@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0908455C

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b. Target Compound Raw Data		
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-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
3. QC Results and Raw Data		
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Completed by:

Kara McKiernan — Kara McKiernan/ Document Control — 09/17/09

(Signature) (Print Name & Title) (Date)

WORK ORDER #: 0908455C

Work Order Summary

CLIENT:	Mr. Taeko Minegishi Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494	**BILL TO:**	Accounts Payable Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494
PHONE:	800-825-5343	**P.O. #**	16512
FAX:	781-247-4305	**PROJECT #**	16512
DATE RECEIVED:	08/21/2009	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/16/2009		

FRACTION #	NAME	TEST
41A	100614	ATL Applications
42A	100615	ATL Applications
43A	100616	ATL Applications
44A	100617	ATL Applications
45A	100618	ATL Applications
46A	100619	ATL Applications
47A	100165	ATL Applications
48A	100166	ATL Applications
49A	100167	ATL Applications
49AA	100167 Lab Duplicate	ATL Applications
50A	100168	ATL Applications
51A	100169	ATL Applications
52A	100170	ATL Applications
53A	100237	ATL Applications
54A	100238	ATL Applications
55A	100239	ATL Applications
55AA	100239 Lab Duplicate	ATL Applications

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0908455C

Work Order Summary

CLIENT:	Mr. Taeko Minegishi Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494	**BILL TO:**	Accounts Payable Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494
PHONE:	800-825-5343	**P.O. #**	16512
FAX:	781-247-4305	**PROJECT #**	16512
DATE RECEIVED:	08/21/2009	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/16/2009		

FRACTION #	NAME	TEST
56A	100240	ATL Applications
57A	100241	ATL Applications
58A	100242	ATL Applications
59A	Method Blank	ATL Applications
59B	Method Blank	ATL Applications
59C	Method Blank	ATL Applications
60A	CCV	ATL Applications

CERTIFIED BY: _____ DATE: 09/16/09

Laboratory Director

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

LABORATORY NARRATIVE
Ozone by Radiello 172
Environmental Health & Engineering, Inc.
Workorder# 0908455C

Eighteen Radiello 172 (Ozone) samples were received on August 21, 2009. The procedure involves reaction of 4-pyridylaldehyde with 3-methyl-2-benzothiazolinone hydrazone to yield the corresponding azide. The absorbance is then measured at 430 nm using a spectrophotometer. Results are reported in uG and uG/m3.

Sampling rate of 24.6 mL/min was provided by the manufacturer.

Receiving Notes

A Temperature Blank was included with the shipment. Temperature was measured and was not within 4±2 °C. Coolant in the form of ice was present. Analysis proceeded.

Sample collection date was not provided on the Chain of Custody for all samples. The client was contacted dates were provided.

Analytical Notes

Results were calculated based on 25 deg C without temperature correction. The actual exposure time was used to calculate sample concentrations and reporting limits.

An exposure time of 20,000 minutes was used for the QC samples and samples 100618, 100619, 100170 and 100242.

All media used for the sampling were supplied by the client. Blank subtraction was not performed on the sample results since the media used for Method Blanks may be from a different lot than the media used for the samples.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
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

Sample Results and Raw Data

AIR TOXICS LTD.

ATL Application # 62 for RAD 172 (Ozone)

Spectrophotometer

Field Sample I.D.	Lab Sample I.D.	Collection Date	Analysis Date	Dilution Factor	Reporting. Limit (ug)	Reporting. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
100614	0908455C-41A	8/19/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100615	0908455C-42A	8/19/2009	8/21/2009	2.00	1.3	2.6	15	31
100616	0908455C-43A	8/19/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100617	0908455C-44A	8/19/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100618	0908455C-45A	8/19/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100619	0908455C-46A	8/19/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100165	0908455C-47A	8/18/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100166	0908455C-48A	8/18/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100167	0908455C-49A	8/18/2009	8/21/2009	1.00	0.64	1.3	8.8	18
100167 Lab Duplicate	0908455C-49AA	8/18/2009	8/21/2009	1.00	0.64	1.3	8.8	18
100168	0908455C-50A	8/18/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100169	0908455C-51A	8/18/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100170	0908455C-52A	8/18/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100237	0908455C-53A	8/20/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100238	0908455C-54A	8/20/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100239	0908455C-55A	8/20/2009	8/21/2009	1.00	0.64	1.3	12	26
100239 Lab Duplicate	0908455C-55AA	8/20/2009	8/21/2009	1.00	0.64	1.3	12	26
100240	0908455C-56A	8/20/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100241	0908455C-57A	8/20/2009	8/21/2009	1.00	0.64	1.3	ND	ND
100242	0908455C-58A	8/20/2009	8/21/2009	1.00	0.64	1.3	ND	ND
Method Blank	0908455C-59A	NA	8/21/2009	1.00	0.64	1.3	ND	ND
Method Blank	0908455C-59B	NA	8/21/2009	1.00	0.64	1.3	ND	ND
Method Blank	0908455C-59C	NA	8/21/2009	1.00	0.64	1.3	ND	ND
								%Rec
CCV	0908455C-60A	NA	8/21/2009	1.00	0.64	1.3		108

