@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0909123C

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Completed by:

Anne E Wilhoit — Anne Wilhoit/ Document Control — 09/22/09

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

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0909123C

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:	09/04/2009	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/18/2009		

FRACTION #	NAME	TEST
33A	102105	ATL Applications
34A	102106	ATL Applications
35A	102107	ATL Applications
36A	102108	ATL Applications
37A	102140	ATL Applications
37AA	102140 Lab Duplicate	ATL Applications
38A	102141	ATL Applications
39A	102142	ATL Applications
39AA	102142 Lab Duplicate	ATL Applications
40A	102143	ATL Applications
41A	102144	ATL Applications
42A	102145	ATL Applications
43A	102146	ATL Applications
44A	102171	ATL Applications
45A	102172	ATL Applications
46A	102173	ATL Applications
47A	102174	ATL Applications
48A	102175	ATL Applications

Continued on next page

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FAX:	781-247-4305	**PROJECT #**	16512
DATE RECEIVED:	09/04/2009	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/18/2009		

FRACTION #	NAME	TEST
49A	102176	ATL Applications
50A	Lab Blank	ATL Applications
50B	Lab Blank	ATL Applications
51A	CCV	ATL Applications

CERTIFIED BY: Linda J. Truman DATE: 09/18/09

Laboratory Director

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

LABORATORY NARRATIVE
Hydrogen Sulfide by Radiello 170
Environmental Health & Engineering, Inc.
Workorder# 0909123C

Seventeen Radiello 170 (H2S) samples were received on September 04, 2009. The procedure involves adsorption of H2S by zinc acetate to form zinc sulfide. The sulfide is then recovered by extraction with water and addition of ferric chloride in a strongly acidic solution to produce methylene blue. Methylene blue absorbance is then measured at 665 nm using a spectrophotometer. Results are reported in uG and uG/m3.

Sampling rate of 69 mL/min for H2S was provided by the manufacturer.

Receiving Notes

There were no receiving discrepancies.

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 20160 minutes was used for the QC samples.

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

0003

Sample Results and Raw Data

AIR TOXICS LTD.

ATL Application # 59 for RAD 170 (Hydrogen Sulfide)

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)
102105	0909123C-33A	9/3/2009	9/10/2009	1.00	0.80	0.54	1.6	1.1
102106	0909123C-34A	9/3/2009	9/10/2009	1.00	0.80	0.54	ND	ND
102107	0909123C-35A	9/3/2009	9/10/2009	1.00	0.80	0.54	ND	ND
102108	0909123C-36A	NA	9/10/2009	1.00	0.80	0.54	ND	ND
102140	0909123C-37A	9/3/2009	9/10/2009	1.00	0.80	0.54	ND	ND
102140 Duplicate	0909123C-37AA	9/3/2009	9/10/2009	1.00	0.80	0.54	ND	ND
102141	0909123C-38A	9/3/2009	9/10/2009	1.00	0.80	0.54	ND	ND
102142	0909123C-39A	9/3/2009	9/10/2009	1.00	0.80	0.54	1.4	0.96
102142 Duplicate	0909123C-39AA	9/3/2009	9/10/2009	1.00	0.80	0.54	1.4	0.95
102143	0909123C-40A	9/3/2009	9/10/2009	1.00	0.80	0.54	ND	ND
102144	0909123C-41A	9/3/2009	9/10/2009	1.00	0.80	0.54	ND	ND
102145	0909123C-42A	NA	9/10/2009	1.00	0.80	0.54	ND	ND
102146	0909123C-43A	NA	9/10/2009	1.00	0.80	0.54	ND	ND
102171	0909123C-44A	9/3/2009	9/10/2009	1.00	0.80	0.54	1.0	0.68
102172	0909123C-45A	9/3/2009	9/10/2009	1.00	0.80	0.54	1.1	0.73
102173	0909123C-46A	9/3/2009	9/10/2009	1.00	0.80	0.54	1.6	1.0
102174	0909123C-47A	9/3/2009	9/10/2009	1.00	0.80	0.54	0.80	0.54
102175	0909123C-48A	9/3/2009	9/10/2009	1.00	0.80	0.54	0.80	0.54
102176	0909123C-49A	NA	9/10/2009	1.00	0.80	0.54	ND	ND
Method Blank	0909123C-50A	NA	9/10/2009	1.00	0.80	0.54	ND	ND
Method Blank	0909123C-50B	NA	9/10/2009	1.00	0.80	0.54	ND	ND
							%Rec	
CCV	0909123C-51A	NA	9/10/2009	1.00	0.80	0.54	109	

COMMENTS: 1. NA=Not Applicable
2. ND=Not Detected
3. Exposure time of 20160 minutes was assumed for the QC samples.
4. Background subtraction not performed.

