@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 1010488

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Completed by:

Kara McKiernan	Kara McKiernan/ Document Control	11/02/10
(Signature)	(Print Name & Title)	(Date)

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 1010488

Work Order Summary

CLIENT:	Mr. Brian Baker 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. #**	17402
FAX:	781-247-4305	**PROJECT #**	17402
DATE RECEIVED:	10/22/2010	**CONTACT:**	Ausha Scott
DATE COMPLETED:	11/01/2010		

FRACTION #	NAME	TEST
01A	118132	ATL Applications
02A	118133	ATL Applications
03A	118134	ATL Applications
04A	118135	ATL Applications
05A	118136	ATL Applications
06A	118137	ATL Applications
07A	118054	ATL Applications
08A	118055	ATL Applications
09A	118056	ATL Applications
10A	118057	ATL Applications
11A	118058	ATL Applications
12A	118064	ATL Applications
12AA	118064 Lab Duplicate	ATL Applications
13A	Lab Blank	ATL Applications
13B	Lab Blank	ATL Applications
14A	LCS	ATL Applications

CERTIFIED BY: Linda A. Frumarx

Laboratory Director

DATE: 11/01/10

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# 1010488

Twelve Radiello 170 (H2S) samples were received on October 22, 2010. 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 20175 minutes was used for the QC samples and trip blanks.

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 I.D.	Lab Sample I.D.	Collection Date	Analysis Date	Dilution Factor	Reporting Limit (ug)	Reporting Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
118132	1010488-01A	10/21/2010	10/26/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
118133	1010488-02A	10/21/2010	10/26/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
118134	1010488-03A	10/21/2010	10/26/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
118135	1010488-04A	10/21/2010	10/26/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
118136	1010488-05A	10/21/2010	10/26/2010	1.00	**0.80**	**0.55**	**ND**	**ND**
118137	1010488-06A	10/7/2010	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
118054	1010488-07A	10/21/2010	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
118055	1010488-08A	10/21/2010	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
118056	1010488-09A	10/21/2010	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
118057	1010488-10A	10/21/2010	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
118058	1010488-11A	10/7/2010	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
118064	1010488-12A	10/21/2010	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
118064 Lab Duplicate	1010488-12AA	10/21/2010	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
Method Blank	1010488-13A	NA	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
Method Blank	1010488-13B	NA	10/26/2010	1.00	**0.80**	**0.54**	**ND**	**ND**
							%Rec	
LCS	1010488-14A	NA	10/26/2010	1.00	**0.80**	**0.54**	**84**	

COMMENTS: 1. NA=Not Applicable
2. ND=Not Detected
3. Exposure time of 20175 minutes was assumed for the QC samples.
4. Background subtraction not performed.

Hydrogen Sulfide Radiello Calculation Worksheet

Workorder #:	1010488	
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:	10/26/2010	
Corrected Q	0.096	Takes into account temp

Q includes conversion from Sulfide to H2S

Formulas: Conc (ug/mL) of sulfide = (Abs-Y-int)xDF / Slope; Conc (ug) of sulfide = Conc(ug/mL)xVol (mL); Conc (ug) of H2S = conc (ug sulfide) *MW H2S / MW Sulfide; Conc (ppb) of H2S = Conc (ug) x 1000 / Q x Duration; Conc (ug/m3) of H2S = ppbx mw / 24.45

