

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0909377C

	Page Nos.	
	From	To
1. Work Order Cover Page & Laboratory Narrative & Table	1	3
2. Sample Results and Raw Data (Organized By Sample)	4	7
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	8	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)		
<u>Sample Receipt Discrepancy Report</u>	19	20
5. Other Records (describe or list)		
a. <u>Manual Spectral Defense</u>	-	-
b. <u>Manual Intergrations</u>	-	-
c. <u>Manual Calculations</u>	-	-
d. <u>Canister Dilution Factors</u>	-	-
e. <u>Laboratory Corrective Action Request</u>	-	-
f. <u>CAS Number Reference</u>	21	22
g. <u>Variance Table</u>	-	-
h. <u>Canister Certification</u>	-	-
i. <u>Data Review Check Sheet</u>	23	23

Completed by:

Kara McKiernan

(Signature)

Kara McKiernan/ Document Control

(Print Name & Title)

10/08/09

(Date)

WORK ORDER #: 0909377C

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:	09/18/2009	CONTACT:	Ausha Scott
DATE COMPLETED:	10/08/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
30A	102777	ATL Applications
31A	102778	ATL Applications
32A	102779	ATL Applications
33A	102780	ATL Applications
34A	102781	ATL Applications
35A	102782	ATL Applications
36A	105641	ATL Applications
37A	105642	ATL Applications
38A	105643	ATL Applications
39A	105644	ATL Applications
40A	105645	ATL Applications
41A	105646	ATL Applications
42A	105048	ATL Applications
43A	105049	ATL Applications
44A	105050	ATL Applications
45A	105051	ATL Applications
45AA	105051 Lab Duplicate	ATL Applications
46A	105052	ATL Applications

Continued on next page

WORK ORDER #: 0909377C

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: 09/18/2009
CONTACT: Ausha Scott

DATE COMPLETED: 10/08/2009

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
46AA	105052 Lab Duplicate	ATL Applications
47A	105053	ATL Applications
48A	Method Blank	ATL Applications
48B	Method Blank	ATL Applications
49A	CCV	ATL Applications

CERTIFIED BY:

Sinda S. Fumar

Laboratory Director

DATE: 10/08/09

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

**LABORATORY NARRATIVE
Hydrogen Sulfide by Radiello 170
Environmental Health & Engineering, Inc.
Workorder# 0909377C**

Eighteen Radiello 170 (H₂S) samples were received on September 18, 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

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.

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

Sample Results and Raw Data

AIR TOXICS LTD.
ATL Application # 59 for RAD 170 (Hydrogen Sulfide)
 Spectrophotometer

Field Sample ID.	Lab Sample ID.	Collection Date	Analysis Date	Dilution Factor	Reporting Limit (ug)	Reporting Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
102777	0909377C-30A	9/16/2009	9/25/2009	1.00	0.80	0.58	0.80	0.59
102778	0909377C-31A	9/16/2009	9/25/2009	1.00	0.80	0.58	ND	ND
102779	0909377C-32A	9/16/2009	9/25/2009	1.00	0.80	0.58	ND	ND
102780	0909377C-33A	9/16/2009	9/25/2009	1.00	0.80	0.58	ND	ND
102781	0909377C-34A	9/16/2009	9/25/2009	1.00	0.80	0.58	ND	ND
102782	0909377C-35A	NA	9/25/2009	1.00	0.80	0.54	ND	ND
105641	0909377C-36A	9/16/2009	9/25/2009	1.00	0.80	0.58	ND	ND
105642	0909377C-37A	9/16/2009	9/25/2009	1.00	0.80	0.58	ND	ND
105643	0909377C-38A	9/16/2009	9/25/2009	1.00	0.80	0.58	ND	ND
105644	0909377C-39A	9/16/2009	9/25/2009	1.00	0.80	0.58	ND	ND
105645	0909377C-40A	9/16/2009	9/25/2009	1.00	0.80	0.58	1.4	1.0
105646	0909377C-41A	NA	9/25/2009	1.00	0.80	0.54	ND	ND
105048	0909377C-42A	9/17/2009	9/25/2009	1.00	0.80	0.54	0.99	0.67
105049	0909377C-43A	9/17/2009	9/25/2009	1.00	0.80	0.54	ND	ND
105050	0909377C-44A	9/17/2009	9/25/2009	1.00	0.80	0.54	ND	ND
105051	0909377C-45A	9/17/2009	9/25/2009	1.00	0.80	0.54	1.6	1.1
105051 Lab Duplicate	0909377C-45AA	9/17/2009	9/25/2009	1.00	0.80	0.54	1.7	1.1
105052	0909377C-46A	9/17/2009	9/25/2009	1.00	0.80	0.54	1.3	0.86
105052 Lab Duplicate	0909377C-46AA	9/17/2009	9/25/2009	1.00	0.80	0.54	1.2	0.85
105053	0909377C-47A	NA	9/25/2009	1.00	0.80	0.54	ND	ND
Method Blank	0909377C-48A	NA	9/25/2009	1.00	0.80	0.54	ND	ND
Method Blank	0909377C-48B	NA	9/25/2009	1.00	0.80	0.54	ND	ND
CCV	0909377C-49A	NA	9/25/2009	1.00	0.80	0.54	%Rec 98	