COMMENTS: 1. NA=Not Applicable
2. ND=Not Detected
3. Exposure time of 19850 minutes was assumed for the QC samples and samples 100618, 100619, 100170 and 100242.
4. Background subtraction not performed.

9000

Ozone Radiello Calculation Worksheet

Workorder #:	0908455C	
Sampling Rate (mL/min))	24.6	ically 24.6 for Ozone
Sampling T (deg C)	25	Typically 25
Volume (mL)	5	pically 5 for Ozone
Date of Analysis:	8/21/2009	
Corrected Q	24.6	aking into account Temp

(Abs-Y-int)xDF / Slope

Conc (ug) x 1000000 / Q x Duration

Low PointxDF

RL (ug) x 1000000 / Q x Duration

LabSampleID	Client	Date of Collection	Abs	Duration (min)	DF	Ozone Conc (ug)	Conc (ug/m3)	RL(ug)	RL (ug/m3)	Result (ug)	
41A	100614	8/19/2009	0.061	19850	1.00	0.183748521	0.376	0.638	1.307	ND	
42A	100615	8/19/2009	1.026	19850	2.00	15.26041709	31.251	1.277	2.615		15.3
43A	100616	8/19/2009	0.065	19850	1.00	0.214614677	0.440	0.638	1.307	ND	
44A	100617	8/19/2009	0.059	19850	1.00	0.168315444	0.345	0.638	1.307	ND	
45A	100618	8/19/2009	0.036	20000	1.00	-0.009164951	-0.019	0.638	1.298	ND	
46A	100619	8/19/2009	0.031	20000	1.00	-0.047747645	-0.097	0.638	1.298	ND	
47A	100165	8/18/2009	0.049	19969	1.00	0.091150055	0.186	0.638	1.300	ND	
48A	100166	8/18/2009	0.051	19969	1.00	0.106583133	0.217	0.638	1.300	ND	
49A	100167	8/18/2009	1.172	19969	1.00	8.75682322	17.826	0.638	1.300		8.8
49AA	100167 Lab Duplicate	8/18/2009	1.176	19969	1.00	8.787689376	17.889	0.638	1.300		8.8
50A	100168	8/18/2009	0.056	19969	1.00	0.145165827	0.296	0.638	1.300	ND	
51A	100169	8/18/2009	0.047	19969	1.00	0.075716977	0.154	0.638	1.300	ND	
52A	100170	8/18/2009	0.032	19850	1.00	-0.040031106	-0.082	0.638	1.307	ND	
53A	100237	8/20/2009	0.046	19699	1.00	0.068000438	0.140	0.638	1.317	ND	
54A	100238	8/20/2009	0.044	19699	1.00	0.05256736	0.108	0.638	1.317	ND	
55A	100239	8/20/2009	1.644	19699	1.00	12.39902957	25.586	0.638	1.317		12.4
55AA	100239 Lab Duplicate	8/20/2009	1.650	19699	1.00	12.44532881	25.682	0.638	1.317		12.4
56A	100240	8/20/2009	0.047	19699	1.00	0.075716977	0.156	0.638	1.317	ND	
57A	100241	8/20/2009	0.040	19699	1.00	0.021701205	0.045	0.638	1.317	ND	
58A	100242	8/20/2009	0.031	19850	1.00	-0.047747645	-0.098	0.638	1.307	ND	
				0	1.00	-0.28696035	#DIV/0!	0.638	#DIV/0!	ND	
					1.00	-0.28696035	#DIV/0!	0.638	#DIV/0!	ND	
59A	Method Blank	NA	0.027	19850	1.00	-0.078613801	-0.161	0.638	1.307	ND	
59B	Method Blank	NA	0.029	19850	1.00	-0.063180723	-0.129	0.638	1.307	ND	
59C	Method Blank	NA	0.031	19850	1.00	-0.047747645	-0.098	0.638	1.307	ND	
60A	CCV	NA	0.928	19850	1.00	6.873987733	14.077	0.638	1.307		6.9