T Corrected, no Blank correction

LabSampleID	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
01A	118132	10/21/2010	0.030	19917	1.00	-0.006070168	-0.063736768	-0.06773547	-0.033	-0.046
02A	118133	10/21/2010	0.033	19917	1.00	-0.00326023	-0.034232414	-0.036380079	-0.018	-0.025
03A	118134	10/21/2010	0.030	19917	1.00	-0.006070168	-0.063736768	-0.06773547	-0.033	-0.046
04A	118135	10/21/2010	0.056	19917	1.00	0.018282632	0.19196764	0.20401126	0.100	0.140
05A	118136	10/21/2010	0.043	19917	1.00	0.006106232	0.064115436	0.068137895	0.034	0.047
06A	118137	10/7/2010	0.026	20175	1.00	-0.009816753	-0.103075908	-0.10954266	-0.053	-0.074
07A	118054	10/21/2010	0.03	20175	1.00	-0.006070168	-0.063736768	-0.06773547	-0.033	-0.046
08A	118055	10/21/2010	0.027	20175	1.00	-0.008880107	-0.093241123	-0.099090862	-0.048	-0.067
09A	118056	10/21/2010	0.035	20175	1.00	-0.001386937	-0.014562844	-0.015476484	-0.008	-0.010
10A	118057	10/21/2010	0.033	20175	1.00	-0.00326023	-0.034232414	-0.036380079	-0.018	-0.025
11A	118058	10/7/2010	0.021	20175	1.00	-0.014499984	-0.152249833	-0.161801646	-0.079	-0.110
12A	118064	10/21/2010	0.024	20175	1.00	-0.011690046	-0.122745478	-0.130446254	-0.063	-0.088
12AA	118064 Lab Duplicate	10/21/2010	0.024	20175	1.00	-0.011690046	-0.122745478	-0.130446254	-0.063	-0.088
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
					1.00	-0.034169554	-0.358780316	-0.38128939	#DIV/0!	#DIV/0!
13A	Method Blank	NA	0.016	20175	1.00	-0.019183215	-0.201423757	-0.214060633	-0.104	-0.145
13B	Method Blank	NA	0.021	20175	1.00	-0.014499984	-0.152249833	-0.161801646	-0.079	-0.110
14A	LCS	NA	0.156	20175	1.00	0.111947251	1.175446133	1.249190992	0.607	0.846

QC Duration	CCV Spike Amt
20175	0.133

Verified: HH and AW on 9/4/09

Low PointxDF	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	ppbx mw / 24.45				
					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	Result (ppb) H2S	%Rec
0.072	0.752	0.798966249	0.39	0.548	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.548	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.548	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.548	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.548	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!	#DIV/0!	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	
0.072	0.752	0.798966249	0.39	0.541	ND	ND	ND	%Rec
0.072	0.752	0.798966249	0.39	0.541	1.249190992	0.845987924	0.606901143	84

Calibration Data

ug/ml of sulfide	absorbance
0	0
0.0716	0.091
0.143	0.184
0.286	0.354
0.572	0.679
1.145	1.242

Calibration Date 10/26/2010 Linear Regression

Slope	1.067639005
Y-int	0.036480749
R2	0.997754209

QC Results and Raw Data

Spectrophotometer Logbook **@Air Toxics Ltd.** **Logbook#: 1927**

Work Order: 1010294A/1010488 **Date:** 10/26/10 **Method:** Rad 170

Analyst: M. Skidmore **Wavelength:** 665nm

Standard ID	Concentration	ABS
	Sulfide (ug/mL)	
Level 1 1993-86 -E	0.0716	0.091
Level 2 -D	0.143	0.184
Level 3 -C	0.286	0.354
Level 4 -B	0.572	0.679
Level 5 -A	1.145	1.242
ICV 1993-89	0.286	0.354

r = 0.9978
m = 1.068
b = 0.0365

ICV % Recovery = 104

Fraction	Dilution	ABS	Sample ID	Sample Volume	Comments
1010294A-01A	1.00	0.092	115911	10.5mL	
-02A		0.072	115912		
-03A		0.077	115913		
-04A		0.069	115914		
-05A		0.018	115915		
-06A		0.025	115916		
1010488-01A		0.030	118132		
-02A		0.033	118133		
-03A		0.030	118134		
-04A		0.056	118135		
-05A		0.043	118136		
-06A		0.026	118137		
-07A		0.030	118054		
-08A		0.027	118055		
-09A		0.035	118056		
-10A		0.033	118057		
-11A		0.021	118058		
-12A		0.024	118064		
-12AA		0.024	118064		
1010294A 1010488 -BLK1		0.016	N/A		Lot: 10101
-BLK2		0.021			Lot: 1010148 0.133ug/mL
-LCS		0.156			

Procedure:

→ continued Page 74

1.) Add 10 mL of H_20 to sample tube, cap and vortex for 1 minute.
2.) Add 0.5 mL of Ferric Chloride-Amine solution and cap immediately.
3.) Allow color to develop for 30 minutes.
4.) Measure absorbance at 665nm.

MJS 10/26/10

Signed

10/26/10
Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-76
Project: Rad 170 Amine Solution
Analyst: MSkidmore
Preparation Date: 10/18/10
Expiration Date: 11/18/10

Solvent: HPLC H2O
Solvent Lot #: DB 270

Procedure/Comments:

Sulfuric Acid Solution:

Slowly add 6.25 mL of concentrated sulfuric acid to 2.5 mL of D.I. H_2O, and let the solution cool. (sulfuric acid lot: 014281S).

