30	1.2
o-Xylene	0.035	0.11	0.15	0.47

# AIR TOXICS LTD.

Client Sample ID: 1002 Hampton-1st Floor

Lab ID#: 0510176-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	6101906	Date of Collection: 10/5/05
Dil. Factor:	1.79	Date of Analysis: 10/19/05 02:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.30	0.28	0.95
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	0.039	0.19	0.21
Toluene	0.036	1.2	0.13	4.4
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.056	0.24	0.38
Ethyl Benzene	0.036	0.16	0.16	0.70
m,p-Xylene	0.072	0.54	0.31	2.4
o-Xylene	0.036	0.18	0.16	0.78
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	110	70-130

# AIR TOXICS LTD.

Client Sample ID: 1002 Hampton-2nd Floor

Lab ID#: 0510176-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	6101907	Date of Collection:	10/5/05
Dil. Factor:	1.87	Date of Analysis:	10/19/05 02:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	0.028	0.048	0.072
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.094	0.31	0.30	1.0
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.044	0.20	0.24
Toluene	0.037	1.1	0.14	4.2
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.054	0.25	0.36
Ethyl Benzene	0.037	0.18	0.16	0.77
m,p-Xylene	0.075	0.56	0.32	2.4
o-Xylene	0.037	0.19	0.16	0.84
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.67	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	111	70-130

# AIR TOXICS LTD.

Client Sample ID: 1002 Hampton-2nd Floor Duplicate

Lab ID#: 0510176-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>6101908</b>	<b>Date of Collection:</b>	<b>10/5/05</b>
<b>Dil. Factor:</b>	<b>1.87</b>	<b>Date of Analysis:</b>	<b>10/19/05 03:47 PM</b>

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	0.026	0.048	0.068
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.094	0.31	0.30	1.0
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.046	0.20	0.25
Toluene	0.037	1.1	0.14	4.2
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.055	0.25	0.37
Ethyl Benzene	0.037	0.18	0.16	0.76
m,p-Xylene	0.075	0.53	0.32	2.3
o-Xylene	0.037	0.18	0.16	0.80
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.67	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	108	70-130

# AIR TOXICS LTD.

Client Sample ID: 1002 Hampton-crawl

Lab ID#: 0510176-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>6101909</b>	<b>Date of Collection:</b> 10/5/05
<b>Dil. Factor:</b>	1.75	<b>Date of Analysis:</b> 10/19/05 04:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.20	0.28	0.64
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.46	0.13	1.7
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.084	0.15	0.36
m,p-Xylene	0.070	0.28	0.30	1.2
o-Xylene	0.035	0.11	0.15	0.47
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	113	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0510176-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>6101905</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 10/19/05 01:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0510176-06A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>6101902</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/19/05 09:34 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	96
1,1-Dichloroethene	99
1,1-Dichloroethane	104
cis-1,2-Dichloroethene	102
1,1,1-Trichloroethane	112
Benzene	77
1,2-Dichloroethane	114
Trichloroethene	103
Toluene	93
1,1,2-Trichloroethane	104
Tetrachloroethene	105
Ethyl Benzene	102
m,p-Xylene	104
o-Xylene	105
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	104
Methyl tert-butyl ether	107

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	109	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0510176-07A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>6101903</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 10/19/05 10:25 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	91
1,1-Dichloroethene	98
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	100
Benzene	72
1,2-Dichloroethane	106
Trichloroethene	98
Toluene	91
1,1,2-Trichloroethane	101
Tetrachloroethene	105
Ethyl Benzene	98
m,p-Xylene	102
o-Xylene	94
1,1,2,2-Tetrachloroethane	93
trans-1,2-Dichloroethene	116
Methyl tert-butyl ether	111

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

Fed Ex 6328 99006832



**AIR TOXICS LTD.**  
AN ENVIRONMENTAL ANALYTICAL LABORATORY

**CHAIN-OF-CUSTODY RECORD**

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Page 1 of 1

Contact Person Kimberly Lake

Company ERM-West, Inc. Email kimberly.lake@erm.com

Address TTI Berkeley Dr, #400 Walnut Creek State CA zip 94596

Phone 925-946-0455 Fax 925-946-9968

Collected by: (signature) [Signature]

**Project Info:**

P.O. #

Project # 0020557.16

Project Name Hookston Station

Turn Around Time:

Normal

Rush

Lab Use Only

Pressurized by: [Signature]

Date: 10/12/05

Pressurization Gas: N<sub>2</sub> He

Project Name

Initial

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum		
					Initial	Final	Receipt Final
01A	1002 Hampton-1st Floor 10/5/05	0736	730	TO-15 SIM	28.5	7	7.5" Hg 50psi
02A	1002 Hampton-2nd Floor	0747	432	TO-15 SIM	29	5	8.5" Hg
03A	1002 Hampton-2nd Floor Duplicate	0747	432	TO-15 SIM	28.5	8	8.5" Hg
04A	1002 Hampton-CRAWL	0750	435	TO-15 SIM	28.5	7	7.0" Hg

**Notes:**

Received by: (signature) [Signature] Date/Time 10/11/05 10:05

Relinquished by: (signature) Kimberly Lake Date/Time 10/6/05

Received by: (signature) [Signature] Date/Time 10/11/05 10:05

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Lab Shipper Name

Air Bill #

Temp (°C)

Condition

Quality Seals Intact?

Work Order #

Use Fed Ex 6328 99006832 N/A Good Yes None 0510178

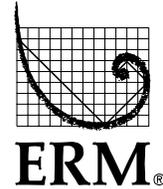
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 16 September 2005  
**Subject:** Data Review of 1002 Hampton Drive (UPRR  
Hookston Station) Samples Collected 30 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509059

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1002 Hampton Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509059	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509059	CCV	1002 Hampton Dr. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0509059	CCV	1002 Hampton Dr. - 2nd Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0509059	CCV	1002 Hampton Dr. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.60	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

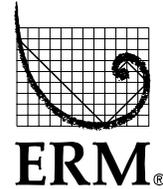
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 24 October 2005  
**Subject:** Data Review of 1002 Hampton Drive (UPRR  
Hookston Station) Samples Collected 05 October 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0510176

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***FIELD DUPLICATE EVALUATION***

One sample was collected, prepared, and analyzed in duplicate. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 10 percent, indicating acceptable precision. The RPDs are presented in Table 1.

### ***OVERALL ASSESSMENT***

No data required qualification or rejection. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Analytical Duplicate Results and Calculated Relative Percent Differences**  
**1000 Hampton Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
0510179	1000 Hampton Dr. - 1st Floor	1,1,1-Trichloroethane	1.2	1.3	0.17	µg/m <sup>3</sup>	8.0
0510179	1000 Hampton Dr. - 1st Floor	Benzene	0.9	0.92	0.25	µg/m <sup>3</sup>	2.2
0510179	1000 Hampton Dr. - 1st Floor	Trichloroethene	1.4	1.4	0.17	µg/m <sup>3</sup>	0
0510179	1000 Hampton Dr. - 1st Floor	Toluene	5.2	5.4	0.12	µg/m <sup>3</sup>	3.8
0510179	1000 Hampton Dr. - 1st Floor	Tetrachloroethene	0.45	0.5	0.21	µg/m <sup>3</sup>	2.2
0510179	1000 Hampton Dr. - 1st Floor	Ethylbenzene	1.1	1.1	0.13	µg/m <sup>3</sup>	0
0510179	1000 Hampton Dr. - 1st Floor	m,p-Xylene	3.8	3.8	0.27	µg/m <sup>3</sup>	0
0510179	1000 Hampton Dr. - 1st Floor	o-Xylene	0.91	0.95	0.13	µg/m <sup>3</sup>	4.3

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

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

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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**ERM-West**  
**Workorder# 0508582**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 26, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq$ 30% Difference with 10% of compounds allowed out up to $\leq$ 40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq$ 30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is $\leq$ 30% RSD with 10% of compounds allowed out to < 40% RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1006 Hampton Dr- 1st Floor

Lab ID#: 0508582-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.30	0.28	0.96
Trichloroethene	0.035	0.45	0.19	2.4
Toluene	0.035	1.2	0.13	4.5
Tetrachloroethene	0.035	0.036	0.24	0.24
Ethyl Benzene	0.035	0.17	0.15	0.75
m,p-Xylene	0.070	0.44	0.30	1.9
o-Xylene	0.035	0.14	0.15	0.62

Client Sample ID: 1006 Hampton Dr- 2nd Floor

Lab ID#: 0508582-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.31	0.29	0.99
Trichloroethene	0.037	0.48	0.20	2.6
Toluene	0.037	1.2	0.14	4.3
Ethyl Benzene	0.037	0.16	0.16	0.69
m,p-Xylene	0.073	0.38	0.32	1.6
o-Xylene	0.037	0.13	0.16	0.55

Client Sample ID: 1006 Hampton Dr- Crawl Space

Lab ID#: 0508582-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.094	0.27	0.30	0.87
Trichloroethene	0.037	0.42	0.20	2.3
Toluene	0.037	0.82	0.14	3.1
Ethyl Benzene	0.037	0.12	0.16	0.51
m,p-Xylene	0.075	0.31	0.32	1.4
o-Xylene	0.037	0.097	0.16	0.42

# AIR TOXICS LTD.

Client Sample ID: 1006 Hampton Dr- 1st Floor

Lab ID#: 0508582-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083111	Date of Collection:	8/23/05
Dil. Factor:	1.75	Date of Analysis:	8/31/05 07:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.30	0.28	0.96
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.45	0.19	2.4
Toluene	0.035	1.2	0.13	4.5
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.036	0.24	0.24
Ethyl Benzene	0.035	0.17	0.15	0.75
m,p-Xylene	0.070	0.44	0.30	1.9
o-Xylene	0.035	0.14	0.15	0.62
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: 1006 Hampton Dr- 2nd Floor

Lab ID#: 0508582-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083112	Date of Collection:	8/23/05
Dil. Factor:	1.83	Date of Analysis:	8/31/05 07:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.31	0.29	0.99
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.48	0.20	2.6
Toluene	0.037	1.2	0.14	4.3
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.16	0.16	0.69
m,p-Xylene	0.073	0.38	0.32	1.6
o-Xylene	0.037	0.13	0.16	0.55
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	101	70-130

# AIR TOXICS LTD.

Client Sample ID: 1006 Hampton Dr- Crawl Space

Lab ID#: 0508582-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083113	Date of Collection:	8/23/05
Dil. Factor:	1.87	Date of Analysis:	8/31/05 09:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.094	0.27	0.30	0.87
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.42	0.20	2.3
Toluene	0.037	0.82	0.14	3.1
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.12	0.16	0.51
m,p-Xylene	0.075	0.31	0.32	1.4
o-Xylene	0.037	0.097	0.16	0.42
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.67	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508582-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083105c	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/31/05 02:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508582-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083102	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/31/05 11:18 AM

Compound	%Recovery
Vinyl Chloride	88
1,1-Dichloroethene	88
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	92
1,1,1-Trichloroethane	100
Benzene	88
1,2-Dichloroethane	109
Trichloroethene	90
Toluene	103
1,1,2-Trichloroethane	99
Tetrachloroethene	95
Ethyl Benzene	108
m,p-Xylene	112
o-Xylene	108
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	88
Methyl tert-butyl ether	72

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508582-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/31/05 12:09 PM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	84
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	84
Benzene	76
1,2-Dichloroethane	94
Trichloroethene	79
Toluene	95
1,1,2-Trichloroethane	91
Tetrachloroethene	89
Ethyl Benzene	99
m,p-Xylene	105
o-Xylene	98
1,1,2,2-Tetrachloroethane	89
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	69

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	105	70-130



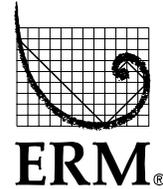
# Memorandum

**Environmental  
Resources  
Management**

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1006 Hampton Drive (UPRR  
Hookston Station) Samples Collected 23 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508582

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data were qualified based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required qualification or rejection. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

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This electronic report includes the following:

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

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**WORK ORDER #: 0509211**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #** 0020557.10

**FAX:** 925-946-9968      **PROJECT #** Hookston Station

**DATE RECEIVED:** 09/12/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/23/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1008 hampton-1st Floor	Modified TO-15 SIM	3.0 "Hg
02A	1008 hampton-crawl	Modified TO-15 SIM	7.0 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/23/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509211**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	<=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: 1008 hampton-1st Floor**

**Lab ID#: 0509211-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.074	0.27	0.24	0.86
Trichloroethene	0.030	0.11	0.16	0.57
Toluene	0.030	1.9	0.11	7.2
Ethyl Benzene	0.030	0.12	0.13	0.52
m,p-Xylene	0.060	0.32	0.26	1.4
o-Xylene	0.030	0.12	0.13	0.53

**Client Sample ID: 1008 hampton-crawl**

**Lab ID#: 0509211-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.088	0.18	0.28	0.59
Trichloroethene	0.035	0.21	0.19	1.1
Toluene	0.035	0.58	0.13	2.2
Ethyl Benzene	0.035	0.063	0.15	0.28
m,p-Xylene	0.070	0.16	0.30	0.72
o-Xylene	0.035	0.051	0.15	0.22

# AIR TOXICS LTD.

Client Sample ID: 1008 hampton-1st Floor

Lab ID#: 0509211-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092119	Date of Collection:	9/7/05
Dil. Factor:	1.49	Date of Analysis:	9/22/05 10:15 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.038	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Benzene	0.074	0.27	0.24	0.86
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	0.11	0.16	0.57
Toluene	0.030	1.9	0.11	7.2
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.20	Not Detected
Ethyl Benzene	0.030	0.12	0.13	0.52
m,p-Xylene	0.060	0.32	0.26	1.4
o-Xylene	0.030	0.12	0.13	0.53
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Methyl tert-butyl ether	0.15	Not Detected U J	0.54	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: 1008 hampton-crawl

Lab ID#: 0509211-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092120</b>	<b>Date of Collection:</b> 9/7/05
<b>Dil. Factor:</b>	1.75	<b>Date of Analysis:</b> 9/22/05 10:56 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.18	0.28	0.59
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.21	0.19	1.1
Toluene	0.035	0.58	0.13	2.2
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.063	0.15	0.28
m,p-Xylene	0.070	0.16	0.30	0.72
o-Xylene	0.035	0.051	0.15	0.22
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509211-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092107	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/21/05 08:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509211-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092103</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/21/05 04:53 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	86
1,1-Dichloroethene	84
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	90
1,2-Dichloroethane	112
Trichloroethene	94
Toluene	104
1,1,2-Trichloroethane	103
Tetrachloroethene	98
Ethyl Benzene	108
m,p-Xylene	114
o-Xylene	105
1,1,2,2-Tetrachloroethane	98
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	61 Q

Q = Exceeds Quality Control limits.

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509211-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092104</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/21/05 05:50 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	86
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	78
1,2-Dichloroethane	96
Trichloroethene	81
Toluene	97
1,1,2-Trichloroethane	91
Tetrachloroethene	89
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	85
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	69

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	103	70-130



# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake

**From:** Jackie Luta

**Date:** 26 September 2005

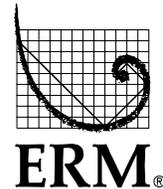
**Subject:** Data Review of 1008 Hampton Drive (UPRR  
Hookston Station) Samples Collected 07 September  
2005

**Project Number:** 0020557.10

**Data Package:** Air Toxics Data Package 0509211

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. The associated trip blank had a low-level detection of tetrachloroethene; however, both samples were nondetected so no results required qualification based on blank results.

### ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1008 Hampton Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509211	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509211	CCV	1008 Hampton Dr. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.54	UJ
0509211	CCV	1008 Hampton Dr. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

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

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Hours 8:00 A.M to 6:00 P.M. Pacific**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508610

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	08/29/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/12/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1016 Hampton Dr- 1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1016 Hampton Dr- 2nd Floor	Modified TO-15 SIM	8.0 "Hg
03A	1016 Hampton Dr- Crawl Space	Modified TO-15 SIM	7.0 "Hg
03AA	1016 Hampton Dr- Crawl Space Duplicate	Modified TO-15 SIM	7.0 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/12/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0508610**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq$ 30% Difference with 10% of compounds allowed out up to $\leq$ 40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq$ 30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is $\leq$ 30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1016 Hampton Dr- 1st Floor

Lab ID#: 0508610-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.054	0.20	0.30
Benzene	0.090	0.34	0.28	1.1
Toluene	0.036	1.2	0.13	4.7
Ethyl Benzene	0.036	0.18	0.16	0.78
m,p-Xylene	0.072	0.61	0.31	2.6
o-Xylene	0.036	0.20	0.16	0.86

Client Sample ID: 1016 Hampton Dr- 2nd Floor

Lab ID#: 0508610-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.042	0.20	0.23
Benzene	0.092	0.29	0.29	0.93
Toluene	0.037	0.94	0.14	3.5
Ethyl Benzene	0.037	0.15	0.16	0.64
m,p-Xylene	0.073	0.43	0.32	1.9
o-Xylene	0.037	0.13	0.16	0.55

Client Sample ID: 1016 Hampton Dr- Crawl Space

Lab ID#: 0508610-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.22	0.28	0.69
Toluene	0.035	0.58	0.13	2.2
Ethyl Benzene	0.035	0.071	0.15	0.31
m,p-Xylene	0.070	0.20	0.30	0.88
o-Xylene	0.035	0.064	0.15	0.28

Client Sample ID: 1016 Hampton Dr- Crawl Space Duplicate

Lab ID#: 0508610-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.22	0.28	0.71
Toluene	0.035	0.59	0.13	2.2
Ethyl Benzene	0.035	0.071	0.15	0.31
m,p-Xylene	0.070	0.20	0.30	0.85
o-Xylene	0.035	0.064	0.15	0.28

# AIR TOXICS LTD.

Client Sample ID: 1016 Hampton Dr- 1st Floor

Lab ID#: 0508610-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090809	Date of Collection:	8/25/05
Dil. Factor:	1.79	Date of Analysis:	9/8/05 07:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.054	0.20	0.30
Benzene	0.090	0.34	0.28	1.1
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	1.2	0.13	4.7
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.18	0.16	0.78
m,p-Xylene	0.072	0.61	0.31	2.6
o-Xylene	0.036	0.20	0.16	0.86
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: 1016 Hampton Dr- 2nd Floor

Lab ID#: 0508610-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090810	Date of Collection:	8/25/05
Dil. Factor:	1.83	Date of Analysis:	9/8/05 08:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	0.042	0.20	0.23
Benzene	0.092	0.29	0.29	0.93
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.94	0.14	3.5
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.15	0.16	0.64
m,p-Xylene	0.073	0.43	0.32	1.9
o-Xylene	0.037	0.13	0.16	0.55
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1016 Hampton Dr- Crawl Space

Lab ID#: 0508610-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090811	Date of Collection:	8/25/05
Dil. Factor:	1.75	Date of Analysis:	9/8/05 09:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.22	0.28	0.69
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.58	0.13	2.2
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.071	0.15	0.31
m,p-Xylene	0.070	0.20	0.30	0.88
o-Xylene	0.035	0.064	0.15	0.28
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: 1016 Hampton Dr- Crawl Space Duplicate

Lab ID#: 0508610-03AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090812	Date of Collection:	8/25/05
Dil. Factor:	1.75	Date of Analysis:	9/8/05 10:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.22	0.28	0.71
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.59	0.13	2.2
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.071	0.15	0.31
m,p-Xylene	0.070	0.20	0.30	0.85
o-Xylene	0.035	0.064	0.15	0.28
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508610-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/8/05 04:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508610-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/05 12:09 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	80
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	95
Benzene	91
1,2-Dichloroethane	108
Trichloroethene	92
Toluene	106
1,1,2-Trichloroethane	101
Tetrachloroethene	95
Ethyl Benzene	107
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	66 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	105	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508610-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/05 01:02 PM

Compound	%Recovery
Vinyl Chloride	87
1,1-Dichloroethene	81
1,1-Dichloroethane	85
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	81
Benzene	79
1,2-Dichloroethane	93
Trichloroethene	81
Toluene	97
1,1,2-Trichloroethane	92
Tetrachloroethene	89
Ethyl Benzene	100
m,p-Xylene	106
o-Xylene	99
1,1,2,2-Tetrachloroethane	91
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	67

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	104	70-130



# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake

**From:** Jackie Luta

**Date:** 19 September 2005

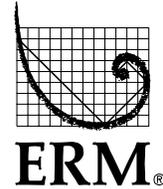
**Subject:** Data Review of 1016 Hampton Drive (UPRR  
Hookston Station) Samples Collected 25 August 2005

**Project Number:** 0020557.10

**Data Package:** Air Toxics Data Package 0508610

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***ANALYTICAL DUPLICATE EVALUATION***

One sample was prepared and analyzed as a duplicate in the laboratory. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 10 percent, indicating acceptable precision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1016 Hampton Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508610	CCV	See below	Methyl tert-butyl ether	66	70-130	NA	NA
0508610	CCV	1016 Hampton Dr. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0508610	CCV	1016 Hampton Dr. - 2nd Floor	Methyl tert-butyl ether	NA	NA	0.66	UJ
0508610	CCV	1016 Hampton Dr. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

*Table 2*  
*Analytical and Field Duplicate Results and Calculated Relative Percent Differences*  
*1016 Hampton Drive*  
*UPRR Hookston Station*  
*Pleasant Hill, California*

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Analytical Duplicate Results</b>							
0508610	1016 Hampton Dr. - Crawl Space	Benzene	0.69	0.71	0.28	µg/m <sup>3</sup>	2.9
0508610	1016 Hampton Dr. - Crawl Space	Toluene	2.2	2.2	0.13	µg/m <sup>3</sup>	0
0508610	1016 Hampton Dr. - Crawl Space	Ethylbenzene	0.31	0.31	0.15	µg/m <sup>3</sup>	0
0508610	1016 Hampton Dr. - Crawl Space	m,p-Xylene	0.88	0.85	0.30	µg/m <sup>3</sup>	3.5
0508610	1016 Hampton Dr. - Crawl Space	o-Xylene	0.28	0.28	0.15	µg/m <sup>3</sup>	0

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

## **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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508616

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	08/29/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/12/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1250 Hookston Rd- 1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1250 Hookston Rd- Crawl Space	Modified TO-15 SIM	6.5 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/12/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0508616**

Two 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

The Chain of Custody (COC) information for sample 1250 Hookston Rd- Crawl Space did not match the entry on the sample tag with regard to sample identification. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the information on the COC was used to process and report the sample.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1250 Hookston Rd- 1st Floor

Lab ID#: 0508616-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.44	0.20	2.4
Benzene	0.090	0.18	0.28	0.59
Toluene	0.036	3.6	0.13	13
Tetrachloroethene	0.036	0.22	0.24	1.5
Ethyl Benzene	0.036	0.19	0.16	0.82
m,p-Xylene	0.072	0.53	0.31	2.3
o-Xylene	0.036	0.15	0.16	0.66
Methyl tert-butyl ether	0.18	0.21 J	0.64	0.75 J

Client Sample ID: 1250 Hookston Rd- Crawl Space

Lab ID#: 0508616-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.034	0.19	0.18 J
Benzene	0.086	0.18	0.27	0.56
Toluene	0.034	4.3	0.13	16
Ethyl Benzene	0.034	0.25	0.15	1.1
m,p-Xylene	0.068	0.66	0.30	2.9
o-Xylene	0.034	0.14	0.15	0.61

# AIR TOXICS LTD.

Client Sample ID: 1250 Hookston Rd- 1st Floor

Lab ID#: 0508616-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090807	Date of Collection:	8/24/05
Dil. Factor:	1.79	Date of Analysis:	9/8/05 05:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.44	0.20	2.4
Benzene	0.090	0.18	0.28	0.59
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	3.6	0.13	13
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.22	0.24	1.5
Ethyl Benzene	0.036	0.19	0.16	0.82
m,p-Xylene	0.072	0.53	0.31	2.3
o-Xylene	0.036	0.15	0.16	0.66
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	0.21 J	0.64	0.75 J

J = Estimated value due to bias in the CCV.

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: 1250 Hookston Rd- Crawl Space

Lab ID#: 0508616-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090808	Date of Collection:	8/24/05
Dil. Factor:	1.71	Date of Analysis:	9/8/05 06:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.034	0.19	0.18 J
Benzene	0.086	0.18	0.27	0.56
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	4.3	0.13	16
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
Ethyl Benzene	0.034	0.25	0.15	1.1
m,p-Xylene	0.068	0.66	0.30	2.9
o-Xylene	0.034	0.14	0.15	0.61
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

J = Estimated value.

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508616-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/8/05 04:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508616-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/05 12:09 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	80
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	95
Benzene	91
1,2-Dichloroethane	108
Trichloroethene	92
Toluene	106
1,1,2-Trichloroethane	101
Tetrachloroethene	95
Ethyl Benzene	107
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	66 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	105	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508616-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/05 01:02 PM

Compound	%Recovery
Vinyl Chloride	87
1,1-Dichloroethene	81
1,1-Dichloroethane	85
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	81
Benzene	79
1,2-Dichloroethane	93
Trichloroethene	81
Toluene	97
1,1,2-Trichloroethane	92
Tetrachloroethene	89
Ethyl Benzene	100
m,p-Xylene	106
o-Xylene	99
1,1,2,2-Tetrachloroethane	91
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	67

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	104	70-130

Fed Ex 6328 9899 5475



AN ENVIRONMENTAL ANALYTICAL LABORATORY

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Page 1 of 1

CHAIN-OF-CUSTODY RECORD

Contact Person Kimberly Lake

Company ERM Email kimberly.lake@erm.com

Address 1111 Estelha Dr #2600 Walnut Creek State ZIP 94596

Phone 925-946-0455 Fax 925-946-9968

Collected by: (Signature) Rachael Seyppa/Dery ML

Project Info:

P.O. # \_\_\_\_\_

Project # \_\_\_\_\_

Project Name WRK Hookston Station

Turn Around Time:  Normal  Rush

Lab Use Only: Pressurized by: BS Date: 8/30/05

Pressurization Gas: N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum		
					Initial	Final	Receipt Final (psi)
01A	1230 Hookston Rd - 1st Floor	8/24/05	07:40-19:40	TO15 SIM	29	7.5	7.5/14.5/0.5
02A	1230 Hookston Rd - <del>2nd Floor</del> - crawl space	8/24/05	07:45-19:45	TO15 SIM	29	7	1.5/19.5/0.5
Relinquished by: (signature) <u>Kimberly Lake</u>	Date/Time <u>8/25/05 15:00</u>	Received by: (signature) <u>Judy Ser</u>	Date/Time <u>8/29/05</u>	Notes: <u>Crawl space sample in box w/ Fed Ex # 6328 9899 5572</u>			
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time				
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time				

Shipper Name Fed Ex Air Bill # \_\_\_\_\_ Temp (°C) \_\_\_\_\_ Condition good Custody Seals Intact?  Yes  No  None Work Order # 0508616

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This electronic report includes the following:

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

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# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508617

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	08/29/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/12/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	Ambient Air 8-25-05	Modified TO-15 SIM	8.0 "Hg
02A	Trip Blank 8-25-05	Modified TO-15 SIM	4.8psi
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
Laboratory Director

DATE: 09/12/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0508617**

Two 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$ .; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: Ambient Air 8-25-05

Lab ID#: 0508617-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.18	0.29	0.56
Toluene	0.037	0.38	0.14	1.4
Ethyl Benzene	0.037	0.047	0.16	0.20
m,p-Xylene	0.073	0.11	0.32	0.48
o-Xylene	0.037	0.037	0.16	0.16

Client Sample ID: Trip Blank 8-25-05

Lab ID#: 0508617-02A

No Detections Were Found.