QC Duration	CCV Spike Amt
19850	6.384

Verified by HH and AW on 9/4/09

0007

Date of Calibration

Calibration Data 8/21/2009 Linear Regression

Result (ug/m3)	%Rec	4-PA ug/mL	ug Ozone	absorbance		
ND		0	0	0	Slope	0.129591779
	31.3	5.7	0.6384	0.101	Y-int	0.037187702
ND		11.4	1.2768	0.190	R2	0.998198851
ND		22.8	2.5536	0.377		
ND		57	6.384	0.909		
ND		114	12.768	1.670		
ND						
ND		hand entry				
	17.8					
	17.9					
ND						
ND						
ND						
ND						
ND						
	25.6					
	25.7					
ND						
ND						
ND						
#DIV/0!						
#DIV/0!						
ND						
ND						
ND						

4-PA ug/ml*0.224*0.5mL

%Rec	
14.1	108

QC Results and Raw Data

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908455C/D

Date: 8/21/09

Analyst: A. Toyama

Method: Read 172

Wavelength: 430 nm

Prep. Notes:

Standard ID	Concentration	ABS
1858-15-2.85	2.85 ug/mL	0.057
-5.7	5.7	0.101
-11.4	11.4	0.190
-22.8	22.8	0.377
-57	57	0.909
-114	114	1.670

r = 0.99819
m = 0.129591
b = 0.037187

Fraction	Dilution	ABS	Sample ID	Sample Volume
41A	1.00	0.061	100614	5.0 mL
42A	2.00	1.026	615	
43A	1.00	0.065	616	
44A		0.059	617	
45A		0.036	618	
46A		0.031	619	
47A		0.049	165	
48A		0.051	166	
49A		1.172	167	
50A		0.056	168	
51A		0.047	169	
52A		0.032	170	
53A		0.046	237	
54A		0.044	238	
55A		1.644	239	

Notes: Code 172 Lot 091146 Exp 01/010 used for Blanks

Signed: [signature]

Date: 8/24/09

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908455 C/D

Date: 8/21/09

Analyst: A. Toyama

Method: Rad 172

Wavelength: 430

Prep. Notes: Cont. from page 14

Standard ID	Concentration	ABS
1858-15-2.85	2.85 ug/mL	0.057
-5.7	5.7	0.101
-11.4	11.4	0.190
-22.8	22.8	0.377
-57	57	0.909
-114	114	1.670

r =

m =

b =

Fraction	Dilution	ABS	Sample ID	Sample Volume
56A	1.00	0.047	100240	5.0 mL
57A		0.040	100241	
58A		0.031	242	
49AA		1.176	167	
55AA		1.650	239	
BIK		0.027	NA	
BIK		0.029		
BIK		0.031		
LCS/CCV		0.928		

8/21/09

AT

Notes: LCS/CCV prepared at 57 ug/mL

Signed:

Date: 8/21/09

Spectrophotometer Standard Preparation Log **@Air Toxics Ltd.** **Log Book #:** 1858

Standard ID: 1858-14
Project: Bad 172 MBTH Solution
Analyst: A. Toyama
Preparation Date: 8/21/09
Expiration Date: 8/21/09

Solvent: DI H2O
Solvent Lot #: NA

Ozone

Procedure/Comments: Dissolve 2.5g of 3-Methyl-2-benzothiazolinone (Located ERIA) hydrazone hydrochloride hydrate, 97% (14760-11006) into 500 mL DI H2O and add 2.5 mL of concentrated sulfuric acid.

