

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0908456A

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Completed by:

Kara McKiernan

(Signature)

Kara McKiernan/ Document Control

(Print Name & Title)

09/17/09

(Date)

WORK ORDER #: 0908456A

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		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>
01A	99917	ATL Applications
02A	99918	ATL Applications
03A	99919	ATL Applications
03AA	99919 Lab Duplicate	ATL Applications
04A	99920	ATL Applications
05A	99921	ATL Applications
06A	99922	ATL Applications
07A	100012	ATL Applications
08A	100013	ATL Applications
09A	100014	ATL Applications
10A	100015	ATL Applications
11A	100016	ATL Applications
11AA	100016 Lab Duplicate	ATL Applications
12A	100522	ATL Applications
13A	100523	ATL Applications
14A	100524	ATL Applications
15A	100525	ATL Applications

Continued on next page

**LABORATORY NARRATIVE
Hydrogen Sulfide by Radiello 170
Environmental Health & Engineering, Inc.
Workorder# 0908456A**

Twenty Radiello 170 (H₂S) samples were received on August 21, 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.

Sample collection dates were not provided on the Chain of Custody for all samples. The client was contacted and collection 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 21000 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

Four 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.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.

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)
99917	0908456A-01A	8/18/2009	8/25/2009	1.00	0.80	0.52	1.3	0.86
99918	0908456A-02A	8/18/2009	8/25/2009	1.00	0.80	0.52	1.4	0.90
99919	0908456A-03A	8/18/2009	8/25/2009	1.00	0.80	0.52	4.0	2.6
99919 Duplicate	0908456A-034A	8/18/2009	8/25/2009	1.00	0.80	0.52	4.0	2.6
99920	0908456A-04A	8/18/2009	8/25/2009	1.00	0.80	0.52	1.3	0.83
99921	0908456A-05A	8/18/2009	8/25/2009	1.00	0.80	0.52	1.4	0.92
99922	0908456A-06A	8/18/2009	8/25/2009	1.00	0.80	0.52	ND	ND
100012	0908456A-07A	8/19/2009	8/25/2009	1.00	0.80	0.51	1.2	0.74
100013	0908456A-08A	8/19/2009	8/25/2009	1.00	0.80	0.51	1.1	0.72
100014	0908456A-09A	8/19/2009	8/25/2009	1.00	0.80	0.51	1.0	0.65
100015	0908456A-10A	8/19/2009	8/25/2009	1.00	0.80	0.51	0.85	0.54
100016	0908456A-11A	8/19/2009	8/25/2009	1.00	0.80	0.51	4.5	2.9
100016 Duplicate	0908456A-11AA	8/19/2009	8/25/2009	1.00	0.80	0.51	4.5	2.9
100522	0908456A-12A	8/18/2009	8/25/2009	1.00	0.80	0.54	1.4	0.95
100523	0908456A-13A	8/18/2009	8/25/2009	1.00	0.80	0.54	1.7	1.1
100524	0908456A-14A	8/18/2009	8/25/2009	1.00	0.80	0.54	3.3	2.3
100525	0908456A-15A	8/18/2009	8/25/2009	1.00	0.80	0.54	1.2	0.81
100526	0908456A-16A	8/18/2009	8/25/2009	1.00	0.80	0.54	1.3	0.88
100527	0908456A-17A	8/18/2009	8/25/2009	1.00	0.80	0.52	ND	ND
100856	0908456A-18A	8/18/2009	8/25/2009	1.00	0.80	0.63	ND	ND
100857	0908456A-19A	8/18/2009	8/25/2009	1.00	0.80	0.63	ND	ND
100858	0908456A-20A	8/18/2009	8/25/2009	1.00	0.80	0.63	4.5	3.5
Method Blank	0908456A-21A	NA	8/25/2009	1.00	0.80	0.52	ND	ND
Method Blank	0908456A-21B	NA	8/25/2009	1.00	0.80	0.52	ND	ND
CCV	0908456A-22A	NA	8/25/2009	1.00	0.80	0.52	%Rec 93	

COMMENTS: 1. NA=Not Applicable
 2. ND=Not Detected
 3. Exposure time of 21000 minutes was assumed for the QC samples and samples 99922 and 100527.
 4. Background subtraction not performed.