# AIR TOXICS LTD.

Client Sample ID: Ambient Air 8-25-05

Lab ID#: 0508617-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090909	Date of Collection:	8/25/05
Dil. Factor:	1.83	Date of Analysis:	9/9/05 07:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.18	0.29	0.56
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.38	0.14	1.4
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.047	0.16	0.20
m,p-Xylene	0.073	0.11	0.32	0.48
o-Xylene	0.037	0.037	0.16	0.16
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

## Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: Trip Blank 8-25-05

Lab ID#: 0508617-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090910	Date of Collection:	8/25/05
Dil. Factor:	1.00	Date of Analysis:	9/9/05 08:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	91	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508617-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 04:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508617-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 01:27 PM

Compound	%Recovery
Vinyl Chloride	79
1,1-Dichloroethene	80
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	87
1,1,1-Trichloroethane	94
Benzene	91
1,2-Dichloroethane	107
Trichloroethene	90
Toluene	105
1,1,2-Trichloroethane	101
Tetrachloroethene	95
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	84
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508617-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 02:06 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	82
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	82
Benzene	80
1,2-Dichloroethane	95
Trichloroethene	86
Toluene	100
1,1,2-Trichloroethane	93
Tetrachloroethene	90
Ethyl Benzene	100
m,p-Xylene	107
o-Xylene	98
1,1,2,2-Tetrachloroethane	89
trans-1,2-Dichloroethene	109
Methyl tert-butyl ether	65

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



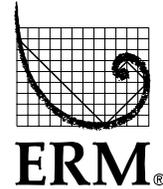
# Memorandum

**Environmental  
Resources  
Management**

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1250 Hookston Drive (UPRR  
Hookston Station) Samples Collected 24 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508616

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (J/UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1250 Hookston Road**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508616	CCV	See below	Methyl tert-butyl ether	66	70-130	NA	NA
0508616	CCV	1250 Hookston Rd.-1st Floor	Methyl tert-butyl ether	NA	NA	0.75	J
0508616	CCV	1250 Hookston Rd.-Crawl Space	Methyl tert-butyl ether	NA	NA	0.62	UJ

**Key:**

CCV = Continuing calibration verification

J = Detected result qualified as estimated

UJ = Nondetected result qualified as estimated

NA = Not applicable

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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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508572

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	08/26/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/09/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1261 Hookston Rd-1st Floor	Modified TO-15 SIM	8.0 "Hg
02A	1261 Hookston Rd-2nd Floor	Modified TO-15 SIM	8.0 "Hg
03A	1261 Hookston Rd-Crawl Space	Modified TO-15 SIM	6.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/09/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0508572**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 26, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1261 Hookston Rd-1st Floor

Lab ID#: 0508572-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.018	0.022	0.072	0.086
1,1,1-Trichloroethane	0.037	0.52	0.20	2.8
Benzene	0.092	1.6	0.29	5.3
Toluene	0.037	9.4	0.14	36
Tetrachloroethene	0.037	0.055	0.25	0.37
Ethyl Benzene	0.037	1.1	0.16	4.8
m,p-Xylene	0.073	5.0	0.32	22
o-Xylene	0.037	1.2	0.16	5.2

Client Sample ID: 1261 Hookston Rd-2nd Floor

Lab ID#: 0508572-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.32	0.20	1.8
Benzene	0.092	1.1	0.29	3.6
Toluene	0.037	6.3	0.14	24
Tetrachloroethene	0.037	0.050	0.25	0.34
Ethyl Benzene	0.037	0.81	0.16	3.5
m,p-Xylene	0.073	3.4	0.32	15
o-Xylene	0.037	0.83	0.16	3.6

Client Sample ID: 1261 Hookston Rd-Crawl Space

Lab ID#: 0508572-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.15	0.19	0.82
Benzene	0.086	0.68	0.27	2.2
Toluene	0.034	2.8	0.13	10
Tetrachloroethene	0.034	0.062	0.23	0.42
Ethyl Benzene	0.034	0.35	0.15	1.5
m,p-Xylene	0.068	1.3	0.30	5.5
o-Xylene	0.034	0.32	0.15	1.4

# AIR TOXICS LTD.

Client Sample ID: 1261 Hookston Rd-1st Floor

Lab ID#: 0508572-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083019	Date of Collection:	8/23/05
Dil. Factor:	1.83	Date of Analysis:	8/31/05 05:33 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	0.022	0.072	0.086
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	0.52	0.20	2.8
Benzene	0.092	1.6	0.29	5.3
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	9.4	0.14	36
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.055	0.25	0.37
Ethyl Benzene	0.037	1.1	0.16	4.8
m,p-Xylene	0.073	5.0	0.32	22
o-Xylene	0.037	1.2	0.16	5.2
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1261 Hookston Rd-2nd Floor

Lab ID#: 0508572-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083020	Date of Collection:	8/23/05
Dil. Factor:	1.83	Date of Analysis:	8/31/05 06:22 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	0.32	0.20	1.8
Benzene	0.092	1.1	0.29	3.6
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	6.3	0.14	24
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.050	0.25	0.34
Ethyl Benzene	0.037	0.81	0.16	3.5
m,p-Xylene	0.073	3.4	0.32	15
o-Xylene	0.037	0.83	0.16	3.6
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: 1261 Hookston Rd-Crawl Space

Lab ID#: 0508572-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083021	Date of Collection:	8/23/05
Dil. Factor:	1.71	Date of Analysis:	8/31/05 09:01 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.15	0.19	0.82
Benzene	0.086	0.68	0.27	2.2
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	2.8	0.13	10
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.062	0.23	0.42
Ethyl Benzene	0.034	0.35	0.15	1.5
m,p-Xylene	0.068	1.3	0.30	5.5
o-Xylene	0.034	0.32	0.15	1.4
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508572-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083006a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/30/05 03:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508572-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083002	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/30/05 10:21 AM

Compound	%Recovery
Vinyl Chloride	86
1,1-Dichloroethene	86
1,1-Dichloroethane	91
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	85
1,2-Dichloroethane	107
Trichloroethene	89
Toluene	99
1,1,2-Trichloroethane	97
Tetrachloroethene	94
Ethyl Benzene	104
m,p-Xylene	109
o-Xylene	105
1,1,2,2-Tetrachloroethane	100
trans-1,2-Dichloroethene	88
Methyl tert-butyl ether	73

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508572-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8083003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/30/05 11:50 AM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	83
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	83
Benzene	73
1,2-Dichloroethane	88
Trichloroethene	76
Toluene	90
1,1,2-Trichloroethane	89
Tetrachloroethene	88
Ethyl Benzene	97
m,p-Xylene	102
o-Xylene	97
1,1,2,2-Tetrachloroethane	85
trans-1,2-Dichloroethene	100
Methyl tert-butyl ether	69

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	105	70-130



# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake

**From:** Jackie Luta

**Date:** 19 September 2005

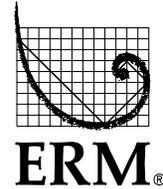
**Subject:** Data Review of 1261 Hookston Drive (UPRR  
Hookston Station) Samples Collected 23 August 2005

**Project Number:** 0020557.10

**Data Package:** Air Toxics Data Package 0508572

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

## **Air Toxics Ltd. Introduces the Electronic Report**

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This electronic report includes the following:

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

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

**WORK ORDER #: 0508515**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

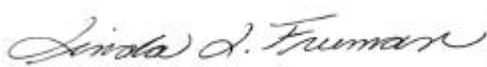
**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 08/24/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/07/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1271 Hookston Rd-1st Floor	Modified TO-15 SIM	2.0 "Hg
02A	1271 Hookston Rd-2nd Floor	Modified TO-15 SIM	8.5 "Hg
03A	1271 Hookston Rd-Crawl Space	Modified TO-15 SIM	7.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/07/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0508515**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 24, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1271 Hookston Rd-1st Floor

Lab ID#: 0508515-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.072	0.40	0.23	1.3
Toluene	0.029	2.7	0.11	10
Ethyl Benzene	0.029	0.28	0.12	1.2
m,p-Xylene	0.058	1.1	0.25	4.6
o-Xylene	0.029	0.36	0.12	1.5

Client Sample ID: 1271 Hookston Rd-2nd Floor

Lab ID#: 0508515-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.094	0.30	0.30	0.96
Toluene	0.037	2.0	0.14	7.6
Ethyl Benzene	0.037	0.28	0.16	1.2
m,p-Xylene	0.075	0.96	0.32	4.2
o-Xylene	0.037	0.26	0.16	1.1

Client Sample ID: 1271 Hookston Rd-Crawl Space

Lab ID#: 0508515-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.24	0.28	0.78
Toluene	0.036	1.1	0.13	4.2
Ethyl Benzene	0.036	0.11	0.16	0.47
m,p-Xylene	0.072	0.33	0.31	1.4
o-Xylene	0.036	0.11	0.16	0.46

# AIR TOXICS LTD.

Client Sample ID: 1271 Hookston Rd-1st Floor

Lab ID#: 0508515-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082516	Date of Collection:	8/22/05
Dil. Factor:	1.44	Date of Analysis:	8/26/05 02:37 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.014	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.057	Not Detected
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Benzene	0.072	0.40	0.23	1.3
1,2-Dichloroethane	0.029	Not Detected	0.12	Not Detected
Trichloroethene	0.029	Not Detected	0.15	Not Detected
Toluene	0.029	2.7	0.11	10
1,1,2-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Tetrachloroethene	0.029	Not Detected	0.20	Not Detected
Ethyl Benzene	0.029	0.28	0.12	1.2
m,p-Xylene	0.058	1.1	0.25	4.6
o-Xylene	0.029	0.36	0.12	1.5
1,1,2,2-Tetrachloroethane	0.029	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Methyl tert-butyl ether	0.14	Not Detected U J	0.52	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

## Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: 1271 Hookston Rd-2nd Floor

Lab ID#: 0508515-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082518	Date of Collection:	8/22/05
Dil. Factor:	1.87	Date of Analysis:	8/26/05 04:23 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.094	0.30	0.30	0.96
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	2.0	0.14	7.6
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.28	0.16	1.2
m,p-Xylene	0.075	0.96	0.32	4.2
o-Xylene	0.037	0.26	0.16	1.1
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	Not Detected U J	0.67	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: 1271 Hookston Rd-Crawl Space

Lab ID#: 0508515-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082517	Date of Collection:	8/22/05
Dil. Factor:	1.79	Date of Analysis:	8/26/05 03:29 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.24	0.28	0.78
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	1.1	0.13	4.2
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.11	0.16	0.47
m,p-Xylene	0.072	0.33	0.31	1.4
o-Xylene	0.036	0.11	0.16	0.46
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508515-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/25/05 04:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508515-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/25/05 11:46 AM

Compound	%Recovery
Vinyl Chloride	86
1,1-Dichloroethene	80
1,1-Dichloroethane	91
cis-1,2-Dichloroethene	83
1,1,1-Trichloroethane	99
Benzene	85
1,2-Dichloroethane	108
Trichloroethene	86
Toluene	97
1,1,2-Trichloroethane	97
Tetrachloroethene	93
Ethyl Benzene	102
m,p-Xylene	108
o-Xylene	98
1,1,2,2-Tetrachloroethane	99
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508515-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/25/05 01:59 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	82
1,1-Dichloroethane	84
cis-1,2-Dichloroethene	74
1,1,1-Trichloroethane	83
Benzene	74
1,2-Dichloroethane	91
Trichloroethene	78
Toluene	92
1,1,2-Trichloroethane	87
Tetrachloroethene	86
Ethyl Benzene	96
m,p-Xylene	102
o-Xylene	96
1,1,2,2-Tetrachloroethane	87
trans-1,2-Dichloroethene	104
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	108	70-130



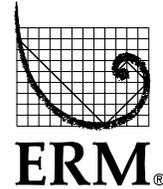
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1271 Hookston Road (UPRR  
Hookston Station) Samples Collected 22 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508515

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1271 Hookston Road**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508515	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0508515	CCV	1271 Hookston Rd.-1st Floor	Methyl tert-butyl ether	NA	NA	0.52	UJ
0508515	CCV	1271 Hookston Rd.-2nd Floor	Methyl tert-butyl ether	NA	NA	0.67	UJ
0508515	CCV	1271 Hookston Rd.-Crawl Space	Methyl tert-butyl ether	NA	NA	0.64	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

D = Duplicate

## **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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508613

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	08/29/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/12/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1200 Thames Dr- 1st Floor	Modified TO-15 SIM	7.0 "Hg
02A	1200 Thames Dr- 1st Floor Duplicate	Modified TO-15 SIM	7.0 "Hg
03A	1200 Thames Dr- Crawl Space	Modified TO-15 SIM	7.0 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/12/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0508613**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: 1200 Thames Dr- 1st Floor**

**Lab ID#: 0508613-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.088	0.16	0.28	0.52
Toluene	0.035	1.0	0.13	3.9
Ethyl Benzene	0.035	0.088	0.15	0.38
m,p-Xylene	0.070	0.23	0.30	0.98
o-Xylene	0.035	0.066	0.15	0.29

**Client Sample ID: 1200 Thames Dr- 1st Floor Duplicate**

**Lab ID#: 0508613-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.088	0.18	0.28	0.58
Toluene	0.035	1.0	0.13	3.9
Ethyl Benzene	0.035	0.089	0.15	0.39
m,p-Xylene	0.070	0.23	0.30	0.99
o-Xylene	0.035	0.070	0.15	0.31

**Client Sample ID: 1200 Thames Dr- Crawl Space**

**Lab ID#: 0508613-03A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.088	0.14	0.28	0.46
Trichloroethene	0.035	0.14	0.19	0.77
Toluene	0.035	0.39	0.13	1.5
Ethyl Benzene	0.035	0.046	0.15	0.20
m,p-Xylene	0.070	0.11	0.30	0.50
o-Xylene	0.035	0.039	0.15	0.17

# AIR TOXICS LTD.

Client Sample ID: 1200 Thames Dr- 1st Floor

Lab ID#: 0508613-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090720	Date of Collection:	8/24/05
Dil. Factor:	1.75	Date of Analysis:	9/8/05 06:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.16	0.28	0.52
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	1.0	0.13	3.9
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.088	0.15	0.38
m,p-Xylene	0.070	0.23	0.30	0.98
o-Xylene	0.035	0.066	0.15	0.29
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: 1200 Thames Dr- 1st Floor Duplicate

Lab ID#: 0508613-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090721	Date of Collection:	8/24/05
Dil. Factor:	1.75	Date of Analysis:	9/8/05 09:29 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.18	0.28	0.58
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	1.0	0.13	3.9
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.089	0.15	0.39
m,p-Xylene	0.070	0.23	0.30	0.99
o-Xylene	0.035	0.070	0.15	0.31
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1200 Thames Dr- Crawl Space

Lab ID#: 0508613-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090722	Date of Collection:	8/24/05
Dil. Factor:	1.75	Date of Analysis:	9/8/05 10:07 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.14	0.28	0.46
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.14	0.19	0.77
Toluene	0.035	0.39	0.13	1.5
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.046	0.15	0.20
m,p-Xylene	0.070	0.11	0.30	0.50
o-Xylene	0.035	0.039	0.15	0.17
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	96	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508613-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090707	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/7/05 04:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508613-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/05 11:40 AM

Compound	%Recovery
Vinyl Chloride	82
1,1-Dichloroethene	83
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	87
1,1,1-Trichloroethane	95
Benzene	86
1,2-Dichloroethane	101
Trichloroethene	87
Toluene	101
1,1,2-Trichloroethane	100
Tetrachloroethene	95
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	107
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	82
Methyl tert-butyl ether	64 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	105	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508613-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/05 12:40 PM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	84
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	83
Benzene	77
1,2-Dichloroethane	92
Trichloroethene	79
Toluene	95
1,1,2-Trichloroethane	91
Tetrachloroethene	89
Ethyl Benzene	100
m,p-Xylene	106
o-Xylene	99
1,1,2,2-Tetrachloroethane	90
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	68

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	105	70-130



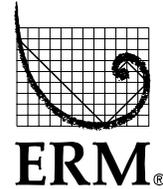
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1200 Thames Drive (UPRR Hookston Station) Samples Collected 24 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508613

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 15 percent, indicating acceptable precision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1200 Thames Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508613	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0508613	CCV	1200 Thames Dr. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0508613	CCV	1200 Thames Dr. - 1st Floor D	Methyl tert-butyl ether	NA	NA	0.63	UJ
0508613	CCV	1200 Thames Dr. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

D = Duplicate

**Table 2**  
**Analytical and Field Duplicate Results and Calculated Relative Percent Differences**  
**1200 Thames Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Field Duplicate Results</b>							
0508613	1200 Thames Dr - 1st Floor	Benzene	0.52	0.58	0.28	µg/m <sup>3</sup>	11
0508613	1200 Thames Dr - 1st Floor	Toluene	3.9	3.9	0.13	µg/m <sup>3</sup>	0
0508613	1200 Thames Dr - 1st Floor	Ethylbenzene	0.38	0.39	0.15	µg/m <sup>3</sup>	2.6
0508613	1200 Thames Dr - 1st Floor	m,p-Xylene	0.98	0.99	0.30	µg/m <sup>3</sup>	1.0
0508613	1200 Thames Dr - 1st Floor	o-Xylene	0.29	0.31	0.15	µg/m <sup>3</sup>	6.7

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

## **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**

**WORK ORDER #: 0508514**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 08/24/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/06/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1210 Thames Dr-1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1210 Thames Dr-Crawl Space	Modified TO-15 SIM	7.0 "Hg
03A	1210 Thames Dr-1st Floor Duplicate	Modified TO-15 SIM	8.0 "Hg
03AA	1210 Thames Dr-1st Floor Duplicate Duplicate	Modified TO-15 SIM	8.0 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/07/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0508514**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 24, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq$ 30% Difference with 10% of compounds allowed out up to $\leq$ 40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq$ 30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is $\leq$ 30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1210 Thames Dr-1st Floor

Lab ID#: 0508514-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.27	0.28	0.87
Trichloroethene	0.036	0.076	0.19	0.40
Toluene	0.036	2.2	0.13	8.4
Ethyl Benzene	0.036	0.21	0.16	0.89
m,p-Xylene	0.072	0.52	0.31	2.2
o-Xylene	0.036	0.19	0.16	0.82

Client Sample ID: 1210 Thames Dr-Crawl Space

Lab ID#: 0508514-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.21	0.28	0.68
Trichloroethene	0.035	0.12	0.19	0.65
Toluene	0.035	1.0	0.13	3.9
Ethyl Benzene	0.035	0.082	0.15	0.36
m,p-Xylene	0.070	0.22	0.30	0.96
o-Xylene	0.035	0.071	0.15	0.31

Client Sample ID: 1210 Thames Dr-1st Floor Duplicate

Lab ID#: 0508514-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.27	0.29	0.86
Trichloroethene	0.037	0.074	0.20	0.40
Toluene	0.037	2.1	0.14	7.9
Ethyl Benzene	0.037	0.20	0.16	0.87
m,p-Xylene	0.073	0.50	0.32	2.2
o-Xylene	0.037	0.20	0.16	0.88

Client Sample ID: 1210 Thames Dr-1st Floor Duplicate Duplicate

Lab ID#: 0508514-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.27	0.29	0.87
Trichloroethene	0.037	0.074	0.20	0.40
Toluene	0.037	2.1	0.14	7.9
Ethyl Benzene	0.037	0.21	0.16	0.89
m,p-Xylene	0.073	0.50	0.32	2.2

**Client Sample ID: 1210 Thames Dr-1st Floor Duplicate Duplicate**

**Lab ID#: 0508514-03AA**

o-Xylene

0.037

0.19

0.16

0.84

# AIR TOXICS LTD.

Client Sample ID: 1210 Thames Dr-1st Floor

Lab ID#: 0508514-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082512	Date of Collection:	8/22/05
Dil. Factor:	1.79	Date of Analysis:	8/25/05 09:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.27	0.28	0.87
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	0.076	0.19	0.40
Toluene	0.036	2.2	0.13	8.4
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.21	0.16	0.89
m,p-Xylene	0.072	0.52	0.31	2.2
o-Xylene	0.036	0.19	0.16	0.82
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	110	70-130

# AIR TOXICS LTD.

Client Sample ID: 1210 Thames Dr-Crawl Space

Lab ID#: 0508514-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082513	Date of Collection:	8/22/05
Dil. Factor:	1.75	Date of Analysis:	8/25/05 10:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.21	0.28	0.68
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.12	0.19	0.65
Toluene	0.035	1.0	0.13	3.9
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.082	0.15	0.36
m,p-Xylene	0.070	0.22	0.30	0.96
o-Xylene	0.035	0.071	0.15	0.31
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: 1210 Thames Dr-1st Floor Duplicate

Lab ID#: 0508514-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082514	Date of Collection:	8/22/05
Dil. Factor:	1.83	Date of Analysis:	8/25/05 11:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.27	0.29	0.86
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.074	0.20	0.40
Toluene	0.037	2.1	0.14	7.9
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.20	0.16	0.87
m,p-Xylene	0.073	0.50	0.32	2.2
o-Xylene	0.037	0.20	0.16	0.88
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	109	70-130

# AIR TOXICS LTD.

Client Sample ID: 1210 Thames Dr-1st Floor Duplicate Duplicate

Lab ID#: 0508514-03AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082515	Date of Collection:	8/22/05
Dil. Factor:	1.83	Date of Analysis:	8/26/05 12:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.27	0.29	0.87
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.074	0.20	0.40
Toluene	0.037	2.1	0.14	7.9
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.21	0.16	0.89
m,p-Xylene	0.073	0.50	0.32	2.2
o-Xylene	0.037	0.19	0.16	0.84
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	109	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508514-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/25/05 04:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508514-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/25/05 11:46 AM

Compound	%Recovery
Vinyl Chloride	86
1,1-Dichloroethene	80
1,1-Dichloroethane	91
cis-1,2-Dichloroethene	83
1,1,1-Trichloroethane	99
Benzene	85
1,2-Dichloroethane	108
Trichloroethene	86
Toluene	97
1,1,2-Trichloroethane	97
Tetrachloroethene	93
Ethyl Benzene	102
m,p-Xylene	108
o-Xylene	98
1,1,2,2-Tetrachloroethane	99
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508514-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/25/05 01:59 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	82
1,1-Dichloroethane	84
cis-1,2-Dichloroethene	74
1,1,1-Trichloroethane	83
Benzene	74
1,2-Dichloroethane	91
Trichloroethene	78
Toluene	92
1,1,2-Trichloroethane	87
Tetrachloroethene	86
Ethyl Benzene	96
m,p-Xylene	102
o-Xylene	96
1,1,2,2-Tetrachloroethane	87
trans-1,2-Dichloroethene	104
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	108	70-130

# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake

**From:** Jackie Luta

**Date:** 16 September 2005

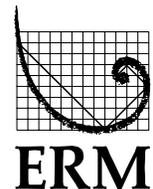
**Subject:** Data Review of 1210 Thames Drive (UPRR Hookston Station) Samples Collected 22 August 2005

**Project Number:** 0020557.10

**Data Package:** Air Toxics Data Package 0508514

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***ANALYTICAL DUPLICATE EVALUATION***

The laboratory analyzed one analytical duplicate sample. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 10 percent, indicating acceptable precision. The RPDs are presented in Table 2.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 10 percent, indicating acceptable precision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1210 Thames Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508514	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0508514	CCV	1210 Thames Dr. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0508514	CCV	1210 Thames Dr. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ
0508514	CCV	1210 Thames Dr. - 1st Floor D	Methyl tert-butyl ether	NA	NA	0.66	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

D = Duplicate

**Table 2**  
**Analytical and Field Duplicate Results and Calculated Relative Percent Differences**  
**1210 Thames Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Analytical Duplicate Results</b>							
0508514	1210 Thames Dr - 1st Floor	Benzene	0.87	0.86	0.29	µg/m <sup>3</sup>	1.2
0508514	1210 Thames Dr - 1st Floor	Trichloroethene	0.4	0.4	0.2	µg/m <sup>3</sup>	0
0508514	1210 Thames Dr - 1st Floor	Toluene	8.4	7.9	0.14	µg/m <sup>3</sup>	6.1
0508514	1210 Thames Dr - 1st Floor	Ethylbenzene	0.89	0.87	0.16	µg/m <sup>3</sup>	2.3
0508514	1210 Thames Dr - 1st Floor	m,p-Xylene	2.2	2.2	0.32	µg/m <sup>3</sup>	0
0508514	1210 Thames Dr - 1st Floor	o-Xylene	0.82	0.88	0.16	µg/m <sup>3</sup>	7.1
<b>Field Duplicate Results</b>							
0508514	1210 Thames Dr - 1st Floor	Benzene	0.87	0.87	0.29	µg/m <sup>3</sup>	0
0508514	1210 Thames Dr - 1st Floor	Trichloroethene	0.4	0.4	0.2	µg/m <sup>3</sup>	0
0508514	1210 Thames Dr - 1st Floor	Toluene	8.4	7.9	0.14	µg/m <sup>3</sup>	6.1
0508514	1210 Thames Dr - 1st Floor	Ethylbenzene	0.89	0.89	0.16	µg/m <sup>3</sup>	0
0508514	1210 Thames Dr - 1st Floor	m,p-Xylene	2.2	2.2	0.32	µg/m <sup>3</sup>	0
0508514	1210 Thames Dr - 1st Floor	o-Xylene	0.82	0.84	0.16	µg/m <sup>3</sup>	2.4

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

## **Air Toxics Ltd. Introduces the Electronic Report**

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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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508615

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	Union Pacific Hookston
<b>DATE RECEIVED:</b>	08/29/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/12/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1221 Thames Dr- 1st Floor	Modified TO-15 SIM	2.5 "Hg
02A	1221 Thames Dr- 2nd Floor	Modified TO-15 SIM	7.5 "Hg
03A	1221 Thames Dr- Crawl Space	Modified TO-15 SIM	7.0 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/12/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0508615**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1221 Thames Dr- 1st Floor

Lab ID#: 0508615-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.029	0.25	0.16	1.3
Benzene	0.073	0.62	0.23	2.0
1,2-Dichloroethane	0.029	0.048	0.12	0.19
Trichloroethene	0.029	0.62	0.16	3.3
Toluene	0.029	7.9	0.11	30
Tetrachloroethene	0.029	0.36	0.20	2.5
Ethyl Benzene	0.029	0.49	0.13	2.1
m,p-Xylene	0.058	1.5	0.25	6.6
o-Xylene	0.029	0.46	0.13	2.0

Client Sample ID: 1221 Thames Dr- 2nd Floor

Lab ID#: 0508615-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.28	0.20	1.5
Benzene	0.090	1.0	0.28	3.2
1,2-Dichloroethane	0.036	0.049	0.14	0.20
Trichloroethene	0.036	1.3	0.19	7.1
Toluene	0.036	7.5	0.13	28
Tetrachloroethene	0.036	0.11	0.24	0.76
Ethyl Benzene	0.036	0.59	0.16	2.6
m,p-Xylene	0.072	2.3	0.31	10
o-Xylene	0.036	0.64	0.16	2.8

Client Sample ID: 1221 Thames Dr- Crawl Space

Lab ID#: 0508615-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.035	0.091	0.19	0.50
Benzene	0.088	0.36	0.28	1.1
Trichloroethene	0.035	0.33	0.19	1.8
Toluene	0.035	1.9	0.13	7.2
Tetrachloroethene	0.035	0.046	0.24	0.32
Ethyl Benzene	0.035	0.14	0.15	0.59
m,p-Xylene	0.070	0.40	0.30	1.7
o-Xylene	0.035	0.11	0.15	0.49

# AIR TOXICS LTD.

Client Sample ID: 1221 Thames Dr- 1st Floor

Lab ID#: 0508615-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090911	Date of Collection:	8/25/05
Dil. Factor:	1.46	Date of Analysis:	9/9/05 09:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.058	Not Detected
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.029	0.25	0.16	1.3
Benzene	0.073	0.62	0.23	2.0
1,2-Dichloroethane	0.029	0.048	0.12	0.19
Trichloroethene	0.029	0.62	0.16	3.3
Toluene	0.029	7.9	0.11	30
1,1,2-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Tetrachloroethene	0.029	0.36	0.20	2.5
Ethyl Benzene	0.029	0.49	0.13	2.1
m,p-Xylene	0.058	1.5	0.25	6.6
o-Xylene	0.029	0.46	0.13	2.0
1,1,2,2-Tetrachloroethane	0.029	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Methyl tert-butyl ether	0.15	Not Detected U J	0.53	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: 1221 Thames Dr- 2nd Floor

Lab ID#: 0508615-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090915	Date of Collection:	8/25/05
Dil. Factor:	1.79	Date of Analysis:	9/10/05 12:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.28	0.20	1.5
Benzene	0.090	1.0	0.28	3.2
1,2-Dichloroethane	0.036	0.049	0.14	0.20
Trichloroethene	0.036	1.3	0.19	7.1
Toluene	0.036	7.5	0.13	28
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.11	0.24	0.76
Ethyl Benzene	0.036	0.59	0.16	2.6
m,p-Xylene	0.072	2.3	0.31	10
o-Xylene	0.036	0.64	0.16	2.8
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	102	70-130

# AIR TOXICS LTD.

Client Sample ID: 1221 Thames Dr- Crawl Space

Lab ID#: 0508615-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090914	Date of Collection:	8/25/05
Dil. Factor:	1.75	Date of Analysis:	9/10/05 12:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	0.091	0.19	0.50
Benzene	0.088	0.36	0.28	1.1
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.33	0.19	1.8
Toluene	0.035	1.9	0.13	7.2
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.046	0.24	0.32
Ethyl Benzene	0.035	0.14	0.15	0.59
m,p-Xylene	0.070	0.40	0.30	1.7
o-Xylene	0.035	0.11	0.15	0.49
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508615-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090905	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/9/05 04:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508615-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 01:27 PM

Compound	%Recovery
Vinyl Chloride	79
1,1-Dichloroethene	80
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	87
1,1,1-Trichloroethane	94
Benzene	91
1,2-Dichloroethane	107
Trichloroethene	90
Toluene	105
1,1,2-Trichloroethane	101
Tetrachloroethene	95
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	84
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508615-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 02:06 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	82
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	82
Benzene	80
1,2-Dichloroethane	95
Trichloroethene	86
Toluene	100
1,1,2-Trichloroethane	93
Tetrachloroethene	90
Ethyl Benzene	100
m,p-Xylene	107
o-Xylene	98
1,1,2,2-Tetrachloroethane	89
trans-1,2-Dichloroethene	109
Methyl tert-butyl ether	65

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake

**From:** Jackie Luta

**Date:** 19 September 2005

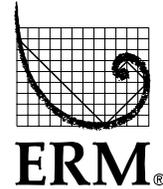
**Subject:** Data Review of 1221 Thames Drive (UPRR Hookston Station) Samples Collected 25 August 2005

**Project Number:** 0020557.10

**Data Package:** Air Toxics Data Package 0508615

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1221 Thames Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508615	CCV	See below	Methyl tert-butyl ether	66	70-130	NA	NA
0508615	CCV	1221 Thames Dr. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.53	UJ
0508615	CCV	1221 Thames Dr. - 2nd Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0508615	CCV	1221 Thames Dr. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ

**Key:**

CCV = Continuing calibration verification  
UJ = Nondetected result qualified as estimated  
NA = Not applicable

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This electronic report includes the following:

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

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

**WORK ORDER #: 0509210**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 09/12/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/23/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1221 Thames-1st Floor	Modified TO-15 SIM	4.5 "Hg
02A	Lab Blank	Modified TO-15 SIM	NA
03A	CCV	Modified TO-15 SIM	NA
04A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/23/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509210**

One 6 Liter Summa Canister (SIM Certified) sample was received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: 1221 Thames-1st Floor**

**Lab ID#: 0509210-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
1,1,1-Trichloroethane	0.032	0.26	0.17	1.4
Benzene	0.079	0.55	0.25	1.8
1,2-Dichloroethane	0.032	0.037	0.13	0.15
Trichloroethene	0.032	0.32	0.17	1.7
Toluene	0.032	4.5	0.12	17
Tetrachloroethene	0.032	0.071	0.21	0.48
Ethyl Benzene	0.032	0.33	0.14	1.4
m,p-Xylene	0.063	1.2	0.27	5.1
o-Xylene	0.032	0.35	0.14	1.5

# AIR TOXICS LTD.

Client Sample ID: 1221 Thames-1st Floor

Lab ID#: 0509210-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092118	Date of Collection:	9/7/05
Dil. Factor:	1.58	Date of Analysis:	9/22/05 09:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	0.26	0.17	1.4
Benzene	0.079	0.55	0.25	1.8
1,2-Dichloroethane	0.032	0.037	0.13	0.15
Trichloroethene	0.032	0.32	0.17	1.7
Toluene	0.032	4.5	0.12	17
1,1,2-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	0.071	0.21	0.48
Ethyl Benzene	0.032	0.33	0.14	1.4
m,p-Xylene	0.063	1.2	0.27	5.1
o-Xylene	0.032	0.35	0.14	1.5
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Methyl tert-butyl ether	0.16	Not Detected U J	0.57	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509210-02A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092107	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/21/05 08:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509210-03A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/21/05 04:53 PM

Compound	%Recovery
Vinyl Chloride	86
1,1-Dichloroethene	84
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	90
1,2-Dichloroethane	112
Trichloroethene	94
Toluene	104
1,1,2-Trichloroethane	103
Tetrachloroethene	98
Ethyl Benzene	108
m,p-Xylene	114
o-Xylene	105
1,1,2,2-Tetrachloroethane	98
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	61 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509210-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092104</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/21/05 05:50 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	86
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	78
1,2-Dichloroethane	96
Trichloroethene	81
Toluene	97
1,1,2-Trichloroethane	91
Tetrachloroethene	89
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	85
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	69

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	103	70-130



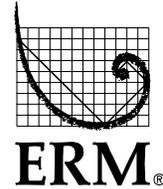
# Memorandum

**Environmental  
Resources  
Management**

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1221 Thames Drive (UPRR Hookston Station) Sample Collected 07 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509210

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The sample was prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. The associated sample result was qualified as estimated (UJ) for methyl tert-butyl ether. This qualification can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

### ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1221 Thames Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509210	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509210	CCV	1221 Thames Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.57	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

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

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Hours 8:00 A.M to 6:00 P.M. Pacific**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509123

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/08/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/21/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1005 Stimel Dr-1st Floor	Modified TO-15 SIM	6.5 "Hg
02A	1005 Stimel Dr-2nd Floor	Modified TO-15 SIM	7.5 "Hg
03A	1005 Stimel Dr-Crawl Space	Modified TO-15 SIM	6.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/21/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**ERM-West**  
**Workorder# 0509123**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 08, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1005 Stimel Dr-1st Floor

Lab ID#: 0509123-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.086	0.19	0.47
Benzene	0.086	0.34	0.27	1.1
Trichloroethene	0.034	0.25	0.18	1.4
Toluene	0.034	2.0	0.13	7.6
Tetrachloroethene	0.034	0.063	0.23	0.43
Ethyl Benzene	0.034	0.21	0.15	0.89
m,p-Xylene	0.068	0.53	0.30	2.3
o-Xylene	0.034	0.12	0.15	0.54

Client Sample ID: 1005 Stimel Dr-2nd Floor

Lab ID#: 0509123-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.082	0.20	0.45
Benzene	0.090	0.35	0.28	1.1
Trichloroethene	0.036	0.27	0.19	1.4
Toluene	0.036	1.9	0.13	7.1
Tetrachloroethene	0.036	0.066	0.24	0.45
Ethyl Benzene	0.036	0.20	0.16	0.85
m,p-Xylene	0.072	0.52	0.31	2.2
o-Xylene	0.036	0.13	0.16	0.55

Client Sample ID: 1005 Stimel Dr-Crawl Space

Lab ID#: 0509123-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.16	0.27	0.52
Trichloroethene	0.034	0.50	0.18	2.7
Toluene	0.034	0.58	0.13	2.2
Ethyl Benzene	0.034	0.061	0.15	0.26
m,p-Xylene	0.068	0.15	0.30	0.66
o-Xylene	0.034	0.044	0.15	0.19

# AIR TOXICS LTD.

Client Sample ID: 1005 Stimel Dr-1st Floor

Lab ID#: 0509123-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091820	Date of Collection:	9/6/05
Dil. Factor:	1.71	Date of Analysis:	9/19/05 10:27 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.086	0.19	0.47
Benzene	0.086	0.34	0.27	1.1
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.25	0.18	1.4
Toluene	0.034	2.0	0.13	7.6
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.063	0.23	0.43
Ethyl Benzene	0.034	0.21	0.15	0.89
m,p-Xylene	0.068	0.53	0.30	2.3
o-Xylene	0.034	0.12	0.15	0.54
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1005 Stimel Dr-2nd Floor

Lab ID#: 0509123-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091821	Date of Collection:	9/6/05
Dil. Factor:	1.79	Date of Analysis:	9/19/05 11:05 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.082	0.20	0.45
Benzene	0.090	0.35	0.28	1.1
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	0.27	0.19	1.4
Toluene	0.036	1.9	0.13	7.1
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.066	0.24	0.45
Ethyl Benzene	0.036	0.20	0.16	0.85
m,p-Xylene	0.072	0.52	0.31	2.2
o-Xylene	0.036	0.13	0.16	0.55
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1005 Stimel Dr-Crawl Space

Lab ID#: 0509123-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091822	Date of Collection:	9/6/05
Dil. Factor:	1.71	Date of Analysis:	9/19/05 11:47 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.16	0.27	0.52
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.50	0.18	2.7
Toluene	0.034	0.58	0.13	2.2
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
Ethyl Benzene	0.034	0.061	0.15	0.26
m,p-Xylene	0.068	0.15	0.30	0.66
o-Xylene	0.034	0.044	0.15	0.19
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	94	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509123-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091805	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/18/05 06:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509123-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 02:47 PM

Compound	%Recovery
Vinyl Chloride	80
1,1-Dichloroethene	81
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	91
1,2-Dichloroethane	113
Trichloroethene	90
Toluene	106
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	114
o-Xylene	106
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	85
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509123-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 03:41 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	80
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	84
Benzene	79
1,2-Dichloroethane	96
Trichloroethene	80
Toluene	98
1,1,2-Trichloroethane	94
Tetrachloroethene	91
Ethyl Benzene	101
m,p-Xylene	108
o-Xylene	99
1,1,2,2-Tetrachloroethane	93
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	105	70-130



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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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509124

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/08/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/21/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	Ambient Air 9/6/05	Modified TO-15 SIM	14.5 "Hg
02A	Trip Blank 9/6/05	Modified TO-15 SIM	4.6 psi
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
Laboratory Director

DATE: 09/21/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509124**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 08, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: Ambient Air 9/6/05

Lab ID#: 0509124-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.13	0.15	0.41	0.47
Toluene	0.052	0.40	0.20	1.5
m,p-Xylene	0.10	0.11	0.45	0.50

Client Sample ID: Trip Blank 9/6/05

Lab ID#: 0509124-02A

No Detections Were Found.