8/20/09
AT

Page 14 — Signed — 8/21/09 Date — Reviewed — 8/21/09 Date — 0012 — Rev. 8/97

Spectrophotometer Standard Preparation Log **@Air Toxics Ltd.** **Log Book #: 1858**

Standard ID: 1858-15
Project: Rad 172 Calibration Solution
Analyst: A. Toyama
Preparation Date: 8/21/09
Expiration Date: 8/21/09

Solvent: DI H_2O
Solvent Lot #: NA

Procedure/Comments: Dissolve 20 µl of 4-Pyridine-carboxaldehyde, 97% (1476-1103, Located F22H) in 200 mL DI H_2O. From this solution prepare dilutions at 1:2, 1:5, 1:10, 1:20 and 1:40. = 114 µg/mL

1:2) 250 µl Pyridine solution with 250 µl of DI H_2O. = 57 µg/mL ✓

1:5) 100 µl of Pyridine solution with 400 µl of DI H_2O. = 22.8 µg/mL.

1:10) 100 µl of Pyridine solution with 900 µl of DI H_2O. = 11.4 µg/mL

1:20) 250 µl of Pyridine 1:10 solution with 250 µl of DI H_2O. = 5.7 µg/mL

1:40) 125 µl of Pyridine 1:10 solution with 375 µl of DI H_2O. = 2.85 µg/mL

Then add 4.5 mL of MBTH solution to each level, stir and let stand for 1 hour (cover with Parafilm) Then read the absorbance at 430 nm.

1 µg of 4-pyridylaldehyde = 0.224 µg of ozone

8/21/09
AT

Page 15 Signed 8/21/09 Date Reviewed 8/21/09 Date

Shipping/ Receiving Documents

Air Toxics LTD.
Laboratory Services Since 1989

180 Blue Ravine Road, Suite B
Folsom, CA 95630

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

COMPANY:	Environmental Health & Engineering, Inc.
ATTENTION:	Mr. Taeko Minegishi
FAX #:	781-247-4305
FROM:	Sample Receiving
Workorder #:	0908455C
# of pages (Including Cover):	4

9/17/2009

Thank you for selecting Air Toxics Ltd. We have received your samples and have found no discrepancies. In order to expedite analysis and reporting, please review the attached information for accuracy. Corrections can be faxed to **Ausha Scott at 916-985-1020.**
ATL will proceed with the analysis as specified on the Chain of Custody and Sample Login page.

0908455

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: ~~21~~ 20 AUG 09

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: AIR TOXICS

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 16512

The cost of this analysis will be covered by EH&E Purchase Order # 16512

Fax EH & E Data Coordinator - URGENT DATA ☒

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
33A	100336	AIR/PASSIVE	OZONE ANALYSIS	∅
34A	100680			12D 18H 52M
35A	100681			
36A	100682			
37A	100683			
38A	100684			
39A	100685			∅
40A	100613			13D 18H 50M
41A	100614			
42A	100615			
43A	100616			
44A	100617			
45A	100618			∅
46A	100619			∅
47A	100165			13D 20H 49M
48A	100166			

Special Instructions:

☒ Standard turn around time ☐ Rush by ________ date/time ☐ Other Fedex 8734 2332 9291

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient mfragala@eheinc.com

CUSTODY SEAL INTACT? Y N NONE TEMP 8°C

Each signatory please return one copy of this form to the above address

Relinquished by: [signature] of Environmental Health & Engineering, Inc. Date: ~~8/21/09~~ 8/20/09

Received by: [signature] 0850 of (company name) ATL Date: 8/21/09

Relinquished by: ________ of (company name) ________ Date: ________

Received by: ________ of (company name) ________ Date: ________

Relinquished by: ________ of (company name) ________ Date: ________

Received by: ________ of (company name) ________ Date: ________

Lab Data Received by: ________ of Environmental Health & Engineering, Inc. Date: ________

Page 3 of 4

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

20 0908455

DATE: 21st Aug 09

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: Air Toxics

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 16512

The cost of this analysis will be covered by EH&E Purchase Order # 16512

For EH & E Data Coordinator - URGENT DATA ☒

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
49A	100167	AIR/PASSIVE	OZONE ANALYSIS	13D 20H 49M
50A	100168	↓	↓	↓
51A	100169	↓	↓	↓
52A	100170	↓	↓	∅
53A	100237	↓	↓	13D 16H 19M
54A	100238	↓	↓	↓
55A	100239	↓	↓	↓
56A	100240	↓	↓	↓
57A	100241	↓	↓	↓
58A	100242	↓	↓	∅

Special Instructions:

☒ Standard turn around time ☐ Rush by ______ date/time ☐ Other FedEx 8704 2332 7291