Amine Solution:

Dissolve 1.6875g of N,N-dimethyl-p-phenylendiammonium oxalate (located in ER1A; Lot: 63797PJ) in the above mentioned sulfuric acid solution. Dilute this solution to 250 mL with sulfuric acid-water 1:1 v/v. (This is roughly 120 mL H_2O + 120 mL sulfuric acid).

MJS 10/18/10

MJS 10/18/10

Signed 10/18/10 Date Reviewed 10/22/10 Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-77
Project: Ferric Chloride Solution Rad 170
Analyst: M. Skidmore
Preparation Date: 10/18/10
Expiration Date: 10/18/11

Solvent: HPLC H_2O
Solvent Lot #: DB270

Procedure/Comments: Dissolve 125 g of ferric chloride hexahydrate (located in ERAU, lot: 73297) in 50 mL of H_2O.

MJS 10/18/10

Page 77 Signed 10/18/10 Date Reviewed 10/22/10 Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-86
Project: Rad 170 Calibration Curve
Analyst: M. Sfidmore
Preparation Date: 10/26/10
Expiration Date: 10/26/10

Solvent: HPLC H_2O
Solvent Lot #: DB270

Procedure/Comments:

Solution A: 2 mL of Code Rad 171 (1476-2077, exp 6/16/11) (located in ER1B) with 98 mL of D.I. H_2O = 1.145 µg/mL

Solution B: 2.5 mL of Solution A with 2.5 mL of D.I. H_2O = 0.572 µg/mL

Solution C: 1.25 mL of Solution A with 3.75 mL of D.I. H_2O = 0.286 µg/mL

Solution D: 0.625 mL of Solution A with 4.375 mL of D.I. H_2O = 0.143 µg/mL

Solution E: 0.375 mL of Solution A with 5.625 mL of D.I. H_2O = 0.0716 µg/mL

Note: Each solution was measured immediately after it was prepared. Solution A is only stable in the flask it was prepared in.

MJS 10/26/10

MJS 10/26/10

Signed 10/26/10 Date
Reviewed 10/26/10 Date

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-87
Project: Rad 170 H_2S LCS
Analyst: M.Skidmore
Preparation Date: 10/26/10
Expiration Date: 10/26/10

Solvent: HPLC H_2O
Solvent Lot #: DB270

Procedure/Comments:

A Rad 170 cartridge (lot: 101048 MJS 10/26/10) was placed in a 40 mL VOA vial. 10.0 mL of D.I. H_2O was aliquoted into the vial. 1.0 mL of H_2S gas (1476-1497; 1000ppm) was injected into the vial, into the H_2O. The solution was allowed to gently shake for 2 hours. Then 0.5 of the ferric-chloride-amine (1993-87) was added to the vial and capped immediately. The solution was allowed to sit for 30 minutes and the absorbance was measured at 665 nm.

MJS 10/26/10

MJS 10/26/10

Signed 10/26/10 Reviewed 10/26/10

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-88
Project: Ferric Chloride Amine Solution Rad 170
Analyst: M. Skidmore
Preparation Date: 10/26/10
Expiration Date: 10/26/10

Solvent: HPLC H_2O
Solvent Lot #: DB 270

Procedure/Comments: Add 5.0 mL of ferric chloride solution (1993-77, exp 10/18/11) with 25 mL of Amine solution (1993-76; exp. 11/18/10).

MJS
10/26/10

Signed 10/26/10 Reviewed 10/26/10

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1993

Standard ID: 1993-89
Project: Rad. 170 ICV
Analyst: FM
Preparation Date: 10/26/10
Expiration Date: 10/26/10

Solvent: HPLC H2O
Solvent Lot #: DB270

Procedure/Comments:

Solution A: 2 mL of Code Rad 171 (1476-2077, exp 6/16/11) (located in ER1B) with 98 mL of D.I. H_2O = 1.145 µg/mL

Solution C: 1.25 mL of Solution A with 3.75 mL of D.I. H_2O = 0.286 µg/mL

Note: Each solution was measured immediately after it was prepared. Solution A is only stable in the flask it was prepared in.

FM 10/26/10

FM
10/26/10

Signed 10/26/10 Reviewed 10/27/10

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. Brian Baker
FAX #: 781-247-4305
FROM: Sample Receiving
Workorder #: 1010488
# of pages (Including Cover): 4

11/2/2010

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.

Your prompt response is appreciated.