# AIR TOXICS LTD.

Client Sample ID: Ambient Air 9/6/05

Lab ID#: 0509124-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091823	Date of Collection:	9/6/05
Dil. Factor:	2.59	Date of Analysis:	9/19/05 12:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.026	Not Detected	0.066	Not Detected
1,1-Dichloroethene	0.026	Not Detected	0.10	Not Detected
1,1-Dichloroethane	0.052	Not Detected	0.21	Not Detected
cis-1,2-Dichloroethene	0.052	Not Detected	0.20	Not Detected
1,1,1-Trichloroethane	0.052	Not Detected	0.28	Not Detected
Benzene	0.13	0.15	0.41	0.47
1,2-Dichloroethane	0.052	Not Detected	0.21	Not Detected
Trichloroethene	0.052	Not Detected	0.28	Not Detected
Toluene	0.052	0.40	0.20	1.5
1,1,2-Trichloroethane	0.052	Not Detected	0.28	Not Detected
Tetrachloroethene	0.052	Not Detected	0.35	Not Detected
Ethyl Benzene	0.052	Not Detected	0.22	Not Detected
m,p-Xylene	0.10	0.11	0.45	0.50
o-Xylene	0.052	Not Detected	0.22	Not Detected
1,1,2,2-Tetrachloroethane	0.052	Not Detected	0.36	Not Detected
trans-1,2-Dichloroethene	0.26	Not Detected	1.0	Not Detected
Methyl tert-butyl ether	0.26	Not Detected U J	0.93	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: Trip Blank 9/6/05

Lab ID#: 0509124-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091824	Date of Collection:	9/6/05
Dil. Factor:	1.00	Date of Analysis:	9/19/05 01:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

## Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	89	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509124-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091805	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/18/05 06:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509124-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 02:47 PM

Compound	%Recovery
Vinyl Chloride	80
1,1-Dichloroethene	81
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	91
1,2-Dichloroethane	113
Trichloroethene	90
Toluene	106
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	114
o-Xylene	106
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	85
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509124-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 03:41 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	80
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	84
Benzene	79
1,2-Dichloroethane	96
Trichloroethene	80
Toluene	98
1,1,2-Trichloroethane	94
Tetrachloroethene	91
Ethyl Benzene	101
m,p-Xylene	108
o-Xylene	99
1,1,2,2-Tetrachloroethane	93
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	105	70-130



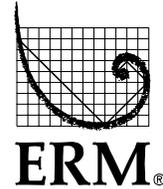
# Memorandum

**Environmental  
Resources  
Management**

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1005 Stimel Drive (UPRR Hookston Station) Samples Collected 06 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509123

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1005 Stimel Road**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509123	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509123	CCV	1005 Stimel Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.62	UJ
0509123	CCV	1005 Stimel Dr.- 2nd Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509123	CCV	1005 Stimel Dr.-Crawl Space	Methyl tert-butyl ether	NA	NA	0.62	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

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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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509421

### Work Order Summary

<b>CLIENT:</b>	Ms. Kimberly Lake ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/19/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/29/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1006 Stimel Dr- 1st Floor	Modified TO-15 SIM	6.5 "Hg
02A	1006 Stimel Dr- Crawl Space	Modified TO-15 SIM	7.0 "Hg
02AA	1006 Stimel Dr- Crawl Space Duplicate	Modified TO-15 SIM	7.0 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 10/03/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509421**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 19, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1006 Stimel Dr- 1st Floor

Lab ID#: 0509421-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.46	0.27	1.5
Trichloroethene	0.034	0.40	0.18	2.2
Toluene	0.034	3.8	0.13	14
Ethyl Benzene	0.034	0.35	0.15	1.5
m,p-Xylene	0.068	1.3	0.30	5.8
o-Xylene	0.034	0.36	0.15	1.6

Client Sample ID: 1006 Stimel Dr- Crawl Space

Lab ID#: 0509421-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.24	0.28	0.78
Trichloroethene	0.035	0.60	0.19	3.2
Toluene	0.035	1.3	0.13	4.9
Ethyl Benzene	0.035	0.14	0.15	0.62
m,p-Xylene	0.070	0.47	0.30	2.1
o-Xylene	0.035	0.13	0.15	0.58

Client Sample ID: 1006 Stimel Dr- Crawl Space Duplicate

Lab ID#: 0509421-02AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.25	0.28	0.79
Trichloroethene	0.035	0.61	0.19	3.3
Toluene	0.035	1.3	0.13	5.0
Ethyl Benzene	0.035	0.14	0.15	0.61
m,p-Xylene	0.070	0.48	0.30	2.1
o-Xylene	0.035	0.13	0.15	0.58

# AIR TOXICS LTD.

Client Sample ID: 1006 Stimel Dr- 1st Floor

Lab ID#: 0509421-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092717	Date of Collection:	9/14/05
Dil. Factor:	1.71	Date of Analysis:	9/28/05 12:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.46	0.27	1.5
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.40	0.18	2.2
Toluene	0.034	3.8	0.13	14
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
Ethyl Benzene	0.034	0.35	0.15	1.5
m,p-Xylene	0.068	1.3	0.30	5.8
o-Xylene	0.034	0.36	0.15	1.6
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: 1006 Stimel Dr- Crawl Space

Lab ID#: 0509421-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092715	Date of Collection:	9/14/05
Dil. Factor:	1.75	Date of Analysis:	9/28/05 11:09 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.24	0.28	0.78
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.60	0.19	3.2
Toluene	0.035	1.3	0.13	4.9
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.14	0.15	0.62
m,p-Xylene	0.070	0.47	0.30	2.1
o-Xylene	0.035	0.13	0.15	0.58
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1006 Stimel Dr- Crawl Space Duplicate

Lab ID#: 0509421-02AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092716	Date of Collection:	9/14/05
Dil. Factor:	1.75	Date of Analysis:	9/28/05 11:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.25	0.28	0.79
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.61	0.19	3.3
Toluene	0.035	1.3	0.13	5.0
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.14	0.15	0.61
m,p-Xylene	0.070	0.48	0.30	2.1
o-Xylene	0.035	0.13	0.15	0.58
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509421-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092707	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/27/05 07:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	123	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509421-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/27/05 01:39 PM

Compound	%Recovery
Vinyl Chloride	79
1,1-Dichloroethene	84
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	92
1,1,1-Trichloroethane	108
Benzene	92
1,2-Dichloroethane	125
Trichloroethene	96
Toluene	107
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	106
m,p-Xylene	111
o-Xylene	103
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509421-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/27/05 02:51 PM

Compound	%Recovery
Vinyl Chloride	88
1,1-Dichloroethene	81
1,1-Dichloroethane	89
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	90
Benzene	78
1,2-Dichloroethane	103
Trichloroethene	81
Toluene	98
1,1,2-Trichloroethane	91
Tetrachloroethene	90
Ethyl Benzene	99
m,p-Xylene	106
o-Xylene	97
1,1,2,2-Tetrachloroethane	90
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	73

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	104	70-130



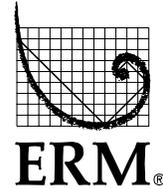
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 08 October 2005  
**Subject:** Data Review of 1006 Stimel Drive (UPRR Hookston Station) Samples Collected 14 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509421

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***ANALYTICAL DUPLICATE EVALUATION***

One analytical duplicate sample was prepared in the laboratory and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1006 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509421	CCV	See below	Methyl tert-butyl ether	60	70-130	NA	NA
0509421	CCV	1006 Stimel Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.62	UJ
0509421	CCV	1006 Stimel Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

**Table 2**  
**Analytical Duplicate Results and Calculated Relative Percent Differences**  
**1006 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
0509421	1006 Stimel Dr.- Crawl Space	Benzene	0.78	0.79	0.28	µg/m <sup>3</sup>	1.3
0509421	1006 Stimel Dr.- Crawl Space	Trichloroethane	3.2	3.3	0.19	µg/m <sup>3</sup>	3.1
0509421	1006 Stimel Dr.- Crawl Space	Toluene	4.9	5.0	0.13	µg/m <sup>3</sup>	2.0
0509421	1006 Stimel Dr.- Crawl Space	Ethylbenzene	0.62	0.61	0.15	µg/m <sup>3</sup>	1.6
0509421	1006 Stimel Dr.- Crawl Space	m,p-Xylene	2.1	2.1	0.30	µg/m <sup>3</sup>	0
0509421	1006 Stimel Dr.- Crawl Space	o-Xylene	0.58	0.58	0.15	µg/m <sup>3</sup>	0

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

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

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Hours 8:00 A.M to 6:00 P.M. Pacific**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509122

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/08/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/21/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1007 Stimel Dr-1st Floor	Modified TO-15 SIM	7.0 "Hg
02A	1007 Stimel Dr-2nd Floor	Modified TO-15 SIM	8.0 "Hg
03A	1007 Stimel Dr-Crawl Space	Modified TO-15 SIM	6.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/21/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0509122**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 08, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1007 Stimel Dr-1st Floor

Lab ID#: 0509122-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.035	0.065	0.19	0.36
Benzene	0.088	0.30	0.28	0.95
Trichloroethene	0.035	0.18	0.19	0.99
Toluene	0.035	2.0	0.13	7.7
Tetrachloroethene	0.035	0.76	0.24	5.2
Ethyl Benzene	0.035	0.18	0.15	0.80
m,p-Xylene	0.070	0.51	0.30	2.2
o-Xylene	0.035	0.16	0.15	0.71

Client Sample ID: 1007 Stimel Dr-2nd Floor

Lab ID#: 0509122-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.039	0.20	0.22
Benzene	0.092	0.26	0.29	0.83
Trichloroethene	0.037	0.12	0.20	0.62
Toluene	0.037	1.6	0.14	6.1
Tetrachloroethene	0.037	0.35	0.25	2.4
Ethyl Benzene	0.037	0.14	0.16	0.61
m,p-Xylene	0.073	0.37	0.32	1.6
o-Xylene	0.037	0.12	0.16	0.55

Client Sample ID: 1007 Stimel Dr-Crawl Space

Lab ID#: 0509122-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.15	0.27	0.49
Trichloroethene	0.034	0.26	0.18	1.4
Toluene	0.034	0.48	0.13	1.8
Tetrachloroethene	0.034	0.043	0.23	0.29
Ethyl Benzene	0.034	0.048	0.15	0.21
m,p-Xylene	0.068	0.13	0.30	0.56
o-Xylene	0.034	0.042	0.15	0.18

# AIR TOXICS LTD.

Client Sample ID: 1007 Stimel Dr-1st Floor

Lab ID#: 0509122-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091817	Date of Collection:	9/6/05
Dil. Factor:	1.75	Date of Analysis:	9/19/05 05:59 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	0.065	0.19	0.36
Benzene	0.088	0.30	0.28	0.95
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.18	0.19	0.99
Toluene	0.035	2.0	0.13	7.7
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.76	0.24	5.2
Ethyl Benzene	0.035	0.18	0.15	0.80
m,p-Xylene	0.070	0.51	0.30	2.2
o-Xylene	0.035	0.16	0.15	0.71
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: 1007 Stimel Dr-2nd Floor

Lab ID#: 0509122-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091818	Date of Collection:	9/6/05
Dil. Factor:	1.83	Date of Analysis:	9/19/05 09:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	0.039	0.20	0.22
Benzene	0.092	0.26	0.29	0.83
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.12	0.20	0.62
Toluene	0.037	1.6	0.14	6.1
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.35	0.25	2.4
Ethyl Benzene	0.037	0.14	0.16	0.61
m,p-Xylene	0.073	0.37	0.32	1.6
o-Xylene	0.037	0.12	0.16	0.55
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	105	70-130

# AIR TOXICS LTD.

Client Sample ID: 1007 Stimel Dr-Crawl Space

Lab ID#: 0509122-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091819	Date of Collection:	9/6/05
Dil. Factor:	1.71	Date of Analysis:	9/19/05 09:48 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.15	0.27	0.49
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.26	0.18	1.4
Toluene	0.034	0.48	0.13	1.8
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.043	0.23	0.29
Ethyl Benzene	0.034	0.048	0.15	0.21
m,p-Xylene	0.068	0.13	0.30	0.56
o-Xylene	0.034	0.042	0.15	0.18
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509122-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 06:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509122-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 02:47 PM

Compound	%Recovery
Vinyl Chloride	80
1,1-Dichloroethene	81
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	91
1,2-Dichloroethane	113
Trichloroethene	90
Toluene	106
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	114
o-Xylene	106
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	85
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509122-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 03:41 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	80
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	84
Benzene	79
1,2-Dichloroethane	96
Trichloroethene	80
Toluene	98
1,1,2-Trichloroethane	94
Tetrachloroethene	91
Ethyl Benzene	101
m,p-Xylene	108
o-Xylene	99
1,1,2,2-Tetrachloroethane	93
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	105	70-130



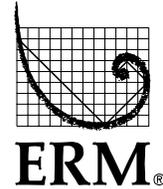
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1007 Stimel Drive (UPRR Hookston Station) Samples Collected 06 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509122

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1007 Stimel Road**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509122	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509122	CCV	1007 Stimel Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0509122	CCV	1007 Stimel Dr.- 2nd Floor	Methyl tert-butyl ether	NA	NA	0.66	UJ
0509122	CCV	1007 Stimel Dr.-Crawl Space	Methyl tert-butyl ether	NA	NA	0.62	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

## **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).

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

**WORK ORDER #: 0509214**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 09/12/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/23/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1009 Stimel Dr- 1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1009 Stimel Dr- 1st Floor Duplicate	Modified TO-15 SIM	0.0 "Hg
03A	1009 Stimel Dr- Crawl Space	Modified TO-15 SIM	7.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/23/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509214**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	<=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1009 Stimel Dr- 1st Floor

Lab ID#: 0509214-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.25	0.20	1.3
Benzene	0.090	0.59	0.28	1.9
1,2-Dichloroethane	0.036	0.072	0.14	0.29
Trichloroethene	0.036	0.067	0.19	0.36
Toluene	0.036	2.2	0.13	8.5
Tetrachloroethene	0.036	0.10	0.24	0.68
Ethyl Benzene	0.036	0.15	0.16	0.66
m,p-Xylene	0.072	0.34	0.31	1.5
o-Xylene	0.036	0.13	0.16	0.56

Client Sample ID: 1009 Stimel Dr- 1st Floor Duplicate

Lab ID#: 0509214-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.027	0.20	0.15	1.1
Benzene	0.067	0.59	0.21	1.9
1,2-Dichloroethane	0.027	0.051	0.11	0.21
Trichloroethene	0.027	0.036	0.14	0.19
Toluene	0.027	1.9	0.10	7.3
Tetrachloroethene	0.027	0.083	0.18	0.56
Ethyl Benzene	0.027	0.12	0.12	0.54
m,p-Xylene	0.054	0.28	0.23	1.2
o-Xylene	0.027	0.097	0.12	0.42

Client Sample ID: 1009 Stimel Dr- Crawl Space

Lab ID#: 0509214-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.11	0.28	0.35
Trichloroethene	0.036	0.083	0.19	0.44
Toluene	0.036	0.35	0.13	1.3
Tetrachloroethene	0.036	0.13	0.24	0.87
Ethyl Benzene	0.036	0.040	0.16	0.18
m,p-Xylene	0.072	0.10	0.31	0.46
o-Xylene	0.036	0.036	0.16	0.16

# AIR TOXICS LTD.

Client Sample ID: 1009 Stimel Dr- 1st Floor

Lab ID#: 0509214-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092217</b>	<b>Date of Collection:</b> 9/8/05
<b>Dil. Factor:</b>	1.79	<b>Date of Analysis:</b> 9/23/05 06:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.25	0.20	1.3
Benzene	0.090	0.59	0.28	1.9
1,2-Dichloroethane	0.036	0.072	0.14	0.29
Trichloroethene	0.036	0.067	0.19	0.36
Toluene	0.036	2.2	0.13	8.5
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.10	0.24	0.68
Ethyl Benzene	0.036	0.15	0.16	0.66
m,p-Xylene	0.072	0.34	0.31	1.5
o-Xylene	0.036	0.13	0.16	0.56
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: 1009 Stimel Dr- 1st Floor Duplicate

Lab ID#: 0509214-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092218	Date of Collection:	9/8/05
Dil. Factor:	1.34	Date of Analysis:	9/23/05 09:22 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.053	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.027	0.20	0.15	1.1
Benzene	0.067	0.59	0.21	1.9
1,2-Dichloroethane	0.027	0.051	0.11	0.21
Trichloroethene	0.027	0.036	0.14	0.19
Toluene	0.027	1.9	0.10	7.3
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	0.083	0.18	0.56
Ethyl Benzene	0.027	0.12	0.12	0.54
m,p-Xylene	0.054	0.28	0.23	1.2
o-Xylene	0.027	0.097	0.12	0.42
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Methyl tert-butyl ether	0.13	Not Detected U J	0.48	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	112	70-130

# AIR TOXICS LTD.

Client Sample ID: 1009 Stimel Dr- Crawl Space

Lab ID#: 0509214-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092219	Date of Collection:	9/8/05
Dil. Factor:	1.79	Date of Analysis:	9/23/05 10:01 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.11	0.28	0.35
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	0.083	0.19	0.44
Toluene	0.036	0.35	0.13	1.3
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.13	0.24	0.87
Ethyl Benzene	0.036	0.040	0.16	0.18
m,p-Xylene	0.072	0.10	0.31	0.46
o-Xylene	0.036	0.036	0.16	0.16
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509214-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 07:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509214-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	81
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	101
Benzene	94
1,2-Dichloroethane	122
Trichloroethene	98
Toluene	112
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	115
o-Xylene	106
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509214-06A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092203</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/22/05 04:58 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	82
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	79
1,2-Dichloroethane	99
Trichloroethene	82
Toluene	98
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	83
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	64

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



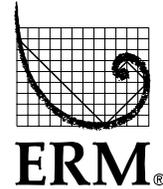
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 27 September 2005  
**Subject:** Data Review of 1009 Stimel Drive (UPRR Hookston Station) Samples Collected 08 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509214

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 2.

### ***CANISTER VACUUM EVALUATION***

One sample was received in the laboratory with zero vacuum. All compounds in that sample are qualified as estimated (J/UJ) as shown in Table 3.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1009 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509214	CCV	See below	Methyl tert-butyl ether	60	70-130	NA	NA
0509214	CCV	1009 Stimel Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509214	CCV	1009 Stimel Dr.- 1st Floor D	Methyl tert-butyl ether	NA	NA	0.48	UJ
0509214	CCV	1009 Stimel Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	0.64	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

D = Duplicate

**Table 2**  
**Field Duplicate Results and Calculated Relative Percent Differences**  
**1009 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
0509214	1009 Stimel Dr.- 1st Floor	1,1,1-Trichloroethane	1.3	1.1	0.20	µg/m <sup>3</sup>	17
0509214	1009 Stimel Dr.- 1st Floor	Benzene	1.9	1.9	0.28	µg/m <sup>3</sup>	0
0509214	1009 Stimel Dr.- 1st Floor	1,2-Dichloroethane	0.29	0.21	0.14	µg/m <sup>3</sup>	32
0509214	1009 Stimel Dr.- 1st Floor	Trichloroethane	0.36	0.19	0.19	µg/m <sup>3</sup>	62
0509214	1009 Stimel Dr.- 1st Floor	Toluene	8.5	7.3	0.13	µg/m <sup>3</sup>	15
0509214	1009 Stimel Dr.- 1st Floor	Tetrachloroethene	0.68	0.56	0.24	µg/m <sup>3</sup>	19
0509214	1009 Stimel Dr.- 1st Floor	Ethylbenzene	0.66	0.54	0.16	µg/m <sup>3</sup>	20
0509214	1009 Stimel Dr.- 1st Floor	m,p-Xylene	1.5	1.2	0.31	µg/m <sup>3</sup>	22
0509214	1009 Stimel Dr.- 1st Floor	o-Xylene	0.56	0.42	0.16	µg/m <sup>3</sup>	29

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

**Table 3**  
**Samples with Zero Canister Vacuum Upon Receipt**  
**1009 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compounds	Receipt Vacuum	ERM Qualifier
0509214	1009 Stimel Dr.- 1st Floor D	All	0.0" Hg	J/UJ

**Key:**

" Hg = Inches of mercury

J/UJ = Detected/nondetected compounds are qualified as estimated

D = Duplicate

## **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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508516

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	08/24/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/07/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1015 Stimel Drive-1st Floor	Modified TO-15 SIM	7.0 "Hg
02A	1015 Stimel Drive-Crawl Space	Modified TO-15 SIM	5.5 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/07/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0508516**

Two 6 Liter Summa Canister (SIM Certified) samples were received on August 24, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1015 Stimel Drive-1st Floor

Lab ID#: 0508516-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.018	0.030	0.069	0.12
1,1,1-Trichloroethane	0.035	1.5	0.19	8.1
Benzene	0.088	0.15	0.28	0.48
Toluene	0.035	1.1	0.13	4.3
Ethyl Benzene	0.035	0.081	0.15	0.35
m,p-Xylene	0.070	0.19	0.30	0.84
o-Xylene	0.035	0.068	0.15	0.29

Client Sample ID: 1015 Stimel Drive-Crawl Space

Lab ID#: 0508516-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.033	0.24	0.18	1.3
Benzene	0.082	0.15	0.26	0.48
Toluene	0.033	0.64	0.12	2.4
Ethyl Benzene	0.033	0.058	0.14	0.25
m,p-Xylene	0.066	0.15	0.28	0.66
o-Xylene	0.033	0.058	0.14	0.25

# AIR TOXICS LTD.

Client Sample ID: 1015 Stimel Drive-1st Floor

Lab ID#: 0508516-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082519	Date of Collection:	8/22/05
Dil. Factor:	1.75	Date of Analysis:	8/26/05 09:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	0.030	0.069	0.12
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	1.5	0.19	8.1
Benzene	0.088	0.15	0.28	0.48
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	1.1	0.13	4.3
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.081	0.15	0.35
m,p-Xylene	0.070	0.19	0.30	0.84
o-Xylene	0.035	0.068	0.15	0.29
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: 1015 Stimel Drive-Crawl Space

Lab ID#: 0508516-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082520	Date of Collection:	8/22/05
Dil. Factor:	1.64	Date of Analysis:	8/26/05 10:46 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	0.24	0.18	1.3
Benzene	0.082	0.15	0.26	0.48
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	Not Detected	0.18	Not Detected
Toluene	0.033	0.64	0.12	2.4
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected
Ethyl Benzene	0.033	0.058	0.14	0.25
m,p-Xylene	0.066	0.15	0.28	0.66
o-Xylene	0.033	0.058	0.14	0.25
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Methyl tert-butyl ether	0.16	Not Detected U J	0.59	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508516-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082506	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/25/05 04:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508516-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082502	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/25/05 11:46 AM

Compound	%Recovery
Vinyl Chloride	86
1,1-Dichloroethene	80
1,1-Dichloroethane	91
cis-1,2-Dichloroethene	83
1,1,1-Trichloroethane	99
Benzene	85
1,2-Dichloroethane	108
Trichloroethene	86
Toluene	97
1,1,2-Trichloroethane	97
Tetrachloroethene	93
Ethyl Benzene	102
m,p-Xylene	108
o-Xylene	98
1,1,2,2-Tetrachloroethane	99
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508516-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8082504	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/25/05 01:59 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	82
1,1-Dichloroethane	84
cis-1,2-Dichloroethene	74
1,1,1-Trichloroethane	83
Benzene	74
1,2-Dichloroethane	91
Trichloroethene	78
Toluene	92
1,1,2-Trichloroethane	87
Tetrachloroethene	86
Ethyl Benzene	96
m,p-Xylene	102
o-Xylene	96
1,1,2,2-Tetrachloroethane	87
trans-1,2-Dichloroethene	104
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	108	70-130



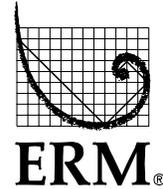
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1015 Stimel Drive (UPRR Hookston Station) Samples Collected 22 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508516

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1015 Stimel Road**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508516	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0508516	CCV	1015 Stimel Dr.-1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0508516	CCV	1015 Stimel Dr.-Crawl Space	Methyl tert-butyl ether	NA	NA	0.59	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

## **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 #: 0509422**

Work Order Summary

**CLIENT:** Ms. Kimberly Lake  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455

**FAX:** 925-946-9968

**DATE RECEIVED:** 09/19/2005

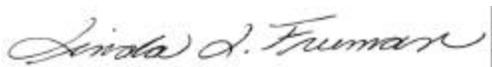
**DATE COMPLETED:** 09/29/2005

**P.O. #**

**PROJECT #** UPRR Hookston Station

**CONTACT:** Nicole Danbacher

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1016 Stimel Dr- 1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1016 Stimel Dr- Crawl Space	Modified TO-15 SIM	6.0 "Hg
03A	1016 Stimel Dr- 1st Floor Duplicate	Modified TO-15 SIM	7.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

Laboratory Director

DATE: 09/30/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509422**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 19, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	<=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1016 Stimel Dr- 1st Floor

Lab ID#: 0509422-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.074	0.20	0.40
Benzene	0.090	0.14	0.28	0.46
Toluene	0.036	0.89	0.13	3.4
Ethyl Benzene	0.036	0.086	0.16	0.37
m,p-Xylene	0.072	0.19	0.31	0.83
o-Xylene	0.036	0.063	0.16	0.27

Client Sample ID: 1016 Stimel Dr- Crawl Space

Lab ID#: 0509422-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.084	0.12	0.27	0.40
Trichloroethene	0.034	0.034	0.18	0.18
Toluene	0.034	0.39	0.13	1.4
Ethyl Benzene	0.034	0.043	0.14	0.19
m,p-Xylene	0.067	0.12	0.29	0.53
o-Xylene	0.034	0.037	0.14	0.16

Client Sample ID: 1016 Stimel Dr- 1st Floor Duplicate

Lab ID#: 0509422-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.072	0.20	0.39
Benzene	0.090	0.14	0.28	0.44
Toluene	0.036	0.87	0.13	3.3
Ethyl Benzene	0.036	0.084	0.16	0.36
m,p-Xylene	0.072	0.18	0.31	0.80
o-Xylene	0.036	0.060	0.16	0.26

# AIR TOXICS LTD.

Client Sample ID: 1016 Stimel Dr- 1st Floor

Lab ID#: 0509422-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092807</b>	<b>Date of Collection:</b> 9/14/05
<b>Dil. Factor:</b>	1.79	<b>Date of Analysis:</b> 9/28/05 06:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.074	0.20	0.40
Benzene	0.090	0.14	0.28	0.46
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	0.89	0.13	3.4
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.086	0.16	0.37
m,p-Xylene	0.072	0.19	0.31	0.83
o-Xylene	0.036	0.063	0.16	0.27
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: 1016 Stimel Dr- Crawl Space

Lab ID#: 0509422-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092808	Date of Collection:	9/14/05
Dil. Factor:	1.68	Date of Analysis:	9/28/05 07:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Benzene	0.084	0.12	0.27	0.40
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.034	0.18	0.18
Toluene	0.034	0.39	0.13	1.4
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
Ethyl Benzene	0.034	0.043	0.14	0.19
m,p-Xylene	0.067	0.12	0.29	0.53
o-Xylene	0.034	0.037	0.14	0.16
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.60	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