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient infogala@eheinc.com

CUSTODY SEAL INTACT? Y N NONE TEMP N/A

Each signatory please return one copy of this form to the above address

Relinquished by: [signature] of Environmental Health & Engineering, Inc. Date: 8/20/09 ~~8/21/09~~

Received by: [signature] 0850 of (company name) ATL Date: 8/21/09

Relinquished by: ______ of (company name) ______ Date: ______

Received by: ______ of (company name) ______ Date: ______

Relinquished by: ______ of (company name) ______ Date: ______

Received by: ______ of (company name) ______ Date: ______

Lab Data Received by: ______ of Environmental Health & Engineering, Inc. Date: ______

Page 4 of 4

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Air Toxics LTD.
Laboratory Services Since 1989

SAMPLE RECEIPT SUMMARY

WORKORDER 0908455C

Client

Mr. Taeko Minegishi
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Phone

800-825-5343

Fax

781-247-4305

Sales Rep: TL

Date Promised: 09/01/09 11:59 pm
Date Completed: 9/16/09
Date Received: 8/21/09
PO#: 16512
Project#: 16512

Total $: $ 990.00
Logged By: MG

Fraction	Sample #	Analysis	Collected	Amount$
41A	100614	ATL Applications	8/19/2009	$50.00
42A	100615	ATL Applications	8/19/2009	$50.00
43A	100616	ATL Applications	8/19/2009	$50.00
44A	100617	ATL Applications	8/19/2009	$50.00
45A	100618	ATL Applications	8/19/2009	$50.00
46A	100619	ATL Applications	8/19/2009	$50.00
47A	100165	ATL Applications	8/18/2009	$50.00
48A	100166	ATL Applications	8/18/2009	$50.00
49A	100167	ATL Applications	8/18/2009	$50.00
49AA	100167 Lab Duplicate	ATL Applications	8/18/2009	$0.00
50A	100168	ATL Applications	8/18/2009	$50.00
51A	100169	ATL Applications	8/18/2009	$50.00
52A	100170	ATL Applications	8/18/2009	$50.00
53A	100237	ATL Applications	8/20/2009	$50.00
54A	100238	ATL Applications	8/20/2009	$50.00
55A	100239	ATL Applications	8/20/2009	$50.00
55AA	100239 Lab Duplicate	ATL Applications	8/20/2009	$0.00
56A	100240	ATL Applications	8/20/2009	$50.00
57A	100241	ATL Applications	8/20/2009	$50.00
58A	100242	ATL Applications	8/20/2009	$50.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Analysis Code: Other GC

TERMS:

Reporting Method: ATL Application #62 Ozone-Radiello 172

SAMPLE RECEIPT SUMMARY Continued

Client

Mr. Taeko Minegishi
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Sales Rep: TL

Phone

800-825-5343

Fax

781-247-4305

Date Promised: 09/01/09 11:59 pm
Date Completed: 9/16/09
Date Received: 8/21/09
PO#: 16512
Project#: 16512

Total $: $ 990.00
Logged By: MG

Fraction	Sample #	Analysis	Collected	Amount$
59A	Method Blank	ATL Applications	NA	$0.00
59B	Method Blank	ATL Applications	NA	$0.00
59C	Method Blank	ATL Applications	NA	$0.00
60A	CCV	ATL Applications	NA	$0.00

Misc. Charges eCVP (18) @ $5.00 each. $90.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Analysis Code: Other GC

TERMS:

Reporting Method: ATL Application #62 Ozone-Radiello 172

Sample Discrepancy Report

Identification

Initiated By: MG **Project ID:**13297 **PM**: BL **Date:** 8/21/2009 **Discrepancy Type:** ☐ **1.** ☒ **2.** ☐ **3.**

Workorder(s) affected:0908455 **Sample(s) affected:** ALL

1. Sample Receipt Discrepancies

Narration Not Required:

1.1. ☐ Sample container (cartridge/tube/VOA vial) was received broken, however sample was intact.

1.2. ☐ No brass cap on canister.

1.3. ☐ Date of Collection noted on first sample, but no arrow down to indicate all samples.

Notify Lab for further determination:

1.4. ☐ Tedlar bag received with minimal volume.

Initials: _____ Date: _____

Narration Required in Lab Narrative and Sample Confirmation:

1.5. ☐ COC was not filled out in ink.

1.6. ☐ COC improperly relinquished / received.