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 Radiallo Calculation Worksheet

Workorder #: 0909377C

0.096 Typically 0.096 for H2S

Sampling Rate (ng/ppb.min)
 Sampling T (deg C)
 Volume (ml)

25 Typically 25
 10.5 Typically 10.5 for H2S

Date of Analysis:
 Corrected Q

9/25/2009
 Takes into account temp

(Abs-Y-Int)/DF
 Slope

Conc(ug/ml)(Vol (ml)

Conc (ug sulfide) *MW H2S
 MW Sulfide

Q includes conversion from
 Sulfide to H2S
 Conc (ug) x 1000
 Q x Duration

ppb.mw
 24.45

T Corrected, no Blank correction

Lab/SampleID	Client	Date of Collection	Abs	Duration (min)	DF	Conc (ug/ml) of sulfide	Conc (ug) of sulfide	Conc (ug) of H2S	Conc (ppb) of H2S	Conc (ug/m3) of H2S
30A	102777	9/16/2009	0.093	18720	1.00	0.07198606	0.75585363	0.803274194	0.421	0.586
31A	102778	9/16/2009	0.054	18720	1.00	0.034193093	0.359027473	0.381552053	0.200	0.278
32A	102779	9/16/2009	0.044	18720	1.00	0.024502588	0.251717176	0.273418171	0.143	0.200
33A	102780	9/16/2009	0.054	18720	1.00	0.034193093	0.359027473	0.381552053	0.200	0.278
34A	102781	9/16/2009	0.072	18720	1.00	0.051636001	0.542178007	0.576193041	0.302	0.421
35A	102782	NA	0.016	20160	1.00	-0.002630824	-0.027623654	-0.0293567	-0.014	-0.020
36A	105641	9/16/2009	0.091	18720	1.00	0.070047959	0.73550357	0.781647418	0.409	0.570
37A	105642	9/16/2009	0.089	18720	1.00	0.068108858	0.715153511	0.760020641	0.398	0.555
38A	105643	9/16/2009	0.083	18720	1.00	0.062295556	0.654103333	0.685140312	0.364	0.507
39A	105644	9/16/2009	0.054	18720	1.00	0.034193093	0.359027473	0.381552053	0.200	0.278
40A	105645	9/16/2009	0.15	18720	1.00	0.127221935	1.33583032	1.419637324	0.743	0.278
41A	105646	NA	0.015	20160	1.00	-0.003599875	-0.037798684	-0.040170088	-0.020	1.086
42A	105048	9/17/2009	0.11	20160	1.00	0.088455918	0.928829134	0.987101794	0.480	-0.027
43A	105049	9/17/2009	0.080	20160	1.00	0.059388404	0.623578244	0.662700147	0.332	0.669
44A	105050	9/17/2009	0.062	20160	1.00	0.041945496	0.44042771	0.468059159	0.228	0.449
45A	105051	9/17/2009	0.164	20160	1.00	0.140788641	1.478280735	1.571024759	0.764	0.317
45AA	105052	105051 Lab Duplicate	0.174	20160	1.00	0.150479146	1.580031032	1.679158641	0.816	1.065
46A	105052	105052 Lab Duplicate	0.136	20160	1.00	0.113655229	1.193379905	1.268249888	0.617	1.138
46AA	105053	105052 Lab Duplicate	0.135	20160	1.00	0.112686179	1.183204875	1.2574365	0.611	0.860
47A	105053	NA	0.016	20160	1.00	-0.002630824	-0.027623654	-0.0293567	-0.014	0.852
48A	Method Blank	NA	0.013	20160	1.00	-0.018135631	-0.190424128	-0.202370912	#DNV/0!	-0.020
488	Method Blank	NA	0.011	20160	1.00	-0.018135631	-0.190424128	-0.202370912	-0.030	-0.042
49A	CCV	NA	0.309	20160	1.00	-0.005537976	-0.058148743	-0.061796865	-0.041	-0.057
						-0.007476076	-0.078498802	-0.083423641	1.526	2.127
						0.281300956	2.953660035	3.138966053		