Hydrogen Sulfide Radiello Calculation Worksheet

Workorder #: 0909123C

Sampling Rate (ng/ppb.min) 0.096 Typically0.096 for H2S

Sampling T (deg C) 25 Typically 25

Volume (mL) 10.5 Typically 10.5 for H2S

Date of Analysis: 9/10/2009

Corrected Q 0.096 Takes into account temp

Q includes conversion from Sulfide to H2S

(Abs-Y-int)xDF / Slope

Conc(ug/mL)xVol (mL)

conc (ug sulfide) *MW H2S / MW Sulfide

Conc (ug) x 1000 / Q x Duration

ppbx mw / 24.45

LabSampleID	Client	Date of Collection	Abs	Duration (min)	DF	Conc (ug/mL) of sulfide	Conc (ug) of sulfide	Conc (ug) of H2S	T Corrected, no Blank correction: Conc (ppb) of H2S	Conc (ug/m3) of H2S
33A	102105	9/3/2009	0.161	20160	1.00	0.141602479	1.486826034	1.580106171	0.768	1.071
34A	102106	9/3/2009	0.059	20160	1.00	0.036712878	0.385485215	0.409669695	0.199	0.278
35A	102107	9/3/2009	0.076	20160	1.00	0.054194478	0.569042018	0.604742441	0.294	0.410
36A	102108	NA	0.017	20160	1.00	-0.006476958	-0.068008063	-0.072274737	-0.035	-0.049
37A	102140	9/3/2009	0.085	20160	1.00	0.063449443	0.66621915	0.708016247	0.344	0.480
37AA	102140 Duplicate	9/3/2009	0.087	20160	1.00	0.065506102	0.687814068	0.730965982	0.355	0.495
38A	102141	9/3/2009	0.066	20160	1.00	0.043911184	0.461067428	0.489993767	0.238	0.332
39A	102142	9/3/2009	0.147	20160	1.00	0.127205867	1.335661608	1.419458027	0.690	0.962
39AA	102142 Duplicate	9/3/2009	0.145	20160	1.00	0.125149209	1.31406669	1.396508292	0.679	0.946
40A	102143	9/3/2009	0.071	20160	1.00	0.049052831	0.515054723	0.547368104	0.266	0.371
41A	102144	9/3/2009	0.054	20160	1.00	0.03157123	0.33149792	0.352295358	0.171	0.239
42A	102145	NA	0.019	20160	1.00	-0.0044203	-0.046413145	-0.049325002	-0.024	-0.033
43A	102146	NA	0.019	20160	1.00	-0.0044203	-0.046413145	-0.049325002	-0.024	-0.033
44A	102171	9/3/2009	0.111	20160	1.00	0.090186008	0.946953084	1.0063628	0.489	0.682
45A	102172	9/3/2009	0.117	20160	1.00	0.096355985	1.011737838	1.075212005	0.523	0.729
46A	102173	9/3/2009	0.159	20160	1.00	0.139545821	1.465231116	1.557156436	0.757	1.055
47A	102174	9/3/2009	0.093	20160	1.00	0.071676078	0.752598822	0.799815187	0.389	0.542
48A	102175	9/3/2009	0.093	20160	1.00	0.071676078	0.752598822	0.799815187	0.389	0.542
49A	102176	NA	0.020	20160	1.00	-0.00339197	-0.035615686	-0.037850135	-0.018	-0.026
					1.00	-0.023958559	-0.251564866	-0.267347483	#DIV/0!	#DIV/0!
					1.00	-0.023958559	-0.251564866	-0.267347483	#DIV/0!	#DIV/0!
					1.00	-0.023958559	-0.251564866	-0.267347483	#DIV/0!	#DIV/0!
50A	Method Blank	NA	0.021	20160	1.00	-0.002363641	-0.024818227	-0.026375267	-0.013	-0.018
50B	Method Blank	NA	0.022	20160	1.00	-0.001335311	-0.014020768	-0.0149004	-0.007	-0.010
51A	CCV	NA	0.629	20160	1.00	0.622860653	6.540036852	6.950344121	3.379	4.710

QC Duration: 20160

CCV Spike Amt: 0.572

Verified: HH and AW on 9/4/09

Q includes conversion from Sulfide to H2S

Low PointxDF | RL(ug/mL)xVol (mL) | RL (ug sulfide) *MW H2S / MW Sulfide | RL (ug) x 1000 / Q x Duration | ppbx mw 24.45

