@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0908457B

	Page Nos. From	To
1. Work Order Cover Page & Laboratory Narrative & Table	1	4
2. Sample Results and Raw Data (Organized By Sample)	5	8
a. ATL Sample Results Form		
b. Target Compound Raw Data		
-Internal Standard Area and Retention Time Summary (If Applicable)		
-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
3. QC Results and Raw Data		
a. Method Blank (Results + Raw Data)	-	-
b. Surrogate Recovery Summary Form (If Applicable)	-	-
c. Internal Standard Summary Form (If Applicable)	-	-
d. Duplicate Results Summary Sheet	-	-
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data)	-	-
f. Initial Calibration Data (Summary Sheet + Raw Data)		
g. MDL Study (If Applicable)	-	-
h. Continuing Calibration Verification Data		
i. Second Source LCS (Summary + Raw Data)	-	-
j. Extraction Logs	-	-
k. Instrument Run Logs/Software Verification	9	12
l. GC/MS Tune (Results + Raw Data)	-	-
4. Shipping/Receiving Documents:		
a. Login Receipt Summary Sheet	13	14
b. Chain-of-Custody Records	15	16
c. Sample Log-In Sheet	17	18
d. Misc. Shipping/Receiving Records (list individual records)		
Sample Receipt Discrepancy Report	19	21
5. Other Records (describe or list)		
a. Manual Spectral Defense	-	-
b. Manual Intergrations	-	-
c. Manual Calculations	-	-
d. Canister Dilution Factors	-	-
e. Laboratory Corrective Action Request	-	-
f. CAS Number Reference	22	23
g. Variance Table	-	-
h. Canister Certification	-	-
i. Data Review Check Sheet	24	24

Completed by:

Kara McKiernan | Kara McKiernan/ Document Control | 09/17/09

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

WORK ORDER #: 0908457B

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	100853	ATL Applications
22A	100854	ATL Applications
23A	100855	ATL Applications
24A	100159	ATL Applications
25A	100160	ATL Applications
25AA	100160 Lab Duplicate	ATL Applications
26A	100161	ATL Applications
27A	100162	ATL Applications
28A	100163	ATL Applications
29A	100164	ATL Applications
30A	100606	ATL Applications
31A	100607	ATL Applications
32A	100608	ATL Applications
32AA	100608 Lab Duplicate	ATL Applications
33A	100609	ATL Applications
34A	100610	ATL Applications
35A	100611	ATL Applications

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0908457B

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	100612	ATL Applications
37A	100692	ATL Applications
38A	100693	ATL Applications
39A	100694	ATL Applications
40A	100695	ATL Applications
41A	Method Blank	ATL Applications
41B	Method Blank	ATL Applications
42A	CCV	ATL Applications

CERTIFIED BY: Linda S. Frumarn

Laboratory Director

DATE: 09/16/09

LABORATORY NARRATIVE
Nitrogen Dioxide by Radiello 166
Environmental Health & Engineering, Inc.
Workorder# 0908457B

Twenty Radiello 166 (NO2) samples were received on August 21, 2009. The procedure involves extraction of nitrite from reaction of NO2 with triethanolamine. Absorbance of nitrite is then measured at 537 nm using a spectrophotometer. Results are reported in uG and uG/m3.

Sampling rate of 141 mL/min was provided by the manufacturer.

Receiving Notes

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

Sample collection dates were not provided on the Chain of Custody for all samples. The client was contacted and 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 100855, 100164, and 100611 and 100612.

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 # 61 for RAD 166 (Nitrogen Dioxide)