1.7. ☐ Sample tags / can numbers do not match the COC.

1.8. ☐ Sample date ☐ error / ☐ missing on COC but noted on sample tag (check one).

1.9. ☐ Custody Seal on the outside of the container was ☐ broken / ☐ improperly placed (check one).

1.10. ☐ ID-none on the sample Tag/Blank

1.11. ☐ Other (describe below).

Describe the Discrepancy: _____

2. Sample Receipt/Screening Discrepancies requiring PM notification

Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative

If Section II. is filled out PM must be notified within 24 hrs of initiation

2.1. ☐ COC was not received with samples.

2.2. ☐ Analysis method(s) is ☐ not specified / ☐ incorrectly specified (check one) on the COC.

2.3. ☐ Incorrect sampling media / container for analysis requested.

2.4. ☐ Number of samples on the COC does not match the number of samples that were received.

2.5. ☐ Samples were received expired.

2.6. ☒ Sampling date (time for sulfur) is not documented for ☐ *some* / ☒ *any* samples (check one).

2.7. ☐ Sample received with amount of H_2O in the Tedlar Bag.

2.8. ☐ Sample cannot be analyzed. Container was ☐ received broken / ☐ leaking / ☐ flat / ☐ defective.

2.9. ☐ Tedlar bag / canister received emitting a strong odor; Sample ☐ can / ☐ cannot (check one) be analyzed.

2.10. ☐ Tedlar Bag for Sulfur analysis has metal fitting.

2.11. ☐ Environmental Supply Company valves

2.12. ☐ Sorbent samples-sampling volume was not provided

2.13. ☐ Flow controller used – canister samples received at ambient or under pressure.

2.14. ☐ Canister was at ambient pressure at time of pressurization and (check all that apply):

- ☐ Canister failed leak check on two manifolds,
- ☐ Canister valve was open,
- ☐ Brass nut was loose/not present.
- ☐ Sample can be analyzed
- ☐ Cannot be analyzed

2.15. ☐ Canister sample received with a vacuum difference >5.0"Hg between the receipt vac. And the final vac. reported on the COC, indicating loss of vacuum.

2.16. ☐ Canister sample received at >15"Hg (*not* identified as a Trip/Field Blank).

2.17. ☐ Canister Trip Blank received at low vacuum (< 25"Hg).

2.18. ☒ Sorbent Sample received outside method required temperature of 2°C to 6°C; ☒ ice / ☒ blue ice (check one) was present. A temp. Blank ☐ was / ☒ was not present (check one).

2.19. ☐ Other (describe below)

Initials: _____ **Date:** _____ **Notify Receiving:** ☐ **Notify PM:** ☐

Describe the Discrepancy: 2.6: Date of Collection not noted on the COC.

2.18: Samples arrived at 8C

3. Lab Discrepancies requiring Team Leader/PM notification

Document in Analytical Notes of Lab Narrative

If Section III. is filled out PM must be notified within 24 hrs of initiation

3.1. ☐ Tedlar Bag found to be leaking at the time of analysis; sample ☐ can / ☐ cannot (check one) be analyzed.

3.2. ☐ Tedlar Bag found to be flat/low volume; sample cannot be analyzed.

3.3. ☐ Sulfur samples received with insufficient time to analyze prior to expiration.

3.4. ☐ Canister found to be leaking at the time of analysis.

3.5. ☐ VOST tube saturated; bag dilution necessary.

3.6. ☐ Sample loss due to instrument malfunction / broken glassware.

3.7. ☐ Low/high surrogate recoveries noted in QC/sample(s) for extractable samples.

3.8. ☐ Reporting Limit was raised.

3.9. ☐ Post weight > Pre weight in field/lab Blank for PM10/TSP samples.

3.10. ☐ Other (describe below).

Initials: _____ **Date:** _____ **Notify Receiving:** ☐ **Notify PM:** ☐ _____

Team Lead Initials: _____ **Date:** _____

Describe the Discrepancy: _____

_____

_____

How Does this Affect Client: _____

_____

_____

Project Manager Use Only

Project Manager Notification ☒ **Section 2 Complete** ☐ **Section 3 Complete**

Action:

☐ It is not necessary to notify the client. Narrate the discrepancy in Receiving Notes/Analytical Notes of Lab Narrative.