Hydrogen Sulfide Radicleo Calculation Worksheet

Workorder #: 0908456A

0.096 Typically 0.096 for H2S

Sampling Rate (mg/pph-min)

25 Typically 25

Sampling T (deg C)

10.5 Typically 10.5 for H2S

Volume (ml)

8/25/2009

Date of Analysis:

Takes into account temp

Corrected Q

0.096

(Abs-Y-int)DF

Slope

Conc (ug sulfide) * MW H2S

MW Sulfide

Q includes conversion from Sulfide to H2S

Conc (ug) x 1000

Q x Duration

pphm mW

74.45

T Corrected, no Blank correction

LabsSampleID	Client	Date of Collection	Abs	Duration (min)	DF	Conc (ug/ml) of sulfide	Conc (ug) of sulfide	Conc (ug) of H2S	Conc (ppm) of H2S	Conc (ug/m3) of H2S
01A	98917	8/18/2009	0.148	21130	1.00	0.119431127	1.254026831	1.332701666	0.618	0.963
02A	98918	8/18/2009	0.154	21130	1.00	0.125173989	1.314326887	1.396784813	0.648	0.983
03A	98919	8/18/2009	0.401	21130	1.00	0.361588495	3.796679199	4.034874352	1.872	2.609
03AA	98919 Duplicate	8/18/2009	0.402	21130	1.00	0.362545639	3.806729208	4.045554876	1.877	2.616
04A	98920	8/18/2009	0.144	21130	1.00	0.115602552	1.213826793	1.289979569	0.598	0.834
05A	98921	8/18/2009	0.157	21130	1.00	0.12804542	1.344476915	1.428826386	0.663	0.924
06A	98922	8/18/2009	0.024	21525	1.00	0.000745302	0.00782567	0.008316635	0.004	0.005
07A	100012	8/19/2009	0.133	21525	1.00	0.105073971	1.10327669	1.1724938	0.534	0.744
08A	100013	8/19/2009	0.129	21525	1.00	0.101245396	1.063076653	1.129771702	0.514	0.717
09A	100014	8/19/2009	0.119	21525	1.00	0.091673958	0.962576559	1.022966458	0.466	0.649
10A	100015	8/19/2009	0.103	21525	1.00	0.076359658	0.801776409	0.852078056	0.388	0.541
11A	100016	8/19/2009	0.449	21525	1.00	0.407313395	4.279079648	4.547539525	2.071	2.887
11AA	100016 Duplicate	8/19/2009	0.445	21525	1.00	0.40370282	4.238879611	4.504817427	2.051	2.859
12A	100522	8/18/2009	0.154	20125	1.00	0.125173989	1.314326887	1.396784813	0.680	0.948
13A	100523	8/18/2009	0.179	20125	1.00	0.149102583	1.565577121	1.663797924	0.810	1.130
14A	100524	8/18/2009	0.336	20125	1.00	0.299374151	3.14342859	3.340640262	1.627	2.268
15A	100525	8/18/2009	0.135	20125	1.00	0.106988258	1.123376709	1.193864849	0.581	0.811
16A	100526	8/18/2009	0.145	20125	1.00	0.116559695	1.223876803	1.300660093	0.633	0.883
17A	100527	8/18/2009	0.024	21525	1.00	0.000745302	0.00782567	0.008316635	0.004	0.005
18A	100856	8/18/2009	0.095	17280	1.00	0.068702508	0.721376335	0.766633871	0.435	0.606
19A	100857	8/18/2009	0.075	17280	1.00	0.0495559633	0.520376147	0.553023882	0.314	0.437
20A	100858	8/18/2009	0.44	17280	1.00	0.389917101	4.1898629564	4.451414805	2.525	3.520
21A	Method Blank	NA	0.018	21525	1.00	-0.004997561	-0.052474386	-0.055766512	-0.025	-0.035
21B	Method Blank	NA	0.016	21525	1.00	-0.006911848	-0.072574405	-0.077122561	-0.035	-0.049
22A	CCV	NA	0.58	21525	1.00	0.532917226	5.595630874	5.946888227	2.708	3.775