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)
100853	0908457B-21A	8/18/2009	8/24/2009	1.00	0.32	0.27	1.2	1.0
100854	0908457B-22A	8/18/2009	8/24/2009	1.00	0.32	0.27	0.84	0.71
100855	0908457B-23A	8/18/2009	8/24/2009	1.00	0.32	0.22	ND	ND
100159	0908457B-24A	8/18/2009	8/24/2009	1.00	0.32	0.22	3.7	2.5
100160	0908457B-25A	8/18/2009	8/24/2009	1.00	0.32	0.22	4.6	3.0
100160 Lab Duplicate	0908457B-25AA	8/18/2009	8/24/2009	1.00	0.32	0.22	4.4	2.9
100161	0908457B-26A	8/18/2009	8/24/2009	1.00	0.32	0.22	2.9	1.9
100162	0908457B-27A	8/18/2009	8/24/2009	1.00	0.32	0.22	3.4	2.3
100163	0908457B-28A	8/18/2009	8/24/2009	1.00	0.32	0.22	2.9	2.0
100164	0908457B-29A	8/18/2009	8/24/2009	1.00	0.32	0.22	ND	ND
100606	0908457B-30A	8/19/2009	8/24/2009	1.00	0.32	0.22	3.2	2.1
100607	0908457B-31A	8/19/2009	8/24/2009	1.00	0.32	0.22	2.5	1.7
100608	0908457B-32A	8/19/2009	8/24/2009	1.00	0.32	0.22	5.2	3.5
100608 Lab Duplicate	0908457B-32AA	8/19/2009	8/24/2009	1.00	0.32	0.22	5.1	3.4
100609	0908457B-33A	8/19/2009	8/24/2009	1.00	0.32	0.22	2.7	1.8
100610	0908457B-34A	8/19/2009	8/24/2009	1.00	0.32	0.22	2.2	1.4
100611	0908457B-35A	8/19/2009	8/24/2009	1.00	0.32	0.22	ND	ND
100612	0908457B-36A	8/19/2009	8/24/2009	1.00	0.32	0.22	ND	ND
100692	0908457B-37A	8/19/2009	8/24/2009	1.00	0.32	0.24	2.4	1.8
100693	0908457B-38A	8/19/2009	8/24/2009	1.00	0.32	0.24	1.8	1.3
100694	0908457B-39A	8/19/2009	8/24/2009	1.00	0.32	0.24	3.6	2.6
100695	0908457B-40A	8/19/2009	8/24/2009	1.00	0.32	0.24	0.75	0.54
Method Blank	0908457B-41A	NA	8/24/2009	1.00	0.32	0.22	ND	ND
Method Blank	0908457B-41B	NA	8/24/2009	1.00	0.32	0.22	ND	ND
								%Rec
CCV	0908457B-42A	NA	8/24/2009	1.00	0.32	0.22		103

COMMENTS: 1. NA=Not Applicable
2. ND=Not Detected
3. Exposure time of 19969 minutes was assumed for the QC samples and samples 100855, 100164, and 100611 and 100612.

9000

Nitrogen Dioxide Radiello Calculation Worksheet

Workorder #:	0908457B	
Sampling Rate (ng/(ppb*min))	0.141	pically 0.96 for NO2
Sampling T (deg C)	25	Typically 25
Volume (mL)	5	ypically 5 for NO2
Date of Analysis:	8/24/2009	

1000ng/1ug

(Abs-Y-int)xDF	Conc(ug)x5 (mL)	Conc (ug) x 1000	ppbx mw	Low PointxDF
Slope	0.5mL	Q x Duration	24.45	