Calibration Data — Calibration Date 9/10/2009 Linear Regression

T Corrected, no Blank correction

RL(ug/ml) of sulfide	RL (ug) of sulfide	RL (ug) of H2S	RL (ppb) of H2S	RL (ug/m3)	Result (ug) H2S	Result (ug/m3) H2S	%Rec	ug/ml of sulfide	absorbance
0.072	0.752	0.798966249	0.39	0.541	1.580106171	1.070889363		0	0
0.072	0.752	0.798966249	0.39	0.541	ND	ND		0.0716	0.074
0.072	0.752	0.798966249	0.39	0.541	ND	ND		0.143	0.151
0.072	0.752	0.798966249	0.39	0.541	ND	ND		0.286	0.316
0.072	0.752	0.798966249	0.39	0.541	ND	ND		0.572	0.613
0.072	0.752	0.798966249	0.39	0.541	ND	ND		1.145	1.119
0.072	0.752	0.798966249	0.39	0.541	ND	ND			
0.072	0.752	0.798966249	0.39	0.541	1.419458027	0.962012889			
0.072	0.752	0.798966249	0.39	0.541	1.396508292	0.946459107			
0.072	0.752	0.798966249	0.39	0.541	ND	ND			
0.072	0.752	0.798966249	0.39	0.541	ND	ND			
0.072	0.752	0.798966249	0.39	0.541	ND	ND			
0.072	0.752	0.798966249	0.39	0.541	ND	ND			
0.072	0.752	0.798966249	0.39	0.541	1.0063628	0.682044813			
0.072	0.752	0.798966249	0.39	0.541	1.075212005	0.728706159			
0.072	0.752	0.798966249	0.39	0.541	1.557156436	1.055335581			
0.072	0.752	0.798966249	0.39	0.541	0.799815187	0.542060775			
0.072	0.752	0.798966249	0.39	0.541	0.799815187	0.542060775			
0.072	0.752	0.798966249	0.39	0.541	ND	ND			
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!			
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!			
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!			
0.072	0.752	0.798966249	0.39	0.541	ND	ND			
0.072	0.752	0.798966249	0.39	0.541	ND	ND	%Rec		
0.072	0.752	0.798966249	0.39	0.541	6.950344121	4.710474351	109		

Slope	0.972451017
Y-int	0.023298525
R2	0.997046605

QC Results and Raw Data

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1873

Work Order: 0909123C

Method: Rad 170

Wavelength: 665nm

Date: 9/10/09

Analyst: M. SKidmore

Prep. Notes:

Standard ID	Concentration	ABS
1858-36 E	0.0716 ug/mL	0.074
D	0.143 ug/mL	0.151
C	0.286 ug/mL	0.316
B	~~0.572~~ 0.572 ug/mL	0.613
A	1.145 ug/mL	1.119

r = ~~0.9968~~ 0.9970
m = 0.97144 0.9724
b = ~~0.02157~~ 0.02329
9/16/09

Fraction	Dilution	ABS	Sample ID	Sample Volume
33A	1.00	0.161	102105	10.5mL
34A		0.059	102106	
35A		0.076	102107	
36A		0.017	102108	
37A		0.085	102140	
38A		0.066	102141	
39A		0.147	102142	
40A		0.071	102143	
41A		0.054	102144	
42A		0.019	102145	
43A		0.019	102146	
44A		0.111	102171	
45A		0.117	102172	
46A		0.159	102173	
47A		0.093	102174	
48A		0.093	102175	
49A		0.020	102176	
BLK		0.021	N/A	
BLK		0.022		
CCV LCS		0.629		
37AA		0.087	102140	
39AA		0.145	102142	

Notes: CCV/LCS @ 0.572 ug/mL
Spiked cartridge: 0.141 (1.0 mL of 1000 ppm)

Signed: [signature] Date: 9/11/09

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

Standard ID: 1858-36
Project: Calibration Solution Rad 170
Analyst: M. Skidmore
Preparation Date: 9/10/09
Expiration Date: 9/10/09

Solvent: D.I. H_2O
Solvent Lot #: N/A

Procedure/Comments:

Solution A: 2mL of Code Rad 171 (1476-984, exp 8/6/2010 ERIB) with 98 mL DI water = 1,145 µg/mL

Solution B: 2.5 mL of Solution A with 2.5mL DI water = 0,572 µg/mL.