QC Duration
21525

CCV Spike Amt
0.572

MW Sulfide Q x Duration DOBox mw 24.45

Q includes correction from Sulfide to H2S

RL(ug/ml) of sulfide	RL (ug) of sulfide	Conc (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
0.072	0.752	0.798966249	0.4	0.517	1.332701666	0.861752014		0	0	1.044775146
0.072	0.752	0.798966249	0.4	0.517	1.396784813	0.903189481		0.0716	0.088	0.023221327
0.072	0.752	0.798966249	0.4	0.517	4.034874352	2.609031854		0.143	0.169	0.999419909
0.072	0.752	0.798966249	0.4	0.517	4.045554876	2.615938098		0.286	0.328	
0.072	0.752	0.798966249	0.4	0.517	1.289979569	0.834127036		0.572	0.637	
0.072	0.752	0.798966249	0.4	0.507	1.428826386	0.973908214		1.145	1.211	
0.072	0.752	0.798966249	0.4	0.507	1.1724938	0.74424557				
0.072	0.752	0.798966249	0.4	0.507	1.129771702	0.717127531				
0.072	0.752	0.798966249	0.4	0.507	1.022966458	0.649332435				
0.072	0.752	0.798966249	0.4	0.507	0.852078066	0.540860281				
0.072	0.752	0.798966249	0.4	0.507	4.547539525	2.886570612				
0.072	0.752	0.798966249	0.4	0.507	4.504817427	2.859452573				
0.072	0.752	0.798966249	0.4	0.542	1.396784813	0.948292856				
0.072	0.752	0.798966249	0.4	0.542	1.663797924	1.129571048				
0.072	0.752	0.798966249	0.4	0.542	3.340640262	2.267998095				
0.072	0.752	0.798966249	0.4	0.542	1.193854849	0.81052143				
0.072	0.752	0.798966249	0.4	0.507	1.300660093	0.883032707				
0.072	0.752	0.798966249	0.5	0.632	ND	ND				
0.072	0.752	0.798966249	0.5	0.632	ND	ND				
0.072	0.752	0.798966249	0.5	0.632	4.451414805	3.519680088				
0.072	0.752	0.798966249	0.4	0.507	ND	ND				
0.072	0.752	0.798966249	0.4	0.507	5.946888227	3.774686373	%Rec			
0.072	0.752	0.798966249	0.4	0.507	ND	ND				

T Corrected, no Blank correction
 Result (ug) H2S
 Result (ug/m3) H2S
 %Rec

Calibration Date 8/25/2009 Linear Regression
 Slope 1.044775146
 Y-int 0.023221327
 R2 0.999419909

QC Results and Raw Data

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908456A/B

Date: 8/25/09
 Analyst: A. Toyama

Method: Rad 170
 Wavelength: 665
 Prep. Notes:

Standard ID	Concentration	ABS
1858-20-E	0.0716 ug/ml	0.088
-D	0.143	0.169
-C	0.286	0.328
-B	0.572	0.637
-A	1.145	1.211

r = 0.99942
 m = 1.044775
 b = 0.023221

Fraction	Dilution	ABS	Sample ID	Sample Volume
01A	1.00	0.148	99917	10.5ml
02A		0.154	18	
03A		0.401	19	
04A		0.144	20	
05A		0.157	21	
06A		0.024	22	
07A		0.133	100012	
08A		0.129	013	
09A		0.119	014	
10A		0.103	015	
11A		0.449	016	
12A		0.154	522	
13A		0.179	523	
14A		0.336	524	
15A		0.135	525	

Notes: Code 170 Lot 09075 Exp 04/010 used for Blanks. Sample lots unknown

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 6908456A1B

Date: 8/25/09
 Analyst: A. Toyama

Method: Rad. 170
 Wavelength: 665
 Prep. Notes: cont. from page 24

Standard ID	Concentration <small>8/26/09 AT</small>	ABS
1858-20.. E	0.0116-0.776 $\mu\text{g}/\text{mL}$	0.088
D	0.143	0.169
C	0.286	0.328
B	0.572	0.637
A	1.145	1.211

r = _____
 m = _____
 b = _____

Fraction	Dilution	ABS	Sample ID	Sample Volume
16A	1.00	0.145	100526	10.5 mL
17A		0.024	527	
18A		0.095	856	
19A		0.075	857	
20A		0.440	858	
03AA		0.402	99919	
11AA		0.445	100016	
BIK		0.019	NA	
BIK		0.016		
<small>8/26/09 AT</small> LCS/CCV		0.580		