QC Duration
 20160

CCV Spike Amt
 0.286

Verified: HH and AW on 9/4/09

Low Point:DF RL(ug/ml)XVol (ml)

RL (ug sulfide) *MW H2S
MW Sulfide

Q includes conversion from Sulfide to H2S
RL (ug) x 1000
Q x Duration

dpdx mw
24.45

Calibration Date
9/25/2009 Linear Regression

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	Slope	Y-int	R2
0.072	0.752	0.798966249	0.42	0.583	0.80374194	0.586282369		0	0	1.031938024	0.018714848	0.99987045
0.072	0.752	0.798966249	0.42	0.583	ND	ND		0.0716	0.085			
0.072	0.752	0.798966249	0.42	0.583	ND	ND		0.143	0.17			
0.072	0.752	0.798966249	0.42	0.583	ND	ND		0.286	0.319			
0.072	0.752	0.798966249	0.39	0.541	ND	ND		0.572	0.609			
0.072	0.752	0.798966249	0.42	0.583	ND	ND		1.145	1.199			
0.072	0.752	0.798966249	0.42	0.583	ND	ND						
0.072	0.752	0.798966249	0.42	0.583	ND	ND						
0.072	0.752	0.798966249	0.42	0.583	1.419637324	1.036144743						
0.072	0.752	0.798966249	0.39	0.541	ND	ND						
0.072	0.752	0.798966249	0.39	0.541	0.987101794	0.668991003						
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	1.571024759	1.064734595						
0.072	0.752	0.798966249	0.39	0.541	1.679158641	1.138020445						
0.072	0.752	0.798966249	0.39	0.541	1.268249888	0.859534214						
0.072	0.752	0.798966249	0.39	0.541	1.2574365	0.852205629						
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	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	3.138966053	2.127379425	%Rec					

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	Slope	Y-int	R2
0.072	0.752	0.798966249	0.42	0.583	0.80374194	0.586282369		0	0	1.031938024	0.018714848	0.99987045
0.072	0.752	0.798966249	0.42	0.583	ND	ND		0.0716	0.085			
0.072	0.752	0.798966249	0.42	0.583	ND	ND		0.143	0.17			
0.072	0.752	0.798966249	0.42	0.583	ND	ND		0.286	0.319			
0.072	0.752	0.798966249	0.39	0.541	ND	ND		0.572	0.609			
0.072	0.752	0.798966249	0.42	0.583	ND	ND		1.145	1.199			
0.072	0.752	0.798966249	0.42	0.583	ND	ND						
0.072	0.752	0.798966249	0.42	0.583	1.419637324	1.036144743						
0.072	0.752	0.798966249	0.39	0.541	ND	ND						
0.072	0.752	0.798966249	0.39	0.541	0.987101794	0.668991003						
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	1.571024759	1.064734595						
0.072	0.752	0.798966249	0.39	0.541	1.679158641	1.138020445						
0.072	0.752	0.798966249	0.39	0.541	1.268249888	0.859534214						
0.072	0.752	0.798966249	0.39	0.541	1.2574365	0.852205629						
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	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	3.138966053	2.127379425	%Rec					