Corrected Q 0.141 es into account temp

LabSampleID	Client	Date of Collection	Abs	Duration (min)	DF	Conc (ug) (for 0.5mL Aliquot)	Conc (ug) in full 5 mL of sample	Conc (ppb)	Conc (ug/m3)	RL(ug) for 0.5 mL aliquot
21A	100853	8/18/2009	0.039	15840	1.00	0.123208292	1.232082918	0.552	1.038	0.033
22A	100854	8/18/2009	0.030	15840	1.00	0.083783082	0.837830824	0.375	0.706	0.033
23A	100855	8/18/2009	0.004	19969	1.00	-0.030111967	-0.301119667	-0.107	-0.201	0.033
24A	100159	8/18/2009	0.095	19969	1.00	0.368520705	3.685207054	1.309	2.462	0.033
25A	100160	8/18/2009	0.115	19969	1.00	0.456132282	4.561322817	1.620	3.048	0.033
25AA	100160 Lab Duplicate	8/18/2009	0.111	19969	1.00	0.438609966	4.386099665	1.558	2.931	0.033
26A	100161	8/18/2009	0.077	19969	1.00	0.289670287	2.896702868	1.029	1.936	0.033
27A	100162	8/18/2009	0.089	19969	1.00	0.342237233	3.422372325	1.215	2.287	0.033
28A	100163	8/18/2009	0.078	19969	1.00	0.294050866	2.940508656	1.044	1.965	0.033
29A	100164	8/18/2009	0.003	19969	1.00	-0.034492546	-0.344925456	-0.123	-0.230	0.033
30A	100606	8/19/2009	0.083	19850	1.00	0.31595376	3.159537597	1.129	2.124	0.033
31A	100607	8/19/2009	0.067	19850	1.00	0.245864499	2.458644986	0.878	1.653	0.033
32A	100608	8/19/2009	0.130	19850	1.00	0.521840964	5.21840964	1.864	3.508	0.033
32AA	100608 Lab Duplicate	8/19/2009	0.128	19850	1.00	0.513079806	5.130798063	1.833	3.449	0.033
33A	100609	8/19/2009	0.072	19850	1.00	0.267767393	2.677673927	0.957	1.800	0.033
34A	100610	8/19/2009	0.060	19850	1.00	0.215200447	2.152004469	0.769	1.447	0.033
35A	100611	8/19/2009	0.001	19969	1.00	-0.043253703	-0.432537032	-0.154	-0.289	0.033
36A	100612	8/19/2009	0.000	19969	1.00	-0.047634282	-0.47634282	-0.169	-0.318	0.033
37A	100692	8/19/2009	0.066	18412	1.00	0.24148392	2.414839198	0.930	1.750	0.033
38A	100693	8/19/2009	0.051	18412	1.00	0.175775238	1.757752376	0.677	1.274	0.033
39A	100694	8/19/2009	0.093	18412	1.00	0.359759548	3.597595478	1.386	2.607	0.033
40A	100695	8/19/2009	0.028	18412	1.00	0.075021925	0.750219248	0.289	0.544	0.033
41A	Method Blank	NA	0.008	19969	1.00	-0.012589651	-0.125896515	-0.045	-0.084	0.033
41B	Method Blank	NA	0.006	19969	1.00	-0.021350809	-0.213508091	-0.076	-0.143	0.033
42A	CCV	NA	0.773	19969	1.00	3.338553142	33.38553142	11.857	22.308	0.033

QC Duration	CCV Spike Amt ug per 0.5 mL
19969	3.25

Template Verified by HH and AW on 9/4/09

1000ng/1ug

RL(ug)x5 (mL)	RL (ug) x 1000	ppbx mw
0.5mL	Q x Duration	24.45

Calibration Data — Calibration Date 8/24/2009 Linear Regression

RL (ug) in full 5 mL of sample	RL (ppb)	RL (ug/m3)	Result (ug)	Result (ug/m3)	%Rec
0.325	0.1	0.274	1.23	1.04	
0.325	0.1	0.274	0.84	0.71	
0.325	0.1	0.217	ND	ND	
0.325	0.1	0.217	3.69	2.46	
0.325	0.1	0.217	4.56	3.05	
0.325	0.1	0.217	4.39	2.93	
0.325	0.1	0.217	2.90	1.94	
0.325	0.1	0.217	3.42	2.29	
0.325	0.1	0.217	2.94	1.96	
0.325	0.1	0.217	ND	ND	
0.325	0.1	0.218	3.16	2.12	
0.325	0.1	0.218	2.46	1.65	
0.325	0.1	0.218	5.22	3.51	
0.325	0.1	0.218	5.13	3.45	
0.325	0.1	0.218	2.68	1.80	
0.325	0.1	0.218	2.15	1.45	
0.325	0.1	0.217	ND	ND	
0.325	0.1	0.217	ND	ND	
0.325	0.1	0.236	2.41	1.75	
0.325	0.1	0.236	1.76	1.27	
0.325	0.1	0.236	3.60	2.61	
0.325	0.1	0.236	0.75	0.54	
0.325	0.1	0.217	ND	ND	
0.325	0.1	0.217	ND	ND	%Rec
0.325	0.1	0.217	33.39	22.31	103

0.5 mL Aliquot of Cal STD

ug/ml of NO2	ug of NO2	absorbance
0	0	0
0.065	0.0325	0.011
0.325	0.1625	0.042
1.3	0.65	0.162
6.5	3.25	0.774
13	6.5	1.484

