@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0908455B

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Completed by:

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

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

WORK ORDER #: 0908455B

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
21A	100840	ATL Applications
21AA	100840 Lab Duplicate	ATL Applications
22A	100839	ATL Applications
23A	100838	ATL Applications
24A	100177	ATL Applications
25A	100178	ATL Applications
26A	100180	ATL Applications
27A	100181	ATL Applications
28A	100331	ATL Applications
29A	100332	ATL Applications
30A	100333	ATL Applications
31A	100334	ATL Applications
32A	100335	ATL Applications
32AA	100335 Lab Duplicate	ATL Applications
33A	100336	ATL Applications
34A	100680	ATL Applications
35A	100681	ATL Applications

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0908455B

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
36A	100682	ATL Applications
37A	100683	ATL Applications
38A	100684	ATL Applications
39A	100685	ATL Applications
40A	100613	ATL Applications
41A	Method Blank	ATL Applications
41B	Method Blank	ATL Applications
41C	Method Blank	ATL Applications
42A	CCV	ATL Applications

CERTIFIED BY: Linda S. Freeman

Laboratory Director

DATE: 09/16/09

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

Twenty 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 and a dates were provided.

The Chain of Custody (COC) information for sample 100539 did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

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 22,000 minutes was used for the QC samples and samples 100336 and 100685.

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)
100840	0908455B-21A	8/18/2009	8/21/2009	1.00	0.64	1.6	9.5	24
100840 Lab Duplicate	0908455B-21AA	8/18/2009	8/21/2009	1.00	0.64	1.6	9.5	24
100839	0908455B-22A	8/18/2009	8/21/2009	1.00	0.64	1.6	ND	ND
100838	0908455B-23A	8/18/2009	8/21/2009	1.00	0.64	1.6	ND	ND
100177	0908455B-24A	8/19/2009	8/21/2009	1.00	0.64	1.2	ND	ND
100178	0908455B-25A	8/19/2009	8/21/2009	1.00	0.64	1.2	ND	ND
100180	0908455B-26A	8/19/2009	8/21/2009	1.00	0.64	1.2	ND	ND
100181	0908455B-27A	8/19/2009	8/21/2009	1.00	0.64	1.2	ND	ND
100331	0908455B-28A	8/19/2009	8/21/2009	1.00	0.64	1.5	ND	ND
100332	0908455B-29A	8/19/2009	8/21/2009	1.00	0.64	1.5	ND	ND
100333	0908455B-30A	8/19/2009	8/21/2009	1.00	0.64	1.5	ND	ND
100334	0908455B-31A	8/19/2009	8/21/2009	1.00	0.64	1.5	ND	ND
100335	0908455B-32A	8/19/2009	8/21/2009	1.00	0.64	1.5	9.0	21
100335 Lab Duplicate	0908455B-32AA	8/19/2009	8/21/2009	1.00	0.64	1.5	9.1	21
100336	0908455B-33A	8/19/2009	8/21/2009	1.00	0.64	1.2	ND	ND
100680	0908455B-34A	8/19/2009	8/21/2009	1.00	0.64	1.4	ND	ND
100681	0908455B-35A	8/19/2009	8/21/2009	1.00	0.64	1.4	ND	ND
100682	0908455B-36A	8/19/2009	8/21/2009	1.00	0.64	1.4	11	23
100683	0908455B-37A	8/19/2009	8/21/2009	1.00	0.64	1.4	ND	ND
100684	0908455B-38A	8/19/2009	8/21/2009	1.00	0.64	1.4	ND	ND
100685	0908455B-39A	8/19/2009	8/21/2009	1.00	0.64	1.2	ND	ND
100613	0908455B-40A	8/19/2009	8/21/2009	1.00	0.64	1.3	ND	ND
Method Blank	0908455B-41A	NA	8/21/2009	1.00	0.64	1.2	ND	ND
Method Blank	0908455B-41B	NA	8/21/2009	1.00	0.64	1.2	ND	ND
Method Blank	0908455B-41C	NA	8/21/2009	1.00	0.64	1.2	ND	ND
								%Rec
CCV	0908455B-42A	NA	8/21/2009	1.00	0.64	1.2		108

COMMENTS: 1. NA=Not Applicable
2. ND=Not Detected
3. Exposure time of 21842 minutes was assumed for the QC samples and samples 100336 and 100685.
4. Background subtraction not performed.