# AIR TOXICS LTD.

Client Sample ID: 1016 Stimel Dr- 1st Floor Duplicate

Lab ID#: 0509422-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092809	Date of Collection:	9/14/05
Dil. Factor:	1.79	Date of Analysis:	9/28/05 08:32 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.072	0.20	0.39
Benzene	0.090	0.14	0.28	0.44
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	0.87	0.13	3.3
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.084	0.16	0.36
m,p-Xylene	0.072	0.18	0.31	0.80
o-Xylene	0.036	0.060	0.16	0.26
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509422-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/28/05 05:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509422-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/28/05 01:55 PM

Compound	%Recovery
Vinyl Chloride	82
1,1-Dichloroethene	86
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	92
1,1,1-Trichloroethane	107
Benzene	93
1,2-Dichloroethane	126
Trichloroethene	98
Toluene	110
1,1,2-Trichloroethane	102
Tetrachloroethene	97
Ethyl Benzene	107
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	98
trans-1,2-Dichloroethene	88
Methyl tert-butyl ether	61 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509422-06A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/28/05 03:31 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	81
1,1-Dichloroethane	88
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	89
Benzene	78
1,2-Dichloroethane	103
Trichloroethene	79
Toluene	97
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	106
o-Xylene	96
1,1,2,2-Tetrachloroethane	87
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	69

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	103	70-130



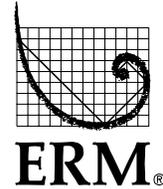
# Memorandum

**Environmental  
Resources  
Management**

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 08 October 2005  
**Subject:** Data Review of 1016 Stimel Drive (UPRR Hookston Station) Samples Collected 14 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509422

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***FIELD DUPLICATE EVALUATION***

One sample was collected in duplicate and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1016 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509422	CCV	See below	Methyl tert-butyl ether	60	70-130	NA	NA
0509422	CCV	1016 Stimel Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509422	CCV	1016 Stimel Dr.- 1st Floor D	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509422	CCV	1016 Stimel Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	0.60	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

D = Duplicate sample

**Table 2**  
**Analytical Duplicate Results and Calculated Relative Percent Differences**  
**1016 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
0509422	1016 Stimel Dr.- 1st Floor	1,1,1-Trichloroethane	0.40	0.39	0.20	µg/m <sup>3</sup>	2.5
0509422	1016 Stimel Dr.- 1st Floor	Benzene	0.46	0.44	0.28	µg/m <sup>3</sup>	4.4
0509422	1016 Stimel Dr.- 1st Floor	Toluene	3.4	3.3	0.13	µg/m <sup>3</sup>	3.0
0509422	1016 Stimel Dr.- 1st Floor	Ethylbenzene	0.37	0.36	0.16	µg/m <sup>3</sup>	2.7
0509422	1016 Stimel Dr.- 1st Floor	m,p-Xylene	0.83	0.80	0.31	µg/m <sup>3</sup>	3.7
0509422	1016 Stimel Dr.- 1st Floor	o-Xylene	0.27	0.26	0.16	µg/m <sup>3</sup>	3.8

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

## **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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509178

### Work Order Summary

<b>CLIENT:</b>	Ms. Kimberly Lake ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/09/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/22/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1040 Stimel Dr-1st Floor	Modified TO-15 SIM	6.5 "Hg
01AA	1040 Stimel Dr-1st Floor Duplicate	Modified TO-15 SIM	6.5 "Hg
02A	1040 Stimel Dr-1st Floor Duplicate	Modified TO-15 SIM	6.5 "Hg
03A	1040 Stimel Dr-Crawl Space	Modified TO-15 SIM	7.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/22/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0509178**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 09, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$ .; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD

**Receiving Notes**

The Chain of Custody (COC) information for sample 1040 Stimel Dr-Crawl Space did not match the entry on the sample tag with regard to sample identification. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the information on the COC was used to process and report the sample.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1040 Stimel Dr-1st Floor

Lab ID#: 0509178-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.18	0.27	0.57
Toluene	0.034	1.7	0.13	6.3
Tetrachloroethene	0.034	0.055	0.23	0.37
Ethyl Benzene	0.034	0.075	0.15	0.32
m,p-Xylene	0.068	0.18	0.30	0.77
o-Xylene	0.034	0.056	0.15	0.24

Client Sample ID: 1040 Stimel Dr-1st Floor Duplicate

Lab ID#: 0509178-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.18	0.27	0.59
Toluene	0.034	1.8	0.13	6.6
Tetrachloroethene	0.034	0.054	0.23	0.37
Ethyl Benzene	0.034	0.081	0.15	0.35
m,p-Xylene	0.068	0.18	0.30	0.80
o-Xylene	0.034	0.056	0.15	0.24

Client Sample ID: 1040 Stimel Dr-1st Floor Duplicate

Lab ID#: 0509178-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.17	0.27	0.56
Toluene	0.034	1.6	0.13	6.2
Tetrachloroethene	0.034	0.058	0.23	0.40
Ethyl Benzene	0.034	0.075	0.15	0.33
m,p-Xylene	0.068	0.18	0.30	0.76
o-Xylene	0.034	0.054	0.15	0.23

Client Sample ID: 1040 Stimel Dr-Crawl Space

Lab ID#: 0509178-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.13	0.28	0.42
Toluene	0.036	0.39	0.13	1.5
Ethyl Benzene	0.036	0.051	0.16	0.22
m,p-Xylene	0.072	0.14	0.31	0.60
o-Xylene	0.036	0.042	0.16	0.18

# AIR TOXICS LTD.

Client Sample ID: 1040 Stimel Dr-1st Floor

Lab ID#: 0509178-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091918	Date of Collection:	9/6/05
Dil. Factor:	1.71	Date of Analysis:	9/20/05 05:14 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.18	0.27	0.57
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	1.7	0.13	6.3
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.055	0.23	0.37
Ethyl Benzene	0.034	0.075	0.15	0.32
m,p-Xylene	0.068	0.18	0.30	0.77
o-Xylene	0.034	0.056	0.15	0.24
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

## Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: 1040 Stimel Dr-1st Floor Duplicate

Lab ID#: 0509178-01AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091919	Date of Collection:	9/6/05
Dil. Factor:	1.71	Date of Analysis:	9/20/05 06:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.18	0.27	0.59
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	1.8	0.13	6.6
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.054	0.23	0.37
Ethyl Benzene	0.034	0.081	0.15	0.35
m,p-Xylene	0.068	0.18	0.30	0.80
o-Xylene	0.034	0.056	0.15	0.24
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1040 Stimel Dr-1st Floor Duplicate

Lab ID#: 0509178-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091920	Date of Collection:	9/6/05
Dil. Factor:	1.71	Date of Analysis:	9/20/05 09:31 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.17	0.27	0.56
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	1.6	0.13	6.2
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.058	0.23	0.40
Ethyl Benzene	0.034	0.075	0.15	0.33
m,p-Xylene	0.068	0.18	0.30	0.76
o-Xylene	0.034	0.054	0.15	0.23
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: 1040 Stimel Dr-Crawl Space

Lab ID#: 0509178-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091921	Date of Collection:	9/6/05
Dil. Factor:	1.79	Date of Analysis:	9/20/05 10:29 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.13	0.28	0.42
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	0.39	0.13	1.5
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.051	0.16	0.22
m,p-Xylene	0.072	0.14	0.31	0.60
o-Xylene	0.036	0.042	0.16	0.18
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509178-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091907	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/19/05 06:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	93	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509178-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/05 02:39 PM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	82
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	101
Benzene	92
1,2-Dichloroethane	115
Trichloroethene	94
Toluene	108
1,1,2-Trichloroethane	100
Tetrachloroethene	95
Ethyl Benzene	107
m,p-Xylene	113
o-Xylene	106
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	64 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509178-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/05 03:33 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	80
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	83
Benzene	77
1,2-Dichloroethane	95
Trichloroethene	79
Toluene	96
1,1,2-Trichloroethane	91
Tetrachloroethene	90
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	97
1,1,2,2-Tetrachloroethane	87
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	69

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

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Page 1 of 1

Contact Person Kimberly Lake

Company ERM Email kimberly.lake@erm.com

Address 1777 Batelino Dr #2600 City Walnut Creek State CA Zip 94596

Phone 925-946-4960 Fax 925-946-9968

Collected by: (Signature) Paul S. Sypko

**Project Info:**

P.O. # \_\_\_\_\_

Project # \_\_\_\_\_

Project Name WRK Hookston Station

Turn Around Time: \_\_\_\_\_

Normal

Rush

specify \_\_\_\_\_

Lab Use Only

Pressurized by: PLS

Date: 9/16/05

Pressurization Gas: \_\_\_\_\_

He

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum			
					Initial	Final	Receipt (psi)	
01A	1040 Stimel Dr - 1st Floor	9/16/05	0833-20:33	TD-15 SIM	26.5	41.5	60.5	50psi
02A	1040 Stimel Dr - 1st Floor Duplicate		0833-20:33	TD-15 SIM	26.5	4	60.5	4psi
03A	1040 Stimel Dr - Crawlspace		0837-20:42	TD-15 SIM	26.5	5.5	75.4	4psi

Relinquished by: (signature) \_\_\_\_\_

Date/Time 9/16/05

Received by: (signature) \_\_\_\_\_

Date/Time 9/19/05

Notes: \_\_\_\_\_

Relinquished by: (signature) \_\_\_\_\_

Date/Time 9/16/05

Received by: (signature) \_\_\_\_\_

Date/Time 9/16/05

FedEx # 6328 9899 6840 sample in box w/

Relinquished by: (signature) \_\_\_\_\_

Date/Time \_\_\_\_\_

Received by: (signature) \_\_\_\_\_

Date/Time \_\_\_\_\_

Lab Use Only

Shipper Name FedEx Air Bill # 632898996840 Temp (°C) — Condition Good Custody Seals Intact?  Yes  No  None Work Order # 0509178

FedEx 6328 9899 6840

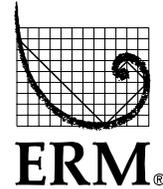
# Memorandum

**Environmental  
Resources  
Management**

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1040 Stimel Drive (UPRR Hookston Station) Samples Collected 06 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509178

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***ANALYTICAL DUPLICATE EVALUATION***

The laboratory analyzed one analytical duplicate sample. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 10 percent, indicating acceptable precision. The RPDs are presented in Table 2.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 10 percent, indicating acceptable precision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1040 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509178	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509178	CCV	1040 Stimel Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.62	UJ
0509178	CCV	1040 Stimel Dr.- 1st Floor D	Methyl tert-butyl ether	NA	NA	0.62	UJ
0509178	CCV	1040 Stimel Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	0.64	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

J = Detected result qualified as estimated

NA = Not applicable

D = Duplicate

**Table 2**  
**Analytical and Field Duplicate Results and Calculated Relative Percent Differences**  
**1040 Stimmel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Analytical Duplicate Results</b>							
0509178	1040 Stimmel Dr.- 1st Floor	Benzene	0.57	0.59	0.27	µg/m <sup>3</sup>	3.4
0509178	1040 Stimmel Dr.- 1st Floor	Toluene	6.3	6.6	0.13	µg/m <sup>3</sup>	4.7
0509178	1040 Stimmel Dr.- 1st Floor	Tetrachloroethene	0.37	0.37	0.23	µg/m <sup>3</sup>	0
0509178	1040 Stimmel Dr.- 1st Floor	Ethylbenzene	0.32	0.35	0.15	µg/m <sup>3</sup>	9.0
0509178	1040 Stimmel Dr.- 1st Floor	m,p-Xylene	0.77	0.80	0.30	µg/m <sup>3</sup>	3.8
0509178	1040 Stimmel Dr.- 1st Floor	o-Xylene	0.24	0.24	0.15	µg/m <sup>3</sup>	0
<b>Field Duplicate Results</b>							
0509178	1040 Stimmel Dr.- 1st Floor	Benzene	0.57	0.56	0.27	µg/m <sup>3</sup>	1.8
0509178	1040 Stimmel Dr.- 1st Floor	Toluene	6.3	6.2	0.13	µg/m <sup>3</sup>	1.6
0509178	1040 Stimmel Dr.- 1st Floor	Tetrachloroethene	0.37	0.40	0.23	µg/m <sup>3</sup>	7.8
0509178	1040 Stimmel Dr.- 1st Floor	Ethylbenzene	0.32	0.33	0.15	µg/m <sup>3</sup>	3.1
0509178	1040 Stimmel Dr.- 1st Floor	m,p-Xylene	0.77	0.76	0.30	µg/m <sup>3</sup>	1.3
0509178	1040 Stimmel Dr.- 1st Floor	o-Xylene	0.24	0.23	0.15	µg/m <sup>3</sup>	4.3

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

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This electronic report includes the following:

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

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# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509234

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/13/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/26/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1043 Stimel Dr- 1st Floor	Modified TO-15 SIM	7.0 "Hg
02A	1043 Stimel Dr- Crawl Space	Modified TO-15 SIM	7.0 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
Laboratory Director

DATE: 09/26/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**ERM-West**  
**Workorder# 0509234**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 13, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1043 Stimel Dr- 1st Floor

Lab ID#: 0509234-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.10	0.28	0.34
Toluene	0.035	0.30	0.13	1.1
m,p-Xylene	0.070	0.073	0.30	0.32

Client Sample ID: 1043 Stimel Dr- Crawl Space

Lab ID#: 0509234-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.097	0.28	0.31
Toluene	0.035	0.20	0.13	0.76
m,p-Xylene	0.070	0.13	0.30	0.55
o-Xylene	0.035	0.040	0.15	0.17

# AIR TOXICS LTD.

Client Sample ID: 1043 Stimel Dr- 1st Floor

Lab ID#: 0509234-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092309	Date of Collection:	9/8/05
Dil. Factor:	1.75	Date of Analysis:	9/23/05 09:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.10	0.28	0.34
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.30	0.13	1.1
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	Not Detected	0.15	Not Detected
m,p-Xylene	0.070	0.073	0.30	0.32
o-Xylene	0.035	Not Detected	0.15	Not Detected
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1043 Stimel Dr- Crawl Space

Lab ID#: 0509234-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092310	Date of Collection:	9/8/05
Dil. Factor:	1.75	Date of Analysis:	9/23/05 10:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.097	0.28	0.31
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.20	0.13	0.76
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	Not Detected	0.15	Not Detected
m,p-Xylene	0.070	0.13	0.30	0.55
o-Xylene	0.035	0.040	0.15	0.17
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509234-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092307	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/23/05 07:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509234-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/23/05 02:15 PM

Compound	%Recovery
Vinyl Chloride	89
1,1-Dichloroethene	88
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	94
1,1,1-Trichloroethane	107
Benzene	95
1,2-Dichloroethane	124
Trichloroethene	100
Toluene	111
1,1,2-Trichloroethane	104
Tetrachloroethene	99
Ethyl Benzene	110
m,p-Xylene	116
o-Xylene	107
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	90
Methyl tert-butyl ether	64 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509234-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/23/05 05:27 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	84
1,1-Dichloroethane	89
cis-1,2-Dichloroethene	78
1,1,1-Trichloroethane	85
Benzene	75
1,2-Dichloroethane	96
Trichloroethene	80
Toluene	93
1,1,2-Trichloroethane	90
Tetrachloroethene	90
Ethyl Benzene	96
m,p-Xylene	102
o-Xylene	94
1,1,2,2-Tetrachloroethane	79
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	70

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	100	70-130



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# AIR TOXICS LTD.

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## WORK ORDER #: 0509235

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/13/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/26/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	Ambient Air 9-8-05	Modified TO-15 SIM	7.0 "Hg
02A	Trip Blank 9-8-05	Modified TO-15 SIM	4.6 psi
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

DATE: 09/26/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**ERM-West**  
**Workorder# 0509235**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 13, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: Ambient Air 9-8-05

Lab ID#: 0509235-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.098	0.28	0.31
Toluene	0.035	0.21	0.13	0.81

Client Sample ID: Trip Blank 9-8-05

Lab ID#: 0509235-02A

No Detections Were Found.

# AIR TOXICS LTD.

Client Sample ID: Ambient Air 9-8-05

Lab ID#: 0509235-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092311	Date of Collection:	9/8/05
Dil. Factor:	1.75	Date of Analysis:	9/23/05 11:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.098	0.28	0.31
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.21	0.13	0.81
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	Not Detected	0.15	Not Detected
m,p-Xylene	0.070	Not Detected	0.30	Not Detected
o-Xylene	0.035	Not Detected	0.15	Not Detected
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

## Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	93	70-130

# AIR TOXICS LTD.

Client Sample ID: Trip Blank 9-8-05

Lab ID#: 0509235-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092312	Date of Collection:	9/8/05
Dil. Factor:	1.00	Date of Analysis:	9/24/05 12:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	86	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509235-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092307	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/23/05 07:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509235-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/23/05 02:15 PM

Compound	%Recovery
Vinyl Chloride	89
1,1-Dichloroethene	88
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	94
1,1,1-Trichloroethane	107
Benzene	95
1,2-Dichloroethane	124
Trichloroethene	100
Toluene	111
1,1,2-Trichloroethane	104
Tetrachloroethene	99
Ethyl Benzene	110
m,p-Xylene	116
o-Xylene	107
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	90
Methyl tert-butyl ether	64 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509235-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/23/05 05:27 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	84
1,1-Dichloroethane	89
cis-1,2-Dichloroethene	78
1,1,1-Trichloroethane	85
Benzene	75
1,2-Dichloroethane	96
Trichloroethene	80
Toluene	93
1,1,2-Trichloroethane	90
Tetrachloroethene	90
Ethyl Benzene	96
m,p-Xylene	102
o-Xylene	94
1,1,2,2-Tetrachloroethane	79
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	70

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	100	70-130



**AIR TOXICS LTD.**  
AN ENVIRONMENTAL ANALYTICAL LABORATORY

**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 1

Contact Person Kimberly Lake

Company EKM

Email kimberly.lake@eam.com

Address 17171 Betelhs Dr, #200 City Walnut Creek State CA Zip 94596

Phone 925-946-9968 Fax 925-946-9968

Collected by: (Signature) Doug Walker - Kimberly Lake

**Project Info:**  
P.O. # \_\_\_\_\_  
Project # \_\_\_\_\_  
Project Name WRR Hoboken Station

**Turn Around Time:**  
 Normal  
 Rush  
specify \_\_\_\_\_  
Lab Use Only  
Pressurized by: BS  
Date: 9/11/05  
Pressurization Gas: He

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum		
					Initial	Final	Final (psi)
<u>01A</u>	<u>Ambient Air</u>	<u>9/8/05</u>	<u>08:20</u>	<u>2024</u>	<u>265</u>	<u>7</u>	<u>7.0"Hg 5.0psi</u>
<u>02A</u>	<u>Trip Blank</u>	<u>9/8/05</u>	<u>---</u>	<u>TD-15 SIM</u>	<u>285</u>	<u>5</u>	<u>4.6psi 4.6psi</u>

Relinquished by: (signature) Kimberly Lake Date/Time 9/9/05  
Received by: (signature) Frank Bell Date/Time 9/13 10:50  
Notes: Trip Blank in separate box

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_  
Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Lab Shipper Name \_\_\_\_\_ Air Bill # \_\_\_\_\_ Temp (°C) \_\_\_\_\_ Condition \_\_\_\_\_ Custody Seals Intact? None Work Order # 0509235  
Use Only Test 51 60328 9899 6184 NA Good Yes No None

## **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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509420

### Work Order Summary

<b>CLIENT:</b>	Ms. Kimberly Lake ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/19/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/30/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	Ambient Air 9/14/05	Modified TO-15 SIM	7.0 "Hg
01AA	Ambient Air 9/14/05 Duplicate	Modified TO-15 SIM	7.0 "Hg
02A	Trip Blank 9/14/05	Modified TO-15 SIM	4.6 psi
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 10/03/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509420**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 19, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: Ambient Air 9/14/05

Lab ID#: 0509420-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.14	0.28	0.44
Toluene	0.035	0.32	0.13	1.2
Ethyl Benzene	0.035	0.040	0.15	0.17
m,p-Xylene	0.070	0.11	0.30	0.49
o-Xylene	0.035	0.036	0.15	0.15

Client Sample ID: Ambient Air 9/14/05 Duplicate

Lab ID#: 0509420-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.11	0.28	0.36
Toluene	0.035	0.32	0.13	1.2
Ethyl Benzene	0.035	0.042	0.15	0.18
m,p-Xylene	0.070	0.11	0.30	0.47
o-Xylene	0.035	0.036	0.15	0.16

Client Sample ID: Trip Blank 9/14/05

Lab ID#: 0509420-02A

No Detections Were Found.

# AIR TOXICS LTD.

Client Sample ID: Ambient Air 9/14/05

Lab ID#: 0509420-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092712	Date of Collection:	9/14/05
Dil. Factor:	1.75	Date of Analysis:	9/28/05 08:12 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.14	0.28	0.44
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.32	0.13	1.2
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.040	0.15	0.17
m,p-Xylene	0.070	0.11	0.30	0.49
o-Xylene	0.035	0.036	0.15	0.15
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: Ambient Air 9/14/05 Duplicate

Lab ID#: 0509420-01AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092714	Date of Collection:	9/14/05
Dil. Factor:	1.75	Date of Analysis:	9/28/05 10:14 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.11	0.28	0.36
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.32	0.13	1.2
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.042	0.15	0.18
m,p-Xylene	0.070	0.11	0.30	0.47
o-Xylene	0.035	0.036	0.15	0.16
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: Trip Blank 9/14/05

Lab ID#: 0509420-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092713	Date of Collection:	9/14/05
Dil. Factor:	1.00	Date of Analysis:	9/28/05 09:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	93	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509420-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092707	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/27/05 07:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	123	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	93	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509420-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/27/05 01:39 PM

Compound	%Recovery
Vinyl Chloride	79
1,1-Dichloroethene	84
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	92
1,1,1-Trichloroethane	108
Benzene	92
1,2-Dichloroethane	125
Trichloroethene	96
Toluene	107
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	106
m,p-Xylene	111
o-Xylene	103
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509420-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/27/05 02:51 PM

Compound	%Recovery
Vinyl Chloride	88
1,1-Dichloroethene	81
1,1-Dichloroethane	89
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	90
Benzene	78
1,2-Dichloroethane	103
Trichloroethene	81
Toluene	98
1,1,2-Trichloroethane	91
Tetrachloroethene	90
Ethyl Benzene	99
m,p-Xylene	106
o-Xylene	97
1,1,2,2-Tetrachloroethane	90
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	73

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	104	70-130

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Page 1 of 1

Contact Person Kimberly Lake  
 Company ERM Email kimberly.lake@erm.com  
 Address 1777 Botelho Dr, #2000 Walnut Creek State CA Zip 94596  
 Phone 925-946-0435 Fax \_\_\_\_\_  
 Collected by: (Signature) [Signature]

**Project Info:**  
 P.O. # \_\_\_\_\_  
 Project # \_\_\_\_\_  
 Project Name UPRR Hobbs Station Station

Turn Around Time:  Normal  Rush  
 Rush specify \_\_\_\_\_  
 Lab Use Only  
 Pressurized by: [Signature]  
 Date: 9/15/05  
 Pressurization Gas: N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum				
					Initial	Final	Final (psi)		
01A	Ambient Air	9-14-05	06:57-	19:00	TD-15 51m	25	4	7.0"Hg	5.0psi
02A	Trip Blank	9-14-05	—	TD-15 51m	28.5	5	4.1psi	4.1psi	

Relinquished by: (Signature) [Signature] Date/Time 9/15/05  
 Received by: (Signature) [Signature] Date/Time 9/19/05 10:50  
 Notes: \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Lab Use Only  
 Shipper Name FedEx Air Bill # 6328 9900 0731 Temp (°C) — Condition good  
 Custody Seals Intact?  Yes  No  None  
 Work Order # 0509420

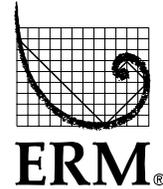
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 27 September 2005  
**Subject:** Data Review of 1043 Stimel Drive (UPRR Hookston Station) Samples Collected 08 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509234

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1043 Stimel Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509234	CCV	See below	Methyl tert-butyl ether	60	70-130	NA	NA
0509234	CCV	1043 Stimel Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0509234	CCV	1043 Stimel Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

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This electronic report includes the following:

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

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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**ERM-West**  
**Workorder# 0508583**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 26, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq$ 30% Difference with 10% of compounds allowed out up to $\leq$ 40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq$ 30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is $\leq$ 30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1270 Waterloo Ct- 1st Floor

Lab ID#: 0508583-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.027	0.037	0.15	0.20
Benzene	0.067	0.36	0.21	1.1
Toluene	0.027	1.3	0.10	5.0
Ethyl Benzene	0.027	0.13	0.12	0.56
m,p-Xylene	0.054	0.44	0.23	1.9
o-Xylene	0.027	0.13	0.12	0.58

Client Sample ID: 1270 Waterloo Ct- 2nd Floor

Lab ID#: 0508583-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.038	0.20	0.21
Benzene	0.094	0.34	0.30	1.1
Toluene	0.037	1.1	0.14	4.2
Ethyl Benzene	0.037	0.13	0.16	0.55
m,p-Xylene	0.075	0.37	0.32	1.6
o-Xylene	0.037	0.11	0.16	0.48

Client Sample ID: 1270 Waterloo Ct- Crawl Space

Lab ID#: 0508583-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.34	0.29	1.1
Toluene	0.037	1.1	0.14	4.1
Ethyl Benzene	0.037	0.12	0.16	0.54
m,p-Xylene	0.073	0.39	0.32	1.7
o-Xylene	0.037	0.12	0.16	0.53

# AIR TOXICS LTD.

Client Sample ID: 1270 Waterloo Ct- 1st Floor

Lab ID#: 0508583-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090608	Date of Collection:	8/23/05
Dil. Factor:	1.34	Date of Analysis:	9/6/05 04:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.053	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
1,1,1-Trichloroethane	0.027	0.037	0.15	0.20
Benzene	0.067	0.36	0.21	1.1
1,2-Dichloroethane	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.14	Not Detected
Toluene	0.027	1.3	0.10	5.0
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	Not Detected	0.18	Not Detected
Ethyl Benzene	0.027	0.13	0.12	0.56
m,p-Xylene	0.054	0.44	0.23	1.9
o-Xylene	0.027	0.13	0.12	0.58
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Methyl tert-butyl ether	0.13	Not Detected U J	0.48	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1270 Waterloo Ct- 2nd Floor

Lab ID#: 0508583-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090609	Date of Collection:	8/23/05
Dil. Factor:	1.87	Date of Analysis:	9/6/05 04:47 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	0.038	0.20	0.21
Benzene	0.094	0.34	0.30	1.1
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	1.1	0.14	4.2
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.13	0.16	0.55
m,p-Xylene	0.075	0.37	0.32	1.6
o-Xylene	0.037	0.11	0.16	0.48
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	Not Detected U J	0.67	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1270 Waterloo Ct- Crawl Space

Lab ID#: 0508583-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090610	Date of Collection:	8/23/05
Dil. Factor:	1.83	Date of Analysis:	9/6/05 05:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.34	0.29	1.1
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	1.1	0.14	4.1
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.12	0.16	0.54
m,p-Xylene	0.073	0.39	0.32	1.7
o-Xylene	0.037	0.12	0.16	0.53
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

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

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508583-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090605	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/6/05 12:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508583-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/6/05 09:41 AM

Compound	%Recovery
Vinyl Chloride	87
1,1-Dichloroethene	84
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	98
Benzene	90
1,2-Dichloroethane	111
Trichloroethene	95
Toluene	106
1,1,2-Trichloroethane	101
Tetrachloroethene	97
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	107
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	68 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508583-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/6/05 10:47 AM

Compound	%Recovery
Vinyl Chloride	89
1,1-Dichloroethene	82
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	83
Benzene	76
1,2-Dichloroethane	92
Trichloroethene	80
Toluene	94
1,1,2-Trichloroethane	91
Tetrachloroethene	90
Ethyl Benzene	98
m,p-Xylene	104
o-Xylene	97
1,1,2,2-Tetrachloroethane	90
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	74

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	105	70-130

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Contact Person Kimberly Lake

Company ERM Email kimberly.lake@erm.com

Address 1777 Estelhe Dr, #202 City Walnut Creek State CA Zip 94596

Phone 925-946-0455 Fax 925-946-9968

Collected by: (Signature) Dee Winters Kimberly Lake

**Project Info:**

P.O. # \_\_\_\_\_

Project # \_\_\_\_\_

Project Name WPRR Hookston Station

Turn Around Time: \_\_\_\_\_

Normal  
 Rush

specify \_\_\_\_\_

Lab Use Only

Pressurized by: VFE

Date: 8/29/05

Pressurization Gas: N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum		
					Initial	Final	Final (psi)
D1A	1270 Waterloo Ct - 1st Floor	8/23/05	06:20-1820	TD15-S/M	24"*	0	10.4"Hg 5.0psi
02A	1270 Waterloo Ct - 2nd Floor	8/23/05	06:30-1825	TD15-S/M	24.5"	1.5	8.5"Hg 5.0psi
03A	1270 Waterloo Ct - Crawlspace	8/23/05	06:35-1822	TD15-S/M	24"*	2	8.0"Hg 5.0psi

Relinquished by: (signature) Kimberly Lake Date/Time 8/24/05 15:00 Received by: (signature) AM Date/Time 8/26/05 8:45\* Notes: VAC reading from separate flowcont gauge. Flow controller gauge = 28.5" for 1st floor sample, = 28.5" for crawl space sample. Final Pressure measured with gauge

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_ Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Lab Use Only  
 Shipper Name FedEx Air Bill #   Temp (°C)   Condition Good Custody Seals Intact? Yes No None Work Order # 0508583

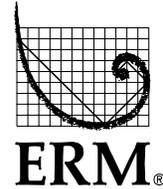
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1270 Waterloo Court (UPRR  
Hookston Station) Samples Collected 23 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508583

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***CANISTER VACUUM EVALUATION***

One sample was received in the laboratory with zero vacuum. All compounds in that sample are qualified as estimated (J/UJ) as shown in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1270 Waterloo Court**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508583	CCV	See below	Methyl tert-butyl ether	68	70-130	NA	NA
0508583	CCV	1270 Waterloo Ct.-1st Floor	Methyl tert-butyl ether	NA	NA	0.48	UJ
0508583	CCV	1270 Waterloo Ct.-2nd Floor	Methyl tert-butyl ether	NA	NA	0.67	UJ
0508583	CCV	1270 Waterloo Ct.-Crawl Space	Methyl tert-butyl ether	NA	NA	0.66	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

D = Duplicate

*Table 2  
 Samples with Zero Canister Vacuum Upon Receipt  
 1270 Waterloo Court  
 UPRR Hookston Station  
 Pleasant Hill, California*

<b>Lab Package</b>	<b>Sample ID</b>	<b>Compounds</b>	<b>Receipt Vacuum</b>	<b>ERM Qualifier</b>
0508583	1270 Waterloo Ct.- 1st Floor	All	0.0" Hg	J/UJ

**Key:**

" Hg = Inches of mercury

J/UJ = Detected/nondetected compounds are qualified as estimated

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This electronic report includes the following:

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

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Hours 8:00 A.M to 6:00 P.M. Pacific**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509573

### Work Order Summary

<b>CLIENT:</b>	Ms. Kimberly Lake ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	Hookston Station
<b>DATE RECEIVED:</b>	09/26/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	10/06/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	992 Bermuda Dr- 1st Floor	Modified TO-15 SIM	2.5 "Hg
02A	992 Bermuda Dr- Crawl Space	Modified TO-15 SIM	7.5 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 10/07/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509573**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 26, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$ .; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD

**Receiving Notes**

The Chain of Custody (COC) information for samples 992 Bermuda Dr- 1st Floor and 992 Bermuda Dr- Crawl Space did not match the entries on the sample tags with regard to sample identification. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the information on the COC was used to process and report the samples.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 992 Bermuda Dr- 1st Floor

Lab ID#: 0509573-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.073	0.41	0.23	1.3
1,2-Dichloroethane	0.029	0.030	0.12	0.12
Toluene	0.029	1.5	0.11	5.7
Tetrachloroethene	0.029	0.24	0.20	1.6
Ethyl Benzene	0.029	0.19	0.13	0.83
m,p-Xylene	0.058	0.53	0.25	2.3
o-Xylene	0.029	0.17	0.13	0.76

Client Sample ID: 992 Bermuda Dr- Crawl Space

Lab ID#: 0509573-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.30	0.28	0.96
Toluene	0.036	1.1	0.13	4.2
Tetrachloroethene	0.036	0.038	0.24	0.26
Ethyl Benzene	0.036	0.13	0.16	0.56
m,p-Xylene	0.072	0.38	0.31	1.6
o-Xylene	0.036	0.11	0.16	0.50

# AIR TOXICS LTD.

Client Sample ID: 992 Bermuda Dr- 1st Floor

Lab ID#: 0509573-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092912	Date of Collection:	9/22/05
Dil. Factor:	1.46	Date of Analysis:	9/30/05 12:15 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.058	Not Detected
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Benzene	0.073	0.41	0.23	1.3
1,2-Dichloroethane	0.029	0.030	0.12	0.12
Trichloroethene	0.029	Not Detected	0.16	Not Detected
Toluene	0.029	1.5	0.11	5.7
1,1,2-Trichloroethane	0.029	Not Detected	0.16	Not Detected
Tetrachloroethene	0.029	0.24	0.20	1.6
Ethyl Benzene	0.029	0.19	0.13	0.83
m,p-Xylene	0.058	0.53	0.25	2.3
o-Xylene	0.029	0.17	0.13	0.76
1,1,2,2-Tetrachloroethane	0.029	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.58	Not Detected
Methyl tert-butyl ether	0.15	Not Detected	0.53	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: 992 Bermuda Dr- Crawl Space

Lab ID#: 0509573-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092913	Date of Collection:	9/22/05
Dil. Factor:	1.79	Date of Analysis:	9/30/05 01:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.30	0.28	0.96
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	1.1	0.13	4.2
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.038	0.24	0.26
Ethyl Benzene	0.036	0.13	0.16	0.56
m,p-Xylene	0.072	0.38	0.31	1.6
o-Xylene	0.036	0.11	0.16	0.50
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	123	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509573-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092907	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/29/05 06:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509573-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/29/05 03:17 PM

Compound	%Recovery
Vinyl Chloride	92
1,1-Dichloroethene	85
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	110
Benzene	93
1,2-Dichloroethane	128
Trichloroethene	98
Toluene	109
1,1,2-Trichloroethane	104
Tetrachloroethene	99
Ethyl Benzene	107
m,p-Xylene	114
o-Xylene	104
1,1,2,2-Tetrachloroethane	101
trans-1,2-Dichloroethene	88
Methyl tert-butyl ether	70

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509573-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/29/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	84
1,1-Dichloroethane	91
cis-1,2-Dichloroethene	77
1,1,1-Trichloroethane	91
Benzene	80
1,2-Dichloroethane	107
Trichloroethene	84
Toluene	100
1,1,2-Trichloroethane	94
Tetrachloroethene	94
Ethyl Benzene	102
m,p-Xylene	109
o-Xylene	100
1,1,2,2-Tetrachloroethane	91
trans-1,2-Dichloroethene	108
Methyl tert-butyl ether	68

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



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

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

**WORK ORDER #: 0509574**

Work Order Summary

**CLIENT:** Ms. Kimberly Lake  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** Hookston Station

**DATE RECEIVED:** 09/26/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 10/06/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	Ambient Air- 9/22/05	Modified TO-15 SIM	9.0 "Hg
02A	Trip Blank	Modified TO-15 SIM	4.6 psi
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 10/07/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509574**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 26, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq$ 30% Difference with 10% of compounds allowed out up to $\leq$ 40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq$ 30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is $\leq$ 30% RSD with 10% of compounds allowed out to < 40% RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: Ambient Air- 9/22/05

Lab ID#: 0509574-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.096	0.31	0.30	1.0
Toluene	0.038	0.97	0.14	3.6
Tetrachloroethene	0.038	0.044	0.26	0.30
Ethyl Benzene	0.038	0.11	0.16	0.48
m,p-Xylene	0.076	0.30	0.33	1.3
o-Xylene	0.038	0.091	0.16	0.40

Client Sample ID: Trip Blank

Lab ID#: 0509574-02A

No Detections Were Found.

# AIR TOXICS LTD.

Client Sample ID: Ambient Air- 9/22/05

Lab ID#: 0509574-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092914	Date of Collection:	9/22/05
Dil. Factor:	1.91	Date of Analysis:	9/30/05 07:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.049	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.076	Not Detected
1,1-Dichloroethane	0.038	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.038	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.038	Not Detected	0.21	Not Detected
Benzene	0.096	0.31	0.30	1.0
1,2-Dichloroethane	0.038	Not Detected	0.15	Not Detected
Trichloroethene	0.038	Not Detected	0.20	Not Detected
Toluene	0.038	0.97	0.14	3.6
1,1,2-Trichloroethane	0.038	Not Detected	0.21	Not Detected
Tetrachloroethene	0.038	0.044	0.26	0.30
Ethyl Benzene	0.038	0.11	0.16	0.48
m,p-Xylene	0.076	0.30	0.33	1.3
o-Xylene	0.038	0.091	0.16	0.40
1,1,2,2-Tetrachloroethane	0.038	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.76	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.69	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: Trip Blank

Lab ID#: 0509574-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092915	Date of Collection:	9/22/05
Dil. Factor:	1.00	Date of Analysis:	9/30/05 08:27 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	126	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509574-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092907	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/29/05 06:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509574-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/29/05 03:17 PM

Compound	%Recovery
Vinyl Chloride	92
1,1-Dichloroethene	85
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	110
Benzene	93
1,2-Dichloroethane	128
Trichloroethene	98
Toluene	109
1,1,2-Trichloroethane	104
Tetrachloroethene	99
Ethyl Benzene	107
m,p-Xylene	114
o-Xylene	104
1,1,2,2-Tetrachloroethane	101
trans-1,2-Dichloroethene	88
Methyl tert-butyl ether	70

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509574-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092904	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/29/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	84
1,1-Dichloroethane	91
cis-1,2-Dichloroethene	77
1,1,1-Trichloroethane	91
Benzene	80
1,2-Dichloroethane	107
Trichloroethene	84
Toluene	100
1,1,2-Trichloroethane	94
Tetrachloroethene	94
Ethyl Benzene	102
m,p-Xylene	109
o-Xylene	100
1,1,2,2-Tetrachloroethane	91
trans-1,2-Dichloroethene	108
Methyl tert-butyl ether	68

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



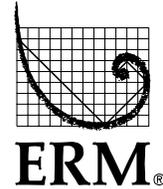
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 13 October 2005  
**Subject:** Data Review of 922 Bermuda Drive (UPRR Hookston Station) Samples Collected 22 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509573

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

***OVERALL ASSESSMENT***

No data required qualification or rejection. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

## **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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508584

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	08/26/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/09/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1007 Bermuda Dr- 1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1007 Bermuda Dr- Crawl Space	Modified TO-15 SIM	8.0 "Hg
02AA	1007 Bermuda Dr- Crawl Space Duplicate	Modified TO-15 SIM	8.0 "Hg
03A	1007 Bermuda Dr- 1st Floor Duplicate	Modified TO-15 SIM	8.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/09/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0508584**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 26, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq$ 30% Difference with 10% of compounds allowed out up to $\leq$ 40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq$ 30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is $\leq$ 30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1007 Bermuda Dr- 1st Floor

Lab ID#: 0508584-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.97	0.28	3.1
Toluene	0.036	4.6	0.13	17
Ethyl Benzene	0.036	0.36	0.16	1.5
m,p-Xylene	0.072	1.3	0.31	5.8
o-Xylene	0.036	0.34	0.16	1.5
Methyl tert-butyl ether	0.18	0.31 J	0.64	1.1 J

Client Sample ID: 1007 Bermuda Dr- Crawl Space

Lab ID#: 0508584-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.36	0.29	1.1
Toluene	0.037	1.2	0.14	4.6
Ethyl Benzene	0.037	0.13	0.16	0.56
m,p-Xylene	0.073	0.38	0.32	1.7
o-Xylene	0.037	0.11	0.16	0.48

Client Sample ID: 1007 Bermuda Dr- Crawl Space Duplicate

Lab ID#: 0508584-02AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.36	0.29	1.1
Toluene	0.037	1.2	0.14	4.7
Ethyl Benzene	0.037	0.13	0.16	0.55
m,p-Xylene	0.073	0.38	0.32	1.6
o-Xylene	0.037	0.11	0.16	0.46

Client Sample ID: 1007 Bermuda Dr- 1st Floor Duplicate

Lab ID#: 0508584-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.094	0.99	0.30	3.1
Toluene	0.037	4.6	0.14	17
Ethyl Benzene	0.037	0.36	0.16	1.6
m,p-Xylene	0.075	1.3	0.32	5.8
o-Xylene	0.037	0.35	0.16	1.5
Methyl tert-butyl ether	0.19	0.30 J	0.67	1.1 J

# AIR TOXICS LTD.

Client Sample ID: 1007 Bermuda Dr- 1st Floor

Lab ID#: 0508584-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090611	Date of Collection:	8/23/05
Dil. Factor:	1.79	Date of Analysis:	9/6/05 06:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.97	0.28	3.1
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	4.6	0.13	17
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.36	0.16	1.5
m,p-Xylene	0.072	1.3	0.31	5.8
o-Xylene	0.036	0.34	0.16	1.5
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	0.31 J	0.64	1.1 J

J = Estimated value due to bias in the CCV.

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130

# AIR TOXICS LTD.

Client Sample ID: 1007 Bermuda Dr- Crawl Space

Lab ID#: 0508584-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090612	Date of Collection:	8/23/05
Dil. Factor:	1.83	Date of Analysis:	9/6/05 07:16 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.36	0.29	1.1
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	1.2	0.14	4.6
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.13	0.16	0.56
m,p-Xylene	0.073	0.38	0.32	1.7
o-Xylene	0.037	0.11	0.16	0.48
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1007 Bermuda Dr- Crawl Space Duplicate

Lab ID#: 0508584-02AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090613	Date of Collection:	8/23/05
Dil. Factor:	1.83	Date of Analysis:	9/6/05 07:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.36	0.29	1.1
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	1.2	0.14	4.7
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.13	0.16	0.55
m,p-Xylene	0.073	0.38	0.32	1.6
o-Xylene	0.037	0.11	0.16	0.46
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

# AIR TOXICS LTD.

Client Sample ID: 1007 Bermuda Dr- 1st Floor Duplicate

Lab ID#: 0508584-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090614	Date of Collection:	8/23/05
Dil. Factor:	1.87	Date of Analysis:	9/6/05 08:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.094	0.99	0.30	3.1
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	4.6	0.14	17
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.36	0.16	1.6
m,p-Xylene	0.075	1.3	0.32	5.8
o-Xylene	0.037	0.35	0.16	1.5
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	0.30 J	0.67	1.1 J

J = Estimated value due to bias in the CCV.

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508584-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090605	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/6/05 12:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508584-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090602	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/6/05 09:41 AM

Compound	%Recovery
Vinyl Chloride	87
1,1-Dichloroethene	84
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	98
Benzene	90
1,2-Dichloroethane	111
Trichloroethene	95
Toluene	106
1,1,2-Trichloroethane	101
Tetrachloroethene	97
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	107
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	68 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508584-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090603	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/6/05 10:47 AM

Compound	%Recovery
Vinyl Chloride	89
1,1-Dichloroethene	82
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	83
Benzene	76
1,2-Dichloroethane	92
Trichloroethene	80
Toluene	94
1,1,2-Trichloroethane	91
Tetrachloroethene	90
Ethyl Benzene	98
m,p-Xylene	104
o-Xylene	97
1,1,2,2-Tetrachloroethane	90
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	74

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	105	70-130

Fed Ex 63288 9899 5497



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

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180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Contact Person Kimberly Lake

Company ERM Email kimberly.lake@erm.com

Address 1771 Estelhe Dr #200 City Walnut Creek State CA Zip 94596

Phone 925-946-0455 Fax 925-946-9968

Collected by: (Signature) Drew Mackay Kimmy Lake

**Project Info:**

P.O. # \_\_\_\_\_

Project # \_\_\_\_\_

Project Name WRR Hookston Station

**Turn Around Time:**

Normal

Rush

specify \_\_\_\_\_

**Lab Use Only**

Pressurized by: WRL

Date: 8/29/05

Pressurization Gas: \_\_\_\_\_

(N<sub>2</sub>) He

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum		
					Initial	Final	Final (psi)
01A	1007 Bermuda Dr- 1st Floor	8/23/05	08:40-20:44	TD-15 SIM	24"*	1	75" Hg 50 psi
02A	1007 Bermuda Dr- Crawl Space	8/23/05	08:45-20:47	TD-15 SIM	28"	1	80" Hg 50 psi
03A	1007 Bermuda Dr- 1st Floor Duplicate	8/23/05	08:40-20:44	TD-15 SIM	24"*	1.5	8.5" Hg 50 psi

Relinquished by: (signature) Kimberly Lake Date/Time 9/15/05 15:00 Received by: (signature) Kimmy Lake Date/Time 8/26/05 9:45 Notes: \* vacuum read w/ separate gauge. Gauges on flow controllers were not working. Final pressure measurements from gauge

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 FedEx Air Bill # \_\_\_\_\_ Temp (°C) - Condition good Custody Seals Intact? Yes No None \_\_\_\_\_ Work Order # 0508584

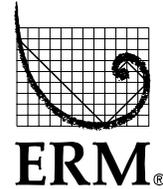
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1007 Bermuda Drive (UPRR  
Hookston Station) Samples Collected 23 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508584

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (J/UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***ANALYTICAL DUPLICATE EVALUATION***

The laboratory analyzed one analytical duplicate sample. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 10 percent, indicating acceptable precision. The RPDs are presented in Table 2.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. All RPDs were less than 10 percent, indicating acceptable precision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1007 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508584	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0508584	CCV	1007 Bermuda Dr.-1st Floor	Methyl tert-butyl ether	NA	NA	1.1	J
0508584	CCV	1007 Bermuda Dr.-Crawl Space	Methyl tert-butyl ether	NA	NA	0.66	UJ
0508584	CCV	1007 Bermuda Dr.-1st Floor D	Methyl tert-butyl ether	NA	NA	1.1	J

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

J = Detected result qualified as estimated

NA = Not applicable

D = Duplicate

**Table 2**  
**Analytical and Field Duplicate Results and Calculated Relative Percent Differences**  
**1007 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Analytical Duplicate Results</b>							
0508584	1007 Bermuda Dr.-Crawl Space	Benzene	1.1	1.1	0.29	µg/m <sup>3</sup>	0
0508584	1007 Bermuda Dr.-Crawl Space	Toluene	4.6	4.7	0.14	µg/m <sup>3</sup>	2.2
0508584	1007 Bermuda Dr.-Crawl Space	Ethylbenzene	0.56	0.55	0.16	µg/m <sup>3</sup>	1.8
0508584	1007 Bermuda Dr.-Crawl Space	m,p-Xylene	1.7	1.6	0.32	µg/m <sup>3</sup>	6.1
0508584	1007 Bermuda Dr.-Crawl Space	o-Xylene	0.48	0.46	0.16	µg/m <sup>3</sup>	4.3
<b>Field Duplicate Results</b>							
0508584	1007 Bermuda Dr.- 1st Floor	Benzene	3.1	3.1	0.30	µg/m <sup>3</sup>	0
0508584	1007 Bermuda Dr.- 1st Floor	Toluene	17	17	0.14	µg/m <sup>3</sup>	0
0508584	1007 Bermuda Dr.- 1st Floor	Ethylbenzene	1.5	1.6	0.16	µg/m <sup>3</sup>	6.5
0508584	1007 Bermuda Dr.- 1st Floor	m,p-Xylene	5.8	5.8	0.32	µg/m <sup>3</sup>	0
0508584	1007 Bermuda Dr.- 1st Floor	o-Xylene	1.5	1.5	0.16	µg/m <sup>3</sup>	0
0508584	1007 Bermuda Dr.- 1st Floor	Methyl tert-butyl ether	1.1	1.1	0.67	µg/m <sup>3</sup>	0

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

## **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**

**WORK ORDER #: 0509213**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455

**FAX:** 925-946-9968

**DATE RECEIVED:** 09/12/2005

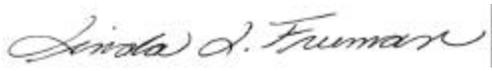
**DATE COMPLETED:** 09/23/2005

**P.O. #** 0020557.10

**PROJECT #** Hookston Station

**CONTACT:** Nicole Danbacher

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1011 Bermuda- 1st Floor	Modified TO-15 SIM	4.0"Hg
02A	1011 Bermuda- Crawl	Modified TO-15 SIM	4.0"Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

Laboratory Director

DATE: 09/24/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509213**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	<=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: 1011 Bermuda- 1st Floor**

**Lab ID#: 0509213-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
1,1,1-Trichloroethane	0.031	0.098	0.17	0.54
Benzene	0.078	0.18	0.25	0.58
Toluene	0.031	1.2	0.12	4.7
Ethyl Benzene	0.031	0.10	0.13	0.46
m,p-Xylene	0.062	0.27	0.27	1.2
o-Xylene	0.031	0.087	0.13	0.38

**Client Sample ID: 1011 Bermuda- Crawl**

**Lab ID#: 0509213-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.078	0.14	0.25	0.46
Toluene	0.031	0.42	0.12	1.6
Ethyl Benzene	0.031	0.051	0.13	0.22
m,p-Xylene	0.062	0.14	0.27	0.62
o-Xylene	0.031	0.043	0.13	0.19

# AIR TOXICS LTD.

Client Sample ID: 1011 Bermuda- 1st Floor

Lab ID#: 0509213-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092207	Date of Collection:	9/7/05
Dil. Factor:	1.55	Date of Analysis:	9/22/05 08:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	0.098	0.17	0.54
Benzene	0.078	0.18	0.25	0.58
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Toluene	0.031	1.2	0.12	4.7
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
Ethyl Benzene	0.031	0.10	0.13	0.46
m,p-Xylene	0.062	0.27	0.27	1.2
o-Xylene	0.031	0.087	0.13	0.38
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Methyl tert-butyl ether	0.16	Not Detected U J	0.56	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130

# AIR TOXICS LTD.

Client Sample ID: 1011 Bermuda- Crawl

Lab ID#: 0509213-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092208	Date of Collection:	9/7/05
Dil. Factor:	1.55	Date of Analysis:	9/22/05 09:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Benzene	0.078	0.14	0.25	0.46
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Toluene	0.031	0.42	0.12	1.6
1,1,2-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
Ethyl Benzene	0.031	0.051	0.13	0.22
m,p-Xylene	0.062	0.14	0.27	0.62
o-Xylene	0.031	0.043	0.13	0.19
1,1,2,2-Tetrachloroethane	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Methyl tert-butyl ether	0.16	Not Detected U J	0.56	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	94	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509213-03A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 07:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509213-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	81
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	101
Benzene	94
1,2-Dichloroethane	122
Trichloroethene	98
Toluene	112
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	115
o-Xylene	106
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509213-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092203</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/22/05 04:58 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	82
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	79
1,2-Dichloroethane	99
Trichloroethene	82
Toluene	98
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	83
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	64

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



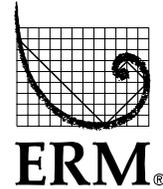
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1011 Bermuda Drive (UPRR  
Hookston Station) Samples Collected 07 September  
2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509213

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1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

### ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1011 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509213	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509213	CCV	1011 Bermuda Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.56	UJ
0509213	CCV	1011 Bermuda Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	0.56	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

## **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**

**WORK ORDER #: 0509212**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #** 0020557.10

**FAX:** 925-946-9968      **PROJECT #** Hookston Station

**DATE RECEIVED:** 09/12/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/23/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1013 Bermuda-1st Floor	Modified TO-15 SIM	7.0 "Hg
02A	1013 Bermuda-crawl	Modified TO-15 SIM	7.0 "Hg
02AA	1013 Bermuda-crawl Duplicate	Modified TO-15 SIM	7.0 "Hg
03A	1013 Bermuda-2nd Floor	Modified TO-15 SIM	7.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

DATE: 09/23/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509212**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

The recovery of Toluene-d8 in sample 1013 Bermuda-crawl Duplicate Duplicate was outside control limits due to matrix interference. All results duplicate between the original sample and its duplicate. There is no effect on data quality.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: 1013 Bermuda-1st Floor**

**Lab ID#: 0509212-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.088	0.19	0.28	0.60
Toluene	0.035	1.5	0.13	5.6
Ethyl Benzene	0.035	0.092	0.15	0.40
m,p-Xylene	0.070	0.23	0.30	1.0
o-Xylene	0.035	0.064	0.15	0.28

**Client Sample ID: 1013 Bermuda-crawl**

**Lab ID#: 0509212-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.088	0.14	0.28	0.46
Trichloroethene	0.035	0.042	0.19	0.23
Toluene	0.035	0.47	0.13	1.8
Ethyl Benzene	0.035	0.086	0.15	0.38
m,p-Xylene	0.070	0.23	0.30	1.0
o-Xylene	0.035	0.063	0.15	0.27

**Client Sample ID: 1013 Bermuda-crawl Duplicate**

**Lab ID#: 0509212-02AA**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.088	0.14	0.28	0.45
Trichloroethene	0.035	0.045	0.19	0.24
Toluene	0.035	0.48	0.13	1.8
Ethyl Benzene	0.035	0.088	0.15	0.38
m,p-Xylene	0.070	0.23	0.30	1.0
o-Xylene	0.035	0.062	0.15	0.27

**Client Sample ID: 1013 Bermuda-2nd Floor**

**Lab ID#: 0509212-03A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.090	0.16	0.28	0.53
Toluene	0.036	0.84	0.13	3.2
Ethyl Benzene	0.036	0.12	0.16	0.52
m,p-Xylene	0.072	0.32	0.31	1.4
o-Xylene	0.036	0.086	0.16	0.38

# AIR TOXICS LTD.

Client Sample ID: 1013 Bermuda-1st Floor

Lab ID#: 0509212-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092121</b>	<b>Date of Collection:</b> 9/7/05
<b>Dil. Factor:</b>	1.75	<b>Date of Analysis:</b> 9/22/05 11:49 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.19	0.28	0.60
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	1.5	0.13	5.6
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.092	0.15	0.40
m,p-Xylene	0.070	0.23	0.30	1.0
o-Xylene	0.035	0.064	0.15	0.28
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1013 Bermuda-crawl

Lab ID#: 0509212-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092122	Date of Collection:	9/7/05
Dil. Factor:	1.75	Date of Analysis:	9/22/05 12:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.14	0.28	0.46
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.042	0.19	0.23
Toluene	0.035	0.47	0.13	1.8
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.086	0.15	0.38
m,p-Xylene	0.070	0.23	0.30	1.0
o-Xylene	0.035	0.063	0.15	0.27
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	130	70-130
4-Bromofluorobenzene	93	70-130

# AIR TOXICS LTD.

Client Sample ID: 1013 Bermuda-crawl Duplicate

Lab ID#: 0509212-02AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092123	Date of Collection:	9/7/05
Dil. Factor:	1.75	Date of Analysis:	9/22/05 01:05 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.14	0.28	0.45
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.045	0.19	0.24
Toluene	0.035	0.48	0.13	1.8
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.088	0.15	0.38
m,p-Xylene	0.070	0.23	0.30	1.0
o-Xylene	0.035	0.062	0.15	0.27
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Q = Exceeds Quality Control limits.

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	133 Q	70-130
4-Bromofluorobenzene	93	70-130

# AIR TOXICS LTD.

Client Sample ID: 1013 Bermuda-2nd Floor

Lab ID#: 0509212-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092125	Date of Collection:	9/7/05
Dil. Factor:	1.79	Date of Analysis:	9/22/05 02:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.16	0.28	0.53
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	0.84	0.13	3.2
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.12	0.16	0.52
m,p-Xylene	0.072	0.32	0.31	1.4
o-Xylene	0.036	0.086	0.16	0.38
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509212-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092107	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/21/05 08:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

### Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509212-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092103	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/21/05 04:53 PM

Compound	%Recovery
Vinyl Chloride	86
1,1-Dichloroethene	84
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	90
1,2-Dichloroethane	112
Trichloroethene	94
Toluene	104
1,1,2-Trichloroethane	103
Tetrachloroethene	98
Ethyl Benzene	108
m,p-Xylene	114
o-Xylene	105
1,1,2,2-Tetrachloroethane	98
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	61 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509212-06A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092104</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/21/05 05:50 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	86
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	78
1,2-Dichloroethane	96
Trichloroethene	81
Toluene	97
1,1,2-Trichloroethane	91
Tetrachloroethene	89
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	85
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	69

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	103	70-130



# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake

**From:** Jackie Luta

**Date:** 26 September 2005

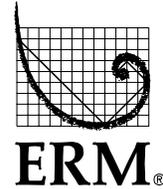
**Subject:** Data Review of 1013 Bermuda Drive (UPRR Hookston Station) Samples Collected 07 September 2005

**Project Number:** 0020557.10

**Data Package:** Air Toxics Data Package 0509212

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1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

### ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***ANALYTICAL DUPLICATE EVALUATION***

The laboratory analyzed one sample in duplicate. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1013 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509212	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509212	CCV	1013 Bermuda Dr. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0509212	CCV	1013 Bermuda Dr. - 2nd Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509212	CCV	1013 Bermuda Dr. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ

**Key:**

CCV = Continuing calibration verification  
 UJ = Nondetected result qualified as estimated  
 NA = Not applicable

*Table 2*  
*Analytical Duplicate Results and Calculated Relative Percent Differences*  
*1013 Bermuda Drive*  
*UPRR Hookston Station*  
*Pleasant Hill, California*

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Analytical Duplicate Results</b>							
0509212	1013 Bermuda Dr. - Crawl Space	Benzene	0.46	0.45	0.29	µg/m <sup>3</sup>	2.2
0509212	1013 Bermuda Dr. - Crawl Space	Trichloroethene	0.23	0.24	0.29	µg/m <sup>3</sup>	4.3
0509212	1013 Bermuda Dr. - Crawl Space	Toluene	1.8	1.8	0.14	µg/m <sup>3</sup>	0
0509212	1013 Bermuda Dr. - Crawl Space	Ethylbenzene	0.38	0.38	0.16	µg/m <sup>3</sup>	0
0509212	1013 Bermuda Dr. - Crawl Space	m,p-Xylene	1.0	1.0	0.32	µg/m <sup>3</sup>	0
0509212	1013 Bermuda Dr. - Crawl Space	o-Xylene	0.27	0.27	0.16	µg/m <sup>3</sup>	0

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

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This electronic report includes the following:

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

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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**ERM-West**  
**Workorder# 0509093**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 06, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: 1018 Bermuda Dr- 1st Floor**

**Lab ID#: 0509093-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.088	0.22	0.28	0.69
Toluene	0.035	0.80	0.13	3.0
Ethyl Benzene	0.035	0.098	0.15	0.43
m,p-Xylene	0.070	0.28	0.30	1.2
o-Xylene	0.035	0.084	0.15	0.37

**Client Sample ID: 1018 Bermuda Dr- 2nd Floor**

**Lab ID#: 0509093-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.090	0.23	0.28	0.72
Toluene	0.036	0.75	0.13	2.8
Ethyl Benzene	0.036	0.092	0.16	0.40
m,p-Xylene	0.072	0.26	0.31	1.1
o-Xylene	0.036	0.080	0.16	0.35

**Client Sample ID: 1018 Bermuda Dr- Crawl Space**

**Lab ID#: 0509093-03A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.090	0.31	0.28	1.0
Toluene	0.036	1.3	0.13	4.8
Ethyl Benzene	0.036	0.15	0.16	0.66
m,p-Xylene	0.072	0.45	0.31	2.0
o-Xylene	0.036	0.14	0.16	0.60
Methyl tert-butyl ether	0.18	0.47 J	0.64	1.7 J

# AIR TOXICS LTD.

Client Sample ID: 1018 Bermuda Dr- 1st Floor

Lab ID#: 0509093-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091809	Date of Collection:	8/31/05
Dil. Factor:	1.75	Date of Analysis:	9/18/05 10:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.22	0.28	0.69
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.80	0.13	3.0
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.098	0.15	0.43
m,p-Xylene	0.070	0.28	0.30	1.2
o-Xylene	0.035	0.084	0.15	0.37
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1018 Bermuda Dr- 2nd Floor

Lab ID#: 0509093-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091810	Date of Collection:	8/31/05
Dil. Factor:	1.79	Date of Analysis:	9/18/05 11:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.23	0.28	0.72
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	0.75	0.13	2.8
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.092	0.16	0.40
m,p-Xylene	0.072	0.26	0.31	1.1
o-Xylene	0.036	0.080	0.16	0.35
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: 1018 Bermuda Dr- Crawl Space

Lab ID#: 0509093-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091811	Date of Collection:	8/31/05
Dil. Factor:	1.79	Date of Analysis:	9/19/05 12:23 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.31	0.28	1.0
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	1.3	0.13	4.8
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.15	0.16	0.66
m,p-Xylene	0.072	0.45	0.31	2.0
o-Xylene	0.036	0.14	0.16	0.60
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	0.47 J	0.64	1.7 J

J = Estimated value due to bias in the CCV.