QC Results and Raw Data

Work Order: 0909377C

Date: 9/25/09

Method: Rad 170

Analyst: M. Skidmore

Wavelength: 665nm

Standard ID	Concentration	ABS
Level 1 1858-52 - E	0.0716 µg/mL	0.085
Level 2 - D	0.143 µg/mL	0.170
Level 3 - C	0.286 µg/mL	0.319
Level 4 - B	0.572 µg/mL	0.609
Level 5 - A	1.145 µg/mL	1.199
ICV 1858-51	0.133 µg/mL	0.150


r = 0.9999
 m = 1.03
 b = 0.01871

ICV % Recovery = 104%

Fraction	Dilution	ABS	Sample ID	Sample Volume	Comments
30A	1.00	0.093	102777	10.5mL	
31A		0.054	102778		
32A		0.044	102779		
33A		0.054	102780		
34A		0.072	102781		
35A		0.016	102782		
36A		0.091	105641		
37A		0.089	105642		
38A		0.083	105643		
39A		0.054	105644		
40A		0.150	105645		
41A		0.015	105646		
42A		0.110	105048		
43A		0.080	105049		
44A		0.062	105050		
45A		0.164	105051		
45AA		0.174	105051		
46A		0.136	105052		
46AA		0.135	105052		
47A		0.016	105053		
BIK		0.013	N/A		
BIK	✓	0.011	↓	↓	

Procedure:

Continued
 Page
 15 →


 Signed

9/28/09
 Date

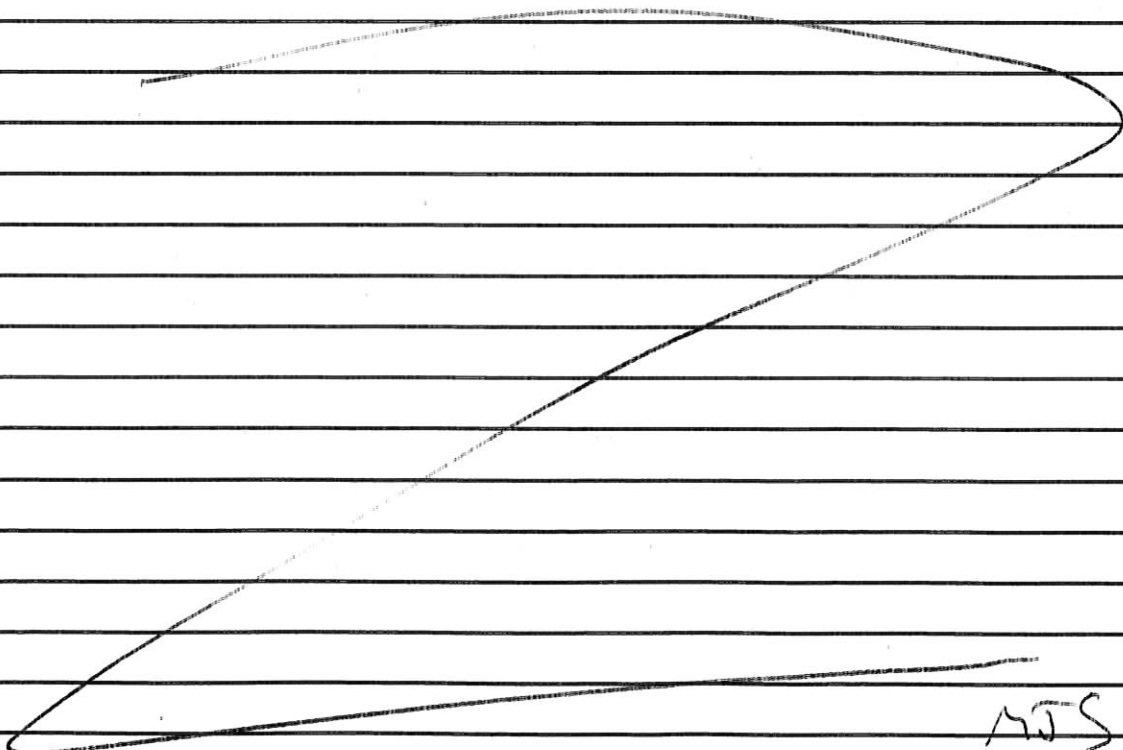
Standard ID: 1858-51
Project: H₂S LCS/ICV Rad 170
Analyst: M. Skidmore
Preparation Date: 9/25/09
Expiration Date: 9/25/09