8/26/09
AT

Notes: LCS/CCV prepared at 0.572 $\mu\text{g}/\text{mL}$

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1858

Standard ID: 1858-18

Project: Ferric chloride ~~amine~~ solution Act RAD170

Solvent: DI H₂O

Analyst: A. Toyama

Solvent Lot #: NA

Preparation Date: 8/25/09

Expiration Date: 8/25/09

Procedure/Comments: Dissolve 25 g of ferric chloride hexahydrate (Located ER2C Lot 73297 MS) in ¹⁰⁰~~25~~ mL of DI H₂O.
_{3/24/09 Act}

8/24/09
Act

[Signature]
Signed

8/25/09
Date

[Signature]
Reviewed

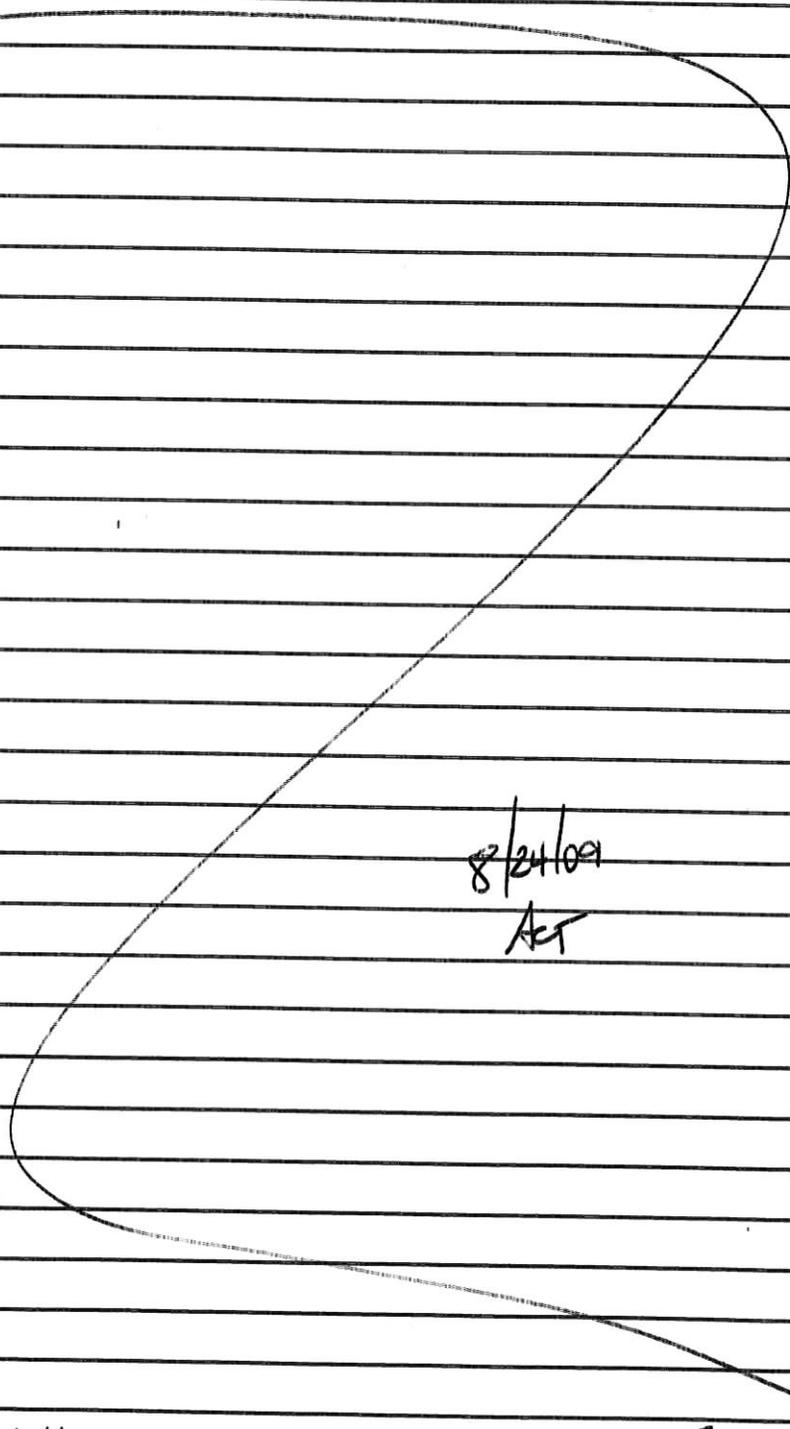
8/25/09
Date

Rev. 8/97

Standard ID: 1858-19
Project: Ferric Chloride - amine
Analyst: A. Toyama
Preparation Date: 8/25/09
Expiration Date: 8/25/09

Solvent: DI H₂O
Solvent Lot #: NA

Procedure/Comments: Mix 10 mL of ferric chloride solution with 50 mL of amine solution.



8/24/09
AT

A. Toyama
Signed

8/25/09
Date

[Signature]
Reviewed

8/25/09
Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1858

Standard ID: 1858-20
Project: Calibration Solution RAD 170
Analyst: A. Toyama
Preparation Date: 8/25/09
Expiration Date: 8/25/09

Solvent: DI H₂O
Solvent Lot #: NA

Procedure/Comments: _____

Solution A: 2 mL of Code RAD 171 (1476-984, Exp 8/6/10, Located ER13) with 98 mL DI H₂O = 1.145 $\mu\text{g}/\text{mL}$ sulfide ions

Solution B: 25 mL of Solution A with 25 mL of DI H₂O = 0.572 $\mu\text{g}/\text{mL}$

Solution C: 1.25 mL of Solution A with 3.75 mL of DI H₂O = 0.286 $\mu\text{g}/\text{mL}$

Solution D: 0.625 mL of Solution A with 4.375 mL of DI H₂O = 0.143 $\mu\text{g}/\text{mL}$

Solution E: 0.375 mL of Solution A with 5.625 mL of DI H₂O = 0.0716 $\mu\text{g}/\text{mL}$
(remove 1.0 mL of final solution) 8/25/09
AT

8/24/09
AT

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 #: 0908456A
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.

In accordance with your company's contract, this account is required to have a PO that is fully executed by both parties which also covers the cost of the workorder before any data can be released. Please ensure that you have given all appropriate information to our Project Manager so that there will be no delay in reporting of the data you are requesting.