Slope	0.228280335
Y-int	0.01087397
R2	0.999588602

QC Results and Raw Data

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

8/24/09 Ast

Work Order: 0909457A~~/B~~ B/C

Date: 8/24/09

Analyst: A. Toyama

Method: Rad 166

Wavelength: 537

Prep. Notes:

Standard ID	Concentration	ABS
1858-17-~~0.1~~ 0.065	~~0.1~~ ug/mL 0.065	0.011
-0.5 0.325	0.5 ng/mL 0.325	0.042
-2 1.3	2.0 ug/mL 1.3	0.162
-~~10~~ 6.5	~~10~~ ug/mL 6.5	0.774
-~~20~~ 13	~~20~~ ug/mL 13	1.484
by 9/14/09	mg 9/14/09	

r = 0.9995886

m = ~~0.074194~~ 0.2282 by 9/14/09

b = 0.0108739

Fraction	Dilution	ABS	Sample ID	Sample Volume 9/1/09
21A	1.00	0.039	100853	50 ~~0.5~~ mL
22A		0.030	854	
23A		0.064	855	
24A		0.095	159	
25A		0.115	160	
26A		0.077	161	
27A		0.089	162	
28A		0.078	163	
29A		0.003	164	
30A		0.083	6062	
31A		0.067	607	
32A		0.130	608	
33A		0.072	609	
34A		0.060	610	
35A		0.001	611	

Notes: Code 166 Lot 09150 Exp 07/010

Signed: _____

Date: 8/31/09

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908457 B/C

Date: 8/24/09

Analyst: A. Teyama

Method: Rad 166

Wavelength: 537

Prep. Notes: cont. from page 18

Standard ID	Concentration	ABS
1858-17-0.1	0.1 ng/mL	0.011
-0.5	0.5 ng/mL	0.042
-2	2 ng/mL	0.162
-10	10 ng/mL	0.774
-20	20 ng/mL	1.484

r = 0.9995886
m = 0.0741911
b = 0.0108739

see page 19

Fraction	Dilution	ABS	Sample ID	Sample Volume all for 5mL
36A	1.00	0.000	100612	5.0 ~~0.5~~mL
37A		0.0660	692	
38A		0.051	693	
39A		0.093	694	
40A		0.028	695	
25AA		0.111	160	
32AA		~~0.128~~ 0.128	608	
BLK		~~0.008~~ 0.008	NA	
BLK		0.006		
CCV/LCS ~~CCV~~		0.773		
Pleolog AT				
		8/31/09 AT		

Notes: CCV/LCS prepared at 10 ng/mL

Signed: _____ Date: 8/31/09

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

Standard ID: 1858-17
Project: Calibration Solution Rad 166
Analyst: A. Toyama
Preparation Date: 8/24/09
Expiration Date: 8/24/09

Solvent: DI H_2O
Solvent Lot #: NA

Procedure/Comments: Dissolve 5 mg Sodium Nitrite, 97% (Location ERED) in 250 mL DI ~~H_2O~~ H_2O to yield ~~20 mg/L or 20 ug/mL~~ 9/3/09 AT From this solution, dilute to make: 13 mg/L or 13 ug/mL

0.5 ug/mL 1.3 ug/mL 0.325 ug/mL 0.065 ug/mL

10 ug/mL, 2.0 ug/mL, 0.5 ug/mL and ~~0.1 ug/mL~~ 9/3/09 AT

To each of these calibration levels, transfer 0.5 mL to ~~vials~~ 9/location AT vial and add 5 mL of sulphanilamide, cap tightly, stir and wait 5 minutes. Then add 1 mL of NEDA solution, stir and wait 10 minutes. Measure absorbance at 537 nm.

8/24/09
AT

Page 17 — Signed — 8/24/09 Date — Katie Johnstone Reviewed — 8/24/09 Date

Rev. 8/97

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 #:	0908457B
# 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.