9000

Ozone Radiello Calculation Worksheet

Workorder #:	0908455B	
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)
21A	100840	8/18/2009	1.265	15840	1.00	9.474461336	24.314	0.638	1.638	9.474461336
21AA	100840 Lab Duplicate	8/18/2009	1.268	15840	1.00	9.497610953	24.374	0.638	1.638	9.497610953
22A	100839	8/18/2009	0.044	15840	1.00	0.05256736	0.135	0.638	1.638	ND
23A	100838	8/18/2009	0.050	15840	1.00	0.098866594	0.254	0.638	1.638	ND
24A	100177	8/19/2009	0.058	21842	1.00	0.160598905	0.299	0.638	1.188	ND
25A	100178	8/19/2009	0.059	21842	1.00	0.168315444	0.313	0.638	1.188	ND
26A	100180	8/19/2009	0.068	21842	1.00	0.237764294	0.443	0.638	1.188	ND
27A	100181	8/19/2009	0.066	21842	1.00	0.222331216	0.414	0.638	1.188	ND
28A	100331	8/19/2009	0.045	17302	1.00	0.060283899	0.142	0.638	1.500	ND
29A	100332	8/19/2009	0.046	17302	1.00	0.068000438	0.160	0.638	1.500	ND
30A	100333	8/19/2009	0.044	17302	1.00	0.05256736	0.124	0.638	1.500	ND
31A	100334	8/19/2009	0.048	17302	1.00	0.083433516	0.196	0.638	1.500	ND
32A	100335	8/19/2009	1.209	17302	1.00	9.042335159	21.245	0.638	1.500	9.042335159
32AA	100335 Lab Duplicate	8/19/2009	1.210	17302	1.00	9.050051698	21.263	0.638	1.500	9.050051698
33A	100336	8/19/2009	0.060	21842	1.00	0.176031982	0.328	0.638	1.188	ND
34A	100680	8/19/2009	0.063	18412	1.00	0.199181599	0.440	0.638	1.409	ND
35A	100681	8/19/2009	0.062	18412	1.00	0.19146506	0.423	0.638	1.409	ND
36A	100682	8/19/2009	1.412	18412	1.00	10.60879255	23.422	0.638	1.409	10.60879255
37A	100683	8/19/2009	0.053	18412	1.00	0.12201621	0.269	0.638	1.409	ND
38A	100684	8/19/2009	0.073	18412	1.00	0.276346988	0.610	0.638	1.409	ND
39A	100685	8/19/2009	0.037	21842	1.00	-0.001448412	-0.003	0.638	1.188	ND
40A	100613	8/19/2009	0.061	19850	1.00	0.183748521	0.376	0.638	1.307	ND
41A	Method Blank	NA	0.027	21842	1.00	-0.078613801	-0.146	0.638	1.188	ND
41B	Method Blank	NA	0.029	21842	1.00	-0.063180723	-0.118	0.638	1.188	ND
41C	Method Blank	NA	0.031	21842	1.00	-0.047747645	-0.089	0.638	1.188	ND
42A	CCV	NA	0.933	21842	1.00	6.912570427	12.865	0.638	1.188	6.912570427

QC Duration	CCV Spike Amt
21842	6.384

Verified by HH and AW on 9/4/09

Date of Calibration

Calibration Data 8/21/2009 Linear Regression

Result (ug/m3)	%Rec	4-PA ug/mL	ug Ozone	absorbance		
24.31443843		0	0	0	Slope	0.129591779
24.3738476		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				
ND						
ND						
ND						
ND						
21.24463068						
21.2627604						
ND						
ND						
ND						
23.42231858						
ND						
ND						
ND						
ND						
ND						
ND						
ND	%Rec					
12.8650672	108					

QC Results and Raw Data

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908455 B/C

Date: 8/21/09

Analyst: A. Toyama

Method: Rad 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 = 0.12959
b = 0.037187

Fraction	Dilution	ABS	Sample ID	Sample Volume
21A	1.00	1.265	100840	5.0 mL
22A		0.044	839	
23A		0.050	838	
24A		0.058	177	
25A		0.059	178	
26A		0.068	180	
27A		0.066	181	
28A		0.045	331	
29A		0.046	332	
30A		0.044	333	
31A		0.048	334	
32A		1.209	335	
33A		0.060	336	
34A		0.063	690	
35A		0.062	681	

Notes:

Signed: [signature]

Date: 8/21/09

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908455 B/C

Date: 8/21/09

Analyst: A. Toyama

Method: Rad 172

Wavelength: 430 nm

Prep. Notes: Cont. From page 12

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
36A	1.00	1.412	100692	5.0 mL
37A		0.053	693	
38A		0.073	694	
39A		0.037	685	
40A		0.061	613	
21AA		1.268	840	
32AA		1.210	335	
Blk		0.027	NA	
Blk		0.029		
Blk		0.031		
LCS/CCV		0.933		
		8/21/09		
		AT		

Notes: Code 172 Lot 09146 Exp 01/010 used for Blanks

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: Raid 172 MBTH Solution
Analyst: A. Toyama
Preparation Date: 8/21/09
Expiration Date: 8/21/09

Solvent: DI H_2O
Solvent Lot #: NA

Ozone

Procedure/Comments: Dissolve 2.5g of 3-Methyl-2-benzothiazolinone (Located ERIA) hydrazone hydrochloride hydrate, 97% (1476-1106) into 500 mL DI H_2O and add 2.5 mL of concentrated sulfuric acid.