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509093-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091805	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/18/05 06:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509093-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 02:47 PM

Compound	%Recovery
Vinyl Chloride	80
1,1-Dichloroethene	81
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	91
1,2-Dichloroethane	113
Trichloroethene	90
Toluene	106
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	114
o-Xylene	106
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	85
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509093-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 03:41 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	80
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	84
Benzene	79
1,2-Dichloroethane	96
Trichloroethene	80
Toluene	98
1,1,2-Trichloroethane	94
Tetrachloroethene	91
Ethyl Benzene	101
m,p-Xylene	108
o-Xylene	99
1,1,2,2-Tetrachloroethane	93
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	105	70-130



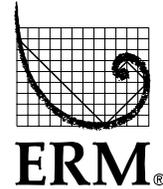
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1018 Bermuda Drive (UPRR  
Hookston Station) Samples Collected 31 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509093

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (J/UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1018 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509093	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509093	CCV	1018 Bermuda Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0509093	CCV	1018 Bermuda Dr.- 2nd Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509093	CCV	1018 Bermuda Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	1.7	J

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

J = Detected result qualified as estimated

NA = Not applicable

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Hours 8:00 A.M to 6:00 P.M. Pacific**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509095

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/06/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/20/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1024 Bermuda Dr- 1st Floor	Modified TO-15 SIM	8.0 "Hg
02A	1024 Bermuda Dr- Crawl Space	Modified TO-15 SIM	6.0 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
Laboratory Director

DATE: 09/20/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509095**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 06, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1024 Bermuda Dr- 1st Floor

Lab ID#: 0509095-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.22	0.20	1.2
Benzene	0.092	0.25	0.29	0.80
Trichloroethene	0.037	0.21	0.20	1.1
Toluene	0.037	2.8	0.14	11
Tetrachloroethene	0.037	0.30	0.25	2.0
Ethyl Benzene	0.037	0.20	0.16	0.86
m,p-Xylene	0.073	0.48	0.32	2.1
o-Xylene	0.037	0.19	0.16	0.82

Client Sample ID: 1024 Bermuda Dr- Crawl Space

Lab ID#: 0509095-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.047	0.18	0.26
Benzene	0.084	0.16	0.27	0.52
Trichloroethene	0.034	0.19	0.18	1.0
Toluene	0.034	0.96	0.13	3.6
Tetrachloroethene	0.034	0.040	0.23	0.27
Ethyl Benzene	0.034	0.080	0.14	0.35
m,p-Xylene	0.067	0.22	0.29	0.96
o-Xylene	0.034	0.085	0.14	0.37

# AIR TOXICS LTD.

Client Sample ID: 1024 Bermuda Dr- 1st Floor

Lab ID#: 0509095-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091815	Date of Collection:	8/31/05
Dil. Factor:	1.83	Date of Analysis:	9/19/05 04:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	0.22	0.20	1.2
Benzene	0.092	0.25	0.29	0.80
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.21	0.20	1.1
Toluene	0.037	2.8	0.14	11
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.30	0.25	2.0
Ethyl Benzene	0.037	0.20	0.16	0.86
m,p-Xylene	0.073	0.48	0.32	2.1
o-Xylene	0.037	0.19	0.16	0.82
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	114	70-130

# AIR TOXICS LTD.

Client Sample ID: 1024 Bermuda Dr- Crawl Space

Lab ID#: 0509095-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091816	Date of Collection:	8/31/05
Dil. Factor:	1.68	Date of Analysis:	9/19/05 05:11 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.034	0.047	0.18	0.26
Benzene	0.084	0.16	0.27	0.52
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.19	0.18	1.0
Toluene	0.034	0.96	0.13	3.6
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.040	0.23	0.27
Ethyl Benzene	0.034	0.080	0.14	0.35
m,p-Xylene	0.067	0.22	0.29	0.96
o-Xylene	0.034	0.085	0.14	0.37
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.60	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	108	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509095-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 06:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509095-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 02:47 PM

Compound	%Recovery
Vinyl Chloride	80
1,1-Dichloroethene	81
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	91
1,2-Dichloroethane	113
Trichloroethene	90
Toluene	106
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	114
o-Xylene	106
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	85
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509095-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 03:41 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	80
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	84
Benzene	79
1,2-Dichloroethane	96
Trichloroethene	80
Toluene	98
1,1,2-Trichloroethane	94
Tetrachloroethene	91
Ethyl Benzene	101
m,p-Xylene	108
o-Xylene	99
1,1,2,2-Tetrachloroethane	93
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	105	70-130



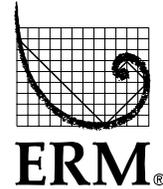
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1024 Bermuda Drive (UPRR  
Hookston Station) Samples Collected 31 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509095

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1024 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509095	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509095	CCV	1024 Bermuda Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.66	UJ
0509095	CCV	1024 Bermuda Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	0.60	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

J = Detected result qualified as estimated

NA = Not applicable

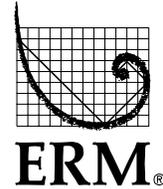
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1025 Bermuda Drive (UPRR  
Hookston Station) Samples Collected 30 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509055

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data were qualified based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

***OVERALL ASSESSMENT***

No data required qualification or rejection. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

## **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**

**WORK ORDER #: 0509179**

Work Order Summary

**CLIENT:** Ms. Kimberly Lake  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 09/09/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/22/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1027 Bermuda Dr-1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1027 Bermuda Dr-2nd Floor	Modified TO-15 SIM	7.5 "Hg
03A	1027 Bermuda Dr-Crawl Space	Modified TO-15 SIM	6.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/22/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509179**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 09, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$ .; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD

**Receiving Notes**

The Chain of Custody (COC) information for sample 1027 Bermuda Dr-Crawl Space did not match the entry on the sample tag with regard to sample identification. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the information on the COC was used to process and report the sample.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1027 Bermuda Dr-1st Floor

Lab ID#: 0509179-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.087	0.20	0.48
Benzene	0.090	0.40	0.28	1.3
1,2-Dichloroethane	0.036	0.052	0.14	0.21
Toluene	0.036	3.6	0.13	13
Ethyl Benzene	0.036	0.20	0.16	0.85
m,p-Xylene	0.072	0.48	0.31	2.1
o-Xylene	0.036	0.14	0.16	0.62

Client Sample ID: 1027 Bermuda Dr-2nd Floor

Lab ID#: 0509179-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.072	0.20	0.39
Benzene	0.090	0.43	0.28	1.4
1,2-Dichloroethane	0.036	0.041	0.14	0.16
Toluene	0.036	3.0	0.13	11
Tetrachloroethene	0.036	0.049	0.24	0.33
Ethyl Benzene	0.036	0.20	0.16	0.89
m,p-Xylene	0.072	0.54	0.31	2.3
o-Xylene	0.036	0.15	0.16	0.67

Client Sample ID: 1027 Bermuda Dr-Crawl Space

Lab ID#: 0509179-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.14	0.27	0.45
Toluene	0.034	0.42	0.13	1.6
Ethyl Benzene	0.034	0.052	0.15	0.23
m,p-Xylene	0.068	0.14	0.30	0.60
o-Xylene	0.034	0.041	0.15	0.18

# AIR TOXICS LTD.

Client Sample ID: 1027 Bermuda Dr-1st Floor

Lab ID#: 0509179-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091922	Date of Collection:	9/6/05
Dil. Factor:	1.79	Date of Analysis:	9/20/05 11:08 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.087	0.20	0.48
Benzene	0.090	0.40	0.28	1.3
1,2-Dichloroethane	0.036	0.052	0.14	0.21
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	3.6	0.13	13
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.20	0.16	0.85
m,p-Xylene	0.072	0.48	0.31	2.1
o-Xylene	0.036	0.14	0.16	0.62
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: 1027 Bermuda Dr-2nd Floor

Lab ID#: 0509179-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091923	Date of Collection:	9/6/05
Dil. Factor:	1.79	Date of Analysis:	9/20/05 11:57 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.072	0.20	0.39
Benzene	0.090	0.43	0.28	1.4
1,2-Dichloroethane	0.036	0.041	0.14	0.16
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	3.0	0.13	11
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.049	0.24	0.33
Ethyl Benzene	0.036	0.20	0.16	0.89
m,p-Xylene	0.072	0.54	0.31	2.3
o-Xylene	0.036	0.15	0.16	0.67
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1027 Bermuda Dr-Crawl Space

Lab ID#: 0509179-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091924	Date of Collection:	9/6/05
Dil. Factor:	1.71	Date of Analysis:	9/20/05 12:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.14	0.27	0.45
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	0.42	0.13	1.6
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
Ethyl Benzene	0.034	0.052	0.15	0.23
m,p-Xylene	0.068	0.14	0.30	0.60
o-Xylene	0.034	0.041	0.15	0.18
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	94	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509179-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091907	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/05 06:56 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	93	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509179-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/05 02:39 PM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	82
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	101
Benzene	92
1,2-Dichloroethane	115
Trichloroethene	94
Toluene	108
1,1,2-Trichloroethane	100
Tetrachloroethene	95
Ethyl Benzene	107
m,p-Xylene	113
o-Xylene	106
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	64 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509179-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/19/05 03:33 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	80
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	83
Benzene	77
1,2-Dichloroethane	95
Trichloroethene	79
Toluene	96
1,1,2-Trichloroethane	91
Tetrachloroethene	90
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	97
1,1,2,2-Tetrachloroethane	87
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	69

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	104	70-130



AN ENVIRONMENTAL ANALYTICAL LABORATORY

**CHAIN-OF-CUSTODY RECORD**

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Page 1 of 1

Contact Person Kimberly Lake

Company ERM Email kimberly.lake@erm.com

Address 1777 Botello Dr #200 Walnut Creek CA 94596

Phone 925-946-0155 Fax 925-946-9968

Collected by: (Signature) Denny Mark

**Project Info:**

P.O. # \_\_\_\_\_

Project # \_\_\_\_\_

Project Name UPRR Hookston Station

Turn Around Time: \_\_\_\_\_

Normal

Rush

specify \_\_\_\_\_

Lab Use Only

Pressurized by: BS

Date: 9/12/05

Pressurization Gas: N<sub>2</sub> He

Canister Pressure/Vacuum

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum		
					Initial	Final	Receipt Final (psi)
01A	1027 Bermuda Dr-1st Floor	9/6/05	0807-	TD-15 SIM	26.5	5.5	7.5/14.5/05
02A	1027 Bermuda Dr-2nd Floor	9/6/05	0815-	TD-15 SIM	26.5	5	7.5/14
03A	1027 Bermuda Dr-Crawl Space	9/6/05	0812-	TD-15 SIM	26.5	4.5	10.5/14

Relinquished by: (signature) Kimberly Lake Date/Time 9/7/05

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: (signature) David James Orr Date/Time 9/9/05

Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Notes: \_\_\_\_\_

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Lab Use Only

Shipper Name FedEx Air Bill # 63228 9899 6861 Temp (°C) — Condition GOOD Custody Seals Intact?  Yes  No  None Work Order # 0509179

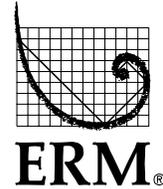
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1027 Bermuda Drive (UPRR  
Hookston Station) Samples Collected 06 September  
2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509179

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

### ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1027 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509179	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509179	CCV	1027 Bermuda Dr.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509179	CCV	1027 Bermuda Dr.- 2nd Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509179	CCV	1027 Bermuda Dr.- Crawl Space	Methyl tert-butyl ether	NA	NA	0.62	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

## **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 #: 0509219**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455

**FAX:** 925-946-9968

**DATE RECEIVED:** 09/12/2005

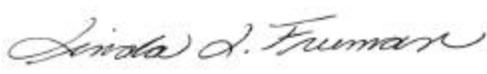
**DATE COMPLETED:** 03/29/2005

**P.O. #** 0020557.10

**PROJECT #** Hookston Station

**CONTACT:** Nicole Danbacher

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1033 Bermuda- 1st Floor	Modified TO-15 SIM	7.0 "Hg
02A	1033 Bermuda- crawl	Modified TO-15 SIM	7.5 "Hg
03A	1033 Bermuda- 2nd Floor	Modified TO-15 SIM	8.0 "Hg
03AA	1033 Bermuda- 2nd Floor Duplicate	Modified TO-15 SIM	8.0 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

DATE: 09/23/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06  
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-15 SIM**  
**ERM-West**  
**Workorder# 0509219**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	<=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1033 Bermuda- 1st Floor

Lab ID#: 0509219-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.035	0.037	0.19	0.20
Benzene	0.088	0.19	0.28	0.62
Toluene	0.035	0.87	0.13	3.3
Tetrachloroethene	0.035	0.16	0.24	1.1
Ethyl Benzene	0.035	0.091	0.15	0.39
m,p-Xylene	0.070	0.24	0.30	1.0
o-Xylene	0.035	0.072	0.15	0.31

Client Sample ID: 1033 Bermuda- crawl

Lab ID#: 0509219-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.20	0.28	0.64
Toluene	0.036	0.77	0.13	2.9
Tetrachloroethene	0.036	0.12	0.24	0.82
Ethyl Benzene	0.036	0.098	0.16	0.42
m,p-Xylene	0.072	0.26	0.31	1.1
o-Xylene	0.036	0.080	0.16	0.35

Client Sample ID: 1033 Bermuda- 2nd Floor

Lab ID#: 0509219-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.17	0.29	0.54
Toluene	0.037	2.4	0.14	9.0
Tetrachloroethene	0.037	0.16	0.25	1.1
Ethyl Benzene	0.037	0.13	0.16	0.56
m,p-Xylene	0.073	0.25	0.32	1.1
o-Xylene	0.037	0.075	0.16	0.32

Client Sample ID: 1033 Bermuda- 2nd Floor Duplicate

Lab ID#: 0509219-03AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.17	0.29	0.53
Toluene	0.037	2.4	0.14	9.0
Tetrachloroethene	0.037	0.16	0.25	1.1
Ethyl Benzene	0.037	0.13	0.16	0.58

**Client Sample ID: 1033 Bermuda- 2nd Floor Duplicate**

**Lab ID#: 0509219-03AA**

m,p-Xylene	0.073	0.25	0.32	1.1
o-Xylene	0.037	0.077	0.16	0.33

# AIR TOXICS LTD.

Client Sample ID: 1033 Bermuda- 1st Floor

Lab ID#: 0509219-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092209	Date of Collection: 9/7/05
Dil. Factor:	1.75	Date of Analysis: 9/22/05 10:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	0.037	0.19	0.20
Benzene	0.088	0.19	0.28	0.62
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.87	0.13	3.3
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	0.16	0.24	1.1
Ethyl Benzene	0.035	0.091	0.15	0.39
m,p-Xylene	0.070	0.24	0.30	1.0
o-Xylene	0.035	0.072	0.15	0.31
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	96	70-130

# AIR TOXICS LTD.

Client Sample ID: 1033 Bermuda- crawl

Lab ID#: 0509219-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092210	Date of Collection:	9/7/05
Dil. Factor:	1.79	Date of Analysis:	9/22/05 11:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.20	0.28	0.64
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	0.77	0.13	2.9
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.12	0.24	0.82
Ethyl Benzene	0.036	0.098	0.16	0.42
m,p-Xylene	0.072	0.26	0.31	1.1
o-Xylene	0.036	0.080	0.16	0.35
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: 1033 Bermuda- 2nd Floor

Lab ID#: 0509219-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092211	Date of Collection:	9/7/05
Dil. Factor:	1.83	Date of Analysis:	9/23/05 12:41 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.17	0.29	0.54
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	2.4	0.14	9.0
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.16	0.25	1.1
Ethyl Benzene	0.037	0.13	0.16	0.56
m,p-Xylene	0.073	0.25	0.32	1.1
o-Xylene	0.037	0.075	0.16	0.32
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: 1033 Bermuda- 2nd Floor Duplicate

Lab ID#: 0509219-03AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092212</b>	<b>Date of Collection:</b> 9/7/05
<b>Dil. Factor:</b>	1.83	<b>Date of Analysis:</b> 9/23/05 01:53 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.17	0.29	0.53
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	2.4	0.14	9.0
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.16	0.25	1.1
Ethyl Benzene	0.037	0.13	0.16	0.58
m,p-Xylene	0.073	0.25	0.32	1.1
o-Xylene	0.037	0.077	0.16	0.33
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509219-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 07:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509219-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	81
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	101
Benzene	94
1,2-Dichloroethane	122
Trichloroethene	98
Toluene	112
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	115
o-Xylene	106
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509219-06A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092203</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/22/05 04:58 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	82
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	79
1,2-Dichloroethane	99
Trichloroethene	82
Toluene	98
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	83
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	64

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



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This electronic report includes the following:

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

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Hours 8:00 A.M to 6:00 P.M. Pacific**



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**ERM-West**  
**Workorder# 0509220**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	<=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: Ambient Air**

**Lab ID#: 0509220-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.092	0.14	0.29	0.46
Toluene	0.037	0.40	0.14	1.5
Ethyl Benzene	0.037	0.047	0.16	0.20
m,p-Xylene	0.073	0.12	0.32	0.54
o-Xylene	0.037	0.041	0.16	0.18

**Client Sample ID: Trip Blank**

**Lab ID#: 0509220-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Tetrachloroethene	0.020	0.028	0.14	0.19

# AIR TOXICS LTD.

Client Sample ID: Ambient Air

Lab ID#: 0509220-01A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092213	Date of Collection:	9/7/05
Dil. Factor:	1.83	Date of Analysis:	9/23/05 02:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.14	0.29	0.46
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.40	0.14	1.5
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.047	0.16	0.20
m,p-Xylene	0.073	0.12	0.32	0.54
o-Xylene	0.037	0.041	0.16	0.18
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

### Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: Trip Blank

Lab ID#: 0509220-02A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092214	Date of Collection:	9/7/05
Dil. Factor:	1.00	Date of Analysis:	9/23/05 03:35 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	0.028	0.14	0.19
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

### Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509220-03A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 07:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

### Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509220-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	81
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	101
Benzene	94
1,2-Dichloroethane	122
Trichloroethene	98
Toluene	112
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	115
o-Xylene	106
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509220-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092203</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/22/05 04:58 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	82
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	79
1,2-Dichloroethane	99
Trichloroethene	82
Toluene	98
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	83
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	64

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130

Field Ex 6/22 & 4/100 0216



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Page 1 of 1

Contact Person Kimberly Lake  
 Company ERM  
 Address 1771 Botelho Dr, #260 City Walnut Creek CA Zip 94596  
 Phone 925-976-0455 FAX \_\_\_\_\_  
 Collected By: Signature [Signature]

Project info:  
 P.O. # \_\_\_\_\_  
 Project # \_\_\_\_\_  
 Project Name UPRR Hookston Station

Turn Around Time:  
 Normal  
 Rush \_\_\_\_\_ Specify \_\_\_\_\_  
Receipt returned 9/12/05

Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum
			Initial Final
MA Ambient AIR	9/7/05 06:55-18:50	TO15 SIM	28.5 7.5
DA TRIP BLANK	9/7/05 07:17	TO15 SIM	28.5 5
			Final 50psi
			44psi
			9/12/05

Relinquished By: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Received By: (Signature) \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Notes: Trip = 14115  
Ambient = 33920  
T Bin box w/ Fedex #1632899600205

Lab Fedex  
 Lab # 8537 Call # 4026 MW  
 Order # 9202  
 Yes  No  None   
 Order # 0509220

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This electronic report includes the following:

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

**WORK ORDER #: 0509220R1**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 09/12/2005      **CONTACT:** Kelly Buettner

**DATE COMPLETED:** 09/23/2005

**DATE REISSUED:** 10/30/05

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	Ambient Air	Modified TO-15 SIM	8.0 "Hg
02A	Trip Blank	Modified TO-15 SIM	4.4 psi
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

Laboratory Director

DATE: 11/03/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509220R1**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

THE WORK ORDER WAS RE-ISSUED ON 10/30/05 TO NARRATE THE FOLLOWING DISCREPANCY:

THE TRIP BLANK HAS REPORTABLE LEVELS OF TETRACHLOROETHENE PRESENT. REANALYSIS CONFIRMED THE INITIAL RESULTS.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: Ambient Air**

**Lab ID#: 0509220R1-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.092	0.14	0.29	0.46
Toluene	0.037	0.40	0.14	1.5
Ethyl Benzene	0.037	0.047	0.16	0.20
m,p-Xylene	0.073	0.12	0.32	0.54
o-Xylene	0.037	0.041	0.16	0.18

**Client Sample ID: Trip Blank**

**Lab ID#: 0509220R1-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Tetrachloroethene	0.020	0.028	0.14	0.19

# AIR TOXICS LTD.

Client Sample ID: Ambient Air

Lab ID#: 0509220R1-01A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092213	Date of Collection:	9/7/05
Dil. Factor:	1.83	Date of Analysis:	9/23/05 02:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.14	0.29	0.46
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.40	0.14	1.5
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.047	0.16	0.20
m,p-Xylene	0.073	0.12	0.32	0.54
o-Xylene	0.037	0.041	0.16	0.18
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

### Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: Trip Blank

Lab ID#: 0509220R1-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092214	Date of Collection:	9/7/05
Dil. Factor:	1.00	Date of Analysis:	9/23/05 03:35 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	0.028	0.14	0.19
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509220R1-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 07:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509220R1-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	81
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	101
Benzene	94
1,2-Dichloroethane	122
Trichloroethene	98
Toluene	112
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	115
o-Xylene	106
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509220R1-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 04:58 PM

Compound	%Recovery
Vinyl Chloride	82
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	79
1,2-Dichloroethane	99
Trichloroethene	82
Toluene	98
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	83
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	64

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130

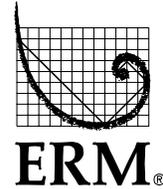
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1033 Bermuda Drive (UPRR  
Hookston Station) Samples Collected 07 September  
2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509219

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

### ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***ANALYTICAL DUPLICATE EVALUATION***

The laboratory analyzed one sample in duplicate. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1033 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509219	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509219	CCV	1033 Bermuda Dr. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0509219	CCV	1033 Bermuda Dr. - 2nd Floor	Methyl tert-butyl ether	NA	NA	0.66	UJ
0509219	CCV	1033 Bermuda Dr. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.64	UJ

**Key:**

CCV = Continuing calibration verification  
 UJ = Nondetected result qualified as estimated  
 NA = Not applicable

## **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**

**WORK ORDER #: 0509217**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 09/12/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/23/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1058 Bancroft Rd- 1st Floor	Modified TO-15 SIM	3.0 "Hg
02A	1058 Bancroft Rd- 2nd Floor	Modified TO-15 SIM	8.5 "Hg
03A	1058 Bancroft Rd- 2nd Floor Duplicate	Modified TO-15 SIM	7.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/23/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0509217**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	<=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1058 Bancroft Rd- 1st Floor

Lab ID#: 0509217-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.030	0.032	0.16	0.17
Benzene	0.074	0.14	0.24	0.45
1,2-Dichloroethane	0.030	0.052	0.12	0.21
Toluene	0.030	2.4	0.11	8.9
Ethyl Benzene	0.030	0.16	0.13	0.71
m,p-Xylene	0.060	0.49	0.26	2.1
o-Xylene	0.030	0.12	0.13	0.54

Client Sample ID: 1058 Bancroft Rd- 2nd Floor

Lab ID#: 0509217-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.040	0.20	0.22
Benzene	0.094	0.14	0.30	0.45
1,2-Dichloroethane	0.037	0.068	0.15	0.27
Toluene	0.037	2.4	0.14	9.2
Ethyl Benzene	0.037	0.16	0.16	0.69
m,p-Xylene	0.075	0.46	0.32	2.0
o-Xylene	0.037	0.12	0.16	0.51

Client Sample ID: 1058 Bancroft Rd- 2nd Floor Duplicate

Lab ID#: 0509217-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.041	0.20	0.22
Benzene	0.090	0.15	0.28	0.48
1,2-Dichloroethane	0.036	0.059	0.14	0.24
Toluene	0.036	2.6	0.13	9.7
Ethyl Benzene	0.036	0.16	0.16	0.69
m,p-Xylene	0.072	0.47	0.31	2.0
o-Xylene	0.036	0.12	0.16	0.51

# AIR TOXICS LTD.

Client Sample ID: 1058 Bancroft Rd- 1st Floor

Lab ID#: 0509217-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092220</b>	<b>Date of Collection:</b> 9/8/05
<b>Dil. Factor:</b>	1.49	<b>Date of Analysis:</b> 9/23/05 10:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.038	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	0.032	0.16	0.17
Benzene	0.074	0.14	0.24	0.45
1,2-Dichloroethane	0.030	0.052	0.12	0.21
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Toluene	0.030	2.4	0.11	8.9
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.20	Not Detected
Ethyl Benzene	0.030	0.16	0.13	0.71
m,p-Xylene	0.060	0.49	0.26	2.1
o-Xylene	0.030	0.12	0.13	0.54
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Methyl tert-butyl ether	0.15	Not Detected U J	0.54	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: 1058 Bancroft Rd- 2nd Floor

Lab ID#: 0509217-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092221	Date of Collection:	9/8/05
Dil. Factor:	1.87	Date of Analysis:	9/23/05 11:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	0.040	0.20	0.22
Benzene	0.094	0.14	0.30	0.45
1,2-Dichloroethane	0.037	0.068	0.15	0.27
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	2.4	0.14	9.2
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.16	0.16	0.69
m,p-Xylene	0.075	0.46	0.32	2.0
o-Xylene	0.037	0.12	0.16	0.51
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	Not Detected U J	0.67	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: 1058 Bancroft Rd- 2nd Floor Duplicate

Lab ID#: 0509217-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092222	Date of Collection:	9/8/05
Dil. Factor:	1.79	Date of Analysis:	9/23/05 12:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.041	0.20	0.22
Benzene	0.090	0.15	0.28	0.48
1,2-Dichloroethane	0.036	0.059	0.14	0.24
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	2.6	0.13	9.7
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.16	0.16	0.69
m,p-Xylene	0.072	0.47	0.31	2.0
o-Xylene	0.036	0.12	0.16	0.51
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	108	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509217-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 07:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509217-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	81
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	101
Benzene	94
1,2-Dichloroethane	122
Trichloroethene	98
Toluene	112
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	115
o-Xylene	106
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509217-06A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092203</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/22/05 04:58 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	82
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	79
1,2-Dichloroethane	99
Trichloroethene	82
Toluene	98
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	83
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	64

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



**Table 2**  
**Analytical Duplicate Results and Calculated Relative Percent Differences**  
**1033 Bermuda Drive**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Analytical Duplicate Results</b>							
0509219	1033 Bermuda Dr. - 2nd Floor	Benzene	0.54	0.53	0.29	µg/m <sup>3</sup>	1.9
0509219	1033 Bermuda Dr. - 2nd Floor	Toluene	9.0	9.0	0.14	µg/m <sup>3</sup>	0
0509219	1033 Bermuda Dr. - 2nd Floor	Tetrachloroethene	1.1	1.1	0.25	µg/m <sup>3</sup>	0
0509219	1033 Bermuda Dr. - 2nd Floor	Ethylbenzene	0.56	0.58	0.16	µg/m <sup>3</sup>	3.5
0509219	1033 Bermuda Dr. - 2nd Floor	m,p-Xylene	1.1	1.1	0.32	µg/m <sup>3</sup>	0
0509219	1033 Bermuda Dr. - 2nd Floor	o-Xylene	0.32	0.33	0.16	µg/m <sup>3</sup>	3.1

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

## **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 #: 0509217**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

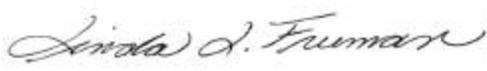
**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 09/12/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/23/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1058 Bancroft Rd- 1st Floor	Modified TO-15 SIM	3.0 "Hg
02A	1058 Bancroft Rd- 2nd Floor	Modified TO-15 SIM	8.5 "Hg
03A	1058 Bancroft Rd- 2nd Floor Duplicate	Modified TO-15 SIM	7.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/23/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0509217**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 12, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1058 Bancroft Rd- 1st Floor

Lab ID#: 0509217-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.030	0.032	0.16	0.17
Benzene	0.074	0.14	0.24	0.45
1,2-Dichloroethane	0.030	0.052	0.12	0.21
Toluene	0.030	2.4	0.11	8.9
Ethyl Benzene	0.030	0.16	0.13	0.71
m,p-Xylene	0.060	0.49	0.26	2.1
o-Xylene	0.030	0.12	0.13	0.54

Client Sample ID: 1058 Bancroft Rd- 2nd Floor

Lab ID#: 0509217-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.040	0.20	0.22
Benzene	0.094	0.14	0.30	0.45
1,2-Dichloroethane	0.037	0.068	0.15	0.27
Toluene	0.037	2.4	0.14	9.2
Ethyl Benzene	0.037	0.16	0.16	0.69
m,p-Xylene	0.075	0.46	0.32	2.0
o-Xylene	0.037	0.12	0.16	0.51

Client Sample ID: 1058 Bancroft Rd- 2nd Floor Duplicate

Lab ID#: 0509217-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.041	0.20	0.22
Benzene	0.090	0.15	0.28	0.48
1,2-Dichloroethane	0.036	0.059	0.14	0.24
Toluene	0.036	2.6	0.13	9.7
Ethyl Benzene	0.036	0.16	0.16	0.69
m,p-Xylene	0.072	0.47	0.31	2.0
o-Xylene	0.036	0.12	0.16	0.51

# AIR TOXICS LTD.

Client Sample ID: 1058 Bancroft Rd- 1st Floor

Lab ID#: 0509217-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092220	Date of Collection:	9/8/05
Dil. Factor:	1.49	Date of Analysis:	9/23/05 10:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.015	Not Detected	0.038	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	0.032	0.16	0.17
Benzene	0.074	0.14	0.24	0.45
1,2-Dichloroethane	0.030	0.052	0.12	0.21
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Toluene	0.030	2.4	0.11	8.9
1,1,2-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.20	Not Detected
Ethyl Benzene	0.030	0.16	0.13	0.71
m,p-Xylene	0.060	0.49	0.26	2.1
o-Xylene	0.030	0.12	0.13	0.54
1,1,2,2-Tetrachloroethane	0.030	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Methyl tert-butyl ether	0.15	Not Detected U J	0.54	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: 1058 Bancroft Rd- 2nd Floor

Lab ID#: 0509217-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092221	Date of Collection:	9/8/05
Dil. Factor:	1.87	Date of Analysis:	9/23/05 11:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	0.040	0.20	0.22
Benzene	0.094	0.14	0.30	0.45
1,2-Dichloroethane	0.037	0.068	0.15	0.27
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	2.4	0.14	9.2
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.16	0.16	0.69
m,p-Xylene	0.075	0.46	0.32	2.0
o-Xylene	0.037	0.12	0.16	0.51
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	Not Detected U J	0.67	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: 1058 Bancroft Rd- 2nd Floor Duplicate

Lab ID#: 0509217-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092222	Date of Collection:	9/8/05
Dil. Factor:	1.79	Date of Analysis:	9/23/05 12:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.041	0.20	0.22
Benzene	0.090	0.15	0.28	0.48
1,2-Dichloroethane	0.036	0.059	0.14	0.24
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	2.6	0.13	9.7
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.16	0.16	0.69
m,p-Xylene	0.072	0.47	0.31	2.0
o-Xylene	0.036	0.12	0.16	0.51
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	108	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509217-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092205</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 9/22/05 07:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509217-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/22/05 04:06 PM

Compound	%Recovery
Vinyl Chloride	81
1,1-Dichloroethene	81
1,1-Dichloroethane	94
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	101
Benzene	94
1,2-Dichloroethane	122
Trichloroethene	98
Toluene	112
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	115
o-Xylene	106
1,1,2,2-Tetrachloroethane	104
trans-1,2-Dichloroethene	87
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509217-06A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092203</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/22/05 04:58 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	82
1,1-Dichloroethene	81
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	85
Benzene	79
1,2-Dichloroethane	99
Trichloroethene	82
Toluene	98
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	105
o-Xylene	96
1,1,2,2-Tetrachloroethane	83
trans-1,2-Dichloroethene	106
Methyl tert-butyl ether	64