The following discrepancies have been observed:

Samples were not received at the recommended temperature (4 ± 2 °C). ATL will proceed with the analysis unless otherwise notified.

Samples were received without documentation regarding collection dates on the Chain of Custody. The sampling dates that you have provided by telephone/fax/e-mail will be used to determine the extent of hold time.

Your prompt response is appreciated.

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

0908456

TO: AIR TORNS

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.	
01A 99917	AIR/PASSIVE	H ₂ S ANALYSIS	10 MIN 14 DAYS 16 HOURS 20 MIN	
02A 99918				
03A 99919				
04A 99920				
05A 99921				
06A 99922				φ
07A 100012				14 DAYS 22 HOURS 45 MIN
08A 100013				
09A 100014				
10A 100015				
11A 100016				
12A 100522				13 DAYS 23 HOURS 25 MIN
13A 100523				
14A 100524				
15A 100525				
16A 100526				

Special Instructions:

- Standard turn around time
- Rush by _____ date/time
- Fax results 781-247-4305
- RETURN SAMPLES
- Additional report recipient mfragala@ehenc.com
- Electronic transfer - datacoordinator@ehenc.com
- Other _____

Index 8724 23329291
ehenc.com
CUSTOMER SEAL INTACT?
NON-TEMP 8°C

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

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

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 18A 100527 100856 100220	AIR/PASSIVE	H ₂ S ANALYSIS	13 DAYS 23 HOURS 5 MIN 12 DAYS
19A 100857			
20A 100858			
21A 100859			
22A 100860			
23A 100861			∅
24A 100182			15 D 3 H 47 MIN
25A 100183			
26A 100185			
27A 100186			
28A 100343			12 D 14 MIN
29A 100344			
30A 100345			
31A 100346			
32A 100347			

Special Instructions:

- Standard turn around time
- Fax results 781-247-4305
- RETURN SAMPLES
- Additional report recipient mfraga@ehunc.com
- Rush by _____ date/time
- Other _____
- Electronic transfer - datacoord