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

0908457

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.
17A	100521	Air Passive	SO_2 NO_2 HF Analysis	ϕ
18A	100850			~~12 Days~~ 11 Days
19A	100851			
20A	100852			
21A	100853			
22A	100854			
23A	100855			ϕ
24A	100159			13D 20H 49M
25A	100160			
26A	100161			
27A	100162			
28A	100163			
29A	100164			ϕ
30A	100606			13D 18H 50M
31A	100607			
32A	100608			

Special Instructions:

☒ Standard turn around time ☐ Rush by ______ date/time ☐ Other Fed Ex 8204 8332 8291

☐ Fax results 781-247-4305

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

☒ Additional report recipient mbergala@eheinc.com

CUSTODY SEAL INTACT? Y N NONE TEMP 2°C

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

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 2 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

0908451

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.
33A	100609	Air Passive	SO_2 NO_2 HF Analysis	13D 18H 50M
34A	100610			1
35A	100611			∅
36A	100612			∅
37A	100692			12D 18H 52M
38A	100693			
39A	100694			
40A	100695			
41A	100696			
42A	100697			∅
43A	100337			12D 17MIN
44A	100338			
45A	100339			
46A	100340			
47A	100341			
48A	100342			∅

Special Instructions:

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

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@ehe[illegible].com

☒ Additional report recipient mfogale@ehemc.com

CUSTODY SEAL INTACT? Y N NONE TEMP 8°C 8201233229

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) Atc Date: 8/21/09 mmm

Relinquished by: _____ of (company name) _____ Date: 8/21/09

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

Air Toxics LTD.
Laboratory Services Since 1989

SAMPLE RECEIPT SUMMARY

WORKORDER 0908457B

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 $: $ 900.00
Logged By: MW

Fraction	Sample #	Analysis	Collected	Amount$
21A	100853	ATL Applications	8/7/2009	$40.00
22A	100854	ATL Applications	8/7/2009	$40.00
23A	100855	ATL Applications	8/7/2009	$40.00
24A	100159	ATL Applications	8/5/2009	$40.00
25A	100160	ATL Applications	8/5/2009	$40.00
25AA	100160 Lab Duplicate	ATL Applications	8/5/2009	$0.00
26A	100161	ATL Applications	8/5/2009	$40.00
27A	100162	ATL Applications	8/5/2009	$40.00
28A	100163	ATL Applications	8/5/2009	$40.00
29A	100164	ATL Applications	8/5/2009	$40.00
30A	100606	ATL Applications	8/5/2009	$40.00
31A	100607	ATL Applications	8/5/2009	$40.00
32A	100608	ATL Applications	8/5/2009	$40.00
32AA	100608 Lab Duplicate	ATL Applications	8/5/2009	$0.00
33A	100609	ATL Applications	8/5/2009	$40.00
34A	100610	ATL Applications	8/5/2009	$40.00
35A	100611	ATL Applications	8/5/2009	$40.00
36A	100612	ATL Applications	8/5/2009	$40.00
37A	100692	ATL Applications	8/6/2009	$40.00
38A	100693	ATL Applications	8/6/2009	$40.00

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 #61 NO2-Radiello 166

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 $: $ 900.00
Logged By: MW

Fraction	Sample #	Analysis	Collected	Amount$
39A	100694	ATL Applications	8/6/2009	$40.00
40A	100695	ATL Applications	8/6/2009	$40.00
41A	Method Blank	ATL Applications	NA	$0.00
41B	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 #61 NO2-Radiello 166

Sample Discrepancy Report

Identification

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

Workorder(s) affected:0908457 **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: samples rec'd at 8 C

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 #61 NO2-Radiello 166

CAS Number	Compound	Rpt. Limit (ug)
10102-44-0	Nitrogen Dioxide	1.0

@Air Toxics Ltd.

DATA REVIEW CHECKLIST

Work Order #: 0908457B

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)
		☐	☐	☑	☐	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
		☐	☐	☑	☐	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
NA ☐		☐	☐		☐	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)
		☐	☐			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
		☐				Date MDL(s) performed per instrument(s) _____
NA ☐	☐	☐				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
		☐	☐	☑	☐	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.: 25A, 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: 9/2/09	R:	9/16/09	
A_2:	T:		

Note (1): Please check all the appropriate boxes. Indicate "NA" for any statement that does not apply. Rev. 02/26/09

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