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



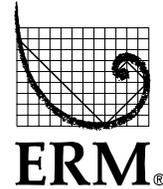
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 27 September 2005  
**Subject:** Data Review of 1058 Bancroft Road (UPRR Hookston Station) Samples Collected 08 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509217

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1058 Bancroft Road**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509217	CCV	See below	Methyl tert-butyl ether	60	70-130	NA	NA
0509217	CCV	1058 Bancroft Rd.- 1st Floor	Methyl tert-butyl ether	NA	NA	0.54	UJ
0509217	CCV	1058 Bancroft Rd.- 2nd Floor	Methyl tert-butyl ether	NA	NA	0.67	UJ
0509217	CCV	1058 Bancroft Rd.- 2nd Floor D	Methyl tert-butyl ether	NA	NA	0.64	UJ

**Key:**

CCV = Continuing calibration verification

UJ = Nondetected result qualified as estimated

NA = Not applicable

D = Duplicate

**Table 2**  
**Field Duplicate Results and Calculated Relative Percent Differences**  
**1058 Bancroft Road**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
0509217	1058 Bancroft Rd.- 2nd Floor	1,1,1-Trichloroethane	0.22	0.22	0.20	µg/m <sup>3</sup>	0
0509217	1058 Bancroft Rd.- 2nd Floor	Benzene	0.45	0.48	0.30	µg/m <sup>3</sup>	6.5
0509217	1058 Bancroft Rd.- 2nd Floor	1,2-Dichloroethane	0.27	0.24	0.15	µg/m <sup>3</sup>	12
0509217	1058 Bancroft Rd.- 2nd Floor	Toluene	9.2	9.7	0.14	µg/m <sup>3</sup>	5.3
0509217	1058 Bancroft Rd.- 2nd Floor	Ethylbenzene	0.69	0.69	0.16	µg/m <sup>3</sup>	0
0509217	1058 Bancroft Rd.- 2nd Floor	m,p-Xylene	2.0	2.0	0.32	µg/m <sup>3</sup>	0
0509217	1058 Bancroft Rd.- 2nd Floor	o-Xylene	0.51	0.51	0.16	µg/m <sup>3</sup>	0

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

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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**

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Hours 8:00 A.M to 6:00 P.M. Pacific**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509054

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPPR Hookston Station
<b>DATE RECEIVED:</b>	09/02/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/16/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1010 Bancroft Rd- 1st Floor	Modified TO-15 SIM	9.0 "Hg
02A	Lab Blank	Modified TO-15 SIM	NA
03A	CCV	Modified TO-15 SIM	NA
04A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
Laboratory Director

DATE: 09/16/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509054**

One 6 Liter Summa Canister (SIM Certified) sample was received on September 02, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$ .; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1010 Bancroft Rd- 1st Floor

Lab ID#: 0509054-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.096	0.43	0.30	1.4
Toluene	0.038	6.7	0.14	25
Tetrachloroethene	0.038	0.059	0.26	0.40
Ethyl Benzene	0.038	0.63	0.16	2.7
m,p-Xylene	0.076	1.2	0.33	5.2
o-Xylene	0.038	0.40	0.16	1.8

# AIR TOXICS LTD.

Client Sample ID: 1010 Bancroft Rd- 1st Floor

Lab ID#: 0509054-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091310	Date of Collection:	8/30/05
Dil. Factor:	1.91	Date of Analysis:	9/14/05 04:06 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.049	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.076	Not Detected
1,1-Dichloroethane	0.038	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.038	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.038	Not Detected	0.21	Not Detected
Benzene	0.096	0.43	0.30	1.4
1,2-Dichloroethane	0.038	Not Detected	0.15	Not Detected
Trichloroethene	0.038	Not Detected	0.20	Not Detected
Toluene	0.038	6.7	0.14	25
1,1,2-Trichloroethane	0.038	Not Detected	0.21	Not Detected
Tetrachloroethene	0.038	0.059	0.26	0.40
Ethyl Benzene	0.038	0.63	0.16	2.7
m,p-Xylene	0.076	1.2	0.33	5.2
o-Xylene	0.038	0.40	0.16	1.8
1,1,2,2-Tetrachloroethane	0.038	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.76	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.69	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509054-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/13/05 10:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509054-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/13/05 06:38 PM

Compound	%Recovery
Vinyl Chloride	96
1,1-Dichloroethene	92
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	102
Benzene	90
1,2-Dichloroethane	111
Trichloroethene	92
Toluene	104
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	107
m,p-Xylene	111
o-Xylene	105
1,1,2,2-Tetrachloroethane	100
trans-1,2-Dichloroethene	89
Methyl tert-butyl ether	83

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509054-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/13/05 07:37 PM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	84
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	84
Benzene	75
1,2-Dichloroethane	94
Trichloroethene	78
Toluene	94
1,1,2-Trichloroethane	90
Tetrachloroethene	89
Ethyl Benzene	97
m,p-Xylene	103
o-Xylene	96
1,1,2,2-Tetrachloroethane	86
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	78

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	104	70-130





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This electronic report includes the following:

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

**WORK ORDER #: 0509054R1**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455

**FAX:** 925-946-9968

**DATE RECEIVED:** 09/02/2005

**DATE COMPLETED:** 09/16/2005

**DATE REISSUED:** 9/26/05

**P.O. #**

**PROJECT #** UPPR Hookston Station

**CONTACT:** Nicole Danbacher

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1010 Bancroft Rd- 1st Floor	Modified TO-15 SIM	9.0 "Hg
02A(cancelled)	1010 Bancroft Rd- 2nd Floor	Modified TO-15 SIM	18.0 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

DATE: 09/30/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0509054R1**

One 6 Liter Summa Canister (SIM Certified) sample was received on September 02, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

THE WORKORDER WAS RE-ISSUED ON 9/29/05 TO ADD THE FOLLOWING RECEIVING NARRATIVES.

SAMPLE 1010 BANCROFT RD- 2ND FLOOR WAS RECEIVED WITH SIGNIFICANT VACUUM REMAINING IN THE CANISTER. THE DISCREPANCY WAS NOTED IN THE SAMPLE RECEIPT CONFIRMATION EMAIL/FAX AND THE SAMPLE WAS PUT ON HOLD.

SAMPLE 1010 BANCROFT RD- 2ND FLOOR WAS CANCELLED PER CLIENT'S REQUEST.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

**Client Sample ID: 1010 Bancroft Rd- 1st Floor**

**Lab ID#: 0509054R1-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.096	0.43	0.30	1.4
Toluene	0.038	6.7	0.14	25
Tetrachloroethene	0.038	0.059	0.26	0.40
Ethyl Benzene	0.038	0.63	0.16	2.7
m,p-Xylene	0.076	1.2	0.33	5.2
o-Xylene	0.038	0.40	0.16	1.8

# AIR TOXICS LTD.

Client Sample ID: 1010 Bancroft Rd- 1st Floor

Lab ID#: 0509054R1-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8091310</b>	<b>Date of Collection:</b> 8/30/05
<b>Dil. Factor:</b>	1.91	<b>Date of Analysis:</b> 9/14/05 04:06 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.049	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.076	Not Detected
1,1-Dichloroethane	0.038	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.038	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.038	Not Detected	0.21	Not Detected
Benzene	0.096	0.43	0.30	1.4
1,2-Dichloroethane	0.038	Not Detected	0.15	Not Detected
Trichloroethene	0.038	Not Detected	0.20	Not Detected
Toluene	0.038	6.7	0.14	25
1,1,2-Trichloroethane	0.038	Not Detected	0.21	Not Detected
Tetrachloroethene	0.038	0.059	0.26	0.40
Ethyl Benzene	0.038	0.63	0.16	2.7
m,p-Xylene	0.076	1.2	0.33	5.2
o-Xylene	0.038	0.40	0.16	1.8
1,1,2,2-Tetrachloroethane	0.038	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.76	Not Detected
Methyl tert-butyl ether	0.19	Not Detected	0.69	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509054R1-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8091306</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 9/13/05 10:44 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509054R1-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8091302</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/13/05 06:38 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	96
1,1-Dichloroethene	92
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	96
1,1,1-Trichloroethane	102
Benzene	90
1,2-Dichloroethane	111
Trichloroethene	92
Toluene	104
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	107
m,p-Xylene	111
o-Xylene	105
1,1,2,2-Tetrachloroethane	100
trans-1,2-Dichloroethene	89
Methyl tert-butyl ether	83

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509054R1-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8091303</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/13/05 07:37 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	84
1,1-Dichloroethene	84
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	84
Benzene	75
1,2-Dichloroethane	94
Trichloroethene	78
Toluene	94
1,1,2-Trichloroethane	90
Tetrachloroethene	89
Ethyl Benzene	97
m,p-Xylene	103
o-Xylene	96
1,1,2,2-Tetrachloroethane	86
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	78

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	104	70-130



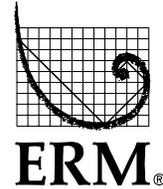
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1010 Bancroft Road (UPRR Hookston Station) Samples Collected 30 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509054

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data were qualified based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

***OVERALL ASSESSMENT***

No data required qualification or rejection. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

## **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**



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**ERM-West**  
**Workorder# 0508618**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$ .; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD

**Receiving Notes**

The Chain of Custody (COC) information for sample 1270 Trafalger Ct- Crawl Space did not match the entry on the sample tag with regard to sample identification. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the information on the COC was used to process and report the sample.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1270 Trafalger Ct- 1st Floor

Lab ID#: 0508618-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.088	0.19	0.28	0.60
Toluene	0.035	2.0	0.13	7.5
Ethyl Benzene	0.035	0.12	0.15	0.52
m,p-Xylene	0.070	0.29	0.30	1.3
o-Xylene	0.035	0.076	0.15	0.33

Client Sample ID: 1270 Trafalger Ct- 2nd Floor

Lab ID#: 0508618-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.15	0.29	0.47
Toluene	0.037	0.87	0.14	3.3
Tetrachloroethene	0.037	0.28	0.25	1.9
Ethyl Benzene	0.037	0.090	0.16	0.39
m,p-Xylene	0.073	0.21	0.32	0.91
o-Xylene	0.037	0.064	0.16	0.28

Client Sample ID: 1270 Trafalger Ct- Crawl Space

Lab ID#: 0508618-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.14	0.29	0.46
Toluene	0.037	0.81	0.14	3.0
Ethyl Benzene	0.037	0.081	0.16	0.35
m,p-Xylene	0.073	0.20	0.32	0.89
o-Xylene	0.037	0.058	0.16	0.25

# AIR TOXICS LTD.

Client Sample ID: 1270 Trafalger Ct- 1st Floor

Lab ID#: 0508618-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090916	Date of Collection:	8/24/05
Dil. Factor:	1.75	Date of Analysis:	9/10/05 01:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Benzene	0.088	0.19	0.28	0.60
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	2.0	0.13	7.5
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.12	0.15	0.52
m,p-Xylene	0.070	0.29	0.30	1.3
o-Xylene	0.035	0.076	0.15	0.33
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1270 Trafalger Ct- 2nd Floor

Lab ID#: 0508618-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090917	Date of Collection:	8/24/05
Dil. Factor:	1.83	Date of Analysis:	9/10/05 02:38 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.15	0.29	0.47
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.87	0.14	3.3
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.28	0.25	1.9
Ethyl Benzene	0.037	0.090	0.16	0.39
m,p-Xylene	0.073	0.21	0.32	0.91
o-Xylene	0.037	0.064	0.16	0.28
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

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

# AIR TOXICS LTD.

Client Sample ID: 1270 Trafalger Ct- Crawl Space

Lab ID#: 0508618-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090918	Date of Collection:	8/24/05
Dil. Factor:	1.83	Date of Analysis:	9/10/05 04:25 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.14	0.29	0.46
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.81	0.14	3.0
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.081	0.16	0.35
m,p-Xylene	0.073	0.20	0.32	0.89
o-Xylene	0.037	0.058	0.16	0.25
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508618-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090905	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/9/05 04:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508618-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 01:27 PM

Compound	%Recovery
Vinyl Chloride	79
1,1-Dichloroethene	80
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	87
1,1,1-Trichloroethane	94
Benzene	91
1,2-Dichloroethane	107
Trichloroethene	90
Toluene	105
1,1,2-Trichloroethane	101
Tetrachloroethene	95
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	84
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508618-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 02:06 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	82
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	82
Benzene	80
1,2-Dichloroethane	95
Trichloroethene	86
Toluene	100
1,1,2-Trichloroethane	93
Tetrachloroethene	90
Ethyl Benzene	100
m,p-Xylene	107
o-Xylene	98
1,1,2,2-Tetrachloroethane	89
trans-1,2-Dichloroethene	109
Methyl tert-butyl ether	65

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



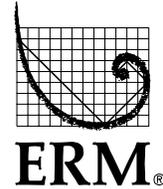
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1270 Trafalgar Court (UPRR  
Hookston Station) Samples Collected 24 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508618

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1270 Trafalgar Court**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508618	CCV	See below	Methyl tert-butyl ether	66	70-130	NA	NA
0508618	CCV	1270 Trafalgar Ct.-1st Floor	Methyl tert-butyl ether	NA	NA	0.63	UJ
0508618	CCV	1270 Trafalgar Ct.-2nd Floor	Methyl tert-butyl ether	NA	NA	0.66	UJ
0508618	CCV	1270 Trafalgar Ct.-Crawl Space	Methyl tert-butyl ether	NA	NA	0.66	UJ

**Key:**

CCV = Continuing calibration verification

J = Detected result qualified as estimated

NA = Not applicable

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

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

**WORK ORDER #: 0508611**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 08/29/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/12/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1310 Strathmore Ct- 1st Floor	Modified TO-15 SIM	8.0 "Hg
02A	1310 Strathmore Ct- Crawl Space	Modified TO-15 SIM	8.0 "Hg
03A	1310 Strathmore Ct- Crawl Space Duplicate	Modified TO-15 SIM	8.0 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/12/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0508611**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1310 Strathmore Ct- 1st Floor

Lab ID#: 0508611-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1-Dichloroethene	0.018	0.040	0.072	0.16
1,1,1-Trichloroethane	0.037	2.2	0.20	12
Benzene	0.092	0.23	0.29	0.73
1,2-Dichloroethane	0.037	0.084	0.15	0.34
Toluene	0.037	2.2	0.14	8.2
Tetrachloroethene	0.037	2.6	0.25	17
Ethyl Benzene	0.037	0.11	0.16	0.46
m,p-Xylene	0.073	0.20	0.32	0.87
o-Xylene	0.037	0.060	0.16	0.26

Client Sample ID: 1310 Strathmore Ct- Crawl Space

Lab ID#: 0508611-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.10	0.20	0.57
Benzene	0.092	0.19	0.29	0.60
Trichloroethene	0.037	0.036 J	0.20	0.19 J
Toluene	0.037	0.67	0.14	2.5
Tetrachloroethene	0.037	0.13	0.25	0.90
Ethyl Benzene	0.037	0.071	0.16	0.31
m,p-Xylene	0.073	0.22	0.32	0.95
o-Xylene	0.037	0.072	0.16	0.31

Client Sample ID: 1310 Strathmore Ct- Crawl Space Duplicate

Lab ID#: 0508611-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.037	0.090	0.20	0.49
Benzene	0.092	0.18	0.29	0.57
Toluene	0.037	0.50	0.14	1.9
Tetrachloroethene	0.037	0.099	0.25	0.67
Ethyl Benzene	0.037	0.045	0.16	0.20
m,p-Xylene	0.073	0.11	0.32	0.48
o-Xylene	0.037	0.036 J	0.16	0.16

# AIR TOXICS LTD.

Client Sample ID: 1310 Strathmore Ct- 1st Floor

Lab ID#: 0508611-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090906	Date of Collection:	8/25/05
Dil. Factor:	1.83	Date of Analysis:	9/9/05 05:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	0.040	0.072	0.16
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	2.2	0.20	12
Benzene	0.092	0.23	0.29	0.73
1,2-Dichloroethane	0.037	0.084	0.15	0.34
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	2.2	0.14	8.2
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	2.6	0.25	17
Ethyl Benzene	0.037	0.11	0.16	0.46
m,p-Xylene	0.073	0.20	0.32	0.87
o-Xylene	0.037	0.060	0.16	0.26
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

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

# AIR TOXICS LTD.

Client Sample ID: 1310 Strathmore Ct- Crawl Space

Lab ID#: 0508611-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090907	Date of Collection:	8/25/05
Dil. Factor:	1.83	Date of Analysis:	9/9/05 05:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	0.10	0.20	0.57
Benzene	0.092	0.19	0.29	0.60
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	0.036 J	0.20	0.19 J
Toluene	0.037	0.67	0.14	2.5
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.13	0.25	0.90
Ethyl Benzene	0.037	0.071	0.16	0.31
m,p-Xylene	0.073	0.22	0.32	0.95
o-Xylene	0.037	0.072	0.16	0.31
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

J = Estimated value.

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: 1310 Strathmore Ct- Crawl Space Duplicate

Lab ID#: 0508611-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090908	Date of Collection:	8/25/05
Dil. Factor:	1.83	Date of Analysis:	9/9/05 06:34 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	0.090	0.20	0.49
Benzene	0.092	0.18	0.29	0.57
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.50	0.14	1.9
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.099	0.25	0.67
Ethyl Benzene	0.037	0.045	0.16	0.20
m,p-Xylene	0.073	0.11	0.32	0.48
o-Xylene	0.037	0.036 J	0.16	0.16
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

J = Estimated value.

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508611-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090905	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 04:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508611-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090902	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 01:27 PM

Compound	%Recovery
Vinyl Chloride	79
1,1-Dichloroethene	80
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	87
1,1,1-Trichloroethane	94
Benzene	91
1,2-Dichloroethane	107
Trichloroethene	90
Toluene	105
1,1,2-Trichloroethane	101
Tetrachloroethene	95
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	84
Methyl tert-butyl ether	60 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	111	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508611-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090903	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/9/05 02:06 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	82
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	82
Benzene	80
1,2-Dichloroethane	95
Trichloroethene	86
Toluene	100
1,1,2-Trichloroethane	93
Tetrachloroethene	90
Ethyl Benzene	100
m,p-Xylene	107
o-Xylene	98
1,1,2,2-Tetrachloroethane	89
trans-1,2-Dichloroethene	109
Methyl tert-butyl ether	65

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130

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**AIR TOXICS LTD.**  
AN ENVIRONMENTAL ANALYTICAL LABORATORY

**CHAIN-OF-CUSTODY RECORD**

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Page 1 of 1

Contact Person Kimberly Lake

Company ERM

Address 1777 Botelho Dr #200 City Walnut Creek State CA Zip 94596

Phone 925-945-0855 Fax 925-946-9968

Collected by: (Signature) Kimberly Lake

Email kimberly.lake@erm.com

**Project Info:**

P.O. # \_\_\_\_\_

Project # \_\_\_\_\_

Project Name Upper Hockessin Station

**Turn Around Time:**

Normal

Rush

specify \_\_\_\_\_

**Lab Use Only**

Pressurized by: KL

Date: 8/26/05

Pressurization Gas: (N) He

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum		
					Initial	Final	Receipt Final (psi)
D1A	1310 Stathmore Ct - 1st Floor	8/25/05	09:00-20:30	T0-15 SIM	26.25	6.5	8.014
D2A	1310 Stathmore Ct - Grass Space	8-25-05	09:10-20:40	T0-15 SIM	26.5	6.5	8.014
D3A	1310 Stathmore Ct - Grass Space Duplicate	8-25-05	09:10-20:45	T0-15 SIM	26.5	6.5	8.014

Relinquished by: (signature) Kimberly Lake Date/Time 8/26/05 10:00

Received by: (signature) Judy Scanlon Date/Time 8/29/05 8:40

Notes: All vacuum readings measured w/ gauge

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Relinquished by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Received by: (signature) \_\_\_\_\_ Date/Time \_\_\_\_\_

Shipper Name FedEx Air Bill # \_\_\_\_\_ Temp (°C) \_\_\_\_\_ Condition good Custody Seals Intact?  Yes  No  None Work Order # 0508611

## **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).

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Hours 8:00 A.M to 6:00 P.M. Pacific**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508612

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	0020557.10 UPRR Hookston Station
<b>DATE RECEIVED:</b>	08/29/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/12/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	Ambient Air 8/24/05	Modified TO-15 SIM	4.5 "Hg
02A	Trip Blank 8/24/05	Modified TO-15 SIM	4.8 psi
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/12/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0508612**

Two 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: Ambient Air 8/24/05

Lab ID#: 0508612-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.079	0.16	0.25	0.51
Toluene	0.032	5.5	0.12	21
Ethyl Benzene	0.032	0.29	0.14	1.3
m,p-Xylene	0.063	0.79	0.27	3.4
o-Xylene	0.032	0.15	0.14	0.63

Client Sample ID: Trip Blank 8/24/05

Lab ID#: 0508612-02A

No Detections Were Found.

# AIR TOXICS LTD.

Client Sample ID: Ambient Air 8/24/05

Lab ID#: 0508612-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090718	Date of Collection:	8/24/05
Dil. Factor:	1.58	Date of Analysis:	9/8/05 04:50 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Benzene	0.079	0.16	0.25	0.51
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Toluene	0.032	5.5	0.12	21
1,1,2-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.21	Not Detected
Ethyl Benzene	0.032	0.29	0.14	1.3
m,p-Xylene	0.063	0.79	0.27	3.4
o-Xylene	0.032	0.15	0.14	0.63
1,1,2,2-Tetrachloroethane	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Methyl tert-butyl ether	0.16	Not Detected U J	0.57	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: Trip Blank 8/24/05

Lab ID#: 0508612-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090719	Date of Collection:	8/24/05
Dil. Factor:	1.00	Date of Analysis:	9/8/05 05:43 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	92	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508612-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090707	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/7/05 04:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508612-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/05 11:40 AM

Compound	%Recovery
Vinyl Chloride	82
1,1-Dichloroethene	83
1,1-Dichloroethane	92
cis-1,2-Dichloroethene	87
1,1,1-Trichloroethane	95
Benzene	86
1,2-Dichloroethane	101
Trichloroethene	87
Toluene	101
1,1,2-Trichloroethane	100
Tetrachloroethene	95
Ethyl Benzene	108
m,p-Xylene	113
o-Xylene	107
1,1,2,2-Tetrachloroethane	102
trans-1,2-Dichloroethene	82
Methyl tert-butyl ether	64 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	105	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508612-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/7/05 12:40 PM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	84
1,1-Dichloroethane	86
cis-1,2-Dichloroethene	76
1,1,1-Trichloroethane	83
Benzene	77
1,2-Dichloroethane	92
Trichloroethene	79
Toluene	95
1,1,2-Trichloroethane	91
Tetrachloroethene	89
Ethyl Benzene	100
m,p-Xylene	106
o-Xylene	99
1,1,2,2-Tetrachloroethane	90
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	68

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	105	70-130



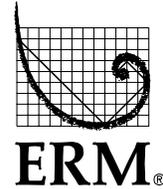
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1310 Strathmore Court (UPRR  
Hookston Station) Samples Collected 25 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508611

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1310 Strathmore Court**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508611	CCV	See below	Methyl tert-butyl ether	66	70-130	NA	NA
0508611	CCV	1310 Strathmore Ct. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.66	UJ
0508611	CCV	1310 Strathmore Ct. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.66	UJ
0508611	CCV	1310 Strathmore Ct. - Crawl Space D	Methyl tert-butyl ether	NA	NA	0.66	UJ

**Key:**

CCV = Continuing calibration verification  
UJ = Nondetected result qualified as estimated  
NA = Not applicable  
D = Duplicate

**Table 2**  
**Analytical and Field Duplicate Results and Calculated Relative Percent Differences**  
**1310 Strathmore Court**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Analytical Duplicate Results</b>							
0508611	1310 Strathmore Ct. - Crawl Space	1,1,1-Trichloroethane	0.57	0.49	0.20	µg/m <sup>3</sup>	15
0508611	1310 Strathmore Ct. - Crawl Space	Benzene	0.6	0.57	0.18	µg/m <sup>3</sup>	5.1
0508611	1310 Strathmore Ct. - Crawl Space	Trichloroethene	0.19	<0.20	0.20	µg/m <sup>3</sup>	NC
0508611	1310 Strathmore Ct. - Crawl Space	Toluene	2.5	1.9	0.14	µg/m <sup>3</sup>	27
0508611	1310 Strathmore Ct. - Crawl Space	Tetrachloroethene	0.9	0.67	0.25	µg/m <sup>3</sup>	29
0508611	1310 Strathmore Ct. - Crawl Space	Ethylbenzene	0.31	0.20	0.16	µg/m <sup>3</sup>	43
0508611	1310 Strathmore Ct. - Crawl Space	m,p-Xylene	0.95	0.48	0.32	µg/m <sup>3</sup>	66
0508611	1310 Strathmore Ct. - Crawl Space	o-Xylene	0.31	0.16	0.16	µg/m <sup>3</sup>	64

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

NC = Not calculated; one result was detected and the other was not

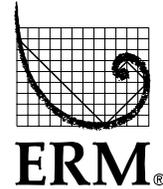
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1311 Strathmore Court (UPRR  
Hookston Station) Samples Collected 31 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509091

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 1.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

## **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**

**Table 1**  
**Field Duplicate Results and Calculated Relative Percent Differences**  
**1311 Strathmore Court**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
0509091	1311 Strathmore Ct. - 2nd Floor	Benzene	0.61	0.59	0.28	µg/m <sup>3</sup>	3.3
0509091	1311 Strathmore Ct. - 2nd Floor	Trichloroethene	<.019	0.20	0.19	µg/m <sup>3</sup>	NC
0509091	1311 Strathmore Ct. - 2nd Floor	Toluene	3.6	3.4	0.13	µg/m <sup>3</sup>	5.7
0509091	1311 Strathmore Ct. - 2nd Floor	Ethylbenzene	0.39	0.36	0.16	µg/m <sup>3</sup>	8.0
0509091	1311 Strathmore Ct. - 2nd Floor	m,p-Xylene	1.1	0.97	0.31	µg/m <sup>3</sup>	13
0509091	1311 Strathmore Ct. - 2nd Floor	o-Xylene	0.33	0.30	0.16	µg/m <sup>3</sup>	10

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

NC = Not calculated; one result was detected and the other was not



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0508614

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	Hookston Station- UPRR
<b>DATE RECEIVED:</b>	08/29/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/12/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1320 Strathmore Ct- 1st Floor	Modified TO-15 SIM	6.5 "Hg
02A	1320 Strathmore Ct- 2nd Floor	Modified TO-15 SIM	7.5 "Hg
03A	1320 Strathmore Ct- Crawl Space	Modified TO-15 SIM	7.0 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/12/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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 SIM**  
**ERM-West**  
**Workorder# 0508614**

Three 6 Liter Summa Canister (SIM Certified) samples were received on August 29, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is $\leq$ 30% Difference with 10% of compounds allowed out up to $\leq$ 40%.; flag and narrate outliers
ICAL %RSD acceptance criteria	$\leq$ 30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is $\leq$ 30% RSD with 10% of compounds allowed out to < 40% RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1320 Strathmore Ct- 1st Floor

Lab ID#: 0508614-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.034	0.050	0.19	0.27
Benzene	0.086	0.23	0.27	0.74
Toluene	0.034	0.81	0.13	3.1
Ethyl Benzene	0.034	0.091	0.15	0.40
m,p-Xylene	0.068	0.25	0.30	1.1
o-Xylene	0.034	0.075	0.15	0.33

Client Sample ID: 1320 Strathmore Ct- 2nd Floor

Lab ID#: 0508614-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.036	0.052	0.20	0.29
Benzene	0.090	0.27	0.28	0.86
Toluene	0.036	0.86	0.13	3.2
Ethyl Benzene	0.036	0.092	0.16	0.40
m,p-Xylene	0.072	0.24	0.31	1.1
o-Xylene	0.036	0.078	0.16	0.34

Client Sample ID: 1320 Strathmore Ct- Crawl Space

Lab ID#: 0508614-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
1,1,1-Trichloroethane	0.035	0.064	0.19	0.35
Benzene	0.088	0.21	0.28	0.67
Toluene	0.035	0.65	0.13	2.4
Ethyl Benzene	0.035	0.077	0.15	0.34
m,p-Xylene	0.070	0.21	0.30	0.91
o-Xylene	0.035	0.059	0.15	0.25

# AIR TOXICS LTD.

Client Sample ID: 1320 Strathmore Ct- 1st Floor

Lab ID#: 0508614-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090813	Date of Collection: 8/25/05
Dil. Factor:	1.71	Date of Analysis: 9/8/05 11:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	0.050	0.19	0.27
Benzene	0.086	0.23	0.27	0.74
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	0.81	0.13	3.1
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
Ethyl Benzene	0.034	0.091	0.15	0.40
m,p-Xylene	0.068	0.25	0.30	1.1
o-Xylene	0.034	0.075	0.15	0.33
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1320 Strathmore Ct- 2nd Floor

Lab ID#: 0508614-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090816	Date of Collection:	8/25/05
Dil. Factor:	1.79	Date of Analysis:	9/9/05 09:22 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	0.052	0.20	0.29
Benzene	0.090	0.27	0.28	0.86
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	0.86	0.13	3.2
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	Not Detected	0.24	Not Detected
Ethyl Benzene	0.036	0.092	0.16	0.40
m,p-Xylene	0.072	0.24	0.31	1.1
o-Xylene	0.036	0.078	0.16	0.34
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1320 Strathmore Ct- Crawl Space

Lab ID#: 0508614-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090817	Date of Collection:	8/25/05
Dil. Factor:	1.75	Date of Analysis:	9/9/05 10:02 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	0.064	0.19	0.35
Benzene	0.088	0.21	0.28	0.67
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Toluene	0.035	0.65	0.13	2.4
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
Ethyl Benzene	0.035	0.077	0.15	0.34
m,p-Xylene	0.070	0.21	0.30	0.91
o-Xylene	0.035	0.059	0.15	0.25
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.63	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0508614-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/05 04:14 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0508614-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/05 12:09 PM

Compound	%Recovery
Vinyl Chloride	83
1,1-Dichloroethene	80
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	88
1,1,1-Trichloroethane	95
Benzene	91
1,2-Dichloroethane	108
Trichloroethene	92
Toluene	106
1,1,2-Trichloroethane	101
Tetrachloroethene	95
Ethyl Benzene	107
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	103
trans-1,2-Dichloroethene	86
Methyl tert-butyl ether	66 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	105	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0508614-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8090803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/8/05 01:02 PM

Compound	%Recovery
Vinyl Chloride	87
1,1-Dichloroethene	81
1,1-Dichloroethane	85
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	81
Benzene	79
1,2-Dichloroethane	93
Trichloroethene	81
Toluene	97
1,1,2-Trichloroethane	92
Tetrachloroethene	89
Ethyl Benzene	100
m,p-Xylene	106
o-Xylene	99
1,1,2,2-Tetrachloroethane	91
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	67

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	104	70-130



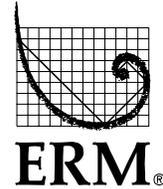
# Memorandum

**Environmental  
Resources  
Management**

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 19 September 2005  
**Subject:** Data Review of 1320 Strathmore Court (UPRR  
Hookston Station) Samples Collected 25 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0508614