Solvent: D.I. H₂O
Solvent Lot #: N/A

Procedure/Comments: 25 mL of H₂S gas (1476-835, 1000ppm)
was placed into a 1 liter tedlar bag. 1.0 mL
of the gas was injected into 10 mL of D.I. H₂O
in a 40 mL VOA vial. The vial also contained
a Rad 170 cartridge absorbant. The vial
was gently shaken for 2 hours.

Cartridge Lot: 09075.

0.5 mL of ferric chloride-amine solution (1858-03)
was added to vial and recapped immediately.
The solution was allowed to stand for
30 minutes and then the absorbance
was measured at 665 nm.



MJS
9/29/09

Page 51 M. Skidmore 9/29/09
Signed Date

Reviewed

Date

Rev. 8/97

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1858

Standard ID: 1858-52
Project: Calibration Solution Rad 170
Analyst: M. Skidmore
Preparation Date: 9/25/09
Expiration Date: 9/25/09

Solvent: D.I. H₂O
Solvent Lot #: N/A

Procedure/Comments:

Solution A: 2 mL of Code Rad 171 (1476-984, exp 8/6/10) (located in ER1B) with 98 mL of D.I. H₂O = 1.145 µg/mL

Solution B: 2.5 mL of Solution A with 2.5 mL of D.I. H₂O = 0.572 µg/mL

Solution C: 1.25 mL of Solution A with 3.75 mL of D.I. H₂O = 0.286 µg/mL

Solution D: 0.625 mL of Solution A with 4.375 mL of D.I. H₂O = 0.143 µg/mL

Solution E: 0.375 mL of Solution A with 5.625 mL of D.I. H₂O = 0.0716 µg/mL

MJS 9/25/09

* Each solution was measured immediately after it was made. The absorbance diminishes rapidly with time. Solution A is stable in the beaker it was in, but was not stable once it was aliquotted into a cuvette. This solution (A) should be measured immediately after its put into the cuvette. All cuvettes were parafilmmed immediately after the ~~S~~MJS 9/24/09

MJS
9/28/09

Shipping/ Receiving Documents

**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 #: 0909377C
of pages (Including Cover): 4

10/8/2009

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.

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.
102777	AIR/PASSIVE	H ₂ S ANALYSIS	9/3/09	9/16/09
102778				
102779				
102780				
102781				
102782				0
105641				9/16/09
105642				
105643				
105644				
105645				
105646				0

fedex
GUSTODY SEAL INTACT?
Y N NONE TEMP 8.4°C
 Other

Special Instructions:

- Standard turn around time
- Fax results 781-247-4305
- RETURN SAMPLES
- Additional report recipient MFRAGALA@EH&EINC.COM
- Rush by _____ date/time
- Electronic transfer - datacoordinator@ehinc.com

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

Relinquished by: [Signature] of Environmental Health & Engineering, Inc. Date: 9/17/09
 Received by: [Signature] of (company name) ATI 0850 Date: 9/18/09
 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: _____

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.	SRP
12A 43A 44A 45A 46A 47A 105048	AIR/PASSIVE	H ₂ S ANALYSIS	9/3/09	9/17/09	
105049	↓	↓	↓	↓	
105050	↓	↓	↓	↓	
105051	↓	↓	↓	↓	
105052	↓	↓	↓	↓	
105053	↓	↓	↓	0	