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 10/21/10

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

1010488
~~1010487~~

TO: Air Toxic

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

MW 10/22/10

In all correspondence regarding this matter, please refer to EH&E Project # 17402

The cost of this analysis will be covered by EH&E Purchase Order # 17402

For EH & E Data Coordinator - URGENT DATA ☐

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER (Time) Date/Vol.
01A	118132	Air	H2S Analysis 10/7/10 14:58 - 10/21/10 10:55	331 Hours 57minutes
02A	118133			
03A	118134			
04A	118135			
05A	118136			
06A	118137		10/7/10 14:58 - 10/7/10 ~~14:58~~ 14:58	Ø
07A	118054		10/7/10 14:10 - 10/21/10 14:25	336 Hours 15minutes
08A	118055			
09A	118056			
10A	118057			
11A	118058		10/7/10 14:10 - 10/7/10 14:10	Ø
12A	118064		10/7/10 14:10 - 10/21/10 14:25	336 Hours 15minutes

Special instructions:

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

☐ Fax results 781-247-4305

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

☒ Additional report recipient bbaker@eheinc.com ; tminegishi@eheinc.com

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

Relinquished by: Tom Tang of Environmental Health & Engineering, Inc. Date: 10/21/10

Received by: Brian Whittaker of (company name) ATL Date: 10/22/10 910

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

CUSTODY Y N NON ACT? TEMP 5C

Relinquished by: _____ of (company name) FEDEX Date: _____

Received by: _____ of (company name) 8742 2760 4269 Date: _____

Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 1

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 1010488

Client

Mr. Brian Baker
Environmental Health &
Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Phone

800-825-5343

Fax

781-247-4305

Sales Rep: TL

Date Promised: 11/04/10 11:59 pm
Date Completed: 11/1/10
Date Received: 10/22/10
PO#: 17402
Project#: 17402

Total $: $ 1,020.00
Logged By: MW

Fraction	Sample #	Analysis	Collected	Amount$
01A	118132	ATL Applications	10/21/2010	$80.00
02A	118133	ATL Applications	10/21/2010	$80.00
03A	118134	ATL Applications	10/21/2010	$80.00
04A	118135	ATL Applications	10/21/2010	$80.00
05A	118136	ATL Applications	10/21/2010	$80.00
06A	118137	ATL Applications	10/7/2010	$80.00
07A	118054	ATL Applications	10/21/2010	$80.00
08A	118055	ATL Applications	10/21/2010	$80.00
09A	118056	ATL Applications	10/21/2010	$80.00
10A	118057	ATL Applications	10/21/2010	$80.00
11A	118058	ATL Applications	10/7/2010	$80.00
12A	118064	ATL Applications	10/21/2010	$80.00
12AA	118064 Lab Duplicate	ATL Applications	10/21/2010	$0.00
13A	Lab Blank	ATL Applications	NA	$0.00
13B	Lab Blank	ATL Applications	NA	$0.00
14A	LCS	ATL Applications	NA	$0.00

Misc. Charges eCVP (12) @ $5.00 each. $60.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC/14482

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

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

DATA REVIEW CHECKLIST

Work Order #: 1010488

A_1	A_2	W	T	R	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.
N/A	☐	N/A				Non-Standard sublist printed/verified, LOQ and LOD verified
		☑	☐	☐	☐	Lab Narrative is correct (proper method & description/Receiving & Analytical notes correct)
		N/A	☐	☐	☐	Sample Discrepancy Report (SDR) is completed
N/A	☐	N/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
		N/A	☐	☐	☐	Appropriate data qualifier flags are applied
		☑	☐	☐	☐	Manual integrations for samples and QC are properly documented
☑	☐	☑	☐		☐	Samples analyzed within the project or method specific clock
		N/A	☐			Retention times have been verified
☑	☐	☑	☐		☐	Appropriate ICAL(s) included, %RSD Recalculation
		☑	☐		☐	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)
		N/A	☐			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
		N/A	☐			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) 10/25/10
N/A	☐	N/A				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.)
		☑	☐	☐		Final PDF report reviewed for correctness

Notes: (to include: noting samples with QA/QC problems, Blanks with positive hits, narratives, etc.)

A/R: An exposure time of 20175 minutes was used for QC samples and trip blanks.

T/Q:

A_1/A_2 (Analytical Review/Date)	W/T (Write-up/Tech Review/Date)	R* (Report Review/Date)	Q (QA Review/Date)
A_1: 10/28/10	W: 10/28/10	R:	
A_2:	T:		

Note (1): Please check all the appropriate boxes. Indicate "NA" for any statement that does not apply.
Note (2): Report reviewer and write-up reviewer must be separate individuals for DoD & Client Specific projects.
* Report Review is completed for DoD & Client Specific projects only.