Solution C: 1,25 mL of Solution A with 3,75mL DI water = 0,286 µg/mL

Solution D: 0,625 mL of Solution A with 4,375 mL DI water = 0,143 µg/mL

Solution E: 0,375 mL of Solution A with 5,625mL DI water = 0,076 µg/mL

MJS
9/10/09

Signed 9/10/09 Reviewed 9/10/09

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 #: 0909123C
# of pages (Including Cover): 4

9/22/2009

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

0909123

DATE: 3 SEP 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	START	OTHER: Time/Date/Vol. STOP
33A	102105	AIR/PASSIVE	H_2S ANALYSIS	8/20/09	9/3/09
34A	102106				
35A	102107				
36A	102108				ϕ
37A	102140				9/3/09
38A	102141				
39A	102142				
40A	102143				
41A	102144				
42A	102145				ϕ
43A	102146				ϕ
44A	102171				9/3/09
45A	102172				
46A	102173				
47A	102174				
48A	102175				
49A	102176				ϕ

Special instructions:

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

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES**

☒ Electronic transfer - datacoordinator@ehemc.com

☐ Additional report recipient mfragola@ehemc.com

Fed Ex 8704 1223 1372

CUSTODY SEAL INTACT? Y N NON TEMP 4°C

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

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 9/3/09

Received by: _____ of (company name) AIR Date: 9/4/09

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 0909123C

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: 09/16/09 11:59 pm
Date Completed: 9/18/09
Date Received: 9/4/09
PO#: 16512
Project#: 16512

Total $: $ 935.00
Logged By: MG

Fraction	Sample #	Analysis	Collected	Amount$
33A	102105	ATL Applications	9/3/2009	$50.00
34A	102106	ATL Applications	9/3/2009	$50.00
35A	102107	ATL Applications	9/3/2009	$50.00
36A	102108	ATL Applications	NA	$50.00
37A	102140	ATL Applications	9/3/2009	$50.00
37AA	102140 Lab Duplicate	ATL Applications	9/3/2009	$0.00
38A	102141	ATL Applications	9/3/2009	$50.00
39A	102142	ATL Applications	9/3/2009	$50.00
39AA	102142 Lab Duplicate	ATL Applications	9/3/2009	$0.00
40A	102143	ATL Applications	9/3/2009	$50.00
41A	102144	ATL Applications	9/3/2009	$50.00
42A	102145	ATL Applications	NA	$50.00
43A	102146	ATL Applications	NA	$50.00
44A	102171	ATL Applications	9/3/2009	$50.00
45A	102172	ATL Applications	9/3/2009	$50.00
46A	102173	ATL Applications	9/3/2009	$50.00
47A	102174	ATL Applications	9/3/2009	$50.00
48A	102175	ATL Applications	9/3/2009	$50.00
49A	102176	ATL Applications	NA	$50.00
50A	Lab Blank	ATL Applications	NA	$0.00

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 #59 H2S-Radiello 170

Air Toxics LTD.
Laboratory Services Since 1989

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: 09/16/09 11:59 pm
Date Completed: 9/18/09
Date Received: 9/4/09
PO#: 16512
Project#: 16512

Total $: $ 935.00
Logged By: MG

Fraction	Sample #	Analysis	Collected	Amount$
50B	Lab Blank	ATL Applications	NA	$0.00
51A	CCV	ATL Applications	NA	$0.00

Misc. Charges eCVP (17) @ $5.00 each. $85.00

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 #59 H2S-Radiello 170

Sample Discrepancy Report

Identification

Initiated By: MW **Project ID:** 13297 **PM:** BI **Date:** 9/4/2009 **Discrepancy Type:** ☒ 1. ☐ 2. ☐ 3.

Workorder(s) affected: 0909123 **Sample(s) affected:** 34A and 35A

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: _____

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:_____ Person notified: _____ Date: _____

☐ Waiting for Client Reply

Comments: _____

_____

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

☐ **Additional notifications attached.**

Additional Comments:

_____

Other Records

Air Toxics LTD.
Laboratory Services Since 1989

Method : ATL Application #59 H2S-Radiello 170

CAS Number	Compound	Rpt. Limit (ug)
7783-06-4	Hydrogen Sulfide	1.2

@Air Toxics Ltd.

DATA REVIEW CHECKLIST

Work Order #: 0909123C

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
☐	☐	☐	☐	☐	☐	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
☐	☐	☑	☐		☐	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.)
☐	☐	☐	☐			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)
☐	☐	☐				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
		☐	☐	☑	☐	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: 37A, 39A

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	9/18/09	
A_2:	T:		

Note (1): Please check all the appropriate boxes. Indicate "NA" for any statement that does not apply. Rev. 02/10/09

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