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1320 Strathmore Court**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0508614	CCV	See below	Methyl tert-butyl ether	66	70-130	NA	NA
0508614	CCV	1320 Strathmore Ct. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.62	UJ
0508614	CCV	1320 Strathmore Ct. - 2nd Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0508614	CCV	1320 Strathmore Ct. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.63	UJ

**Key:**

CCV = Continuing calibration verification  
UJ = Nondetected result qualified as estimated  
NA = Not applicable

## **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**

**WORK ORDER #: 0509094**

Work Order Summary

**CLIENT:** Mr. Brian Bjorklund  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596-5042

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** UPRR Hookston Station

**DATE RECEIVED:** 09/06/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 09/21/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1321 Edinburgh Ct- 1st Floor	Modified TO-15 SIM	7.5 "Hg
02A	1321 Edinburgh Ct- Crawl Space	Modified TO-15 SIM	8.0 "Hg
02AA	1321 Edinburgh Ct- Crawl Space Duplicate	Modified TO-15 SIM	8.0 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:       DATE: 09/21/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0509094**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 06, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

The Chain of Custody was not relinquished properly. The discrepancy was noted in the Sample Receipt Confirmation email/fax.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1321 Edinburgh Ct- 1st Floor

Lab ID#: 0509094-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.40	0.28	1.3
Toluene	0.036	1.8	0.13	7.0
Tetrachloroethene	0.036	0.044	0.24	0.30
Ethyl Benzene	0.036	0.20	0.16	0.88
m,p-Xylene	0.072	0.67	0.31	2.9
o-Xylene	0.036	0.22	0.16	0.98

Client Sample ID: 1321 Edinburgh Ct- Crawl Space

Lab ID#: 0509094-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.22	0.29	0.71
Toluene	0.037	0.87	0.14	3.3
Ethyl Benzene	0.037	0.095	0.16	0.41
m,p-Xylene	0.073	0.28	0.32	1.2
o-Xylene	0.037	0.088	0.16	0.38

Client Sample ID: 1321 Edinburgh Ct- Crawl Space Duplicate

Lab ID#: 0509094-02AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.22	0.29	0.69
Toluene	0.037	0.86	0.14	3.2
Ethyl Benzene	0.037	0.092	0.16	0.40
m,p-Xylene	0.073	0.27	0.32	1.2
o-Xylene	0.037	0.085	0.16	0.37

# AIR TOXICS LTD.

Client Sample ID: 1321 Edinburgh Ct- 1st Floor

Lab ID#: 0509094-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091812	Date of Collection:	8/31/05
Dil. Factor:	1.79	Date of Analysis:	9/19/05 01:24 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.40	0.28	1.3
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	1.8	0.13	7.0
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.044	0.24	0.30
Ethyl Benzene	0.036	0.20	0.16	0.88
m,p-Xylene	0.072	0.67	0.31	2.9
o-Xylene	0.036	0.22	0.16	0.98
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.64	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	108	70-130

# AIR TOXICS LTD.

Client Sample ID: 1321 Edinburgh Ct- Crawl Space

Lab ID#: 0509094-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091813	Date of Collection:	8/31/05
Dil. Factor:	1.83	Date of Analysis:	9/19/05 02:19 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.22	0.29	0.71
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.87	0.14	3.3
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.095	0.16	0.41
m,p-Xylene	0.073	0.28	0.32	1.2
o-Xylene	0.037	0.088	0.16	0.38
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

# AIR TOXICS LTD.

Client Sample ID: 1321 Edinburgh Ct- Crawl Space Duplicate

Lab ID#: 0509094-02AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091814	Date of Collection:	8/31/05
Dil. Factor:	1.83	Date of Analysis:	9/19/05 03:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.22	0.29	0.69
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	0.86	0.14	3.2
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	Not Detected	0.25	Not Detected
Ethyl Benzene	0.037	0.092	0.16	0.40
m,p-Xylene	0.073	0.27	0.32	1.2
o-Xylene	0.037	0.085	0.16	0.37
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected U J	0.66	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509094-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091805	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 06:06 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509094-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 02:47 PM

Compound	%Recovery
Vinyl Chloride	80
1,1-Dichloroethene	81
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	90
1,1,1-Trichloroethane	99
Benzene	91
1,2-Dichloroethane	113
Trichloroethene	90
Toluene	106
1,1,2-Trichloroethane	103
Tetrachloroethene	97
Ethyl Benzene	109
m,p-Xylene	114
o-Xylene	106
1,1,2,2-Tetrachloroethane	106
trans-1,2-Dichloroethene	85
Methyl tert-butyl ether	69 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	106	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509094-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/18/05 03:41 PM

Compound	%Recovery
Vinyl Chloride	85
1,1-Dichloroethene	80
1,1-Dichloroethane	87
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	84
Benzene	79
1,2-Dichloroethane	96
Trichloroethene	80
Toluene	98
1,1,2-Trichloroethane	94
Tetrachloroethene	91
Ethyl Benzene	101
m,p-Xylene	108
o-Xylene	99
1,1,2,2-Tetrachloroethane	93
trans-1,2-Dichloroethene	107
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	105	70-130



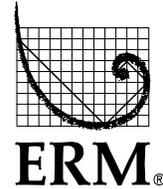
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1321 Edinburgh Court (UPRR  
Hookston Station) Samples Collected 31 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509094

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***CALIBRATION EVALUATION***

The continuing calibration verification sample was slightly below control limits for methyl tert-butyl ether. All associated sample results were qualified as estimated (UJ) for methyl tert-butyl ether. These qualifications can be found in Table 1.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***FIELD DUPLICATE EVALUATION***

One field duplicate sample was submitted and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required rejection. All of the data, including qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Calibration Recoveries Outside of Acceptable Limits**  
**1321 Edinburgh Court**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Calibration ID	Associated Sample ID	Compound	Recovery (%)	Limit (%)	Sample Conc.	ERM Qualifier
0509094	CCV	See below	Methyl tert-butyl ether	69	70-130	NA	NA
0509094	CCV	1321 Edinburgh Ct. - 1st Floor	Methyl tert-butyl ether	NA	NA	0.64	UJ
0509094	CCV	1321 Edinburgh Ct. - Crawl Space	Methyl tert-butyl ether	NA	NA	0.66	UJ

**Key:**

CCV = Continuing calibration verification  
UJ = Nondetected result qualified as estimated  
NA = Not applicable

*Table 2*  
*Analytical Duplicate Results and Calculated Relative Percent Differences*  
*1321 Edinburgh Court*  
*UPRR Hookston Station*  
*Pleasant Hill, California*

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
<b>Analytical Duplicate Results</b>							
0509094	1321 Edinburgh Ct. - Crawl Space	Benzene	0.71	0.69	0.29	µg/m <sup>3</sup>	2.9
0509094	1321 Edinburgh Ct. - Crawl Space	Toluene	3.3	3.2	0.14	µg/m <sup>3</sup>	3.1
0509094	1321 Edinburgh Ct. - Crawl Space	Ethylbenzene	0.41	0.40	0.16	µg/m <sup>3</sup>	2.5
0509094	1321 Edinburgh Ct. - Crawl Space	m,p-Xylene	1.2	1.2	0.32	µg/m <sup>3</sup>	0
0509094	1321 Edinburgh Ct. - Crawl Space	o-Xylene	0.38	0.37	0.16	µg/m <sup>3</sup>	2.7

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

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- 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**

**WORK ORDER #: 0509543**

Work Order Summary

**CLIENT:** Ms. Kimberly Lake  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455

**FAX:** 925-946-9968

**DATE RECEIVED:** 09/23/2005

**DATE COMPLETED:** 10/06/2005

**P.O. #**

**PROJECT #** Hookston Station

**CONTACT:** Nicole Danbacher

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1351 Edinburgh Ct- 1st Floor	Modified TO-15 SIM	11.5 "Hg
02A	1351 Edinburgh Ct- 2nd Floor	Modified TO-15 SIM	8.0 "Hg
02AA	1351 Edinburgh Ct- 2nd Floor Duplicate	Modified TO-15 SIM	8.0 "Hg
03A	1351 Edinburgh Ct- Crawl Space	Modified TO-15 SIM	7.5 "Hg
04A	Lab Blank	Modified TO-15 SIM	NA
05A	CCV	Modified TO-15 SIM	NA
06A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

DATE: 10/06/05

Laboratory Director

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0509543**

Three 6 Liter Summa Canister (SIM Certified) samples were received on September 23, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**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 indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1351 Edinburgh Ct- 1st Floor

Lab ID#: 0509543-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.11	0.70	0.35	2.2
Toluene	0.043	4.4	0.16	16
Tetrachloroethene	0.043	0.30	0.29	2.0
Ethyl Benzene	0.043	0.32	0.19	1.4
m,p-Xylene	0.087	1.0	0.38	4.5
o-Xylene	0.043	0.35	0.19	1.5

Client Sample ID: 1351 Edinburgh Ct- 2nd Floor

Lab ID#: 0509543-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.50	0.29	1.6
1,2-Dichloroethane	0.037	0.037	0.15	0.15
Toluene	0.037	3.2	0.14	12
Tetrachloroethene	0.037	0.20	0.25	1.3
Ethyl Benzene	0.037	0.27	0.16	1.2
m,p-Xylene	0.073	0.78	0.32	3.4
o-Xylene	0.037	0.25	0.16	1.1

Client Sample ID: 1351 Edinburgh Ct- 2nd Floor Duplicate

Lab ID#: 0509543-02AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.092	0.50	0.29	1.6
1,2-Dichloroethane	0.037	0.037	0.15	0.15
Toluene	0.037	3.2	0.14	12
Tetrachloroethene	0.037	0.19	0.25	1.3
Ethyl Benzene	0.037	0.28	0.16	1.2
m,p-Xylene	0.073	0.76	0.32	3.3
o-Xylene	0.037	0.25	0.16	1.1

Client Sample ID: 1351 Edinburgh Ct- Crawl Space

Lab ID#: 0509543-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.090	0.30	0.28	0.95
Toluene	0.036	1.2	0.13	4.3
Tetrachloroethene	0.036	0.049	0.24	0.33
Ethyl Benzene	0.036	0.12	0.16	0.54

**Client Sample ID: 1351 Edinburgh Ct- Crawl Space**

**Lab ID#: 0509543-03A**

m,p-Xylene	0.072	0.37	0.31	1.6
o-Xylene	0.036	0.12	0.16	0.53

# AIR TOXICS LTD.

Client Sample ID: 1351 Edinburgh Ct- 1st Floor

Lab ID#: 0509543-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092908	Date of Collection:	9/20/05
Dil. Factor:	2.17	Date of Analysis:	9/29/05 07:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.022	Not Detected	0.055	Not Detected
1,1-Dichloroethene	0.022	Not Detected	0.086	Not Detected
1,1-Dichloroethane	0.043	Not Detected	0.18	Not Detected
cis-1,2-Dichloroethene	0.043	Not Detected	0.17	Not Detected
1,1,1-Trichloroethane	0.043	Not Detected	0.24	Not Detected
Benzene	0.11	0.70	0.35	2.2
1,2-Dichloroethane	0.043	Not Detected	0.18	Not Detected
Trichloroethene	0.043	Not Detected	0.23	Not Detected
Toluene	0.043	4.4	0.16	16
1,1,2-Trichloroethane	0.043	Not Detected	0.24	Not Detected
Tetrachloroethene	0.043	0.30	0.29	2.0
Ethyl Benzene	0.043	0.32	0.19	1.4
m,p-Xylene	0.087	1.0	0.38	4.5
o-Xylene	0.043	0.35	0.19	1.5
1,1,2,2-Tetrachloroethane	0.043	Not Detected	0.30	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
Methyl tert-butyl ether	0.22	Not Detected	0.78	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	125	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

# AIR TOXICS LTD.

Client Sample ID: 1351 Edinburgh Ct- 2nd Floor

Lab ID#: 0509543-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092909</b>	<b>Date of Collection:</b> 9/20/05
<b>Dil. Factor:</b>	1.83	<b>Date of Analysis:</b> 9/29/05 08:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.50	0.29	1.6
1,2-Dichloroethane	0.037	0.037	0.15	0.15
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	3.2	0.14	12
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.20	0.25	1.3
Ethyl Benzene	0.037	0.27	0.16	1.2
m,p-Xylene	0.073	0.78	0.32	3.4
o-Xylene	0.037	0.25	0.16	1.1
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	123	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	102	70-130

# AIR TOXICS LTD.

Client Sample ID: 1351 Edinburgh Ct- 2nd Floor Duplicate

Lab ID#: 0509543-02AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092911</b>	<b>Date of Collection:</b> 9/20/05
<b>Dil. Factor:</b>	1.83	<b>Date of Analysis:</b> 9/29/05 10:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	0.50	0.29	1.6
1,2-Dichloroethane	0.037	0.037	0.15	0.15
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	3.2	0.14	12
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.19	0.25	1.3
Ethyl Benzene	0.037	0.28	0.16	1.2
m,p-Xylene	0.073	0.76	0.32	3.3
o-Xylene	0.037	0.25	0.16	1.1
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	123	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: 1351 Edinburgh Ct- Crawl Space

Lab ID#: 0509543-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092910</b>	<b>Date of Collection:</b> 9/20/05
<b>Dil. Factor:</b>	1.79	<b>Date of Analysis:</b> 9/29/05 09:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	0.30	0.28	0.95
1,2-Dichloroethane	0.036	Not Detected	0.14	Not Detected
Trichloroethene	0.036	Not Detected	0.19	Not Detected
Toluene	0.036	1.2	0.13	4.3
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	0.049	0.24	0.33
Ethyl Benzene	0.036	0.12	0.16	0.54
m,p-Xylene	0.072	0.37	0.31	1.6
o-Xylene	0.036	0.12	0.16	0.53
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	96	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509543-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092907</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/29/05 06:41 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>
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509543-05A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092903</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/29/05 03:17 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	92
1,1-Dichloroethene	85
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	91
1,1,1-Trichloroethane	110
Benzene	93
1,2-Dichloroethane	128
Trichloroethene	98
Toluene	109
1,1,2-Trichloroethane	104
Tetrachloroethene	99
Ethyl Benzene	107
m,p-Xylene	114
o-Xylene	104
1,1,2,2-Tetrachloroethane	101
trans-1,2-Dichloroethene	88
Methyl tert-butyl ether	70

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	114	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509543-06A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092904</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/29/05 04:06 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	85
1,1-Dichloroethene	84
1,1-Dichloroethane	91
cis-1,2-Dichloroethene	77
1,1,1-Trichloroethane	91
Benzene	80
1,2-Dichloroethane	107
Trichloroethene	84
Toluene	100
1,1,2-Trichloroethane	94
Tetrachloroethene	94
Ethyl Benzene	102
m,p-Xylene	109
o-Xylene	100
1,1,2,2-Tetrachloroethane	91
trans-1,2-Dichloroethene	108
Methyl tert-butyl ether	68

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	112	70-130
4-Bromofluorobenzene	102	70-130



## **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**

**WORK ORDER #: 0509544**

Work Order Summary

**CLIENT:** Ms. Kimberly Lake  
ERM-West  
1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596

**BILL TO:** Mr. Alan Nye  
Center for Toxicology and Environmental  
Health  
615 West Markham Street  
Little Rock, AR 72201

**PHONE:** 925-946-0455      **P.O. #**

**FAX:** 925-946-9968      **PROJECT #** Hookston Station

**DATE RECEIVED:** 09/23/2005      **CONTACT:** Nicole Danbacher

**DATE COMPLETED:** 10/06/2005

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	Ambient Air- 9/20/05	Modified TO-15 SIM	8.5 "Hg
02A	Lab Blank	Modified TO-15 SIM	NA
03A	CCV	Modified TO-15 SIM	NA
04A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY: 

Laboratory Director

DATE: 10/06/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0509544**

One 6 Liter Summa Canister (SIM Certified) sample was received on September 23, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>. ; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

**Definition of Data Qualifying Flags**

Seven 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 not 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

**AIR TOXICS LTD.**  
**Summary of Detected Compounds**  
**MODIFIED EPA METHOD TO-15 GC/MS SIM**

Client Sample ID: Ambient Air- 9/20/05

Lab ID#: 0509544-01A

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (uG/m3)</b>	<b>Amount (uG/m3)</b>
Benzene	0.094	0.26	0.30	0.85
Toluene	0.037	1.0	0.14	3.8
Tetrachloroethene	0.037	0.050	0.25	0.34
Ethyl Benzene	0.037	0.098	0.16	0.42
m,p-Xylene	0.075	0.28	0.32	1.2
o-Xylene	0.037	0.098	0.16	0.43

# AIR TOXICS LTD.

Client Sample ID: Ambient Air- 9/20/05

Lab ID#: 0509544-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092817	Date of Collection:	9/20/05
Dil. Factor:	1.87	Date of Analysis:	9/29/05 01:00 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.019	Not Detected	0.048	Not Detected
1,1-Dichloroethene	0.019	Not Detected	0.074	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.15	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.094	0.26	0.30	0.85
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	1.0	0.14	3.8
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.050	0.25	0.34
Ethyl Benzene	0.037	0.098	0.16	0.42
m,p-Xylene	0.075	0.28	0.32	1.2
o-Xylene	0.037	0.098	0.16	0.43
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.26	Not Detected
trans-1,2-Dichloroethene	0.19	Not Detected	0.74	Not Detected
Methyl tert-butyl ether	0.19	Not Detected U J	0.67	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

## Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509544-02A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/28/05 05:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J

UJ = Non-detected compound associated with low bias in the CCV

**Container Type: NA - Not Applicable**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	95	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509544-03A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8092802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/28/05 01:55 PM

Compound	%Recovery
Vinyl Chloride	82
1,1-Dichloroethene	86
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	92
1,1,1-Trichloroethane	107
Benzene	93
1,2-Dichloroethane	126
Trichloroethene	98
Toluene	110
1,1,2-Trichloroethane	102
Tetrachloroethene	97
Ethyl Benzene	107
m,p-Xylene	113
o-Xylene	105
1,1,2,2-Tetrachloroethane	98
trans-1,2-Dichloroethene	88
Methyl tert-butyl ether	61 Q

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	115	70-130
4-Bromofluorobenzene	103	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509544-04A

## MODIFIED EPA METHOD TO-15 GC/MS SIM

<b>File Name:</b>	<b>8092803</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 9/28/05 03:31 PM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	85
1,1-Dichloroethene	81
1,1-Dichloroethane	88
cis-1,2-Dichloroethene	75
1,1,1-Trichloroethane	89
Benzene	78
1,2-Dichloroethane	103
Trichloroethene	79
Toluene	97
1,1,2-Trichloroethane	92
Tetrachloroethene	91
Ethyl Benzene	98
m,p-Xylene	106
o-Xylene	96
1,1,2,2-Tetrachloroethane	87
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	69

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	103	70-130



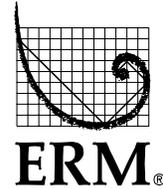
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 08 October 2005  
**Subject:** Data Review of 1351 Edinburgh Court (UPRR Hookston Station) Samples Collected 20 September 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509543

---

1777 Botelho Drive  
Suite 260  
Walnut Creek, CA 94596  
(925) 946-0455  
(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data required qualification based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### *ANALYTICAL DUPLICATE EVALUATION*

One duplicate sample was prepared in the laboratory and analyzed. ERM calculated the RPDs between detected results. The USEPA has not established control criteria for duplicate samples; therefore, sample data are not qualified on the basis of duplicate imprecision. The RPDs are presented in Table 1.

### *OVERALL ASSESSMENT*

No data required qualification or rejection. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

**Table 1**  
**Analytical Duplicate Results and Calculated Relative Percent Differences**  
**1351 Edinburgh Court**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Sample ID	Compound	Concentration		Report Limit	Units	RPD (%)
			Sample	Duplicate			
0509543	1351 Edinburgh Ct. - 2nd Floor	Benzene	1.6	1.6	0.29	µg/m <sup>3</sup>	0
0509543	1351 Edinburgh Ct. - 2nd Floor	1,2-Dichloroethane	0.15	0.15	0.15	µg/m <sup>3</sup>	0
0509543	1351 Edinburgh Ct. - 2nd Floor	Toluene	12	12	0.14	µg/m <sup>3</sup>	0
0509543	1351 Edinburgh Ct. - 2nd Floor	Tetrachloroethene	1.3	1.3	0.25	µg/m <sup>3</sup>	0
0509543	1351 Edinburgh Ct. - 2nd Floor	Ethylbenzene	1.2	1.20	0.16	µg/m <sup>3</sup>	0
0509543	1351 Edinburgh Ct. - 2nd Floor	m,p-Xylene	3.4	3.3	0.32	µg/m <sup>3</sup>	3.0
0509543	1351 Edinburgh Ct. - 2nd Floor	o-Xylene	1.1	1.1	0.16	µg/m <sup>3</sup>	0

**Key:**

µg/m<sup>3</sup> = Micrograms per cubic meter

RPD = Relative percent difference

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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**



# AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

## WORK ORDER #: 0509027

### Work Order Summary

<b>CLIENT:</b>	Mr. Brian Bjorklund ERM-West 1777 Botelho Drive Suite 260 Walnut Creek, CA 94596-5042	<b>BILL TO:</b>	Mr. Alan Nye Center for Toxicology and Environmental Health 615 West Markham Street Little Rock, AR 72201
<b>PHONE:</b>	925-946-0455	<b>P.O. #</b>	
<b>FAX:</b>	925-946-9968	<b>PROJECT #</b>	UPRR Hookston Station
<b>DATE RECEIVED:</b>	09/01/2005	<b>CONTACT:</b>	Nicole Danbacher
<b>DATE COMPLETED:</b>	09/16/2005		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	1321 Hampshire Ct-1st floor	Modified TO-15 SIM	6.5 "Hg
02A	1321 Hampshire Ct-crawl space	Modified TO-15 SIM	6.5 "Hg
03A	Lab Blank	Modified TO-15 SIM	NA
04A	CCV	Modified TO-15 SIM	NA
05A	LCS	Modified TO-15 SIM	NA

CERTIFIED BY:   
 Laboratory Director

DATE: 09/16/05

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004  
 NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,  
 Accreditation number: E87680, Effective date: 07/01/05, Expiration date: 06/30/06

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-15 SIM**  
**ERM-West**  
**Workorder# 0509027**

Two 6 Liter Summa Canister (SIM Certified) samples were received on September 01, 2005. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode. The method involves concentrating up to 0.5 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.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
Blank and standards	Zero air	Nitrogen
Dilutions for initial calibration	Dynamic dilutions or static using canisters.	Syringe dilutions may also be utilized.
BFB acceptance criteria	CLP protocol	SW-846 protocol
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>.; flag and narrate outliers
ICAL %RSD acceptance criteria	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD

**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 indicates as follows:

- B - Compound present in laboratory blank greater than reporting limit (background subtraction not 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

# AIR TOXICS LTD.

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

Client Sample ID: 1321 Hampshire Ct-1st floor

Lab ID#: 0509027-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.31	0.27	1.0
Toluene	0.034	1.8	0.13	6.8
Tetrachloroethene	0.034	0.098	0.23	0.67
Ethyl Benzene	0.034	0.18	0.15	0.79
m,p-Xylene	0.068	0.58	0.30	2.5
o-Xylene	0.034	0.16	0.15	0.69

Client Sample ID: 1321 Hampshire Ct-crawl space

Lab ID#: 0509027-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.086	0.18	0.27	0.58
Toluene	0.034	0.70	0.13	2.6
Ethyl Benzene	0.034	0.078	0.15	0.34
m,p-Xylene	0.068	0.19	0.30	0.84
o-Xylene	0.034	0.053	0.15	0.23

# AIR TOXICS LTD.

Client Sample ID: 1321 Hampshire Ct-1st floor

Lab ID#: 0509027-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091217	Date of Collection:	8/29/05
Dil. Factor:	1.71	Date of Analysis:	9/13/05 09:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.31	0.27	1.0
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	1.8	0.13	6.8
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	0.098	0.23	0.67
Ethyl Benzene	0.034	0.18	0.15	0.79
m,p-Xylene	0.068	0.58	0.30	2.5
o-Xylene	0.034	0.16	0.15	0.69
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	99	70-130

# AIR TOXICS LTD.

Client Sample ID: 1321 Hampshire Ct-crawl space

Lab ID#: 0509027-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091218	Date of Collection:	8/29/05
Dil. Factor:	1.71	Date of Analysis:	9/13/05 10:29 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	0.18	0.27	0.58
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Toluene	0.034	0.70	0.13	2.6
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
Ethyl Benzene	0.034	0.078	0.15	0.34
m,p-Xylene	0.068	0.19	0.30	0.84
o-Xylene	0.034	0.053	0.15	0.23
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	98	70-130

# AIR TOXICS LTD.

Client Sample ID: Lab Blank

Lab ID#: 0509027-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091210	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	9/12/05 10:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	97	70-130

# AIR TOXICS LTD.

Client Sample ID: CCV

Lab ID#: 0509027-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/12/05 04:39 PM

Compound	%Recovery
Vinyl Chloride	97
1,1-Dichloroethene	95
1,1-Dichloroethane	103
cis-1,2-Dichloroethene	98
1,1,1-Trichloroethane	109
Benzene	88
1,2-Dichloroethane	117
Trichloroethene	98
Toluene	104
1,1,2-Trichloroethane	101
Tetrachloroethene	96
Ethyl Benzene	105
m,p-Xylene	110
o-Xylene	105
1,1,2,2-Tetrachloroethane	97
trans-1,2-Dichloroethene	92
Methyl tert-butyl ether	84

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	104	70-130

# AIR TOXICS LTD.

Client Sample ID: LCS

Lab ID#: 0509027-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	8091205	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 9/12/05 05:33 PM

Compound	%Recovery
Vinyl Chloride	84
1,1-Dichloroethene	83
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	73
1,1,1-Trichloroethane	86
Benzene	73
1,2-Dichloroethane	95
Trichloroethene	77
Toluene	90
1,1,2-Trichloroethane	89
Tetrachloroethene	88
Ethyl Benzene	94
m,p-Xylene	100
o-Xylene	90
1,1,2,2-Tetrachloroethane	84
trans-1,2-Dichloroethene	105
Methyl tert-butyl ether	75

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130



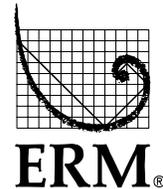
# Memorandum

Environmental  
Resources  
Management

**To:** Kimberly Lake  
**From:** Jackie Luta  
**Date:** 26 September 2005  
**Subject:** Data Review of 1321 Hampshire Court (UPRR  
Hookston Station) Samples Collected 29 August 2005  
**Project Number:** 0020557.10  
**Data Package:** Air Toxics Data Package 0509027

---

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Walnut Creek, CA 94596  
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(925) 946-9968 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method prescribed time period from the date of collection. None of the data were qualified based on holding time exceedances.

## ***BLANK EVALUATION***

The method blank sample results were nondetected for each of the target analytes. No data were qualified based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) percent recoveries (%R) were within the laboratory's limits of acceptance, indicating acceptable accuracy. No data required qualification based on LCS results.

## ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

***OVERALL ASSESSMENT***

No data required qualification or rejection. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

*Table 2  
Ambient Air Sample  
22 August 2005  
UPRR Hookston Station  
Pleasant Hill, California*

<b>Lab Package</b>	<b>Blank ID</b>	<b>Detected Compound</b>	<b>Reported Concentration</b>	<b>Units</b>	<b>Report Limit</b>
0508585	Ambient Air	Benzene	0.49	$\mu\text{g}/\text{m}^3$	0.29
0508585	Ambient Air	Toluene	1.8	$\mu\text{g}/\text{m}^3$	0.14
0508585	Ambient Air	Ethylbenzene	0.23	$\mu\text{g}/\text{m}^3$	0.16
0508585	Ambient Air	m,p-Xylene	0.61	$\mu\text{g}/\text{m}^3$	0.32
0508585	Ambient Air	o-Xylene	0.18	$\mu\text{g}/\text{m}^3$	0.16

**Key:**

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

**Table 2**  
**Ambient Air Sample**  
**23 August 2005**  
**UPRR Hookston Station**  
**Pleasant Hill, California**

Lab Package	Blank ID	Detected Compound	Reported Concentration	Units	Report Limit
0508586	Ambient Air	Benzene	1.0	$\mu\text{g}/\text{m}^3$	0.29
0508586	Ambient Air	Toluene	3.6	$\mu\text{g}/\text{m}^3$	0.14
0508586	Ambient Air	Ethylbenzene	0.49	$\mu\text{g}/\text{m}^3$	0.16
0508586	Ambient Air	m,p-Xylene	1.4	$\mu\text{g}/\text{m}^3$	0.32
0508586	Ambient Air	o-Xylene	0.44	$\mu\text{g}/\text{m}^3$	0.16

**Key:**

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

*Table 2  
Ambient Air Sample  
24 August 2005  
UPRR Hookston Station  
Pleasant Hill, California*

<b>Lab Package</b>	<b>Blank ID</b>	<b>Detected Compound</b>	<b>Reported Concentration</b>	<b>Units</b>	<b>Report Limit</b>
0508612	Ambient Air	Benzene	0.51	$\mu\text{g}/\text{m}^3$	0.25
0508612	Ambient Air	Toluene	21	$\mu\text{g}/\text{m}^3$	0.12
0508612	Ambient Air	Ethylbenzene	1.3	$\mu\text{g}/\text{m}^3$	0.14
0508612	Ambient Air	m,p-Xylene	3.4	$\mu\text{g}/\text{m}^3$	0.27
0508612	Ambient Air	o-Xylene	0.63	$\mu\text{g}/\text{m}^3$	0.14

**Key:**

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

*Table 2  
Ambient Air Sample  
25 August 2005  
UPRR Hookston Station  
Pleasant Hill, California*

<b>Lab Package</b>	<b>Blank ID</b>	<b>Detected Compound</b>	<b>Reported Concentration</b>	<b>Units</b>	<b>Report Limit</b>
0508617	Ambient Air	Benzene	0.56	$\mu\text{g}/\text{m}^3$	0.29
0508617	Ambient Air	Toluene	1.4	$\mu\text{g}/\text{m}^3$	0.14
0508617	Ambient Air	Ethylbenzene	0.2	$\mu\text{g}/\text{m}^3$	0.16
0508617	Ambient Air	m,p-Xylene	0.48	$\mu\text{g}/\text{m}^3$	0.32
0508617	Ambient Air	o-Xylene	0.16	$\mu\text{g}/\text{m}^3$	0.16

**Key:**

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

*Table 2  
Ambient Air Sample  
30 August 2005  
UPRR Hookston Station  
Pleasant Hill, California*

<b>Lab Package</b>	<b>Blank ID</b>	<b>Detected Compound</b>	<b>Reported Concentration</b>	<b>Units</b>	<b>Report Limit</b>
0509057	Ambient Air	Benzene	0.60	$\mu\text{g}/\text{m}^3$	0.30
0509057	Ambient Air	Toluene	6.9	$\mu\text{g}/\text{m}^3$	0.14
0509057	Ambient Air	Ethylbenzene	1.2	$\mu\text{g}/\text{m}^3$	0.16
0509057	Ambient Air	m,p-Xylene	3.2	$\mu\text{g}/\text{m}^3$	0.32
0509057	Ambient Air	o-Xylene	0.65	$\mu\text{g}/\text{m}^3$	0.16

**Key:**

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