Fed ex 8704 2332 7291
CUSTODY SEAL INTACT?
Y N (NONE TEMP 14 8°C)

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

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

SAMPLE RECEIPT SUMMARY

WORKORDER 0908456A

Client	Phone	Date Promised: 09/01/09 11:59 pm
Mr. Taeko Minegishi	800-825-5343	Date Completed: 9/16/09
Environmental Health & Engineering, Inc.	Fax	Date Received: 8/21/09
117 Fourth Avenue	781-247-4305	PO#: 16512
Needham, MA 02494		Project#: 16512
Sales Rep: TL		Total \$: \$ 1,100.00
		Logged By: MW

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Amount\$</u>
01A	99917	ATL Applications	8/18/2009	\$50.00
02A	99918	ATL Applications	8/18/2009	\$50.00
03A	99919	ATL Applications	8/18/2009	\$50.00
03AA	99919 Lab Duplicate	ATL Applications	8/18/2009	\$0.00
04A	99920	ATL Applications	8/18/2009	\$50.00
05A	99921	ATL Applications	8/18/2009	\$50.00
06A	99922	ATL Applications	8/18/2009	\$50.00
07A	100012	ATL Applications	8/19/2009	\$50.00
08A	100013	ATL Applications	8/19/2009	\$50.00
09A	100014	ATL Applications	8/19/2009	\$50.00
10A	100015	ATL Applications	8/19/2009	\$50.00
11A	100016	ATL Applications	8/19/2009	\$50.00
11AA	100016 Lab Duplicate	ATL Applications	8/19/2009	\$0.00
12A	100522	ATL Applications	8/18/2009	\$50.00
13A	100523	ATL Applications	8/18/2009	\$50.00
14A	100524	ATL Applications	8/18/2009	\$50.00
15A	100525	ATL Applications	8/18/2009	\$50.00
16A	100526	ATL Applications	8/18/2009	\$50.00
17A	100527	ATL Applications	8/18/2009	\$50.00
18A	100856	ATL Applications	8/18/2009	\$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 #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: 09/01/09 11:59 pm
Mr. Taeko Minegishi	800-825-5343	Date Completed: 9/16/09
Environmental Health & Engineering, Inc.	Fax	Date Received: 8/21/09
117 Fourth Avenue	781-247-4305	PO#: 16512
Needham, MA 02494		Project#: 16512
Sales Rep: TL		Total \$: \$ 1,100.00
		Logged By: MW

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Amount\$</u>
19A	100857	ATL Applications	8/18/2009	\$50.00
20A	100858	ATL Applications	8/18/2009	\$50.00
21A	Method Blank	ATL Applications	NA	\$0.00
21B	Method Blank	ATL Applications	NA	\$0.00
22A	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 #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: BL Date: 8/21/2009 Discrepancy Type: 1. 2. 3.

Workorder(s) affected: 0908456 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 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. <input type="checkbox"/> Tedlar Bag found to be leaking at the time of analysis; sample <input type="checkbox"/> can / <input type="checkbox"/> cannot (check one) be analyzed. | 3.6. <input type="checkbox"/> Sample loss due to instrument malfunction / broken glassware. |
| 3.2. <input type="checkbox"/> Tedlar Bag found to be flat/low volume; sample cannot be analyzed. | 3.7. <input type="checkbox"/> Low/high surrogate recoveries noted in QC/sample(s) for extractable samples. |
| 3.3. <input type="checkbox"/> Sulfur samples received with insufficient time to analyze prior to expiration. | 3.8. <input type="checkbox"/> Reporting Limit was raised. |
| 3.4. <input type="checkbox"/> Canister found to be leaking at the time of analysis. | 3.9. <input type="checkbox"/> Post weight > Pre weight in field/lab Blank for PM10/TSP samples. |
| 3.5. <input type="checkbox"/> VOST tube saturated; bag dilution necessary. | 3.10. <input type="checkbox"/> 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 Complete

Section 2 Complete

Section 3

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



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 #:

0908456A

- 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

- A
 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. 11A, 03A

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: <u>by 9/16/09</u>	<u>Mr 9/16/09</u>	_____
A ₂ : _____	T: _____	_____	_____