8/20/09
AT

Signed 8/21/09 Date

Reviewed 8/21/09 Date

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 #: 0908455B
# of pages (Including Cover): 4

9/17/2009

Thank you for selecting Air Toxics Ltd. We have received your samples and have found 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.

We have found a discrepancy between the Chain of Custody (COC) and the sample tag. The sample labeled 100539 on the COC is labeled as 100533 on the sample tag. ATL will report the sample identification on the COC unless otherwise notified.

Your prompt response is appreciated.

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

0908455

DATE: 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

For EH & E Data Coordinator - URGENT DATA ☒

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
100539	AIR/PASSIVE	OZONE ANALYSIS	ϕ
100843			~~12 DAYS~~ 11 DAYS
100842			
100841			
100840			
100839			
100838			
100177			15D 4H 2 MIN
100178			
100180			
100181			
100331			12D 22 MIN
100332			
100333			
100334			
100335			

Special Instructions:

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES**

☒ Electronic transfer - datacoordinator@ehe.com

☒ Additional report recipient mfoggia@ehe.com

Fed Ex 8704 3332 9291
CUSTODY SEAL INTACT? Y N NONE
TEMP 8°C

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

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 8/20/09

Received by: _____ 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: _____

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

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

0908455

DATE: 21 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.
33A	100336	AIR/PASSIVE	OZONE ANALYSIS	ϕ
34A	100680			12D 18H 52M
35A	100681			
36A	100682			
37A	100683			
38A	100684			
39A	100685			ϕ
40A	100613			13D 18H 50M
41A	100614			
42A	100615			
43A	100616			
44A	100617			
45A	100618			ϕ
46A	100619			ϕ
47A	100165			13D 20H 49M
48A	100166			1

MG 8/31/09

Special Instructions:

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES**

☒ Electronic transfer - datacoordinator@ehe.com

☒ Additional report recipient mfagala@ehe.com

CUSTODY SEAL INTACT? Y
TEMP 8-2

8754 2332 9291

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

8/20/09

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 8/21/09 PMM

Received by: _____ 0850 of (company name) ATC 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: _____

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 0908455B

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 $: $ 1,100.00
Logged By: MG

Fraction	Sample #	Analysis	Collected	Amount$
21A	100840	ATL Applications	8/18/2009	$50.00
21AA	100840 Lab Duplicate	ATL Applications	8/18/2009	$0.00
22A	100839	ATL Applications	8/18/2009	$50.00
23A	100838	ATL Applications	8/18/2009	$50.00
24A	100177	ATL Applications	8/19/2009	$50.00
25A	100178	ATL Applications	8/19/2009	$50.00
26A	100180	ATL Applications	8/19/2009	$50.00
27A	100181	ATL Applications	8/19/2009	$50.00
28A	100331	ATL Applications	8/19/2009	$50.00
29A	100332	ATL Applications	8/19/2009	$50.00
30A	100333	ATL Applications	8/19/2009	$50.00
31A	100334	ATL Applications	8/19/2009	$50.00
32A	100335	ATL Applications	8/19/2009	$50.00
32AA	100335 Lab Duplicate	ATL Applications	8/19/2009	$0.00
33A	100336	ATL Applications	8/19/2009	$50.00
34A	100680	ATL Applications	8/19/2009	$50.00
35A	100681	ATL Applications	8/19/2009	$50.00
36A	100682	ATL Applications	8/19/2009	$50.00
37A	100683	ATL Applications	8/19/2009	$50.00
38A	100684	ATL Applications	8/19/2009	$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 $: $ 1,100.00
Logged By: MG

Fraction	Sample #	Analysis	Collected	Amount$
39A	100685	ATL Applications	8/19/2009	$50.00
40A	100613	ATL Applications	8/19/2009	$50.00
41A	Method Blank	ATL Applications	NA	$0.00
41B	Method Blank	ATL Applications	NA	$0.00
41C	Method Blank	ATL Applications	NA	$0.00
42A	CCV	ATL Applications	NA	$0.00
Misc. Charges	eCVP (20) @ $5.00 each.			$100.00

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, 17A

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: 1.7: Sample 17A: The Sample ID tag reads "100533"

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 #: 0908455B

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	☐	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
		NA		☐		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.)
				NA		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. 21A, 32A

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: LY 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.