PM Initials:_____ Date: _____

☒ Client notification required. See attached client contact / email, or comments below:

Client Notification:

PM Initials:BL Person notified: David Shore Date: 8/21/2009

☐ Waiting for Client Reply

Comments: **Proceed and narrate temperature discrepancy. See table for time of collection.**

_____

☐ Notify Lab Name: _____ Date: _____ **Notify Receiving:** ☒

☐ **Additional notifications attached.**

Additional Comments:

_____

Other Records

Air Toxics LTD.
Laboratory Services Since 1989

Method : ATL Application #62 Ozone-Radiello 172

CAS Number	Compound	Rpt. Limit (ug)
10028-15-6	Ozone	1.0

@Air Toxics Ltd.

DATA REVIEW CHECKLIST

Work Order #: 0908455C

A_1	A_2	R	T	M	Q	
☐	☐	☑	☐	☑	☐	Analysis/Reporting vs. Project Profile/SOP requirements checked (i.e. 100% Dups, J-Flag to MDL, etc)
		☑	☐	☑	☐	The final report has the correct reporting list, special units, and header info.
		☐	☐	☑	☐	Lab Narrative is correct (proper method & description/Receiving & Analytical notes correct)
		NA	☐	☑	☐	Sample Discrepancy Report (SDR) is completed
☐	☐	☐	☐	NA	☐	Corrective Action issued - #
☐	☐	☐	☐	☐	☐	Unusual circumstances have been documented in the notes section below

LUMEN *validation report present and initialed* ***CIRCLE (YES / NO)***

☐	☐	☑	☐	☐	☐	Lab Blank, CCV, LCS and DUP met QC criteria
☐	☐	☑	☐	☑	☐	Hold time is met for all samples
		NA	☐	☑	☐	Appropriate data qualifier flags are applied
		☐	☐	☑	☐	Manual integrations for samples and QC are properly documented
☐	☐	☐	☐		☐	Samples analyzed within the project or method specific clock
		☑	☐			Retention times have been verified
☐	☐	☑	☐		☐	Appropriate ICAL(s) included
		☑	☐	☑	☐	At least one result per sample is verified against the target quant sheets/raw data
☐	☐	☑	☐		☐	Dilution factor correctly calculated (sample load volume, syringe and bag dilutions, can pressurization(s))
☐	☐	☑	☐			Correct amount of sample analyzed (i.e. sample not over-diluted)
		NA	☐			Spectra verified - documentation of spectral defense included (Section 5A of eCVP pkg)
		☐	☐			TICs resemble reference spectra
		☑	☐			TICs between duplicate samples are consistent
☐	☐	☑	☐	☑	☐	Checked samples for trends (i.e. Influent vs. Effluent, Field Dups, Field/Trip Blank, etc.)
☐	☐	NA	☐			Data for multiple analyses of sample(s) has been evaluated for comparability of results
		☑		☑		Special units for all samples in the final report are correctly calculated
		☑	☐	☑		Manually entered results checked (i.e. TPH/NMOC)
☐	☐	☑				Chain of Custody verified for any special comments (i.e. different compounds/RLs, action levels)
		☑				Chain of Custody scanned correctly
					☐	Verify sample id's vs. chain of custody
		NA				Date MDL(s) performed per instrument(s)
☐	☐	☐				Samples pressurized w/ appropriate gas (N_2 or He) ☑ Other (i.e. Tedlar bag, cartridge, sorbent)
☐	☐	☐				Final pressure consistent with canister size (6L vs. 1L)
☐	☐	☐				Verify receipt pressures
☐	☐	☐				Verify canister ID #'s
		☑		☑		Final invoice amount correct (adjusted for TAT, Penalties, Re-issue Charges etc.)
				☑		MDL date(s) present for all instruments utilized
		NA	☐	☑	☐	Client LUMEN report reviewed for accuracy and completeness

Notes: *(to include: noting samples with QA/QC problems, Blanks with positive hits, narratives, etc.)*

A/R:

Dup. 4 9A, 5 5A

M/Q:

A_1/A_2 (Analytical Review/Date)	R/T (Reporting Review/Date)	M (Management Review/Date)	Q (QA Review/Date)
A_1:	R: 9/16/09	9/16/09	
A_2:	T:		

Note (1): Please check all the appropriate boxes. Indicate "NA" for any statement that does not apply. Rev. 02/2009

Note (2): Management reviewer and reporting reviewer must be separate individuals.