Special Instructions:

- Standard turn around time
- Fax results 781-247-4305
- RETURN SAMPLES
- Additional report recipient M.FRAGOLA@EHEINC.COM
- Rush by _____ date/time
- Other _____
- Electronic transfer - datacoordinator@ehinc.com

CUSTODY SEAL INTACT?
Y N NONE TEMP 8.72

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

Relinquished by: [Signature] of Environmental Health & Engineering, Inc. Date: 9/17/09
 Received by: [Signature] of (company name) ATI 0250 Date: 9/18/09
 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: _____

SAMPLE RECEIPT SUMMARY

WORKORDER 0909377C

Client	Phone	Date Promised: 09/29/09 11:59 pm
Mr. Taeko Minegishi	800-825-5343	Date Completed: 10/8/09
Environmental Health & Engineering, Inc.	Fax	Date Received: 9/18/09
117 Fourth Avenue	781-247-4305	PO#: 16512
Needham, MA 02494		Project#: 16512
Sales Rep: TL		Total \$: \$ 990.00
		Logged By: MW

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Amount\$</u>
30A	102777	ATL Applications	9/16/2009	\$50.00
31A	102778	ATL Applications	9/16/2009	\$50.00
32A	102779	ATL Applications	9/16/2009	\$50.00
33A	102780	ATL Applications	9/16/2009	\$50.00
34A	102781	ATL Applications	9/16/2009	\$50.00
35A	102782	ATL Applications	NA	\$50.00
36A	105641	ATL Applications	9/16/2009	\$50.00
37A	105642	ATL Applications	9/16/2009	\$50.00
38A	105643	ATL Applications	9/16/2009	\$50.00
39A	105644	ATL Applications	9/16/2009	\$50.00
40A	105645	ATL Applications	9/16/2009	\$50.00
41A	105646	ATL Applications	NA	\$50.00
42A	105048	ATL Applications	9/17/2009	\$50.00
43A	105049	ATL Applications	9/17/2009	\$50.00
44A	105050	ATL Applications	9/17/2009	\$50.00
45A	105051	ATL Applications	9/17/2009	\$50.00
45AA	105051 Lab Duplicate	ATL Applications	9/17/2009	\$0.00
46A	105052	ATL Applications	9/17/2009	\$50.00
46AA	105052 Lab Duplicate	ATL Applications	9/17/2009	\$0.00
47A	105053	ATL Applications	NA	\$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 #59 H2S-Radiello 170

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

SAMPLE RECEIPT SUMMARY Continued

Client	Phone	Date Promised: 09/29/09 11:59 pm
Mr. Taeko Minegishi	800-825-5343	Date Completed: 10/8/09
Environmental Health & Engineering, Inc.	Fax	Date Received: 9/18/09
117 Fourth Avenue	781-247-4305	PO#: 16512
Needham, MA 02494		Project#: 16512
Sales Rep: TL		Total \$: \$ 990.00
		Logged By: MW

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Amount\$</u>
48A	Method Blank	ATL Applications	NA	\$0.00
48B	Method Blank	ATL Applications	NA	\$0.00
49A	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 #59 H2S-Radiello 170

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

Sample Discrepancy Report

Identification

Initiated By: MW Project ID: 13297 PM: AS Date: 9/18/2009 Discrepancy Type: 1. 2. 3.

Workorder(s) affected: 0909377 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 H₂O 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 8.4C

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: AS Person notified: _____ Date: 9/22/2009

Waiting for Client Reply

Comments: _____

Notify Lab Name: _____ Date: _____ Notify Receiving:

Additional notifications attached.

Additional Comments:

Other Records

Method : ATL Application #59 H2S-Radiello 170

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

DATA REVIEW CHECKLIST

Work Order #:

0909377C

- A₁ A₂ 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 (N₂ 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: 45A + 46A

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: Km 9/30/09	10/7/09 on 10/8/09 10/8/09	
A ₂ :	T:		